UNIVERSITÉ PARIS-DAUPHINE
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LE CONTROLE STRATEGIQUE DES RELATIONS INTER-ORGANISATIONNELLES DANS LE SECTEUR DE L'AERONAUTIQUE CIVILE

Une étude sur les leviers clés, les outils et mécanismes de contrôle

THESE

pour l'obtention du titre de

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SYNTHESE DE LA THESE EN FRANÇAIS

RESUME

De multiples conférences sur l'« Homo economicus» évoquent les thèmes de l'agent économique et du « jeu de l'ultimatum »[2]. En particulier, dans un ouvrage plongé dans l'actualité économique et financière, Picq (2011)[3] souligne que, tout au long de l'évolution, les processus de sélection naturelle ont favorisé les groupes pratiquant l'échange et la collaboration.

L'évolution de l'industrie rappelle aussi que les relations inter-organisationnelles (IORs) sont stratégiques. Pourtant, en témoignent de nombreuses statistiques, beaucoup de relations de coopération révèlent que la gestion des interfaces inter-entreprises pose problème.

De posture épistémologique constructiviste pragmatique, et s'appuyant sur une méthodologie qualitative, cette recherche de type abductif porte sur le contrôle dans la gestion des interfaces inter-organisationnelles. Il s'agit d'identifier des leviers clés dans la gestion des coopérations et autres relations inter-organisationnelles pour en faire usage ensuite dans le cadre d'une recherche menée au sein de l'industrie aéronautique.

Dès lors, à partir d'une observation participante et d'études de cas, il s'agit de conduire une analyse des dispositifs, parfois lourds et complexes, de contrôles fonctionnels communément mis en œuvre dans le monde industriel. Véritables artéfacts, ces outils de contrôle semblent en effet trop souvent inefficaces car ils ne sont pas en mesure de traiter correctement les dimensions informelles et subjectives pourtant cruciales dans la gestion des interfaces inter-organisationnelles.

Après une analyse concrète de déviances observées, il est proposé de reconsidérer le champ d'actions et les outils requis en contrôle inter-organisationnel pour soutenir la pertinence de

[2] Le principe est le suivant : on donne 100€ à A en lui demandant de partager ce gain avec B. Si A et B n'arrivent pas à se mettre d'accord, ils repartiront tous les deux avec zéro. Si A propose à B un ratio 80/20, B refusera probablement. Mais un 50/50 donnera l'impression à A de se faire flouer, lui qui à l'origine, apporte l'argent.

l'activation de leviers clés ou « *Key Levers* » préalablement identifiés en s'appuyant sur la recherche académique. En particulier, les questions d'architecture organisationnelle mais aussi de compétence et de contrôle de la direction générale seront abordées.

Toutes les données de terrain et les informations secondaires ont été analysées en s'appuyant sur des fiches de synthèse d'entretiens formels ou informels et d'un journal établis sur plusieurs années.

L'apport managérial de cette recherche est de montrer que la réussite des relations inter-organisationnelles dans le secteur aéronautique civil passe par une stratégie et des outils de contrôle reposant sur la prise en compte de dix leviers critiques établis à partir de la littérature et du terrain, le développement d'une nouvelle architecture organisationnelle (structure) du contrôle et des dispositifs inter-organisationnels qui facilitent l'interpénétration des acteurs. En ce sens, l'étude présente également les grandes lignes théoriques d'un mode de gouvernance inter-organisationnelle qui favorise cette interpénétration ainsi que des objets de contrôle à considérer, en particulier à l'égard des directions générales.

[3] Paléoanthropologue français, Professeur de paléonthologie et préhistoire au Collège de France.

Dans un premier temps, les sections qui suivent précisent la posture épistémologique et la méthodologie retenues dans cette thèse. Il s'agit ensuite d'expliciter le positionnement et les enjeux traités à travers le prisme du contrôle organisationnel. Dans cette logique, il apparait ensuite pertinent de fournir les éléments contextuels et les caractéristiques de notre objet d'étude, à savoir le secteur aéronautique civil. Enfin, la dernière section formalise le plan de thèse adopté et la contribution visée par les travaux proposés.

SECTION 1 - POSTURE EPISTEMOLOGIQUE ET METHODOLOGIE

Cette section traite du rationnel, des critères et des moyens retenus dans la démarche de chercheur adoptée dans cet exercice de rédaction d'une thèse. Après quoi il sera possible de détailler l'objet d'étude et le positionnement proposés.

> « *L'un des choix essentiels que le chercheur doit opérer est celui d'une approche et de données adéquates avec sa question de recherche. Il s'agit bien entendu d'une finalité à double entrée. D'une part, il y a la finalité poursuivie, […] d'autre part, il y a l'existant : ce qui est disponible et accessible, ce qui est faisable – et qui a déjà été fait – et ce qui ne l'est pas. Cette seconde entrée possède deux volets : celui de la donnée et celui de l'approche, qui peut être qualitative et quantitative. C'est donc une triple adéquation que le chercheur poursuit entre finalité, approche et données* » (Baumard et Ibert, 2003, p. 82).

C'est fort de cet enseignement que je me suis lancé dans ce travail de recherche en essayant de bien tenir compte de cette triple adéquation: choix de la stratégie de recherche, méthodes de collecte de données et analyses utilisées. Compte tenu de l'ampleur de ma tâche ou encore d'une certaine hétérogénéité des travaux de recherche disponibles dans le domaine spécifique des méthodes et outils en contrôle inter-organisationnel, après avoir décidé de me lancer dans l'élaboration de cette thèse je fus assez tôt confronté à la nécessité de poser certains postulats et autres principes pour non seulement organiser ma pensée mais aussi m'appuyer sur une construction cohérente de l'articulation de la démonstration visée: une façon à moi de poser le problème dans les lignes qui suivent et dont l'ambition est aussi d'aider le lecteur à mieux cerner l'origine des orientations exploratoires fondamentales que j'ai retenues et qui sont à la base de la contribution visée par cette thèse. En réalité, je pus rapidement constater que cette expérience était en droite ligne avec la dimension épistémologique d'une thèse : elle oriente le chercheur dans ses actes de production de connaissance[4] en rendant nécessaire une clarification efficace du contexte ou plus pompeusement de la vision du monde sur laquelle porte ses travaux. Après quoi seulement le choix d'une méthode à préciser s'avère pertinent

[4] Pour Wacheux (1996, p. 263), l'épistémologie est la « *philosophie de la pratique scientifique* ».

pour élaborer l'énoncé de résultats avec l'ambition d'aller au-delà de la simple opinion, de poser et de chercher à répondre à des problèmes, notamment en construisant des outils.

Aussi, il semble opportun de préciser que la construction du travail proposé repose sur la conviction qu'avant de pouvoir les mettre sous contrôle efficace et efficient, il s'agit de comprendre pourquoi et dans quels buts les relations inter-organisationnelles sont mises en place. Il s'agit ensuite de pouvoir déterminer quels peuvent en être les leviers clés indispensables à leur réussite. Alors seulement, il devient possible de réfléchir sur des moyens de contrôles pertinents, efficaces et capables d'aider à mieux gérer de telles dynamiques inter-organisationnelles.

La réalité du terrain, en particulier dans l'aéronautique civile, atteste qu'il s'agit bien là d'un véritable défi et que la réussite de telles orientations ne saurait se limiter à une définition claire de la stratégie et une formalisation détaillée de plans associés. C'est en ce sens que la position de Merchant (1982)[5] m'a paru intéressante puisque parmi d'autres, elle souligne qu'une des toutes premières prérogatives en gestion est de savoir prendre des mesures nécessaires au bon déploiement des plans élaborés ou, le cas échéant, de s'assurer que les plans sont modifiés du fait d'un contexte changeant. Dans cette optique, puisque par définition « *manager*» des relations inter-organisationnelles c'est en particulier diriger les activités d'individus ne devant pas nécessairement s'astreindre à des obligations hiérarchiques, une part prépondérante mais aussi particulièrement délicate du contrôle inter-organisationnel va consister à garantir que les parties prenantes fassent bien ce que l'on attend d'elles. Dès lors, le contrôle inter-organisationnel s'impose comme une fonction critique en management des relations inter-organisationnelles. Il apparaît ainsi que la problématique de la pertinence et de l'efficacité des outils de contrôle est réelle et revêt une grande complexité car elle a trait à des questions de pouvoir, de leadership, de culture et d'instrumentalisation (Christensen et *al.*, 2006) compte tenu de ce que les parties prenantes se seront accordées ou non sur « *pourquoi et comment* » elles se lancent dans cette véritable aventure que constituent les relations inter-organisationnelles.

[5] traduit de Merchant, 1982, p. 4 « ... *une fois les stratégies définies et planifiées, la toute première tâche en gestion consiste à prendre les mesures nécessaires à la bonne exécution des plans établis, ou si les conditions le justifient, faire réviser les plans. Il s'agit là de la fonction critique du contrôle de gestion. De surcroit, comme gérer des hommes consiste à diriger et orienter les activités d'autres individus, une part importante de la fonction contrôle sera de bien faire en sorte que les autres fassent correctement ce que l'on attend d'eux* ».

C'est sur ces bases que le travail qui suit s'est ancré en exploitant aussi une position privilégiée du fait de mes fonctions actives au sein de l'industrie aéronautique civile et au cœur de problématiques liées à la gestion des interfaces inter-organisationnelles. En effet, dès 1999 je fus débauché de l'industrie automobile où depuis plusieurs années je travaillais en tant que chef de projet industrialisation pour un acteur bavarois des plus connus. Je pus ainsi rejoindre un groupe aéronautique anglo-saxon en tant que responsable achats de plusieurs sites dont le réseau de fournisseurs s'étendait principalement sur l'Europe. Au bout de deux années, j'ai eu l'opportunité de rejoindre un motoriste aéronautique britannique de renom dans des fonctions opérationnelles en interface avec des partenaires d'envergure internationale. A cette occasion, je pris conscience concrètement de la complexité liée à la gestion d'interfaces inter-organisationnelles. Quatre ans plus tard, au sein de la même entreprise, je rejoignais la fonction commerciale dans le cadre d'une campagne de vente de moteurs des plus stratégiques et qui là encore abondait dans le sens d'une nécessaire adaptation des modes de contrôles inter-organisationnels au sein de l'industrie aéronautique. En 2008, je changeais de groupe pour prendre la fonction de directeur de la stratégie industrielle. Ce fut pour moi l'occasion de vivre, en tant qu'acteur très impliqué, les développements de coopérations industrielles et interentreprises, en particulier avec l'Asie. Quelques mois plus tard, je pris la décision de rédiger cette thèse alors conscient de bénéficier d'un terrain de recherche privilégié et de surcroît alimenté en continu.

Une telle position de manager au sein du secteur aéronautique civil a notamment facilité l'accès aux documents internes (ex. tableaux de bord de suivi budgétaires et de la performance fournisseurs, éléments constitutifs des stratégies industrielles et autres politiques « de faire ou faire faire », entretiens d'évaluation et autres grilles d'évaluation des fournisseurs...) et aux personnes (dirigeants, directeurs de services, ingénieurs, techniciens, ouvriers etc.) impliquées dans la gouvernance inter-organisationnelle d'entreprises aéronautiques. Parallèlement, des données secondaires (revue de presse, états financiers…) ont pu être exploitées en continu alors que des consultants externes spécialistes du secteur aéronautique ont aussi été approchés pour mieux appréhender les enjeux économiques, réglementaires, technologiques et sociaux de cette industrie.

S'appuyant aussi sur une prise en compte exhaustive de précédentes recherches en contrôle intra- et inter-organisationnel notamment, cette thèse cherche à apporter un regard nouveau et crédible sur des méthodologies et des outils de contrôle efficaces et efficients dans la gestion

des relations inter-organisationnelles au demeurant critiques et stratégiques dans l'industrie aéronautique civile. En ce sens, je souhaiterais également insister sur l'importance que j'ai voulue accorder à la prise en compte du savoir des praticiens rencontrés dans le processus d'élaboration de connaissance visé par cette thèse afin de développer de l'intelligibilité des flux d'expériences humaines. Ce faisant, une caractéristique fondamentale de cette thèse réside bien dans le souci constant de produire de la connaissance en s'appuyant systématiquement sur le savoir de praticiens ou d'académiques desquels des présuppositions phénoménologiques (Yanow et Schwarz-Shea, 2006) pourront être prises en compte. Ainsi, alors que ma situation personnelle telle que décrite ci-dessus peut en partie expliquer cette inclination à vouloir produire de la connaissance qui soit pertinente en pratique, de par sa construction, cette thèse vise aussi à réussir la synthèse entre des points de vues d'érudits engagés comme par exemple Van de Ven and Johnson (2006) et des cadres méthodologiques préconisés par exemple par Avenier et Gialdini (2009). D'autres pourront aussi y voir l'influence de Mir et Watson (2000, 2001) avec l'accent mis sur le rôle du chercheur en tant que véritable acteur engagé dans le processus de recherche et sur la non-séparation entre théorie et pratique.

Une telle cible de contribution méthodologique d'ordre pratique est aussi compatible avec la stratégie de terrain que j'ai choisie d'adopter: observation participante et études de cas au sein d'un secteur d'activités offrant une quasi-totale immersion combinées à une expérience de terrain significative. En tant que chercheur, je me suis véritablement trouvé immergé dans le contexte d'observation, à vouloir développer une intelligence de ce contexte, déjà imprégné que j'étais du langage des acteurs et faisant preuve tout autant d'empathie que d'opportunisme méthodologique.

Par ailleurs, il est à mon sens important de préciser qu'une telle cible de contribution veut s'inscrire dans une logique de non réfutation mais aussi de non affirmation de l'existence d'un monde objectif alimenté par des entités indépendantes d'esprit, comme évoqué par Le Moigne (1995) et von Glaserfeld (2001). Conscient de l'influence que ma construction mentale et mon expérience professionnelle doivent avoir eu sur la manière dont j'ai conduit cette recherche, je me suis donc efforcé de bien tenir compte du principe d'inséparabilité entre le système observant et le système observé. J'étais aussi conscient que mon immersion stimulerait ma compréhension de l'intérieur de la gestion des relations inter-organisationnelles et m'aiderait

à saisir de façon pragmatique les problématiques, les motivations et les représentations des acteurs observés.

Quoiqu'il en soit, s'appuyant sur le principe que l'expérience humaine est connaissable mais aussi réfutant toute idée de vérité objective, la contribution visée par cette thèse est bien de proposer des hypothèses plausibles et enseignables pour faire progresser les connaissances sur la gestion des relations inter-organisationnelles à travers la construction de représentations susceptibles de fournir des repères crédibles ou de proposer aux praticiens des outils et des savoirs instrumentaux. De tels repères auront vocation à convenir à l'expérience des acteurs socio-économiques de l'industrie aéronautique et à être viables pour participer à la gestion de coopérations inter-organisationnelles grâce notamment à l'importance donnée au lien entre théorie et pratique. Surtout pas « pratico-pratique », cette étude a pour but de mener une réflexion plus générale sur les outils de gestion des relations inter-organisationnelles, sur leur validité à moyen ou long terme pour les organisations.

Un tel exercice de mise en ordre et d'organisation des pratiques en vigueur dans le domaine du contrôle des relations inter-organisationnelles au sein de l'aéronautique civil me fait ainsi conclure qu'un positionnement épistémologique adapté pour cette thèse est bien celui du paradigme constructiviste pragmatique. Ce positionnement épistémologique fait d'autant plus sens à mes yeux que si les principes revendiqués par Le Moigne (1995) à savoir éthique, rigueur et explicitations sont bien respectés, alors le paradigme épistémologique constructiviste pragmatique est bien approprié à la conduite de recherches en management (von Glaserfeld, 2001; Le Moigne, 1995). A défaut, un tel paradigme me semble convenablement aligné avec les hypothèses d'interdépendance entre chercheur et situation observée et, aussi le fait que mon approche aura effectivement consisté à prendre part dans mon objet de recherche en considérant que ce qui est connaissable est bien l'expérience du réel que l'on ne sera jamais sûr de connaitre rationnellement (von Glaserfeld, 2001). Ce faisant, il ne s'agit pas de nier l'existence d'un réel mais de ne postuler aucune hypothèse fondatrice d'ordre ontologique afin notamment de pouvoir considérer les entreprises observées comme de véritables systèmes ouverts au sein desquelles le phénomène étudié pourra aussi exister indépendamment du chercheur en tant que sujet individuel.

En termes méthodologiques, le paradigme constructiviste pragmatique me semble aussi aligné avec, durant ces trois années, le souci qui m'aura animé d'accéder au monde à travers

l'expérience que j'en ai puis à sa représentation grâce à la construction de matériaux s'appuyant sur des flux d'expériences humaines et élaborée en respectant des principes directeurs: comportement éthique, quête obstinée et réflexive de rigueur, et explicitation détaillée du processus mis en œuvre (Avenier et Gialdini, 2009 ; Le Moigne, 1995).

Afin de mettre à l'épreuve les degrés de validité interne et externe (Lincoln et Guba, 1985) des analyses proposées, un journal tenu pendant plus de dix mois et des entretiens semi-directifs de deux heures en moyenne, enregistrés et entièrement retranscrits, ainsi que des échanges moins formels ont été conduits auprès de quelques soixante-dix individus véritablement partie prenante des relations inter-organisationnelles considérées. Repartant des catégories issues de la littérature et à priori pertinentes pour un tel thème de recherche, ces acteurs ont été observés ou interrogés sur des points touchant la stratégie d'entreprise et ses évolutions (orientation client, traduction chez les fournisseurs), la structure de l'entreprise et ses évolutions (structure achat / vente), les modalités de contrôle des personnes en charge de la relation client-fournisseur (objectifs, pilotage, évaluation, sanctions-récompenses), le contrôle des fournisseurs ou partenaires ou encore l'évolution des modalités de contrôle (attentes, objectifs, pilotage, évaluation, sanctions-récompenses, modalités relationnelles). Toutes les données de terrain et les informations secondaires ont été analysées selon la méthode préconisée par Miles et Huberman (1991). Des notes de fiches de synthèse d'entretiens ont été établies et exploitées pour faire émerger les thèmes des discours, les différentes catégories ainsi que leur mise en lien qui seront repris sous forme de verbatim.

La diffraction analytique de ces éléments autour d'études de cas est apparue comme un moyen pertinent pour structurer leur restitution et leur conceptualisation progressive. Dans une telle logique et d'un point de vue méthodologique, il est donc à noter que cette thèse est qualitative, partant du principe que les méthodologies qualitatives sont particulièrement adaptées pour mettre en évidence les interdépendances et les dynamiques des relations entre des partenaires d'échange aux intérêts partiellement contradictoires. Yin (1989) rappelle effectivement la complémentarité scientifique que présentent les différents outils méthodologiques d'une recherche qualitative. Plus précisément, l'approche proposée est aussi de type abductif. Par définition adaptée à un protocole de construction itératif qui lui-même doit permettre de faire émerger du terrain des conjectures qu'il sera possible de discuter et de confronter à l'aune de positions académiques, une telle approche a été jugée des plus

appropriées pour tirer la quintessence d'une situation d'observateur privilégiée et pour non seulement décrire mais aussi chercher à comprendre les enjeux spécifiques d'une situation. En d'autres termes, le choix a été fait de ne pas se placer dans une démarche hypothético-déductive ou inductive mais d'opter pour une approche de type abductif. Une telle approche m'a semblé mieux appropriée pour capitaliser sur ma situation professionnelle conférant une observation de terrain des plus précieuses tout en m'efforçant de mettre cette dernière à l'épreuve de précédentes recherches académiques. Ce faisant, il s'est agi là de renforcer la crédibilité de l'ensemble en s'appuyant en continu sur les apports académiques en lien avec les observations menées.

A partir de la position privilégiée de manager au sein du secteur aéronautique civil, et conformément à la perspective dessinée par Glaser et Strauss (1967), une observation participante de plusieurs années ainsi que l'étude de quatre cas auront ainsi permis de conduire une analyse des dispositifs, parfois lourds et complexes, de contrôles fonctionnels communément mis en œuvre dans le monde de l'industrie aéronautique. Véritables artéfacts, ces outils de contrôle semblent en effet trop souvent inefficaces car ils ne sont pas en mesure de traiter correctement les dimensions informelles et subjectives pourtant cruciales dans la gestion des interfaces inter-organisationnelles.

La démarche ainsi proposée aura permis de suivre la dynamique de stratégies et plus particulièrement de processus de construction de relations inter-organisationnelles au sein du monde aéronautique à travers un spectre d'entreprises représentatives. Ces dernières, pour des raisons de confidentialité strictes, seront évoquées en ne divulguant aucun élément compromettant et aucun nom de personne. Seules les fonctions de ces personnes seront précisées pour aider à mieux apprécier la teneur de leurs propos. Quant aux entreprises faisant directement l'objet de cette étude, et afin d'éclairer la lecture de nos analyses ultérieures, les éléments distinctifs qu'il a été possible de divulguer sont présentés dans le tableau 1 qui suit.

A noter également que ces entreprises auront aussi servi de point d'ancrage pour mettre en évidence contexte et caractéristiques de la gestion des relations inter-organisationnelles au sein de l'industrie aéronautique civile (chapitre 2, section 3).

AEROMOTOR (UK)	Leader mondial dans la fabrication de turbines surtout pour l'aviation civile, et d'une vaste gamme de produits sophistiqués pour les secteurs civil et militaire. Le carnet de commande actuel projette un doublement des revenus sur les dix ans à venir. A ce jour l'entreprise compte plus de 38 000 employés et des usines dans près de 50 pays.
YANKEES (USA)	Leader mondial dans la production de turbines destinées à des applications aéronautiques civiles mais aussi militaires, la société peut s'appuyer sur une appartenance à l'un des plus importants groupes industriels du monde.
BBR (France)	Motoriste aéronautique et spatial de premier rang, la société conçoit, développe, produit, et commercialise, seule ou en coopération, des moteurs pour avions civils et militaires, pour lanceurs spatiaux et pour satellites. Avec un chiffre d'affaires de plus de €4 milliards, la société peut compter sur un effectif approchant les 13 000 employés répartis sur plus de trente sites à travers le monde
GEARB (France)	Spécialiste de la transmission de puissance à l'aide de technologies et de systèmes destinés aux avions, la société travaille directement pour les plus grands donneurs d'ordre de l'aéronautique civile. S'appuyant sur un effectif de près de 1 200 personnes et 3 sites industriels, l'entreprise comptabilise avec ses produits près de 600 millions d'heures de vol.
ZIZOU (Italy)	Spécialiste dans le design, le développement et la fabrication de composants et systèmes aéronautiques, la société est présente sur quatre continents et emploie près de 5 500 personnes. Ses activités génèrent plus de €2 milliards et s'appuient sur des dépenses en R&D significatives pour satisfaire les plus grands donneurs d'ordre de l'aéronautique.
ATERO (France)	Leader mondial de fonctions critiques pour aéronefs. Depuis la conception et la fabrication jusqu'à la maintenance et la réparation, ATERO est partenaire d'une trentaine d'avionneurs dans les domaines du transport civil, régional et d'affaires et dans le domaine militaire. La société assure le support de 22 000 avions et compte près de 6 500 collaborateurs en Europe, Amérique du Nord et Asie.
TZUFU (China)	Division d'un consortium aéronautique chinois, cette entreprise, longtemps fournisseur direct de ATERO, fabrique des composants et sous-ensembles destinés aux futurs avions monocouloirs. Désireuse de jouer un rôle croissant dans l'industrie aéronautique mondiale, l'entreprise envisageait en 2010 de pouvoir compter sur plus de 4 Milliards de Yuans d'investissements pour se doter des moyens de faire face au marché mondial.

Tableau 1 - Profil et caractéristiques générales des entreprises observées

Pour finir, les lecteurs constateront qu'à l'exception de la présente partie introductive rédigée en français pour respecter les règles propres aux exigences de la loi Toubon[6] et plus généralement des institutions académiques, l'essentiel de cette thèse est écrit en anglais. Ce choix de rédaction en anglais m'a paru tout naturel compte tenu de mon choix de pouvoir solliciter un jury international mais aussi pour mieux tirer profit de mes expériences et de mes contacts puisque, du fait de mes fonctions professionnelles, j'évolue depuis près de dix ans au sein d'un environnement essentiellement anglo-saxon.

D'autre part, la majorité des références académiques auxquelles je me rapporte sont d'origine anglo-saxonne. Une rédaction de la thèse en anglais offrait donc un confort d'écriture non négligeable. Ainsi, j'ose espérer que cette thèse me permettra de jeter les bases de futurs articles de recherche, dont la portée s'en trouvera probablement accrue si, en plus d'un niveau et d'un intérêt suffisant, ces derniers sont rédigés en anglais.

[6] loi nº 94-665 du 4 août 1994 et relative à l'emploi de la langue française.

Synthèse de la thèse en Français

SECTION 2 - POSITIONNEMENT ET PRINCIPAUX ENJEUX RETENUS A TRAVERS LE PRISME DU CONTROLE ORGANISATIONNEL

Cette section traite du positionnement et de l'objet d'étude retenus. Il s'agit de justifier le choix d'étudier les IORs dans le secteur aéronautique civil sous l'angle du contrôle organisationnel formel ou informel et en particulier les dispositifs et les mécanismes associables. Ce faisant, cette section permet de préciser la question de recherche de cette thèse et l'approche adoptée en donnant des premiers éclairages quant à sa structure.

1. POSITIONNEMENT A TRAVERS LE PRISME DU CONTROLE ORGANISATIONNEL

La configuration de l'économie industrielle mondiale impose de développer toujours plus d'arrangement ou d'activités inter-organisationnelles. Ceci est lié au phénomène de mondialisation et de conquête des marchés qui sont à combiner avec la pression financière toujours plus exigeante en termes de réduction des coûts du capital et en particulier de génération croissante de cash. Dans un tel contexte, les enjeux sont critiques et multiples: répondre à la pression continuellement accrue sur les performances financières en termes de cash et d'EBIT (et leur conséquences associées), optimiser savoir-faire et complémentarités des compétences et des organisations, produire de l'innovation, seule garantie crédible ou pour le moins mise en avant face à la généralisation des biens industriels. Les propos ci-dessous illustrent un tel contexte:

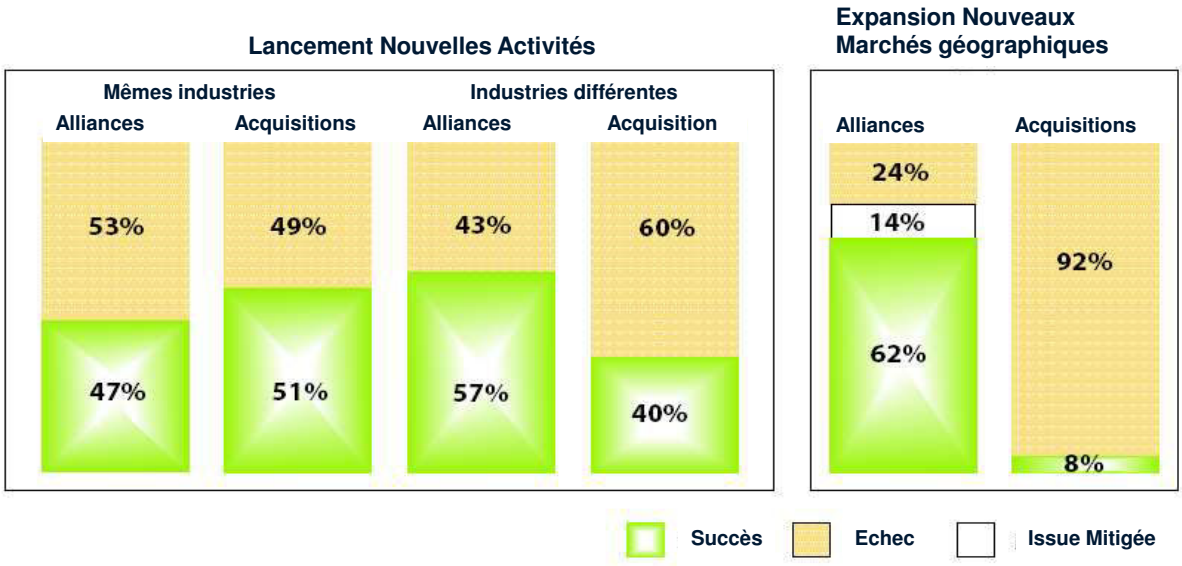
> *« Jamais auparavant, autant d'opportunités et de menaces ne se posaient simultanément. Manager aujourd'hui c'est irrémédiablement agir plus vite et plus astucieusement en s'appuyant sur toujours moins de ressources et de capital. Dans de telles conditions, personne ne devrait être surpris de voir que les entreprises aient de plus en plus recours aux alliances, fondées sur le partage des risques et des ressources, et dans le but d'accroitre la richesse des actionnaires ou de se doter d'avantages concurrentiels » (CEO d'une entreprise aéronautique d'envergure internationale, 2010)*

Pourtant, il est souvent possible de lire que le taux de réussite des alliances[7] est faible (moins de 55% selon diverses études). A cet égard, les plus pointilleux pourront polémiquer sur ce que l'on entend par taux de réussite ou de performance pour une alliance ou des arrangements inter-organisationnels. On pourra noter que Filser (1989) proposait d'apprécier la performance

[7] Alliances au sens d'un ensemble d'arrangements de coopérations entre deux ou plusieurs entreprises ayant délibérément une stratégie commune qui repose sur des comportements donnant-donnant entre les parties prenantes.

selon trois critères : efficacité, efficience et équité. De leur côté, O'Toole et Donaldson (2002) distinguaient les dimensions financières et non financières de la performance, tandis que Claro et *al.* (2003) différenciaient les variables objectives et subjectives de la performance. En réalité, la réussite des alliances inter-organisationnelles apparaît comme un concept multiforme complexe dont la finalité recherchée est soumise à des facteurs d'influence négative comme l'opportunisme, la coercition, le conflit ou la dépendance asymétrique, et des facteurs d'influence positive : confiance, échange d'informations, communication, flexibilité, compétence, valeurs partagées ou l'interdépendance. Pour notre part nous retiendrons plus particulièrement les critères de longévité et de développement. En effet, si des relations inter-organisationnelles perdurent et grandissent dans le temps c'est que les parties engagées y trouvent leur compte.

Quoiqu'il en soit, il semble bien que les principes élémentaires préconisés jusqu'à ce jour pour faire fonctionner les alliances ne se traduisent pas de manière satisfaisante dans les faits. Le graphique suivant illustre ce propos :



Graphique 1 - Taux de réussite des alliances inter-organisationnelles

(traduit de Pekar et Margulis, 2003, p. 57)

En 2003, Parise et Casher soulignaient que le nombre d'alliances augmentait vite à un rythme moyen de 25% par an mais avec un taux d'échec de 50 à 60%. D'autres recherches de Segil (2004) reportaient que 55% des alliances échouaient dans les trois ans avec, pour cause

principale évoquée, les fréquentes tensions entre compétition et coopérations elles-mêmes inhérentes aux alliances.

En outre, quand il s'agit de coopérations inter-organisationnelles du type acheteur-vendeur, il est intéressant de constater que de nombreux sondages, plus ou moins informels, rappellent que les acheteurs ont le plus souvent l'impression de ne rien contrôler chez leurs fournisseurs (ceci fait d'ailleurs l'objet d'une étude de cas proposée dans le chapitre 2, section 3) et que les tentatives de construction de coopérations inter-organisationnelles se soldent par de nombreux échecs, en particulier quand les cultures sont différentes. A cet égard, le baromètre Outsourcing 2008 d'Ernst & Young conclut que 70% des professionnels des achats interrogés jugent toujours leurs méthodes de suivi et de contrôle insuffisantes, inadaptées et souhaitent les faire évoluer dans l'avenir.

Les causes de telles désillusions peuvent trouver leurs racines dans une décision de rapprochement qui, dès le départ, par manque d'adéquation produit, marché ou organisation, était vouée à l'échec. Sur le sujet, des chercheurs en stratégie et en marketing ont (ou bien auront encore) beaucoup apporté. Il semble cependant utile de noter, que sur le terrain, le déploiement et la mise en place opérationnelle de moyens de contrôle inter-organisationnel ne se limitent bien souvent qu'à quelques questions posées sur les capacités d'influence et les efforts de surveillance sur les résultats ou les processus. Paradoxalement, les études traitant de l'influence du contrôle sur la performance ne sont pas pléthoriques. Certes, Bello et Gilliland (1997) proposent que le contrôle sur les résultats améliore la performance économique, tandis que le contrôle sur les processus n'a pas d'effet significatif. D'autres auteurs soulignent que le contrôle (dans le sens de capacité d'influence et effort de surveillance) favorise la coopération mais génère aussi du conflit (Anderson et Narus, 1990 ; Heide et John, 1990 ; Joshi et Stump, 1999). Néanmoins, la conceptualisation du contrôle inter-organisationnel dans les études empiriques est assez restreinte. Un tel contexte pourrait d'ailleurs inciter les chercheurs en contrôle inter-organisationnel à dépasser la conception fonctionnaliste liée à la question de la performance et à étudier la complexité des phénomènes en jeux dans le contrôle inter-organisationnel.

Pour notre part, nous ne prenons pas beaucoup de risques en affirmant qu'une stratégie n'a de sens que si elle s'accompagne d'une bonne exécution. En particulier, il est probable que la manière dont les relations inter-organisationnelles sont orchestrées (notion de structure) et

mises sous contrôle (notion de dispositifs) intervient pour une part déterminante dans la réussite ou non des dynamiques recherchées par le biais d'interfaces inter-organisationnelles elles-mêmes vues comme une partie intégrante de la stratégie[8].

Par ailleurs, dans le domaine du management des relations inter-organisationnelles, on peut constater qu'en 2011 de nombreuses théories et autres principes génériques (marché, bureaucratie, confiance) ont déjà été établis. Dès 1937, Coase jette les bases de ce qui deviendra la théorie des coûts de la transaction sous l'impulsion particulière de Williamson (1975). Traitant de la question des décisions « faire ou acheter », la théorie économique de la firme aurait ainsi pu avoir un impact majeur bien plus tôt si la position de Coase n'avait pas été écartée pendant près de 40 ans. Ceci étant, on admettra que l'apport de Williamson fut significatif. Un point majeur de la position de l'auteur est que les marchés s'appuient sur les contrats formels, là où la firme peut s'appuyer sur des relations dites contractuelles. De l'avis de l'auteur, les contrats formels sont le plus souvent incomplets et ne peuvent pas satisfaire aux impondérables du quotidien. De leur côté, les relations contractuelles peuvent remédier à cette difficulté car elles sont moins impersonnelles pour les parties prenantes. Ces dernières y puiseraient en effet les raisons de s'adapter mieux et plus vite aux contingences difficilement prévisibles.

Déjà, bien avant Williamson, un courant de sociologues en organisation (Blau, 1964 ; Dalton, 1959 ; Gouldner 1954 ; Selznick, 1949) avaient souligné la dimension critique que recoupent les accords informels. Ils s'appuyaient notamment sur les propositions de Weber qui, en son temps, insistait sur l'importance des processus et autres structures informelles d'un point de vue organisationnel. Cette idée allait être relayée par le sociologue Macaulay (1963) pour qui les relations non-contractuelles avaient une haute importance dans les configurations inter-organisationnelles. D'autres éclairages sur le sujet se retrouvent dans les approches juridiques et contractuelles (Macneil, 1980), dans les problématiques de Joint-Ventures (Kogut, 1989), sur le thème plus englobant des alliances (Gerlach, 1991 ; Gulati, 1995), sur les questions de réseaux (Kogut, 2000 ; Podolny et Page, 1998), sur la question des firmes virtuelles (Chesbrough et Teece, 1996) ou encore sur la théorie de l'encastrement (Choi et Kim, 2008 ;

[8] définie en son temps par le Général von Moltke, comme n'étant pas un plan d'actions à long terme mais l'évolution d'une idée centrale au cours de circonstances changeantes. Excellent organisateur (il utilisera les chemins de fer pour rassembler les armées et assurer leur ravitaillement), Helmuth von Moltke abandonna ses fonctions militaires en 1888. Il écrivit de nombreux ouvrages de stratégie et une histoire de la guerre de 1870-1871.

Granovetter, 1985). A cet égard, la revue de littérature proposée dans le chapitre 3 de cette thèse donne l'occasion de mieux préciser la plupart de ces positions. Ces dernières illustrent bien que la recherche a d'ores et déjà été très prolifique sur le sujet de ce que je nommerais les principes directeurs associables aux éléments constitutifs clés des relations inter-organisationnelles, et qui comme le proposent Kogut et *al.* (1992) ont apporté une multitude d'éclairages pouvant justifier pourquoi, et comment passer du « faire ou acheter » au « faire ou coopérer »

En revanche, si l'on admet que l'angle d'analyse fait encore défaut aujourd'hui (Chiapello, 1996; Dekker, 2004; Tomkins, 2001), mettre l'accent sur la pertinence et l'efficacité des outils et méthodes de contrôle des relations inter-organisationnelles préconisées au sein des firmes industrielles semble toujours pertinent. Chez un grand nombre d'acteurs industriels aéronautiques en particulier, ceci pourrait permettre en effet de pallier une défaillance chronique et paradoxale. En effet, il est communément admis et reporté, que le management des relations inter-organisationnelles est la priorité numéro un alors même que des outils et des méthodes de gestion déployés à grands coûts déçoivent bien souvent du fait d'une utilisation peu efficace. Ainsi, l'étude « *Top Management Radar issues 2010* » menée par un cabinet de conseil international auprès de plus d'une centaine de dirigeants représentatifs d'une palette large de firmes du secteur industriel aéronautique et de défense européen, est sans équivoque. Cette étude longitudinale suggère que, depuis 2007, la gestion des programmes et de la chaîne de fournisseurs ou, « *supply chain* », sont des priorités pour les entreprises dans l'aéronautique. Pourtant, de l'avis même des protagonistes, le niveau de satisfaction associé reste bien médiocre. Une telle situation suggère encore et toujours le besoin de construire une compréhension plus poussée des mécanismes et leviers (structurels, organisationnels et sociaux) en jeu dans la mise en application concrète de modalités et d'outils de contrôle pertinents qui puissent participer à des constructions de relations inter-organisationnelles vouées à se développer pour durer.

Eu égard à cette position, il est proposé d'étudier le(s) rôle(s) tenu(s) ou attendu(s) par le contrôle inter-organisationnel et l'efficacité des outils et autres méthodologies associés dans la gestion de coopérations inter-entreprises. Ce faisant, une telle posture devra notamment pouvoir s'appuyer sur une définition argumentée du « *strategic management control* » ou du moins ce que l'on considère pouvoir ou devoir en attendre afin de traiter une question de recherche ainsi formulée :

« Comment s'organise le contrôle au sein des coopérations industrielles dans la dimension stratégie, structure et outils? Dans le cas du secteur aéronautique civil? ».

Alors qu'une nécessaire mise sous contrôle efficace de la gestion des interfaces inter-organisationnelles est communément admise, quels peuvent être des éléments constitutifs d'une situation où les acteurs ont recours à des outils et des modalités de contrôle qui *in fine* s'avèrent défaillants? Dans l'aéronautique civile, quelles sont les alternatives possibles en termes d'outils et de mécanismes de contrôle pour contribuer plus efficacement à la réussite des relations inter-organisationnelles ?

Dès lors, s'entendre sur la finalité du contrôle afin de pouvoir en étudier les caractéristiques de ses modalités et autres outils de son exercice devient nécessaire. Néanmoins, certaines précautions semblent indispensables. En particulier, on peut noter que Drucker (1964) insiste beaucoup sur la différence à faire entre le contrôle (un but) et les contrôles vus comme des moyens utilisant la mesure et l'information, ce qui leur confère une dimension analytique et opérationnelle. D'autre part, l'auteur insiste aussi sur le danger de favoriser les contrôles (c'est-à-dire de mettre l'accent sur ce qu'on peut quantifier) au détriment du contrôle. Enfin, considérée comme « *une allocation relativement stable des tâches et rôles créant un pattern d'activités* » (Desreumaux, 1992, p. 50), la notion de structure pourra compléter un angle d'analyse exclusivement porté sur les dispositifs afin d'appréhender la dimension liée aux schémas de définition des responsabilités et aux interrelations entre les différents éléments qui la composent.

Cependant, comme le souligne Nogatchewsky G. (2004, p. 105), il est aussi légitime de reconnaitre qu'il semble bien n'exister aucun « *cadre théorique unifié dans la littérature inter-organisationnelle* » ou bien qu'avec des « *fondements épistémologiques souvent différents, les théories traitant des relations inter-organisationnelles se complètent, parfois s'opposent* ». Dans tous les cas, ceci les rend difficilement conciliables sous l'angle du contrôle. Malgré cet obstacle, nous maintenons qu'il est pertinent de vouloir s'appuyer sur un cadre théorique plus ou moins délimité. Ce dernier doit en effet permettre que l'appréciation de la finalité et de l'efficacité des méthodes et outils de contrôle dont cette thèse fait l'objet puisse prendre un sens concret en reposant sur une étude ethnographique et une méthodologie de type adductif. Comme cela est expliqué dans la section précédente, ce qui caractérise le

mieux notre processus de recherche est certainement un mouvement d'allers et retours entre la théorie et la démarche sur le terrain afin de pouvoir proposer une nouvelle conceptualisation théorique valide, robuste et rigoureusement élaborée. Dans cette optique, la démarche d'analyse proposée se veut à la fois pragmatique, rigoureuse et respectueuse de la contribution académique disponible à ce jour sur le sujet.

Ce faisant il s'agira dans un premier temps de donner un éclairage sur la raison d'être des relations inter-organisationnelles avec un zoom particulier sur un secteur extrêmement bien connu: l'aéronautique civile qui sera le champ d'exploration ethnologique exploité. En s'appuyant sur une expérience de terrain et une brève revue de littérature, l'objectif sera de souligner que la mise en œuvre des modalités de contrôle dans les relations inter-organisationnelles est des plus compliquées dans l'aéronautique civile. Dès lors il s'agira de mieux comprendre ces éléments de complexité à prendre en compte avant et durant la mise en œuvre de modalités de contrôle efficaces. Pour ce faire, et compte tenu qu'il est de plus en plus admis que les relations inter-organisationnelles ont trait à des phénomènes plutôt hétérogènes (Dekker, 2004), effectuer une revue de littérature exhaustive pourra aider.

Une fois répertorié un nombre suffisamment pertinent de facteurs de complexité, il s'agira de comprendre quelles modalités de contrôle sont envisageables pour justifier que l'on se concentre sur certains dispositifs et autres outils de contrôle. Pour ce faire, une revue de littérature sera proposée sur le contrôle formel et sur le contrôle informel ainsi que leur traduction respective en termes d'outillages et de dispositifs.

Il est à noter que le contrôle formel sera compris comme pouvant être exercé par des systèmes d'incitation (objectifs, structures de sanctions ou récompenses), de planification, mais aussi de mise en concurrence, de supervision directe et autres règles ou procédures. Même en s'appuyant sur des systèmes d'information adaptés à la maturité des IORs dont il est question, les dispositifs formels ne seront pas considérés comme suffisants pour garantir l'efficacité des IORs (Tomkins, 2001). Véritables contrepoids, les dispositifs informels, souvent associés à la gouvernance relationnelle (Poppo et Zenger, 2002) ou bien au contrôle social (Larson, 1992), feront ainsi l'objet d'une attention toute particulière. Aux origines ou bien rationnelles ou bien dérivées de normes et de liens sociaux se construisant à travers l'échange, les dispositifs informels ainsi appréhendés auront trait aux aspects liés à la réputation et à la qualité des expériences communes antérieures. Constat communément

admis au sein du monde aéronautique civil en particulier, la réputation peut en effet être appréhendée comme un moyen de contrôle, certes situé en dehors de la relation, mais d'autant plus crédible et puissant que l'environnement institutionnel du réseau dans lequel les organisations sont insérées est fort et que les solutions alternatives au sein du réseau sont faibles (van der Meer-Kooistra et Vosselman, 2009). Conformément à la criticité de la phase de sélection du fait de la longévité de la majorité des projets stratégiques engagés dans l'aéronautique civile[9], l'évaluation pertinente de la qualité des expériences antérieures sera ainsi perçue comme un dispositif interne à la relation qui lui permet de développer des anticipations sur les compétences, l'implication et les intentions du partenaire éventuel lors de la phase de sélection.

Objet d'étude oblige (aéronautique civile), les expériences individuelles antérieures seront également comprises comme de véritables fondements de processus sociaux qui se dérouleront par la suite. Nous en voulons pour preuve les propos révélateurs et rapportés ci-après :

> *«La relation interpersonnelle est fondamentale. C'est une caractéristique de notre métier, qui généralement met en scène des individus qui le plus souvent se connaissent. Les gens changent de postes, mais rencontrent et travaillent toujours avec les mêmes » (CEO, Entreprise italienne majeure du secteur aéronautique)*
>
> *« Etablir des relations interpersonnelles est la pierre angulaire du processus de coopération à long terme » (CEO, Entreprise française Major French OEM)*

Ainsi, par des interactions répétées, il est considéré que les acteurs pourront apprendre à partager leurs représentations, à gérer les conflits, à interagir de manière à développer une connaissance et une considération pour les intérêts de l'autre (Guibert et Dupuy, 1997 ; van der Meer-Kooistra et Vosselman, 2000). Ces jeux de relations interpersonnelles sont d'autant plus intenses que les produits échangés sont complexes et stratégiques et qu'ils exigent une action jointe et une communication fréquente entre les parties. C'est en cela que le contrôle informel peut être lié à ce travail en commun et vu comme un processus d'apprentissage et d'adaptation qui portera essentiellement sur les compétences, les comportements relationnels (flexibilité, solidarité, échange d'information) et sur les valeurs des partenaires.

[9] Caractéristique fondamentale dans l'aéronautique civile, une fois sélectionnés, les fournisseurs sont en place pour des durées d'activités pouvant aller jusqu'à plus de vingt ans, du fait de la réglementation en vigueur, notamment.

A partir d'une large revue de littérature et de la compréhension ainsi construite des enjeux liés aux modalités de contrôle des relations inter-organisationnelles, il deviendra possible d'établir une grille d'analyse définie autour de leviers clés, ou « *Key Levers* » en anglais, jugés indispensables au bon fonctionnement des relations inter-organisationnelles et qu'il s'agit de pouvoir mettre sous contrôle efficace. L'intérêt associé consistera à faire usage de cette grille d'analyse sur le terrain. Pour ce faire, trois formes de relations inter-organisationnelles seront proposées avec la particularité de couvrir la palette des possibles (bon-moyen-mauvais). L'objectif d'une telle étude de terrain sera d'évaluer la pertinence de « *Key Levers* » devant faire l'objet de modalités de contrôle efficace. Il s'agira aussi d'évaluer la maturité et la pertinence des outils et modalités de contrôle associées et en vigueur au sein des formes de relations inter-organisationnelles appréhendées à travers observations participantes et autres études de cas.

Après quoi, consolidation et interprétation des scores obtenus sur le terrain mettront en évidence de possibles corrélations entre outils ou modalités de contrôles préconisés à mauvais escient (en référence aux *«Key Levers »*) et relations inter-organisationnelles peu satisfaisantes. Dès lors, il s'agira de comprendre comment peut-on en arriver à définir et promouvoir des outils et des modalités de contrôle qui ne puissent pas mieux participer à la réussite ciblée des relations inter-organisationnelles. Pour cela, *« Key Levers »* et placement sous contrôle seront mis en perspective avec une batterie d'outils en vigueur au sein d'entreprises du secteur aéronautique. Le concept proposé du *« Co-operation Snowball effect »* pourra ainsi être mis à l'épreuve du terrain. L'objectif d'un tel exercice sera de souligner des incohérences renforcées par la complexité des outils de contrôles en vigueur au sein des entreprises (tableaux de bords etc.) ou bien l'absence d'architecture organisationnelle adaptée et qui puisse assurer une orchestration efficace des IORs.

Ce faisant, il est attendu que considérer une architecture organisationnelle adaptée aux enjeux associés aux précédents *« Key Levers »* offrira un éclairage nouveau sur le contrôle stratégique inter-organisationnel. L'attention pourra alors se porter sur le rôle des Directions Générales, possible facteur déterminant pour expliquer pourquoi on en arrive à une situation où les gens acceptent d'avoir recours à des outils de gestion dont on sait qu'ils ne sont pas satisfaisants pour ceux qui en font usage.

2. PRINCIPAUX ENJEUX A TRAVERS LE PRISME DU CONTROLE ORGANISATIONNEL

> *« … une fois les stratégies définies et planifiées, la toute première tâche en management consiste à prendre les mesures nécessaires à la bonne exécution des plans établis, ou si les conditions le justifient, faire réviser les plans. Il s'agit là de la fonction critique du contrôle en management. De surcroit, comme gérer des hommes consiste à diriger et orienter les activités d'autres individus, une part importante de la fonction contrôle sera de faire en sorte que les autres fassent bien ce que l'on attend d'eux »* traduit de Merchant (1982, p. 43)

Certes bien antérieure à d'autres courants plus récents en stratégie, une telle définition du contrôle présente l'avantage de renforcer la pertinence d'appréhender le management des interfaces inter-organisationnelles à travers le prisme du contrôle stratégique. En effet, ne peut-on pas affirmer que, quelque soit leur nature ou leur configuration, la gestion des interfaces inter-organisationnelles (alliances, joint-ventures, relations client-fournisseur) renvoie inévitablement à des questions de coordination et de cohérence entre différentes parties prenantes potentiellement sujettes à des conflits d'intérêts et des antagonismes? A ce titre, comme le rappelle Morales (2009, p. 12), « *le concept de « contrôle » peut être mobilisé (…) pour décrire les phénomènes par lesquels les divergences individuelles sont résolues au sein des organisations, et montrer comment elles sont mises en cohérence et en convergence.* ». Dans cette perspective, il conviendra de mentionner le rôle attendu des dispositifs de « contrôle de gestion » pouvant être considérés comme déterminants dans cette recherche de mise en cohérence des comportements et des représentations au sein des organisations (Bouquin, 2008), et de surcroit dans le cadre des relations inter-organisationnelles. La question se pose alors de savoir si de tels dispositifs de contrôle sont correctement ou efficacement configurés et déployés pour bien comprendre le comportement et les actes des parties prenantes ainsi que « *la manière qu'elles ont d'appréhender leur propres actions et celles des autres, voire ce qu'elles ne perçoivent pas elles-mêmes* » (Hugues, 1996).

Cette question encore d'actualité me semble d'autant plus pertinente, que la problématique de l'organisation du management et du contrôle des relations inter-organisationnelles n'est pas nouvelle. De récentes études historiques sur l'industrie automobile (Fabre et *al.*, 2010) soulignent ainsi que le choix de l'externalisation mérite bien de s'accompagner d'une réflexion sur les structures organisationnelles en particulier : où positionner chaque partie prenante ? Comment les faire interagir efficacement entre-elles? Ces questions de contrôle inter-organisationnel et du bon déroulement des échanges ont aussi été largement abordées

par Caglio et Ditillo (2008) qui énumèrent des problèmes liés à des questions de coopération, de coordination et d'appropriation (voir notamment chapitre 3, section 2).

Par ailleurs, il est désormais bien admis que ces problèmes peuvent être plus ou moins aigus et trouver des réponses différentes selon les caractéristiques des transactions (degré et types d'actifs spécifiques, fréquence, mesurabilité des activités ou des résultats), de l'environnement (incertitude, risque marché ou nombre d'acteurs, facteurs institutionnels) et des parties prenantes (asymétrie d'information, réputation, expérience antérieure, attitude de partage du risque, pouvoir de négociation). Sur le terrain il est ainsi possible de constater que, souvent citées en modèle pour ce qui concerne les IOR, les entreprises de l'industrie aéronautique et automobile ne cessent quant à elles de mener des réflexions approfondies sur le sujet. A titre personnel, il peut être mentionné qu'avant de rejoindre le monde de l'aéronautique en 1999, je travaillais dans l'industrie automobile en Allemagne. Compte tenu des enjeux majeurs auquel étaient confrontés les acteurs aéronautiques de l'époque, je fus alors approché par un cabinet de recrutement français soucieux de proposer à son client des candidats rompus aux techniques achats les plus sophistiquées (sous-entendu de l'automobile). Cette période correspondait en effet à la montée en puissance de nouveaux programmes stratégiques pour toute l'industrie aéronautique (très gros porteurs notamment) qui sera suivie de l'explosion des carnets de commandes avec les pays asiatiques en particulier. Par voie de conséquence, la gestion de la supply chain est devenue des plus critiques et extrêmement pointue dans l'industrie aéronautique où finalement les enjeux de performances industrielles (optimisation du coût du capital, niveaux d'investissements, qualité, coûts, délais et time-to-market performance) sont devenus comparables à ceux de l'industrie automobile avec, en plus, des contraintes spécifiques liées aux cycles de fabrications et à la haute technicité des composants. La gestion et le contrôle des interfaces inter-organisationnelles sont ainsi devenus pour longtemps des plus critiques dans les industries automobile ou aéronautique, ce qui se comprend à mesure notamment que les parts achats deviennent de plus en plus complexes et coûteuses.

D'ores et déjà, on notera également que la plupart des préconisations et autres modalités qui découlent de ces réflexions seront aussi fonctions du type de relation dont il est question. A cet égard, et au-delà de cette considération qui posera par ailleurs la question d'une segmentation efficace du portefeuille des partenaires ou fournisseurs, il est utile de rappeler que de nombreux travaux de recherche proposent généralement trois idéaux types de

management (ou de contrôle) des relations d'échange: le marché (mise en concurrence systématique), la bureaucratie (contrôle formalisé selon des processus normés avec des critères de performance élargis) et la confiance.

Pourtant, bien que riches d'enseignements sur le management des relations inter-organisationnelles, et sans vouloir remettre en question leurs contributions déjà apportées sur les types de configurations de contrôle les mieux adaptés, les recherches académiques présentent encore de sérieuses limites. En effet, la difficulté ne réside plus dans le fait de savoir s'il s'agit ou non de former des alliances. Le véritable défi semble bien être de savoir déterminer ce qui fonctionne ou non en tenant bien compte de mécanismes de contrôles concrets à déployer. Certes, les praticiens et les académiques ont depuis longtemps pris à sa juste mesure la phase de sélection inhérente aux IOR. Ceci fait sens car cette phase précède l'engagement à long terme et à n'en pas douter va jeter les bases de la conception du système de management de la relation à mettre en place. D'après des études de recherche (Dekker, 2008), cette phase permet de gérer de façon proactive les problèmes qui peuvent entraver le bon fonctionnement des interfaces inter-organisationnelles : l'opportunisme éventuel de l'autre, les risques liés à la dépendance (risque de défaillance financière du partenaire, d'incompétence, etc.) et les problèmes de coordination liés à l'interdépendance des tâches entre les partenaires. A cet égard, l'approche formelle ou instrumentaliste a permis de grandes avancées comme en témoignent sur le terrain le nombre élevé d'entreprises industrielles qui ont développé des méthodes et outils de contrôles sophistiqués axés sur une logique résolument instrumentaliste. Cette logique suggère notamment de sélectionner les fournisseurs potentiels sur la base de critères élargis : la compétitivité (coût, qualité, délai), les compétences (innovation, capacité technologique, actifs humains et matériels), la qualité de l'organisation du partenaire potentiel (choix stratégiques, qualité du management et des processus, flexibilité), la pérennité financière, la taille et les comportements relationnels (solidarité, partage d'informations, volonté d'implication). Pour ce faire, les référentiels existent et servent bien de support de travail : Valeo 1000, QS9000 dans l'automobile ; ou IAQG, EN9100 et autres dans l'aéronautique. Les moyens déployés pour vérifier l'adéquation du partenaire potentiel à ces critères sont multiples: appels d'offres, audits réalisés au cours d'autres projets ou à l'occasion de la sélection, études d'experts pour avoir une analyse « objective » de la situation. En théorie, ces moyens plutôt formels et bureaucratiques laissent de la place à des données plus subjectives - comme la réputation du partenaire dans son secteur et surtout les expériences passées ensemble (Ding et *al.,* 2013) – dont la visée est de

permettre de susciter la confiance. Cette considération peut d'ailleurs expliquer que depuis, les années 90, la confiance est à l'honneur dans les nombreux ouvrages et articles de professionnels et de chercheurs sur les relations client-fournisseur. Avoir confiance dans son partenaire, c'est croire qu'il peut et veut agir de façon positive chaque fois qu'il en a l'occasion. Cette croyance concerne aussi bien des aspects techniques (confiance dans les compétences du partenaire à réaliser la tâche prévue) que des aspects moraux (confiance dans la bonne volonté de l'autre à agir dans l'intérêt du partenaire). Dans des contextes d'incertitude et d'interdépendance interentreprises, la confiance est ainsi vue comme un moyen de donner l'agilité nécessaire aux partenaires pour faire face aux événements imprévus, pour saisir les opportunités, développer des innovations, etc. La confiance favorise l'action jointe et la coopération. Elle facilite la coordination et la résolution des conflits. Des relations de confiance permettent également d'envisager un futur prometteur entre des partenaires, un engagement réciproque sur une collaboration étendue puisque chaque partenaire est convaincu des compétences et de la loyauté de l'autre.

Egalement, selon certains auteurs, la confiance a une influence directe sur la performance des partenaires : elle permet de réduire les coûts de négociation et les coûts du contrôle (moins de temps à passer à définir les contrats, à contrôler). De telles vertus de la confiance ont en réalité été développées dans de nombreuses recherches dont l'apport dans ce domaine est incontestable et confirme la justesse du choix de susciter et de développer la confiance entre les partenaires (voir chapitres 2 et 3).

Pourtant, comme le révèle aussi l'étude de cas retranscrite dans le chapitre 2, section 3, les résultats ainsi attendus *ex ante* à travers tous types d'interfaces inter-organisationnelles, en particulier entre fournisseur et vendeur, sont *in fine* bien souvent décevants au regard des espérances initiales des parties prenantes impliquées, ou du moins des intentions partagées et clamées haut et fort par les acteurs. En outre, il peut être raisonnablement admis qu'un tel constat ne saurait s'expliquer par la seule perfectible réconciliation des savoirs théoriques en sciences de gestion et les préoccupations des managers, tant on peut constater un vrai problème de mise en application des principes proposés.

La combinaison des idéaux-types (marché, bureaucratie, confiance) n'est que trop peu envisagée alors même que la pratique observée suggère le contraire (Donada et Nogatchewsky G., 2006). Mais il apparaît aussi très nettement que l'on ne prend pas

suffisamment en compte la question de la mise en application et la gestion concrète des principes que la recherche académique préconise pour des entreprises en relation et trop souvent considérées comme des « boîtes noires ». Il apparaît en effet que l'analyse de la pertinence, de l'efficacité et de l'efficience des outils de contrôle déployés à grand flot dans ces entreprises fait souvent défaut. Etrangement, cet aspect ne semble que très peu soulevé par la communauté académique alors que, quotidiennement, au gré de mon immersion totale dans l'industrie aéronautique, je peux constater l'incongruité de moyens de contrôles des IORs que les équipes en place tentent vainement d'opérationnaliser. C'est du moins ce que je soutiendrai en m'appuyant sur une étude d'ordre ethnographique au sein de l'industrie aéronautique.

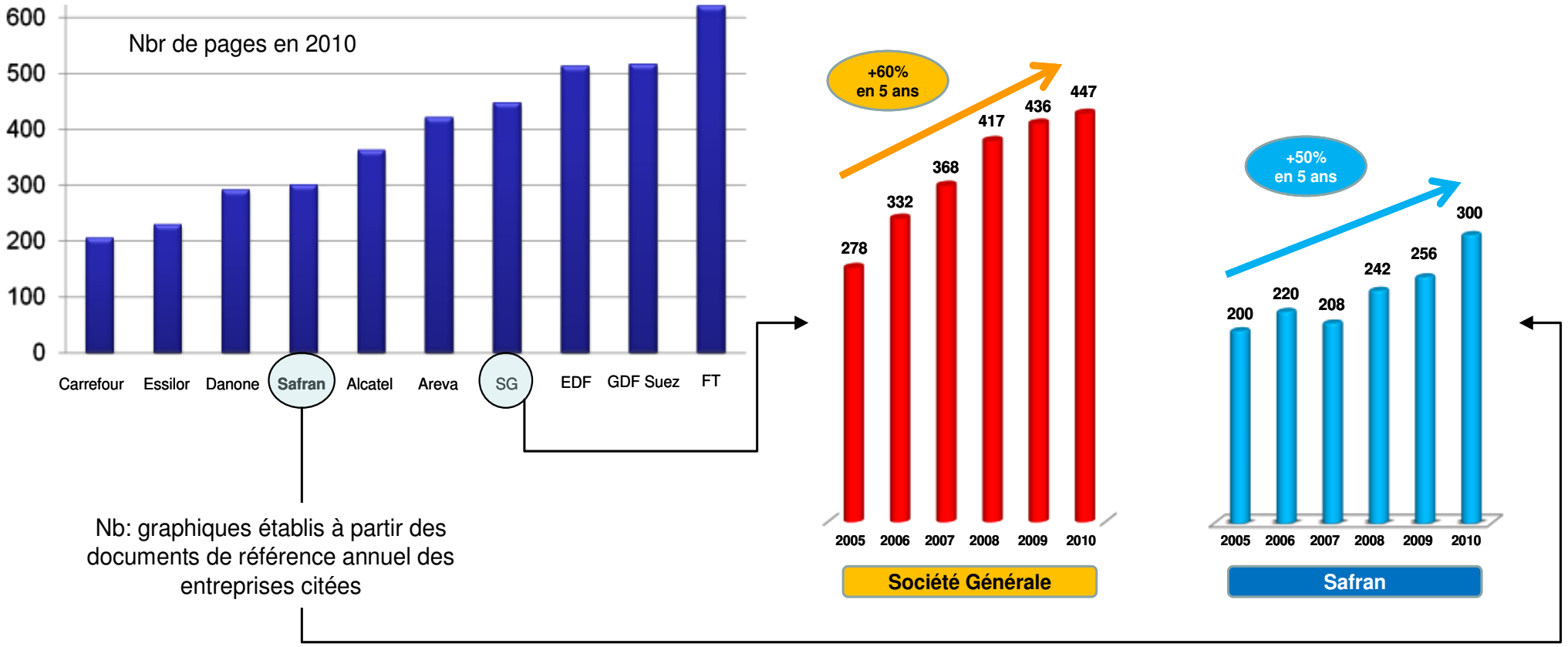
Ces considérations suggèrent que des modalités de contrôle plus pertinentes peuvent encore être envisagées, en particulier, un management qui puisse allier des dispositifs formels et informels aux différents niveaux de l'organisation. Dès lors, il devient légitime de se demander quel est l'impact réel, l'efficacité et le rôle concret des instruments de gestion et de contrôle inter-organisationnels communément en vigueur au sein des grandes entreprises. Comment expliquer l'inadéquation, voire l'incongruité de moyens de contrôle développés communément et dont la réalité de l'impact sur la tournure prise par de nombreuses relations inter-organisationnelles est largement discutable ? Pourquoi tant d'ingéniosité, ou de sophistication, d'outils de mesures bénéficiant de moyens considérables[10] peuvent-ils aboutir à de si piètres résultats quand ils n'ont pas des effets néfastes sur les acteurs ? Ce thème est d'ailleurs largement abordé par Pezet (2011) qui relève que les systèmes d'information et financiers, en particulier, ne sont en fait élaborés que pour fixer des objectifs et contrôler leurs résultats sans que le contrôle des moyens puisse être mis en œuvre efficacement, avec la dimension informelle quasiment exclue des débats. L'auteur avance que ces systèmes de contrôle ne produisent pas d'efficience. De telles modalités de contrôle portent sur les résultats via la production de chiffres et de graphiques (tableaux de bord) pour donner l'impression de contrôle des activités et non pour permettre de dégager du temps pour la réflexion. L'analyse des retours d'expérience trop rare et la dimension informelle bien trop négligée font ainsi perdre l'essence du contrôle à force d'un trop plein de chiffres.

[10] Par exemple, entre 2010 et 2012, 25 M€ ainsi que la mobilisation permanente d'une soixantaine d'experts auront été consentis au sein de Atero (entreprise aéronautique de plus de 6.000 personnes et leader sur son

En fait, la tâche n'est pas simple, d'autant qu'il existe bien une dualité problématique entre contrôle formel et contrôle informel quand il s'agit d'exécution. Dans ce cadre, une caractéristique importante mérite cependant que l'on rappelle qu'à force de déshumaniser les relations inter-organisationnelles (par soucis d'éthique comme par manque de temps ou d'intérêt), la gestion des relations humaines ou du moins sa part prépondérante dans les activités managériales afférentes à la gestion des interfaces inter-organisationnelles n'a cessé de s'amenuiser. A l'inverse, sous l'impulsion des théories classiques et néoclassiques, l'instrumentalisation et le tout « reporting » ont été encouragés sans retenue, en particulier sous l'effet de la systématisation du recours aux consultants et du fait de la pression des marchés financiers. Au sein de grandes entreprises industrielles, et plus particulièrement dans les services achats, on a ainsi pu constater, durant ces dernières décennies, l'augmentation croissante de l'activité de reporting, de remplissage de questionnaires d'audit, de développement d'outils de contrôle toujours plus sophistiqués qui se traduit par une augmentation quasi-exponentielle de la production d'éléments formalisés en particulier sous formes d'indicateurs. A la fois simple et caricatural mais très révélateur de cette tendance à la « reportisation » et au contrôle grandissant, l'exemple ci-après illustre l'évolution du nombre de pages des documents annuels de références d'entreprises du CAC 40.

marché) alors même qu'une minorité des salariés, toutes classes confondues, est convaincue du bien fondé de la démarche.

Sources : rapports annuels des sociétés mentionnées



Graphique 2 - Evolution du nombre de pages des documents annuels de références d'entreprises du CAC 40

En particulier, ce simple exemple suggère que, pour satisfaire les marchés financiers, les entreprises cotées n'hésitent pas à solliciter de plus en plus les compétences de prestataires de services informatiques et autres cabinets de conseil capables d'opérationnaliser les moyens de satisfaire une volonté généralisée du « *toujours plus de contrôle et d'outils* » et d'instrumentalisation. Pourtant, bon nombre de témoignages sur le terrain révèlent aussi de manière récurrente un réel manque d'efficacité et, quand ils existent, des résultats bien éloignés des objectifs initiaux affichés.

Certes caricaturale, mais quelque peu accablante pour des experts s'appuyant pourtant sur des outils de modélisations et de contrôle des plus sophistiqués, l'illustration de ce phénomène se retrouve avec ce qui se passe depuis plusieurs années sur les marchés financiers où les niveaux d'expertise en modélisation en tous genres n'ont cessé de croitre. Pour mémoire, en 2011, le CAC 40 finit l'année autour de 3.100 sachant que pour ce même exercice il était attendu entre 4.100 et 4.700 un an plus tôt, soit une erreur par défaut de 25 (%) à 30 (%). L'indice Euro Stoxx 600 se retrouve lui à 240 contre une attente, un an plus tôt pour le même exercice, entre 295 points et 320 points soit une erreur par défaut de 20 (%) à 25 (%).

Paradoxalement, alors qu'elle peut bien évidemment se retrouver à tous niveaux de l'entreprise, cette tendance instrumentaliste dans la gestion des interfaces inter-organisationnelles, toujours plus nombreuses et de surcroît stratégiques, a durablement laissé espérer une possible mise sous-contrôle formel tous azimuts, et *de facto* une réduction des risques d'échec et d'incertitude associés via ce recours systématique voire excessif aux outils de contrôle formel. C'est en cela que peuvent nous interpeller des auteurs comme Macneil (1980)[11] pour qui la recherche impérieuse du profit et l'intérêt propre des parties prenantes prévalent à tort sur l'altruisme et la volonté d'engagement collectif. Dans une telle logique, il est admis que ce qui détermine les liens efficaces et efficients entre des parties prenantes et donc leur engagement mutuel, ce sont les résultats quantifiés, et la recherche de la performance mesurée à la manière de multiples approches « *scorecardienne* ». Dans ce sens, sous couvert d'un léger dosage d'informel, Kaplan et Norton (1992, 1996) ont fortement influencé les entreprises en développant de manière exhaustive les questions liées à l'élaboration de tableaux de bord prospectifs inter-firmes. Une autre approche emblématique est celle de l'analyse de la chaîne de valeur intégrée au domaine de la gestion stratégique des

[11] L'auteur est considéré comme le principal contributeur de la théorie du contrat social qui avance que, dans les relations interpersonnelles et inter-organisationnelles, tout ne peut être anticipé et formalisé.

coûts développée par Shank et Govindarajan (1992). Enfin, le sujet abordé ici ne saurait s'affranchir du courant porté par Williamson (1985) et la théorie des coûts de transaction déjà mentionnée et sur laquelle nous reviendrons dans les pages suivantes.

Ainsi, sous la pression des résultats, l'omnipotence des directions financières et des maisons mères, il est en fait devenu extrêmement difficile de ne pas succomber aux propositions de consultants instrumentalistes. A titre d'illustration, voici ci-dessous un message reçu personnellement de la part d'une firme internationale majeure dans les activités de conseil en systèmes d'informations :

> ***"Measure What Matters—and Take Action to Meet Business Goals***
>
> *Dear Stephane Nogatchewsky,*
>
> *With so many variables to consider, decision-makers scramble to keep up with day-to-day business fluctuations. Instead of just unleashing more and more data on them, your business intelligence (BI) solution should be focused on relevant trends and your most important business goals.*
>
> *Join us for "From Strategy to Execution: Scorecards and BI, an exclusive Company Or Webcast". We'll cover the basics of must-have tools in your BI portfolio, such as scorecards and dashboards, and review best practices for getting started. Then we'll dive into practical how-toes: defining and measuring key performance indicators (KPIs) and creating a BI interface that lets users keep up with current trends—and adjust business processes as they go.*
>
> *Join Company Or to learn how to:*
>
> - *Define strategy and monitor execution with a single business intelligence platform*
> - *Implement an integrated scorecard for tracking performance via real-time KPIs*
> - *Translate insight into action using Company Or's innovative action framework"*

Certes, des perspectives alternatives ont vu le jour et bénéficié d'un réel écho à travers des auteurs comme Gietzman (1996), Lord (1996), Guibert et Dupuy (1997), van der Meer-Koistra and Vosselman (2000), Tomkins (2001), Dekker (2003) ou Cooper et Slagmulder (2004). Le trait commun à cette contribution académique est la question, développée de manière significative, de la part à accorder au contexte relationnel et au capital social dans le domaine du contrôle inter-organisationnel et pour lequel les outils, les techniques et autres approches de contrôle pourraient être revisitées. En particulier, même s'il n'aura pas l'écho de Williamson (1985) et la théorie des coûts de transaction, il semble pertinent d'insister sur l'émergence, avec Granovetter (1985), du concept d'« *Encastrement* ». Ce dernier souligne notamment un potentiel d'avantages économiques non réplicables par les marchés, les

contrats ou l'intégration verticale. Ceci étant dit, quel intérêt peut-on trouver à réfléchir sur la dualité entre contrôle formel et contrôle informel, et à comparer ou évaluer des outils spécifiques aux approches proposées ?

C'est justement pour tenter de répondre à cette question que, m'appuyant sur des apports académiques pertinents et disponibles, j'ai aussi voulu profiter de ma situation professionnelle pour faciliter une mise en perspective pragmatique de cette interrogation appliquée aux relations inter-organisationnelles au sein de l'aéronautique civile. Durant mes nombreuses années au sein de l'industrie aéronautique, et de par mes fonctions soit au sein de départements achats et industriels, soit au sein de départements stratégie et commerce, j'ai été amené à côtoyer un éventail très large d'acteurs potentiellement impliqués sur l'ensemble de l'échelle hiérarchique en tant que client ou vendeur. Fort de cette opportunité, j'ai ainsi pu mener une enquête qualitative au quotidien et sur une longue durée. Ainsi, cette immersion totale de longue durée se veut être un moyen d'approfondir ma recherche dans une logique proche de l'ethnographie puisqu'il s'agira ici de mener une étude explicative et comparative de caractères sociaux et culturels d'acteurs appartenant à des entreprises co-opérantes.

Mais pour revenir au point soulevé ci-dessus, il me revient à l'esprit cette réponse que me fit un jour le Président Directeur Général d'une entreprise fournisseur d'envergure internationale et qui, compte tenu des caractéristiques du personnage – brillant, rigoureux, travailleur et foncièrement honnête - résonne encore fortement dans ma tête quand il s'agit d'aborder les questions de gestion des interfaces inter-organisationnelles, ce *« working together »* prôné par les anglo-saxons :

> *« Pour nous, fournisseurs, les acheteurs peuvent être de très bons modèles. J'ai toujours pensé qu'AEROMOTOR était un excellent modèle pour nous. Par exemple, votre approche dans l'évaluation fournisseur et la gestion des relations clients/fournisseurs a été présentée au Comité Exécutif de la maison mère. Sur ce point nos divisions étaient en retard, clairement. Ceci a d'ailleurs été acté formellement, ce qui n'est pas rien… Il y a ainsi un effet positif sur les organisations, les méthodes de travail et les relations. Cependant, il y a aussi un gros risque que trop de formalisation n'incite les utilisateurs à n'être qu'exclusivement soucieux de la forme. C'est d'ailleurs toujours le problème entre un concepteur et un utilisateur. Le concepteur considère qu'il faut toujours laisser une marge de flexibilité dans l'usage d'un formalisme alors que l'utilisateur, parce que paresseux, ne prendra souvent pas le recul nécessaire.*
> *Toujours est-il qu'à la question : le client peut-il empiéter sur mon organisation, je réponds clairement NON. AEROMOTOR peut effectivement mettre en évidence certaines spécificités. Par exemple, nous avons besoin d'un responsable de suivi production comme stipulé à maintes reprises par AEROMOTOR. Cela signifie-t-il qu'AEROMOTOR peut contrôler ou même remettre en question l'organisation de ma société ? Je ne le crois absolument pas. »*

Ce jour-là, j'ai compris tout l'intérêt d'analyser concrètement la mise en place des dispositifs de contrôle destinés au management des interfaces inter-organisationnelles. J'ai compris l'intérêt qui peut résider dans la critique de dispositifs de management complexes et rationnels préconisés de manière quasi-systématique au sein des grandes entreprises, avec une mise en place et une opérationnalisation souvent chaotiques, onéreuses et le plus souvent appuyées par des professionnels de cabinets de conseil qui appliquent à X ce qu'ils ont vu ou proposé à Y. Dans cette logique, existe l'intérêt de dépasser les approches fonctionnalistes pour étudier l'influence du contrôle des pratiques sociales - comme les relations interpersonnelles - sur la performance des pratiques inter-organisationnelles alors même que la majorité des dispositifs de contrôle ne prend en compte que trop peu sinon pas du tout la dimension informelle des relations inter-organisationnelles. Cette dernière affirmation peut s'appuyer sur une revue de littérature exhaustive sur le sujet, mais aussi dans mon cas sur une expérience de plus de 10 ans sur le terrain. En effet, la foison de référentiels et autres outils de mesure et d'évaluations n'a eu de cesse d'occuper les esprits et de ponctionner les finances de grands groupes industriels ces dernières années. Pourtant, dans la plupart des cas le constat semble sans équivoque, comme l'atteste l'étude d'Ernst & Young, mentionnée plus haut : les méthodes de suivi et de contrôle inter-organisationnels restent insatisfaisantes.

Dès lors, cette thèse ne cherche pas à décrire des relations interentreprises vues comme des systèmes sociaux ouverts, en rien comparable à des « boites noires ». Ceci est un point clé mais déjà longuement étudié par de nombreux chercheurs. A travers une telle appréhension des relations inter-organisationnelles, il s'agira en fait de mieux comprendre l'intelligibilité de l'action collective conjointe et du contexte relationnel à établir pour qu'à l'intérieur de celui-ci puissent se développer efficacement les relations inter-firmes. Il s'agira de comprendre si cette appréhension des relations interpersonnelles – trop souvent refroidie voire entravée par des dispositifs de management complexes et exclusivement rationnels – n'est, en fait, pas indispensable au succès dans la gestion des interfaces inter-organisationnelles. Une telle démarche abondera dans le sens d'une nécessaire simplification mais aussi d'une complémentarité des approches qualitatives et quantitatives pour mieux définir et développer des outils de contrôle indispensables à la gestion des relations inter-organisationnelles.

Après quoi, l'apport pourra aussi se situer sur les déviances que l'on observe en abordant la complexité des relations en elles-mêmes et, en particulier la pluralité, les caractéristiques et autres contraintes des principaux acteurs concernés. Pour cela, proposition est faite de

s'appuyer principalement sur trois contextes d'interfaces inter-organisationnelles: sous l'angle de l'observation participante pour l'un et d'entretiens semi-formels pour les deux autres. Cette étude est aussi menée au sein du secteur aéronautique car il m'est particulièrement bien connu[12]. Et par ailleurs, une de ses caractéristiques est bien l'impérieuse nécessité de faire fonctionner les relations inter-organisationnelles en tenant compte de la dimension essentielle représentée par la gestion des compétences, le transfert d'expérience et l'émulation des talents.

Ce faisant, il devient possible de considérer face à un tel défi la pertinence d'un remodelage ou repositionnement organisationnel et méthodologique de la fonction contrôle. Une telle posture justifiera que l'on s'attarde sur des modalités organisationnelles spécifiques et sur lesquelles il est possible de trouver des points d'ancrages nécessaires pour monter en généralité et, par exemple aborder les questions du rôle et de la responsabilité de la direction générale.

[12] Voir Curriculum Vitae dans « Appendix 1 ».

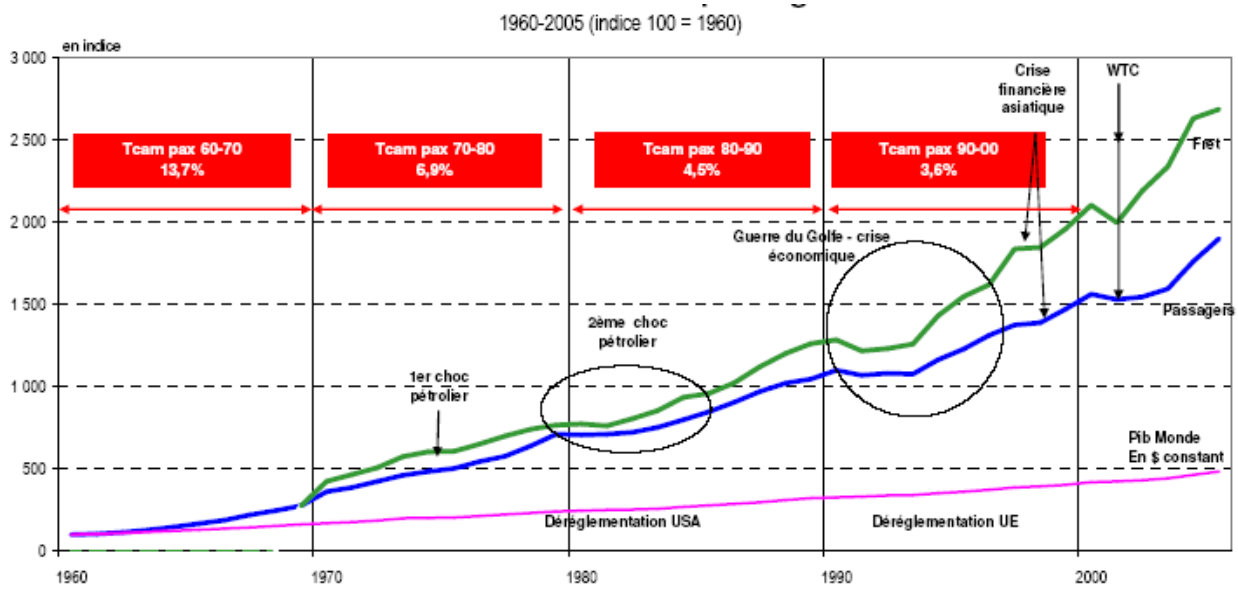
Synthèse de la thèse en Français

SECTION 3 - CONTEXTE ET CARACTERISTIQUES DE L'ENVIRONNEMENT ETUDIE

Comme l'indique son titre, cette section vise à fournir un éclairage efficace sur les rouages propres à l'industrie aéronautique civile et qui justifient une mise en perspective au regard du contrôle organisationnel dans la gestion des relations inter-organisationnelles. Après cette explicitation des caractéristiques de notre objet d'étude, il sera proposé de détailler le plan et la contribution visée par cette thèse.

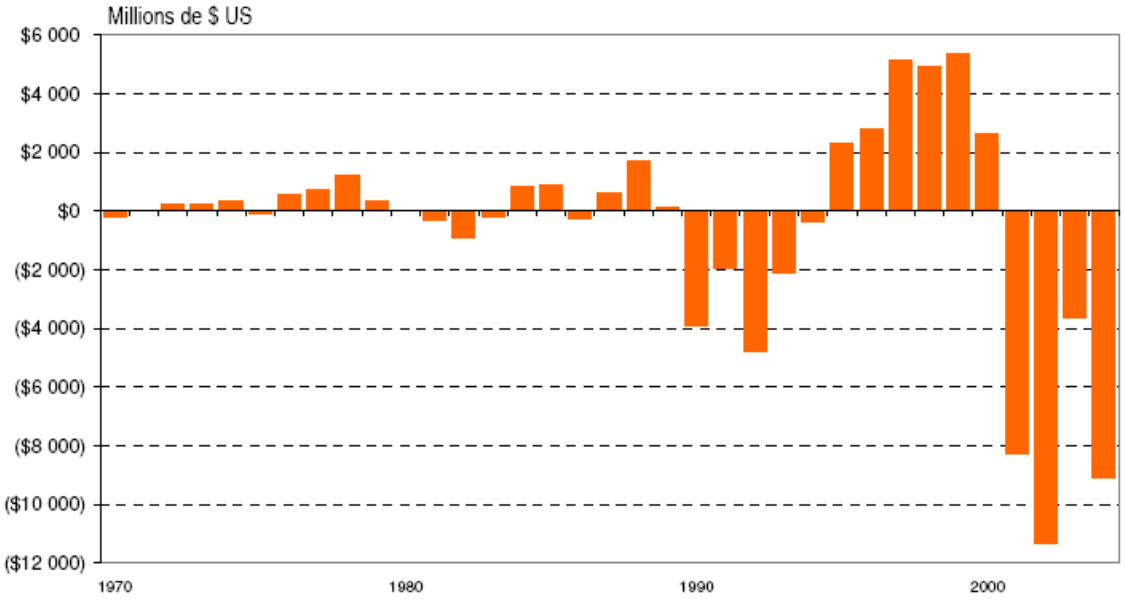
> *« Les profits des compagnies aériennes divisés par deux en 2011.*
> *Les bénéfices des compagnies aériennes vont être divisés par deux en 2011 en raison des prix élevés du pétrole, des troubles dans le monde arabe et des catastrophes naturelles au Japon, a annoncé l'Association Internationale du Transport Aérien (IATA). L'IATA avait évalué ces bénéfices à 8,6 milliards au début du mois de mars, soit juste avant le tremblement de terre, suivi par un tsunami et la catastrophe nucléaire de Fukushima, au Japon. L'estimation de 4 milliards représente une chute de 78 % par rapport aux profits de 18 milliards de dollars réalisés en 2010, année de forte reprise pour le transport aérien après la crise économique. » (AFP – 6/06/2011)*
>
> *« Quand deux entreprises veulent entrer en coopération, dans l'aéronautique, c'est forcément du long terme car les programmes durent longtemps » (EVP Industrial Strategy - AEROMOTOR ; 2011)*
>
> *« La raison pour laquelle on coopère dans l'aéronautique, c'est minimiser les risques financier. Un programme peut marcher ou non. En faisant de la coopération, on réduit le risque car avec le même capital, on peut participer à plusieurs programmes. Il y a une sorte d'auto-assurance. On ne met pas tous les œufs dans le même panier » (ancien CEO - GearB ; 2010).*
>
> *« Quand on regarde toute l'aéronautique, tout le monde coopère avec tout le monde. Il n'y a pratiquement pas de programme où on est tout seul » (ancien VP Programs - Zizou; 2009).*

L'histoire de l'industrie aéronautique est indubitablement liée aux changements de paradigmes technologiques et réglementaires. Les derniers en date sont ceux de *l'Airline Deregulation Act en 1978* en Amérique du Nord suivi dix ans plus tard, de la déréglementation en Europe. S'il est encore difficile d'en mesurer toutes les conséquences, on pourra néanmoins retenir la croissance exponentielle du trafic illustrée ci-après :



Graphique 3 - Evolution du trafic mondial passagers et fret

Egalement, le renforcement des contraintes de sécurité et la baisse des prix méritent d'être mentionnés tout comme la dégradation des résultats moyens des compagnies aériennes illustrée ci-dessous:



Graphique 4 - Historique des résultats des compagnies américaines (1970-2005)

(Source étude BIPE mars 2006)

En réaction, les compagnies aériennes ont diminué leurs dépenses superflues et ont demandé à leurs principaux fournisseurs de baisser leurs prix. Certaines compagnies sont allées jusqu'à redéfinir tous leurs leviers de performance et les structures de coûts. Elles ont cherché de nouveaux marchés et redessiné leurs frontières par des alliances (Saglietto et Levy, 2007) et/ou l'externalisation des activités n'appartenant pas à leur cœur de métier comme la maintenance des appareils ou le service de restauration. Parallèlement, de nouvelles réglementations ont imposé aux équipementiers aéronautiques de fournir les plans de leurs pièces (ex. les pièces des moteurs) à leurs clients. Sont alors apparus les PMAs (Parts Manufacturing Approvals), fabricants à bas coûts qui vendent directement les pièces détachées les plus courantes aux unités de maintenance des compagnies aériennes sans passer par les motoristes (Rossetti et Choi, 2005). Dans un tel cas, il s'en est suivi une désintermédiation au détriment des motoristes, une menace sur leur performance globale et une nécessaire réflexion stratégique sur la pérennité de leur « *business model* » initial.

Les principes de base nous indiquent que les entreprises s'efforcent de maintenir des coûts fixes faibles et des recettes élevées et stables. Dans l'aéronautique civile, ces critères sont inversés. En général, les coûts fixes y sont très élevés et les recettes très fluctuantes. A forte intensité de capital, du fait des coûts élevés d'investissement et de maintenance des avions, cette industrie génère des retours sur investissement de plus en plus faibles pendant des années. De plus, les compagnies aériennes sont fortement régulées, ce qui a aussi un fort impact sur l'intégralité de la chaîne de valeur. Tous ces fardeaux sont très déstabilisants, ce qui explique pourquoi cette industrie est confrontée à des transformations spectaculaires. Dans le secteur de l'aéronautique civile, les gens ont conscience, depuis les années 90, que les vieilles compagnies aériennes incapables de répondre aux nouveaux défis et de satisfaire certains facteurs clés de succès[13] seront automatiquement exclues du marché.

Prenons comme exemple l'industrie aérienne américaine qui a longtemps été considérée comme la principale industrie aérienne; la plupart des gens reconnaissent que cette industrie a aussi connu un état chaotique pendant quelques années. Dès 1993, un rapport[14] du

[13] Définis comme les facteurs de compétitivité qui impactent le plus la capacité des membres de l'industrie à prospérer sur le marché, les facteurs clés de succès sont indispensables pour réussir face à la concurrence.

[14] La Commission Nationale chargée de maintenir une industrie du transport aérien compétitive. Changement, Défi et Concurrence : Un Rapport pour le Président et le Congrès. Washington, D.C.: U.S. Government Printing Office, Août, 1993.

gouvernement américain précisait que cette industrie avait perdu beaucoup d'argent au cours des trois dernières années et n'avait jamais eu de retours sur investissement substantiels.

Comme indiqué par l'Association du Transport Aérien (Air Transport Association récemment rebaptisé Airlines for America[15]), la perte fut d'environ $13 milliards de 1990 à 1994. De 1995 à 2000, les compagnies aériennes américaines ont gagné $23 milliards puis perdu $30 milliards de 2001 à 2005. Les compagnies aériennes ont gagné $2 milliards de 2006 à 2008 tandis qu'elles ont perdu environ $2.5 milliards en 2009. Plus précisément, les revenus d'exploitation en 2009 ont chuté de 16,9 (%) pour atteindre $155 milliards, ce qui a conduit à la plus forte contraction sur deux ans de l'histoire de cette industrie et a monté les pertes de l'industrie à $58 milliards sur la période de neuf ans commençant en 2001.

Cependant, quelques compagnies aériennes américaines ont constamment prouvé qu'elles sont capables de rivaliser avec succès. Parmi les huit principales compagnies américaines, *Southwest Airlines* est sans doute celle qui a la plus longue liste de succès.

Au regard des nouvelles compagnies aériennes américaines *interstate* apparues après la déréglementation de 1978, McCabe (2006) propose douze facteurs clés de succès pour expliquer leur succès ou leur échec. Cette position est soutenue par le modèle informatique d'une compagnie aérienne construit pour simuler les opérations sur les périodes de temps étudiées – pour la plupart des compagnies aériennes sur une période de cinq ans. Le résultat principal de ces simulations est le suivant : « *les compagnies aériennes à succès doivent bien faire beaucoup de choses. Ne pas s'appliquer sur un domaine quelconque pourrait ne pas mener à un échec. Cependant, fonctionner très mal dans un domaine quelconque ou mal dans deux domaines ou plus, rend le succès difficile à atteindre »'* (traduction des propos de McCabe, 2006). De plus, selon les résultats de cet auteur, les compagnies aériennes se sont partiellement transformées en entreprises de services. Pour réussir, elles doivent être efficaces sur quatre points généraux: attirer les clients, gérer leur flotte d'avions, gérer leurs salariés et gérer leurs finances.

[15] Air Transport Association of America, Inc. Economics; Annual Revenue and Earnings; http://www.airlines.org.

La capacité de satisfaire les facteurs clés de succès associés à ces points généraux, mise en perspective avec le succès ou l'échec des huit compagnies aériennes considérées, est bien représentée par le tableau suivant :

	Good	Above Average	Average	Below	Poor	Success / Failure
American Airlines		1	4	5	2	Poor
America West	3	3	3		3	Above Average
Continental Airlines	2	2	4	2	2	Average
Delta Air Lines	1	1	5	1	3	Poor
Northwest Airlines	1	2	2	1	5	Poor
Southwest Airlines	6	3	1	1	1	Good
United Airlines	1	3	3	2	2	Average
US Airways	1			4	6	Poor

Tableau 2 - Evaluation des atouts compétitifs des compagnies aériennes US sur la base de douze facteurs clés de succès

Basée d'une part sur les classements des huit principales compagnies aériennes américaines sur 12 facteurs spécifiques et d'autre part sur un rang pour chaque compagnie aérienne au regard de sa capacité à prospérer sur le marché, l'étude montre comment le monde des affaires a changé depuis la déréglementation instaurée en 1978 et soulève aussi une question clé : pourquoi cette industrie est-elle capable de continuer à attirer assez d'investisseurs pour maintenir toutes ces compagnies aériennes dans un business complètement fou et qui rime avec chaos ?

L'auteur propose une explication qui s'appuie sur un phénomène économique dit « théorie de base » et qui consiste en une *''... formulation mathématique de l'environnement concurrentiel d'une industrie. Comme dans beaucoup de modèles mathématiques, il peut y avoir beaucoup, une ou aucune solution aux équations du modèle. D'après cette théorie, le modèle de l'industrie aérienne n'a aucune solution. C'est donc un ''noyau vide''. Beaucoup de choses ont changé au cours de la décennie qui a suivi, mais cette industrie semble toujours aussi chaotique qu'avant''* (McCabe, 2006). Bien que partiellement exacte, cette position radicale ne doit pas pour autant être considérée comme allant de soi. Certes, des chercheurs comme Telser (1988, 2007), économiste de l'Université de Chicago dont le travail comprend des

recherches sur la « *Core theory* », étudient encore cette théorie en ce qui concerne l'industrie du transport aérien. Mais d'autres économistes développent d'autres théories … Nous devons donc rester prudents. Néanmoins, il est acquis que ces débats suggèrent assez bien le dilemme inextricable auquel est confrontée l'aéronautique civile.

Sans prendre beaucoup de risques, il est aussi possible de dire que, lorsque la déréglementation du transport aérien commercial a été instaurée au début des années 80, les profits furent remplacés par des pertes et les compagnies aériennes furent anéanties, ce qui imposa de nouvelles conditions de succès via de nouvelles façons de penser et de nouvelles méthodes d'organisation. En effet, le système économique de l'aviation commerciale mondiale fut développé il y a des décennies et est rapidement devenu désuet. En particulier, depuis la fin des années 90, la nature des marchés et les modèles commerciaux ont rapidement changé pour l'ensemble de l'industrie aéronautique civile où il s'avère primordial de développer des produits meilleurs, moins chers et plus rapides, et d'apporter davantage de valeurs aux clients. Ceci est notamment lié à une caractéristique clé de cette industrie où, traditionnellement, le succès dépend fortement de la capacité à faire face à des cycles commerciaux très spécifiques.

Les raisons sont multiples : les compagnies aériennes vendent un produit périssable et les prix de vente dépendent fortement de l'offre et de la demande. Les compagnies aériennes achètent aussi de nouveaux avions quand elles peuvent prévoir de façon certaine des hausses de la demande à court terme, ce qui est clairement influencé par l'environnement économique et politique mondial. Par ailleurs, pendant les périodes où la demande est élevée, le nouvel appareil sera reçu au moins 12 mois après le bon de commande. Lorsqu'une compagnie aérienne commence à passer de nouvelles commandes, l'industrie entière a tendance à faire de même. En effet, aucune compagnie aérienne ne peut accepter de perdre des parts de marché en raison d'un nombre insuffisant d'avions et en même temps, aucune compagnie aérienne ne veut faire voler de vieux avions quand ses concurrents utilisent de nouveaux appareils. Dans ces moments-là, cette industrie connaît une forte demande et des prix avantageux.

Cependant, les cycles commerciaux précédemment mentionnés montrent que les périodes de prospérité ont toujours une fin. L'économie connaît alors un ralentissement, la demande tombe en dessous des prévisions collectives et les commandes, les prix et les profits chutent. La production diminue, les prix augmentent dans la supply chain et les profits s'effondrent.

Bien que l'amplitude de ce cycle puisse être réduite au cours du temps grâce à des technologies et un management plus performants, la plupart des professionnels s'accordent sur le fait que les cycles des avions commerciaux ne seront jamais complètement éliminés.

De plus, à long terme, il est évident pour la plupart des opérateurs que l'augmentation de la compétitivité sur le marché menace la certitude d'une croissance des revenus tandis que les coûts continuent à croître de façon inexorable. D'où la nécessité de devenir plus souple vis-à-vis des changements du marché alors que la traditionnelle réduction des coûts et l'efficacité opérationnelle ont atteint leurs limites, ce qui exige donc de nouvelles approches. Déjà en 2002, ce message était martelé par Leo van Wijk (PDG de la compagnie aérienne KLM Royal Dutch Airlines & Président de l'Association des Compagnies Aériennes Européennes). Lors d'une conférence tenue à Bruxelles (Aviation Européenne : vers une industrie durable, Club d'Aviation Européenne), il insista sur le point suivant : chaque compagnie aérienne a besoin de réévaluer ses structures de coût et de revenu.

La représentation qui suit permet de saisir en un seul cliché les éléments constitutifs de l'origine du modèle aéronautique tel qu'il existe aujourd'hui. Avec des cycles économiques fluctuants et des changements de modèles d'affaires (« *business models* »), les acteurs de l'industrie aéronautique civile (compagnies aériennes, constructeurs d'avions, équipementiers ou « OEM », et autres fournisseurs) font face à des enjeux interdépendants. Etablies sur des modèles économiques dépassés et des acquis sociaux enracinés, les compagnies aériennes doivent réduire leur prix et nécessairement leurs coûts face notamment à de nouveaux entrants prêts à casser les prix. Ce faisant, les compagnies cherchent aussi à améliorer leur offre. Ceci a une conséquence directe sur les avionneurs en terme de nécessaire efficience des modèles d'avions proposés. Cette recherche d'efficience se répercute automatiquement sur les équipementiers au sens large (moteurs, trains d'atterrissage…) contraints de travailler sur l'optimisation de leur coûts d'acquisitions et sur leur développement, en particulier. S'en suivent de nécessaires consolidations de la chaîne fournisseurs et optimisation des relations clients fournisseurs pour maximiser efficience et réductions de coûts à travers des prises de risques croissantes, des réductions de prix, un travail d'amélioration continue et de réduction de cycles de fabrication. Les buts visés sont la réduction de la taille et de la complexité de la chaîne de fournisseurs reposant sur l'accroissement de la valeur ajoutée à tous niveaux. La figure suivante représente ces éléments constitutifs de l'industrie aéronautique civile :

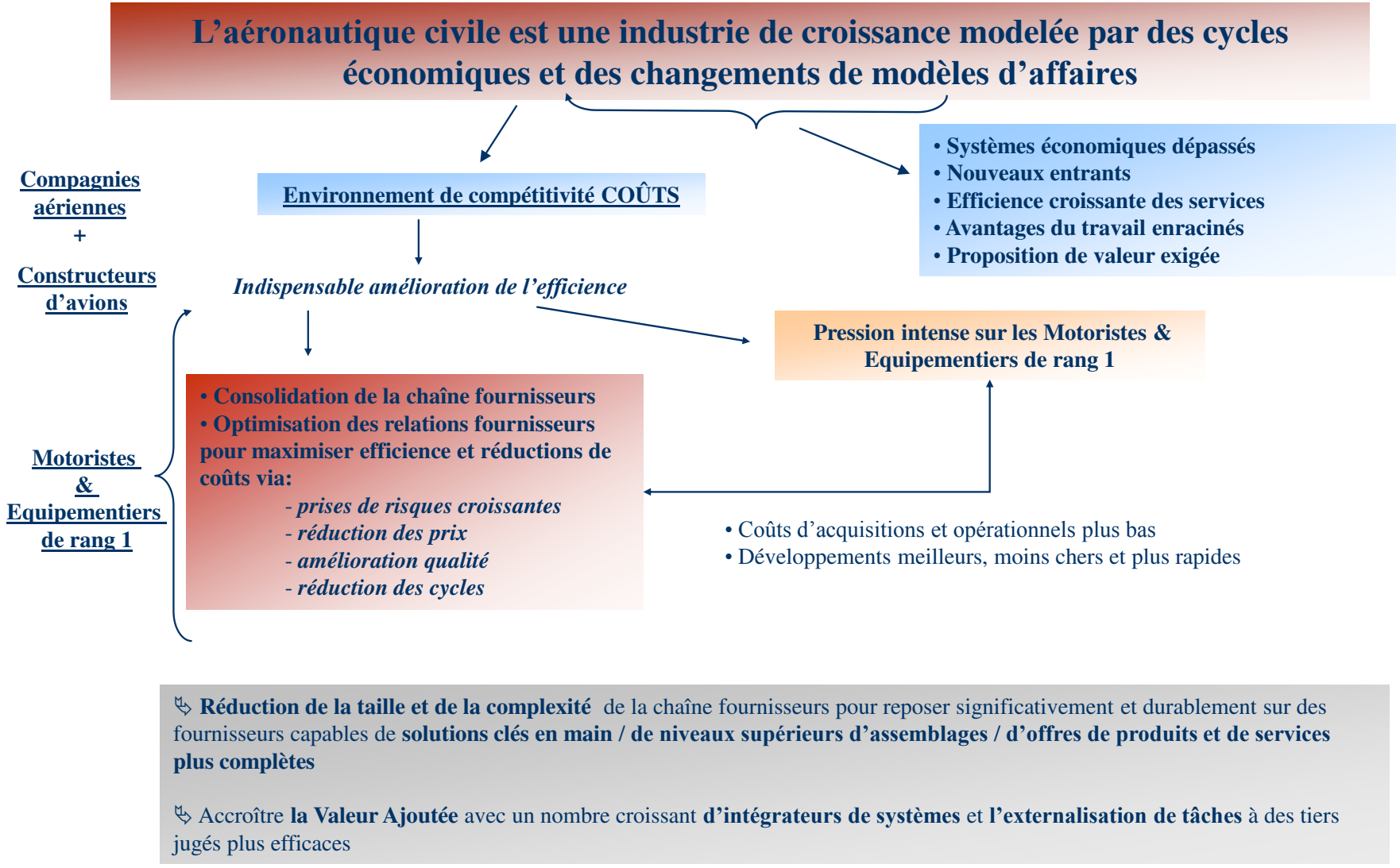


Figure 1 - Eléments constitutifs du modèle d'affaires de l'industrie aéronautique civile

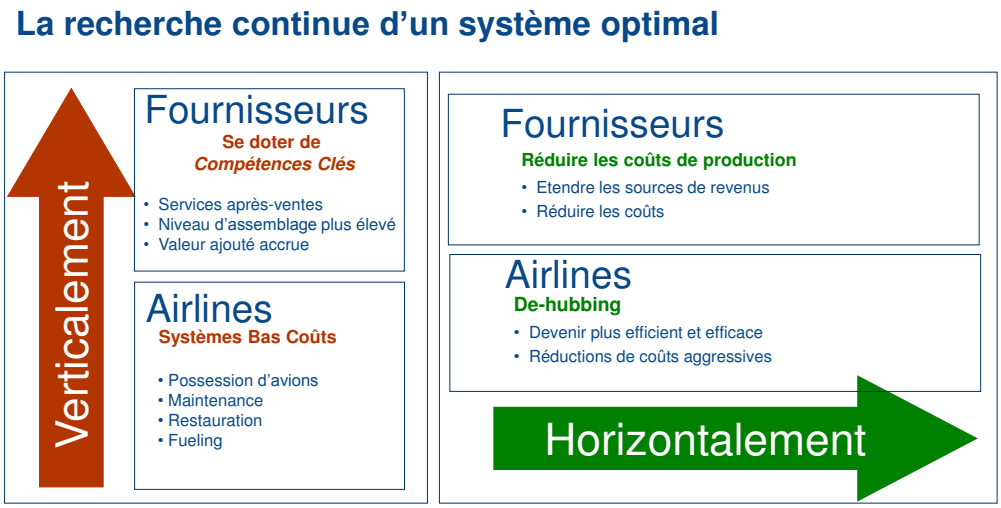
Comme indiqué par Håkansson et Lind (2004), de nombreux acteurs industriels ont connu le même changement dans leur manière de conduire les opérations pendant les 25 dernières années : des méthodes de management telles que le « *juste à temps* », le management basé sur le temps (*TBM = Time based management*), la production au plus juste (*Lean Manufacturing*) et la « *réingénierie* » des processus (*BPR = Business process reengineering*) ont été peu à peu introduites pour réduire les niveaux de stocks au sein des entreprises. Conséquence directe, ces mesures ont augmenté la dépendance des entreprises vis à vis de leurs clients et de leurs fournisseurs.

En plus de cette tendance, il est à noter que les produits ou services proposés reposent sur des technologies qui sont à des stades de développement significativement différents avec des clients qui ont des exigences différentes et parfois même contradictoires. Au vu de la difficulté de la tâche, les entreprises n'ont aucune marge de manœuvre et fonctionnent au sein d'un réseau de relations qui ont des caractéristiques assez différentes. Ainsi, la capacité de gérer avec succès une telle situation devient un facteur de différenciation stratégique. Ce phénomène est valable pour le secteur de l'aéronautique qui a une chaîne de fournisseurs très spécifique avec aucun autre choix que d'améliorer rapidement structures d'exploitation et efficacité pour rester compétitif dans un environnement aussi déréglementé et concurrentiel. C'est ce que Boeing a fait à la fin des années 90 quand, via des améliorations de fabrication et d'approvisionnement sur la ligne du B737, celui-ci a réduit ses temps d'écoulement de 44%, ses stocks de 64% et ses en-cours de 44%. Cependant, ces mesures internes auraient eu un impact limité sans une contribution notable des fournisseurs externes, obtenue grâce à une prise en charge appropriée.

En fait, le marché de l'aéronautique civile laisse les compagnies aériennes et les fabricants d'avions sans autre possibilité que d'instaurer une pression intense sur leurs fournisseurs et d'exiger des avions plus performants et des systèmes de bord ayant des coûts d'acquisition et d'exploitation plus faibles. Pour ce faire, entre 1998 et 2002, Boeing a réduit sa base de fournisseurs de plus de 3500 à légèrement plus de 1500 et, grâce à des efforts de réduction des coûts couronnés de succès, la marge opérationnelle de l'entreprise a augmenté de 3.6% en 1998 à 8.4% en 2001 (Aldermann, 2002). Ce qui se passa avec Airbus en 2006 donne un autre exemple concret et plus récent. Après le dévoilement de dérapages graves sur le programme de l'A380, Airbus a lancé le programme Power 8 dont l'un des objectifs principaux était la

restructuration de la chaîne de fournisseurs pour réaliser des économies de €2,1 milliards par an à partir de 2010.

Ainsi, comme 65-75% des coûts directs proviennent d'articles achetés, les entreprises de l'aéronautique civile dépendent fortement de leur « chaîne de fournisseurs ». Cette dernière se doit d'offrir une meilleure performance avec des coûts d'acquisition et d'exploitation plus faibles, une qualité améliorée en continu et un raccourcissement des délais de fabrication afin d'accroître la réactivité. L'ensemble se réalise dans la recherche continue d'un système optimal qui oscille entre consolidations verticale et horizontale comme représenté ci-dessous où l'on peut noter par acteur les objectifs cibles et leur rationnel sous-jacent :



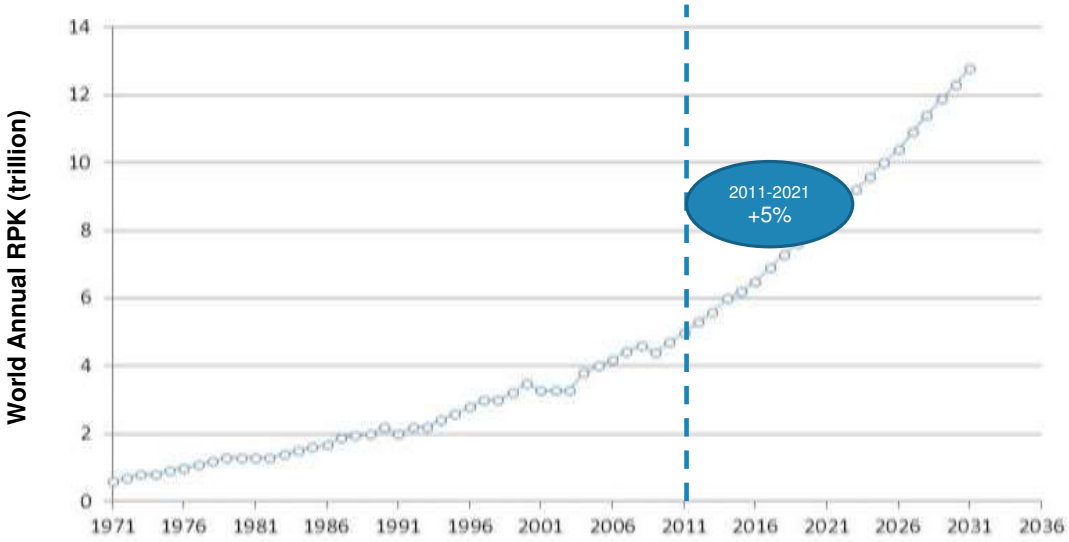
Source: Aldermann, H., (2002), "Industry Consolidation: Review and Outlook, The Trend Continues", Third Annual Aviation Industry Suppliers Conference in Europe (AISCE), Toulouse, 2002

Figure 2 - Logiques de consolidation dans l'aéronautique civile

Ces défis sont énormes mais font sens puisque, dans les prochaines années, l'industrie du transport aérien mondial espère une croissance du « *Revenue Passenger Kilometers* » (RPK ou unité de mesure du volume de passagers transportés par les compagnies aériennes) avec un taux moyen annuel de 5.3% de 2010 à 2029.

Selon des sources IATA (2010), les régions d'Asie Pacifique et d'Amérique Latine espèrent avoir la croissance la plus rapide en termes de RPK et souhaitent atteindre un taux annuel de plus de 7% pendant les 20 prochaines années. Le Moyen Orient et l'Afrique auront un taux de croissance annuel moyen de 6% ; la Russie et les Etats du Commonwealth, un taux de près de

5% ; les deux marchés matures d'Europe et d'Amérique du Nord auront une croissance de l'ordre de respectivement 4% et 3%. D'après les prévisions, l'Asie-Pacifique deviendra le marché avec le plus haut RPK; l'Amérique du Nord et l'Europe suivront. Les routes aériennes entre l'Europe et l'Asie Pacifique atteindront le plus haut RPK avec une vitesse de croissance de 5.6% au cours des 20 prochaines années. Les routes aériennes Nord-Atlantique arrivent en deuxième avec une vitesse de croissance de 4.3%. Les routes aériennes du Moyen Orient à l'Asie Pacifique devraient croître le plus vite en termes de RPK à un taux de 7.5%.



Graphique 5 - Historique et projections d'évolution du trafic aérien (en 2012)

Dans un tel contexte et avec aucune alternative à la réduction des coûts par une consolidation de la chaîne de fournisseurs, il est communément admis que le succès sera fortement issu de l'optimisation des relations entre les parties prenantes de l'ensemble de la chaîne de valeur. Cette optimisation est nécessaire pour maximiser l'efficacité et la réduction des coûts mais aussi pour améliorer continuellement la qualité et partager les risques croissants (financier et technologique).

Par exemple, des relations acheteur-vendeur efficaces peuvent évidemment accélérer les cycles de développement des produits et réduire les coûts. Motivés par des critères de performance économique, ces objectifs sont aussi envisagés le plus souvent comme une opportunité de soutenir la croissance et la rentabilité. En effet, les compagnies aériennes n'ont pas d'autre choix que de se concentrer sur la gestion des risques quotidiens liés à la partie ‘‘recettes’’ de l'équation commerciale tandis qu'une grande partie des éléments de coût de

livraison des produits sur le marché peut être fixée par des fournisseurs spécialisés ayant des prix bas dus à leur expertise et à des économies d'échelle.

Cependant, proposer des produits moins chers ne peut plus suffire pour remporter des contrats. En particulier, « *pour les fournisseurs business-to-business, les avantages compétitifs traditionnels, basés sur des relations et des produits à valeur ajoutée, sont sous pression. Les organisations ''achats'' deviennent plus complexes, les concurrents à bas coûts de Chine et d'Inde deviennent de plus en plus présents et les innovations sont imitées plus rapidement »*' (Baumgartner et *al.*, 2005, p. 80).

Dans la même lignée, Kenny (1998, p. 16) soutient qu'il s'avère essentiel de « *penser en termes de gestion des affaires pour le compte de vos clients* », ce qui signifie finalement que, dans l'aéronautique civile, les compagnies aériennes sont autorisées à se concentrer exclusivement sur leur compétence essentielle i.e. le transport de passagers et de marchandises. Ceci constitue un changement radical pour ce business qui a besoin « *d'intégrer ces règles du côté opérationnel afin d'être capable de concrétiser les promesses* » attendues telles que recommandées par Byron et *al.* (2006, p. 44-45). En particulier, une grande majorité admet qu'une relation de travail étroite entre les parties prenantes des chaînes de valeur est devenue primordiale. Cependant, la plupart des acteurs reconnaissent aussi qu'il y a un énorme défi à relever pour y arriver et que cibler un marché ne crée que « *peu de valeur si l'entreprise ne peut pas développer facilement les capacités nécessaires pour répondre aux besoins des clients* » (Grant, 1991, p. 181).

Cette vision est en accord avec celle de Nadler et Tushman (1999, p. 48), qui se sont intéressés à la transformation des organisations commerciales au 21ème siècle et affirment que nous sommes vraiment entrés dans l'économie Post-Industriel. Nous connaissons une évolution rapide d'une économie basée sur la fabrication et les marchandises à une économie qui met l'essentiel de la valeur sur l'information, les services, les activités de support et la distribution.

Globalement, il est donc soutenu que les fabricants ou OEM (Original Equipment Manufacturer) aéronautiques ont besoin d'étendre leurs compétences naturelles pour développer de nouveaux leviers satisfaisants. Cependant, il est aussi assez légitime d'admettre que les capacités en jeu pour développer les compétences essentielles peuvent être

considérées sous différents angles. Conformément au sujet de cette thèse, nous nous concentrerons sur un des véritables enjeux, à savoir la gestion des interfaces inter-organisationnelles en termes de joint-ventures, d'acquisition d'entreprises spécialisées et d'externalisation de compétences bien choisies.

Synthèse de la thèse en Français

SECTION 4 - PLAN ET CONTRIBUTION DE LA THESE EN CONTROLE INTER-ORGANISATIONNEL

Cette section insiste sur la logique et la structure constitutives de cette thèse. Des éléments explicatifs sur les résultats obtenus et la contribution visée sont ensuite proposés. Ce faisant, la synthèse imposée par les règles du CNU pourra être suivie de la rédaction en anglais de ces travaux. La figure ci-dessous schématise le plan de la thèse en fournissant quelques explications et en montrant les liens entre les différents chapitres:

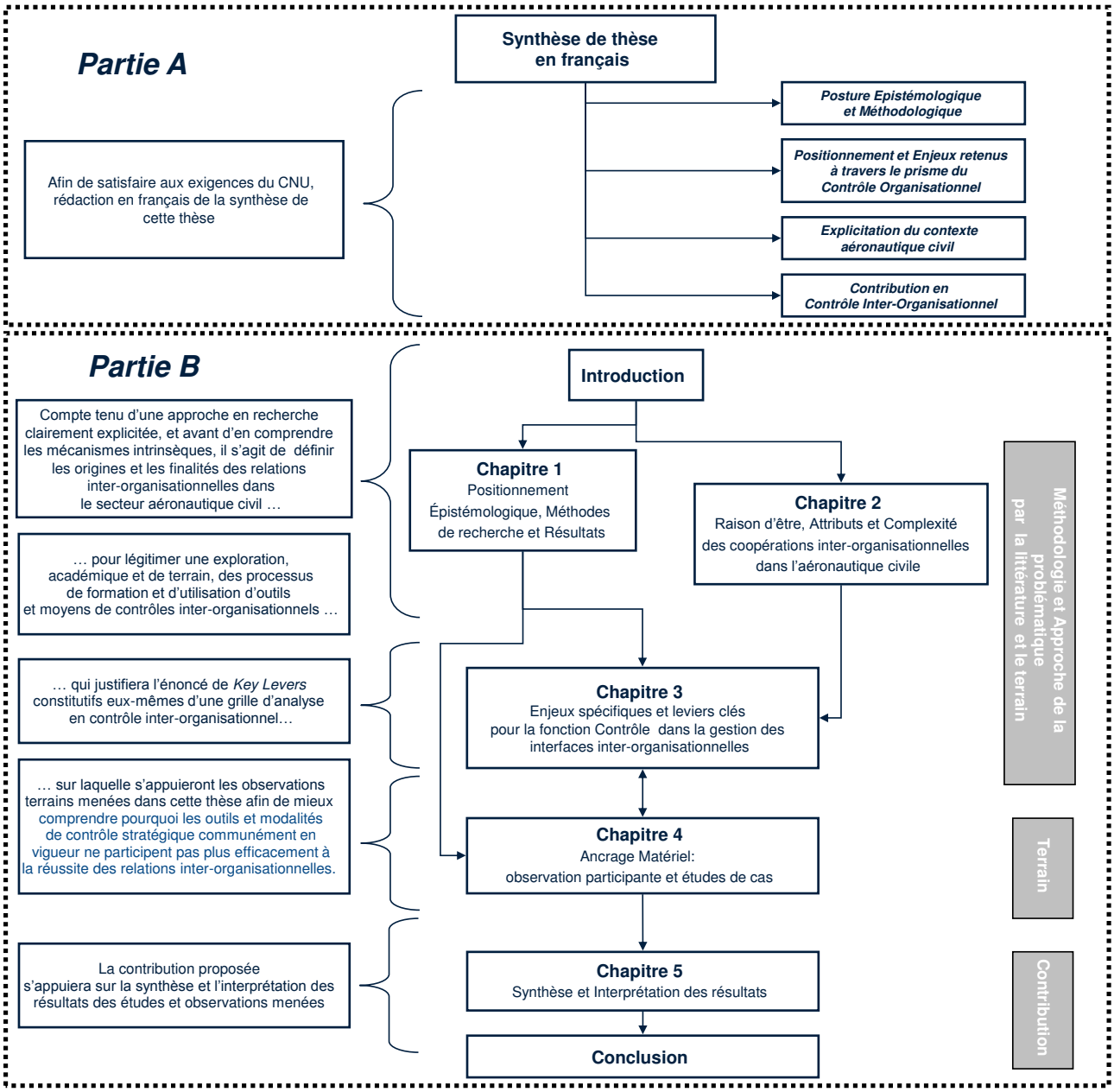


Figure 3 - Plan de la thèse

La thèse propose deux parties distinctes. La partie A est une synthèse rédigée en français de l'ensemble du document soumis. Dans la partie B, rédigée en anglais et après l'introduction, le chapitre 1 regroupe les aspects méthodologiques spécifiques à la démarche proposée ainsi que les principaux résultats des travaux.

Le chapitre 2 de la thèse détaille les caractéristiques propres au contexte de l'aéronautique civile. Cette partie reprend aussi la contribution académique aux questions de création de valeur dans l'industrie, et aborde les questions de raisons d'être, d'attributs des IORs et des types de difficultés de contrôle associées. Une étude de cas est alors exploitée pour préciser la problématique à partir du terrain et soulever la question du pourquoi tant d'échecs entretenus par des moyens de contrôles dont l'efficacité fait défaut dans leur définition et leur mise en application.

Dès lors (chapitre 3), il devient pertinent d'effectuer une revue de littérature traitant des défis proposés à la fonction contrôle dans la gestion des interfaces inter-organisationnelles. En particulier, il est question d'adéquation « complexité de la relation – configuration de contrôle », de contrôle formel et de contrôle informel. Il est à noter que, dans cette optique, la contribution académique prise en compte a trait au contrôle intra- mais aussi inter-organisationnel.

En capitalisant sur ces perspectives académiques et sur des observations terrain (voir chapitre 2, section 3 notamment), il devient alors possible d'établir une matrice croisant trois niveaux de complexité[16] et des leviers clés dans la construction et la gestion réussies de coopérations inter-organisationnelles. Représentée ci-après, cette matrice reprend les leviers clés ou « *Key Levers»* regroupés par typologie de relations inter-organisationnelles, et retenus en s'appuyant sur la contribution académique et le terrain précédemment évoqués. A chaque typologie possible de relations inter-organisationnelles, les « *Key Levers »* proposés sont adaptés au degré de complexité en jeu et *in fine* détermineront plus ou moins significativement le niveau de satisfaction des parties prenantes impliquées dans des relations inter-organisationnelles considérées.

[16] D'après la définition proposée par Thompson (1967)

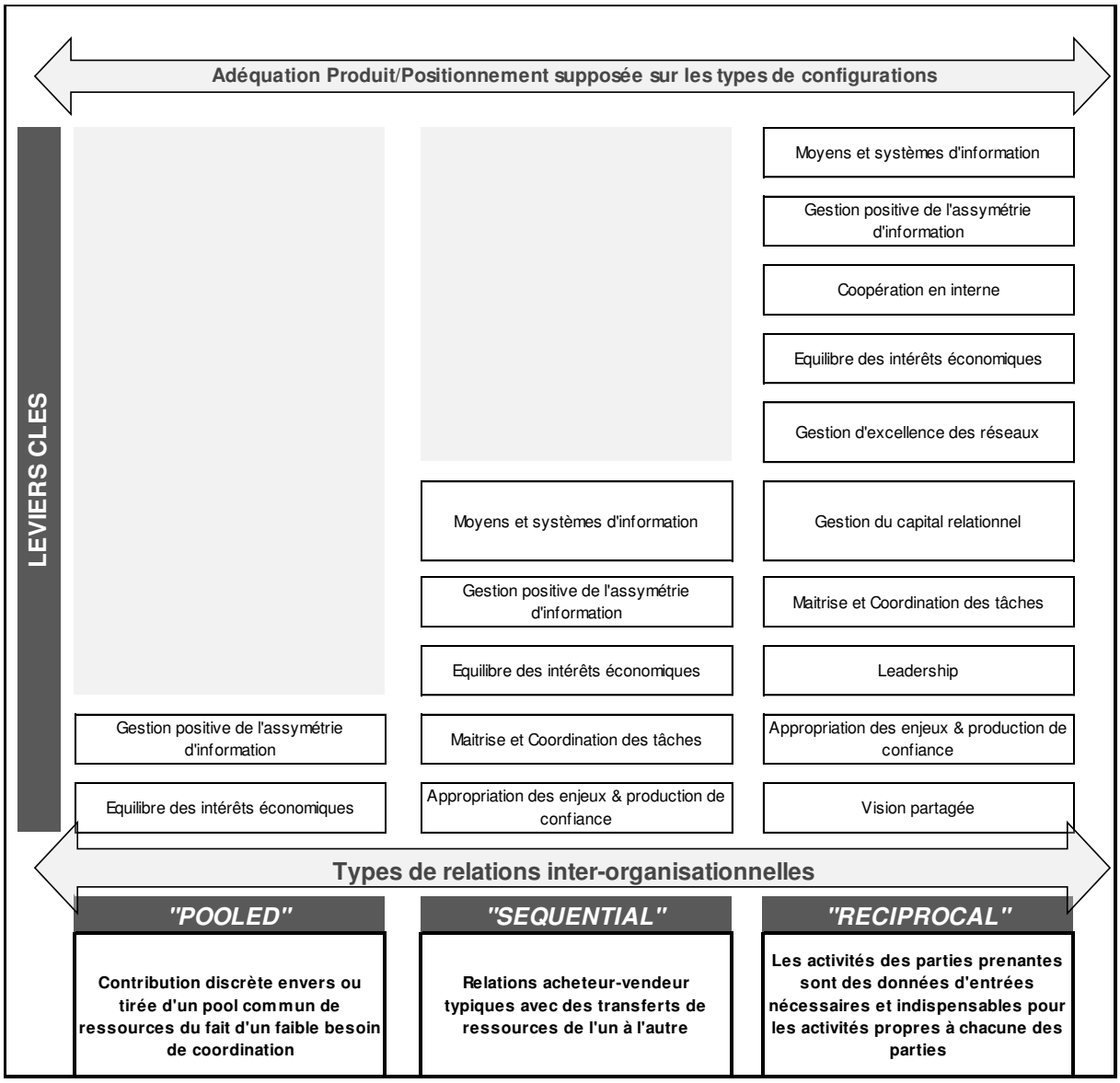


Figure 4 - Matrice d'adéquation « Leviers clés / Niveau de complexité » des coopérations

Il est important de noter qu'un moyen de s'assurer que notre observation ne bute pas sur la problématique d'hypothèses rivales repose sur le choix d'entreprises pour lesquelles l'adéquation produit/positionnement marché fonctionne à plein. Par ailleurs, l'industrie aéronautique civile se caractérise aussi souvent par une dimension dite « incestueuse » à savoir qu'il est monnaie courante entre concurrents, clients ou fournisseurs de s'engager dans des coopérations sur certains marchés alors que sur d'autres ces mêmes acteurs ne communiquent pas entre eux. La coexistence bien ancrée entre coopération et compétition au sein de cette industrie témoigne ainsi du possible bienfondé d'une co-opétition synonyme certes d'instabilité mais aussi d'apprentissage mutuel et d'évolution dynamique.

Dans ce prolongement, et encore une fois à partir d'une expérience de terrain durablement éprouvée mais aussi de positionnements théoriques majeurs sur le sujet, une grille d'analyse suffisamment argumentée pourra être proposée dans la section 3 du chapitre 3. A cette occasion, nous prendrons bien soin d'expliciter largement les mécanismes d'élaboration et d'utilisation de cette grille. Cette dernière devra pouvoir s'appuyer de façon crédible sur les dix leviers clés ou « *Key Levers* » identifiés ci-dessus comme étant critiques dans les coopérations inter-organisationnelles.

Grâce à cette grille d'analyse, le chapitre 4 pourra alors constituer un ancrage matériel sur lequel les hypothèses retenues à partir des sections précédentes pourront être éprouvées. La crédibilité, et la pertinence de cet ancrage matériel reposeront sur la méthodologie employée à travers une observation participante de près de dix mois et des études de cas dont les détails sont communiqués dans le chapitre 1.

Considérant ainsi une non-séparation entre théorie et pratique, cette approche vise à ancrer la recherche proposée dans un référentiel constructiviste pragmatique afin d'aborder la complexité inter-organisationnelle dont il est question (Mir et Watson, 2000, 2001). Bien évidemment, des limites sur le plan méthodologique doivent exister. Pour notre part, dans un souci de cohérence entre positionnement épistémologique et spécificité du dispositif méthodologique adopté, un soin particulier a été pris dans la rigueur appliquée à la production et à l'organisation de la connaissance traitée.

S'appuyant sur ces éléments, il s'agit dans le chapitre 5 de proposer une synthèse et une interprétation des résultats d'analyse obtenus sur le terrain ainsi qu'une « montée » en recherche. Plus particulièrement, l'analyse et le processus d'exploitation des « *Key Levers* » proposés aboutissent à une conclusion qui se veut ici construite et argumentée : le contrôle informel[17] et son orchestration sont critiques dans les relations inter-organisationnelles faisant l'objet de cette recherche. Plus spécifiquement dans le monde de l'aéronautique civile, il est intéressant de noter une étude confidentielle menée en avril 2012 par un cabinet en stratégie de notoriété mondiale. En particulier, l'étude relève que les attentes des acteurs majeurs, à

[17] Selon Ouchi (1979), le contrôle formel est associé aux obligations contractuelles et aux mécanismes organisationnels formels de coopération. Ce type de contrôle regroupe les mécanismes de contrôle des résultats ou de contrôle des comportements. Le contrôle informel (ou contrôle social) se rapporte à la notion de cultures informelles et autres systèmes d'influence des acteurs. Il repose essentiellement sur des mécanismes d'autorégulation.

savoir des équipementiers, gravitent autour des aspects fondamentaux suivants : l'intégration croissante, les processus de management de programme, la philosophie partenariale, les coûts, les services, et la technologie.

L'étude fait ainsi apparaître que ces mêmes acteurs majeurs recherchent les meilleures façons de bien travailler ensemble ou « *Ways of Working* » pour réellement améliorer la gestion des programmes et des fournisseurs à travers des processus harmonisés et collaboratifs.

Pour ce faire, il y a unanimité pour dire que ces processus ne sauront se limiter à la formalisation de contrats mais devront pouvoir s'appuyer sur un certain état d'esprit (« *Partnering Philosophy* »), suggérant ainsi un nécessaire recours à un contrôle informel efficace. En effet, il s'agit alors de pouvoir mettre en œuvre et bien évidemment sous contrôle, des façons de collaborer et de coordonner des activités qui ne sauraient être garanties par la seule existence de papiers contractuels ou autres indicateurs quantitatifs de performance.

Véritable contrepoids à la dictature des moyens de contrôle formels dont certains diront qu'ils n'ont pour vocation que de participer à la satisfaction du sacro-saint coût moyen pondéré du capital (en fait dicté par les exigences des marchés financiers), la capacité à exercer un contrôle informel des IORs efficace semble donc ainsi devoir s'imposer comme une impérieuse nécessité. Le contrôle informel doit alors pouvoir être efficace pour assurer l'activation de certains leviers clés ou « *Key Levers* » : vision partagée et assimilée, leadership, et gestion du savoir-faire tacite, en particulier. Désormais, face à la complexité de la tâche consistant à mettre sous contrôle efficace des interfaces inter-organisationnelles, il apparaît comme nécessaire d'être capable non seulement de mener des actions de suivis quantitatifs (contrôle de gestion dit « classique » et assimilé à de l'outillage) mais aussi et surtout, il s'agit de pouvoir exploiter et d'optimiser le capital social des parties prenantes, en interne comme en externe, pour en particulier garantir, ou à défaut, renforcer l'aptitude à créer et entretenir efficacement le savoir-faire, véritable compétence distinctive pour l'entreprise.

Pour y parvenir, nous admettrons la nécessité d'être capable d'agir sur l'avancement et l'élaboration de projets communs, ou encore les objectifs retenus dans la progression recherchée par les parties prenantes. Mais ce qui apparaît très nettement à travers l'étude proposée dans cette thèse, c'est une nécessaire mise sous contrôle du niveau de maturité des

équipes (dirigeants et subordonnés), du degré de richesse de culture partagée, du style de management et de la dynamique du leadership en place au sein des coopérations (alliance, joint-venture ou contractuelle). Il s'agit également de garantir la pertinence d'actions d'envergures et des niveaux de prises de risques capables d'élever le niveau d'engagements et d'intensité émotionnelle ; mais aussi la pertinence du degré d'exploration de la confiance mutuelle, d'authenticité de la communication, de la dynamique d'ouverture d'esprit ou des niveaux de complicités entre les différents acteurs.

De part ces spécificités, une nécessaire reconfiguration du champ d'action, du rôle et des caractéristiques du contrôle stratégique ainsi que des outils sur lesquels s'appuyer semble devoir s'imposer. C'est à partir de ce constat qu'il est proposé de remettre en question les modèles de management qui prévalent aujourd'hui, à savoir cette dictature de l'objectif et du quantitatif ou autrement dit, véritable artefact, ce mode de représentation du monde qui en voile la subjectivité derrière un masque d'objectivité en ayant recours à des outils de contrôles sophistiqués, mais qui *in fine* peuvent bien souvent aboutir sur peu d'efficacité (pour preuve les statistiques sur les causes d'échecs de la majorité des coopérations).

Forte d'une immersion totale, l'étude qualitative ainsi construite vise à démontrer que la finalité même du management appliqué aux IORs, à savoir « *obtenir des hommes un résultat collectif en leur donnant un but commun, des valeurs communes, une organisation convenable et une formation nécessaire pour qu'ils soient performants et puissent s'adapter au changement* » (Drucker, 2006) ne peut être satisfaite sans une remise en question des pratiques managériales et des outils de contrôle associés communément en vigueur.

Cette recherche est ainsi en droite ligne avec les positions d'auteurs qui en appellent à de nouvelles études considérant plus particulièrement le rôle des parties prenantes externes. Cette remise en question passe par une redéfinition du rôle des parties prenantes ainsi que des architectures organisationnelles sur lesquels un nouveau type de contrôle pourrait être envisagé. Plus englobant, moins exclusivement financier et formel mais aussi plus pertinent, ce nouveau type de contrôle devra pouvoir s'appuyer sur des outils ne faisant plus seulement la part belle au quantitatif. Il s'agit en fait de prendre la juste mesure des principes préconisés par le concept de l'effet boule de neige dans la gestion des relations inter-organisationnelles et représenté ci-après :

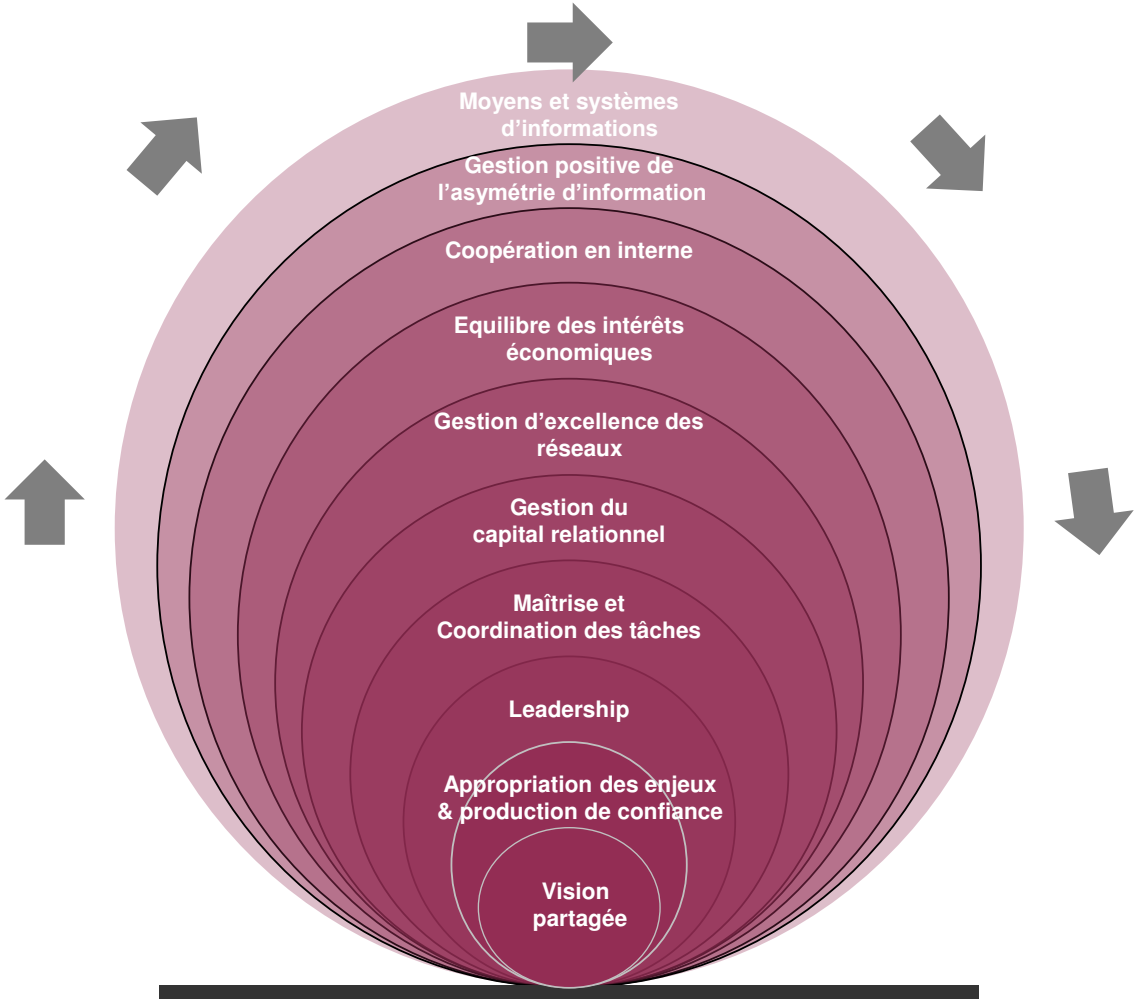


Figure 5 - Le concept de l'effet boule de neige dans la gestion des relations inter-organisationnelles

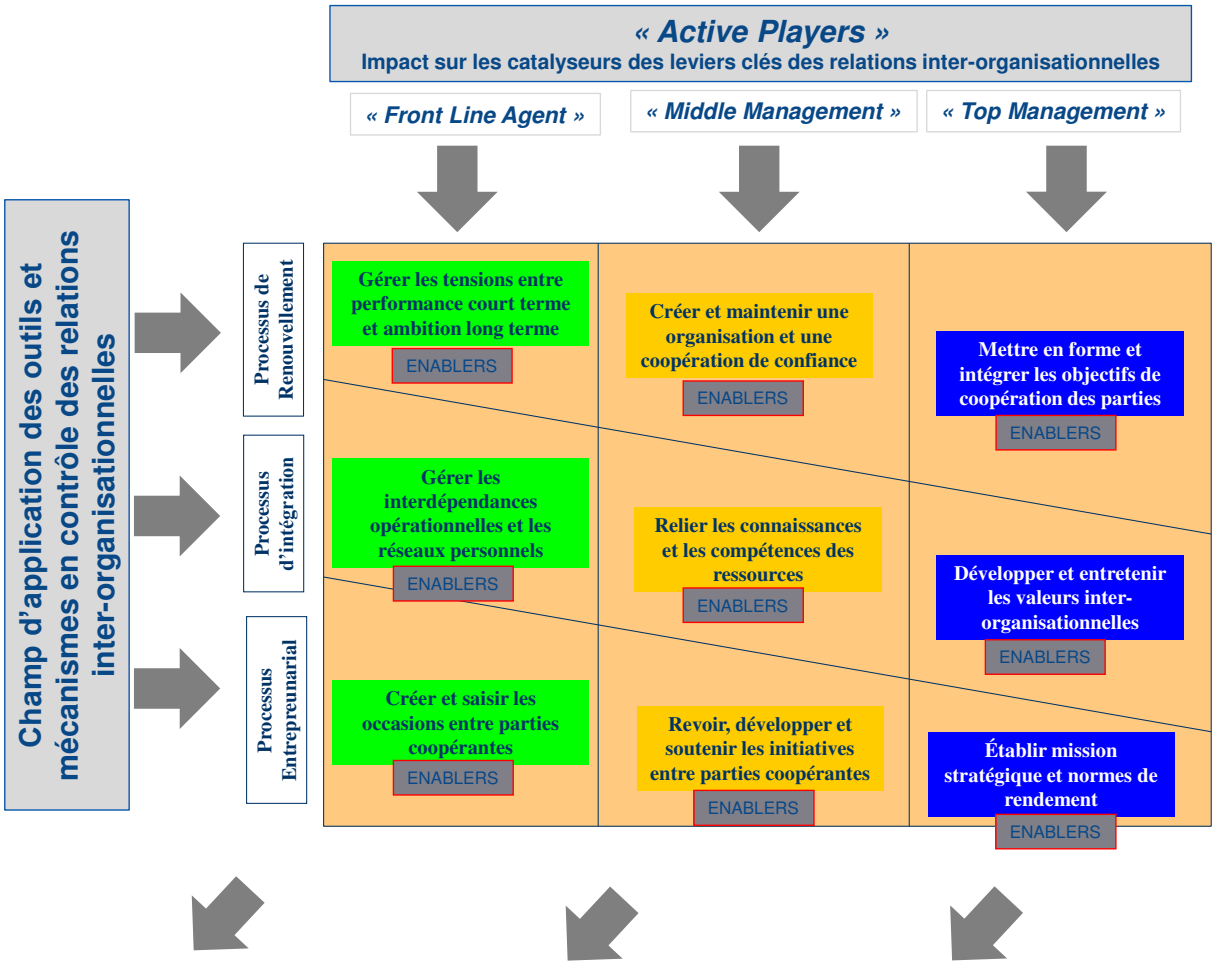
On retiendra comme principe majeur de ce concept que le bon fonctionnement de relations inter-organisationnelles passe par la satisfaction efficacement séquencée des dix leviers clés ou *« Key Levers »* évoqués précédemment : vision partagée, appropriation des enjeux et confiance, leadership, maitrise des activités, gestion du capital relationnel et attitude positive, gestion d'excellence des réseaux, équilibres financiers, coopération interne, gestion de l'asymétrie d'information , et enfin efficacité des systèmes d'information.

La dynamique dans le temps de cet « effet boule de neige » trouve des éléments d'explication dans l'interdépendance des leviers clés identifiés ainsi que dans les principes de la pensée systémique mise en avant par Senge (1990). De ce point de vue, l'émergence d'une vision partagée va affecter la notion d'appropriation des enjeux ainsi que la confiance des acteurs. Dès lors, un leadership va s'en trouver justifié pour notamment porter la vision partagée et les équipes concernées ainsi que pour mettre en branle l'ensemble des activités induites par un tel projet collectif. Il en ressortira une nécessaire gestion du capital relationnel et de surcroît des réseaux pour le cas des relations inter-organisationnelles. L'ensemble pourra alors participer à la recherche d'un équilibre des intérêts économiques avec des implications en interne pouvant justifier des arbitrages et donc une coopération en interne efficace. L'asymétrie d'information, pouvant alors être constatée et mise en perspective avec les intérêts économiques des parties prenantes, sera d'autant moins préjudiciable qu'elle sera gérée positivement en s'appuyant sur des moyens et systèmes d'informations adaptés.

Cette dynamique dans le temps et une telle position sont en tout cas confirmées par les observations et les corrélations établies durant cette recherche et détaillées dans le chapitre 5, section 1.

L'observation des relations inter-organisationnelles considérées pour cette recherche, aura ainsi permis d'identifier, de comprendre et de hiérarchiser des leviers clés ou « *Key Levers* » à mettre sous contrôle efficace au travers de mécanismes formels et informels. Il en découle que le succès des relations inter-organisationnelles observées dans l'aéronautique civile pourrait tenir autant sinon plus à l'existence de modalités efficaces de contrôle informel que de contrôle formel. Ce faisant, nous nous serons attaché à mieux comprendre des mécanismes de contrôle possibles dans l'élaboration et la mise en place d'une nouvelle approche capable d'assurer cohérence et bon fonctionnement d'un type d'architecture organisationnelle (structure) adaptée à la typologie des configurations inter-organisationnelles étudiées, et appelées « *Reciprocal* » pour reprendre la terminologie de Thompson (1967).

En nous appuyant sur des dispositifs de contrôle efficaces des leviers clés ou « *Key Levers* » identifiés précédemment, mais aussi en tenant compte des spécificités des acteurs, de leurs prérogatives et de la conjoncture, il est possible de mieux comprendre les enjeux organisationnels induits par le développement de pratiques inter-organisationnelles. Nous pouvons alors suggérer le concept dit de *gouvernance imbriquée* (Donada et *al*., 2012) pour structurer les relations de coopération inter-organisationnelles sur le long terme. En particulier, ce concept abonde dans le sens d'un possible liant entre approche transactionnelle classique et théorie d'encastrement dans la gestion et le contrôle des coopérations inter-organisationnelles. Reposant sur les conclusions tirées des éléments précédemment évoqués sur les typologies de contrôle, les leviers clés ou « *Key Levers* » retenus, ainsi que sur un travail de capitalisation du modèle proposé par Bartlett et Ghoshal (1993), des éléments constitutifs propices à un réaménagement du mode de contrôle d'interfaces inter-organisationnelles peuvent émerger. Ils sont représentés ci-après dans un modèle d'architecture organisationnelle pour une exécution efficace du contrôle dans les relations inter-organisationnelles :



Moyens et systèmes d'information	Moyens et systèmes d'information	Moyens et systèmes d'information
Gestion positive de l'asymétrie d'information	Gestion positive de l'asymétrie d'information	Gestion positive de l'asymétrie d'information
Coopération en interne	Coopération en interne	Coopération en interne
Equilibre des intérêts économiques	Equilibres des intérêts économiques	Equilibre des intérêts économiques
Gestion d'excellence des réseaux	Gestion d'excellence des réseaux	Gestion d'excellence des réseaux
Gestion du capital relationnel	Gestion du capital relationnel	Gestion du capital relationnel
Maitrise et Coordination des tâches	Maitrise et Coordination des tâches	Maitrise et Coordination des tâches
Leadership	Leadership	Leadership
Appropriation des enjeux & production de confiance	Appropriation des enjeux & production de confiance	Appropriation des enjeux & production de confiance
Vision partagée	Vision partagée	Vision partagée

Leviers Clés des « IOR »

Figure 6 - Architecture organisationnelle et leviers clés pour une exécution efficace du contrôle dans les relations inter-organisationnelles

En premier lieu, il s'agit de poser comme principe que ce modèle s'inscrit dans l'idée qu'une problématique de fond des coopérations inter-organisationnelles réside dans la question de leur bonne exécution. Par exécution, s'entend la capacité de réconcilier des systèmes d'échanges et d'organisation, des individus, des cultures et des structures afin de mettre en cohérence et supporter des initiatives, de lier et activer des compétences ou *« capabilities »* et de donner du sens aux défis engagés. Dans cette optique, il est considéré qu'une organisation est fondamentalement une structure sociale et que, même si elles peuvent être motivées par des objectifs économiques ou autres, les actions lancées au sein des organisations émergent bien d'un processus d'interactions sociales (Bartlett et Ghoshal, 1993).

Une telle posture suggère de mettre l'accent sur la notion de réseaux impliquant des rôles et des relations ainsi que des capacités d'exécution au sein d'une architecture organisationnelle donnée. Le lien peut alors être fait avec la position de Senge et *al*. (1999) pour qui le changement pourra s'opérer en s'appuyant sur une bonne orchestration des leaders dits "*local line leaders, network leaders and executive leaders*". Ainsi, il est possible de concevoir que l'exécution efficace de coopérations inter-organisationnelles reposera fortement sur une bonne orchestration de ce qu'Håkansson et Lind (2004) définissent comme « *business relationships* » ou l'un des trois archétypes du contrôle basé sur la socialisation. Par ailleurs, il est aussi compris que le déploiement efficace de relations inter-organisationnelles sera fortement déterminé par la motivation des acteurs, par une coordination exhaustive des activités inter-organisationnelles et par la forme ou structure prise par la coopération.

C'est pourquoi le modèle proposé met en scène des « *Active Players* » selon le terme consacré par Larson (1992). Il s'agit de « *Front Line Agents »* soucieux de performance et agissant comme de véritables entrepreneurs flexibles, pragmatiques et orientés solutions ; du *« Middle Management »*, soucieux d'intégrer horizontalement diverses stratégies et compétences pour agir sur la coordination et la réconciliation des systèmes ou structures ; enfin, le *« Top Management »* dont on attend qu'il créé la vision et remette en question les choses afin d'agir sur la motivation et la réconciliation des individus, en particulier. Ces *« Active Players »* prendront le rôle d'initiateur du changement au sein de la coopération pour mettre fin à des modes de fonctionnements déjà en place et défaillants. Ce faisant, ils rendront possible des changements de comportements à l'origine de réciprocité entre parties prenantes. Cette dernière ne reposera pas forcément sur des règles écrites mais sur une appropriation des enjeux de la part de chacun. Le champ d'action des « *Active Players* » portera quant à lui sur

trois processus considérés comme fondamentaux et coexistant pour assurer une symbiose générale: le processus entrepreneurial qui consiste à aligner et soutenir des initiatives opérationnelles, le processus d'intégration horizontale qui, lui, consiste à lier et activer des compétences au sein d'organisations, et le processus de renouvellement pour matérialiser les objectifs macros et de long terme ainsi que les mécanismes d'apprentissage.

S'appuyant sur de la littérature académique classique en théorie des organisations (Bower, 1970 ; Chandler, 1962 ; Cyert et March, 1963), Bartlett et Ghoshal (1993) soulignent eux-mêmes l'importance d'une inter-pénétration ainsi que d'une complémentarité entre les trois processus considérés. Ceci apparaît comme indispensable pour assurer une coopération sur des intérêts à long-terme convergents et des intérêts à court-terme divergents. Le « *Top Management* » ou Direction Générale se concentre sur le long terme mais peut aussi être impliqué dans un processus d'escalade prédéterminé et clairement établi. Cependant, il est attendu que les points de divergence ou les conflits soient réglés à l'intérieur d'un même niveau professionnel. En effet, les acteurs du « *Middle Management* » sont plus concernés par les questions de négociations de prix ou les problématiques opérationnelles. A ce niveau professionnel, les intérêts sont le plus souvent divergents et les relations peuvent être réellement conflictuelles. Par opposition, les «*Front Line Agents*» entretiennent des relations plus apaisées. Ils travaillent ensemble et s'appuient sur une collusion évidente qui, inéluctablement, renforce confiance mutuelle et sentiment d'appropriation des enjeux.

Comme l'illustre le modèle, les leviers clés ou « *Key Levers* » proposés dans le chapitre 3, section 3 pourront ainsi être mis en œuvre ou significativement impactés par les trois processus combinés et co-existants. En pratique, ces considérations conceptuelles pourraient se traduire de la manière suivante :

> Une fois la décision prise à haut niveau de se lancer dans la mise en place de relations inter-organisationnelles avec une entreprise extérieure, un processus de sélection est initié. Ce processus est généralement orchestré au niveau *« Middle Management »* par le service achats ou la fonction développement de nouvelles affaires. Il est à noter que ce type de processus implique beaucoup d'autres parties prenantes et reposera aussi sur les informations pertinentes de terrains souvent remontées par les « *Front Line Agents* ».

Les *« Front Line Agents »* des deux entreprises se concentrent sur les initiatives et les résultats opérationnels. Ils recherchent un impact immédiat ou à court terme sur la performance des arrangements de coopération inter-organisationnelle établis. Ils travaillent ensemble pour résoudre les problèmes de qualité, de logistique et de coordination. Leur objectif est bien l'optimisation en continu des produits et des processus. Véritables acteurs de terrain, ils construisent leur succès sur le partage d'expérience et en cela ont un impact évident sur les leviers clés ou *« Key Levers »* colorés en vert[18] dans le modèle d'architecture organisationnelle proposé.

Le « *Middle Management* » se mobilise sur l'optimisation et l'efficacité des moyens à mettre en œuvre pour soutenir les « *Front Line Agents* ». L'un de leurs premiers soucis consiste à aider activement les *« Front Line Agents »* à atteindre leurs objectifs en reposant sur une intégration horizontale et commune des stratégies et des moyens (ressources, investissements…). La finalité recherchée est bien de réconcilier des systèmes et des structures pour avoir un impact concret et positif sur les initiatives engagées par les parties prenantes de la coopération. En cela, ils ont un impact évident sur les *« Key Levers »* colorés en jaune dans le modèle d'architecture organisationnelle proposé.

Ensemble, les équipes « *Top Management* » ou direction générale des organisations coopérantes sont attendues sur leur capacité de construire et formaliser une vision partagée et des objectifs partagés. Elles doivent aussi s'évertuer à tout mettre en œuvre pour lutter contre le statu quo et garantir la motivation des acteurs. Il leur faut aussi décider des orientations nécessaires pour garantir la réconciliation culturelle et structurelle des deux entreprises. En cela, elles ont un impact sur les *« Key Levers »* colorés en bleu dans le modèle d'architecture organisationnelle proposé.

Principalement, de manière informelle, les *« Front Line Agents »* se rencontrent fréquemment pour travailler à la résolution de problématiques opérationnelles. Ensemble ils définissent et travaillent à la concrétisation de plans d'actions. Dans certains cas, ils pourront être co-localisés. De leur côté les acteurs de la catégorie *« Middle Management»* se rencontreront lors de revues formelles à intervalles réguliers (mensuellement ou trimestriellement). Leur objectif

[18] Coloration (vert, jaune ou bleu) il y aura lorsque sur un « *Key Lever »* donné, au moins deux missions génériques d'un « *Active player»* seront considérées comme ayant un impact.

sera de passer en revue et comprendre les projets conduits par les *« Front Line Agents »* afin potentiellement de débloquer des situations. Enfin, les membres de la direction générale ou *« Top Management »* auront à se retrouver plusieurs fois dans l'année. Ceci leur donnera l'opportunité de partager leur stratégie et communiquer sur l'état d'avancement et les progrès de la relation inter-organisationnelle en place.

Le tableau ci-dessous peut être compris comme une carte d'influence ou d'impact. Il décrit comment les « *Key Levers* » explicités dans le chapitre 3, section 3 sont activés ou impactés significativement par les trois processus combinés et coexistant mis en avant : le processus entrepreneurial, le processus d'intégration horizontale et le processus de renouvellement.

		LEVIERS CLES									
		Vision partagée	Appropriation des enjeux & production de confiance	Leadership	Maitrise et Coordination des tâches	Gestion du capital relationnel	Gestion d'excellence des réseaux	Equilibre des intérêts économiques	Coopération en interne	Gestion positive de l'asymétrie d'information	Moyens et systèmes d'information
Processus de Renouvellement	Gérer les tensions entre performance court terme et ambition long terme	X	X	X	X	X		X			
	Créer et maintenir une organisation et une coopération de confiance	X	X	X		X	X			X	
	Mettre en forme et intégrer les objectifs de coopération des parties	X	X	X	X	X	X		X	X	
Processus d'Intégration	Gérer les interdépendances opérationnelles et les réseaux personnels		X	X	X	X	X		X	X	
	Relier les connaissances et les compétences des ressources	X	X	X	X	X	X		X	X	X
	Développer et entretenir les valeurs inter-organisationnelles	X	X	X		X	X		X	X	
Processus Entrepreneurial	Créer et saisir les occasions entre parties coopérantes		X	X	X		X	X	X	X	
	Revoir, développer et soutenir les initiatives entre parties coopérantes	X	X	X	X	X	X	X		X	X
	Établir mission stratégique et normes de rendement	X	X	X	X			X	X	X	

Nota : une croix (X) signifie que les attributs du processus considéré ont un impact significatif sur les leviers clés ou "Key Levers" proposés.

Tableau 3 - Carte d'impact « Processus / Leviers clés » dans la gestion des IORs

Même si la perception de chacun peut varier et donner des résultats quelque peu différents, cette carte d'impact met en évidence des liens pertinents entre les « *Key Levers* » et les trois processus envisagés. Par exemple, pour une bonne activation du levier clé *Vision Partagée*, le processus d'intégration favorisera l'émergence de valeurs inter-organisationnelles, véritable socle d'une vision partagée. Pour porter un dessein commun, la bonne gestion et le contrôle du processus de renouvellement imposeront une nécessaire tension dynamique au sein de la relation inter-organisationnelle (Bartlett et Ghoshal, 1993). Enfin, le processus entrepreneurial sera pertinent pour donner du sens à une vision partagée en revoyant, en développant et en

soutenant les initiatives entre parties coopérantes sur la base du bon établissement de missions stratégiques et de normes de rendement.

Assurée par les *« Active Players »*, une telle gestion de la complexité doit notamment permettre d'adoucir les clashs entre parties prenantes dans la mesure où ils sont gérés à des niveaux appropriés sans détériorer par ailleurs les relations inter-organisationnelles.

Une telle architecture inter-organisationnelle vise à encourager la capacité d'agir à travers des relations de travail intégrées, proches et reposant sur des rôles et responsabilités non seulement clairement établis mais aussi respectueux de processus clés. L'idée maitresse est qu'il s'agit-là de structurer et faire vivre les trois processus clés identifiés autour d'un jeu de relations inter-organisationnelles entre des positions critiques *(« Active Players »).* Ainsi, pour chaque position – *« Front Line Agent »* (qualité, amélioration continue, logistique, bureau d'études, achats et ventes), *« Middle Management »* (direction achats, commerce, opérationnelles, bureau d'étude) et « *Top Management »* – des comportements et des actions spécifiques doivent être rendus possible afin d'impacter constructivement les leviers clés ou « *Key Levers* » de relations inter-organisationnelles.

Il peut alors en découler le développement de confiance entre les acteurs des organisations en jeu et jugé critique dans le succès de relations inter-organisationnelles. Ainsi s'opère un renforcement de pratiques de « travail ensemble » entre les entreprises coopérantes au sein desquelles les acteurs font vraiment de leur mieux pour mener les activités conjointes. Un véritable avantage relationnel peut alors prendre forme. En tant qu'élément différentiateur majeur, il participera au renforcement de l'avantage compétitif des coopérants. On pourra d'ailleurs noter qu'une telle position rejoint celle de Dyer et Singh (1998) ou encore de Gummesson (2004) et son calcul de « *Return on Relationship (ROR*) ». Concernant les éléments de terrain proposés dans cette thèse, de tels principes se retrouvent formidablement bien en observant les relations inter-organisationnelles entre YANKEES et BBR. Au sujet de ces dernières, on notera d'ailleurs avec surprise qu'elles ne semblent pas confirmer l'idée que « *when confronted with greater risk from the transaction context, firms … develop more complex (i.e. more inclusive and specific) contracts to manage the collaboration* » (Ding et *al.*, 2013, p. 140).

Ceci étant, à l'occasion d'arrangements de coopération inter-organisationnelles, et concernant le processus entrepreneurial, il est suggéré de veiller à ce que les *« Front Line Agents »* évoluent bien d'un rôle classique d'exécutants de décisions venant d'en haut vers celui de véritables entrepreneurs soucieux de prendre des initiatives. Concernant le *« Middle Management »*, il s'agira de s'assurer qu'il n'est plus préoccupé et mobilisé par un rôle de contrôleur censeur mais par le souci de jouer le rôle de ressource critique auprès des *« Front Line Agents »* en les coachant et en les supervisant tout au long de leurs activités. Enfin, concernant les directions générales, il s'agira de bien contrôler qu'elles décentralisent les ressources mais aussi les soutiennent efficacement avec une forte délégation de responsabilité, et une attention beaucoup plus portée sur la dimension entrepreneuriale dans les affaires. En d'autres termes, il s'agit de mettre fin à un contrôle de gestion abstrait s'appuyant sur des systèmes sophistiqués et à distance. L'important est bien de sécuriser le contact direct et les relations interpersonnelles qui vont encourager les initiatives, et offrir une aide adaptée pour adopter des processus permettant d'intégrer le savoir, les ressources et les compétences logés à différents niveaux de la coopération.

D'un point de vue processus d'intégration, le contrôle de la mise en place de modes de fonctionnement décentralisés s'inscrivant dans des conditions définies en central sera déterminant : ceci afin de garantir que le *« Top Management »* fournisse bien un cadre aux niveaux hiérarchiques inférieurs pour qu'ils puissent opérer et prendre des décisions. Il s'agira de contrôler aussi que le *« Middle Management* » ne consacre pas son énergie et son temps à la gestion de plannings ou des ressources. Au contraire, l'accent pourra être mis sur la réduction des demandes faites auprès du *« Middle Management »* sur le plan des tâches intensives de traitement vertical de l'information ou du complexe et politiquement motivé processus décisionnel. Pour cela, il s'agira de garantir l'existence d'un système d'information étendu et reposant sur des règles strictes en termes de définition, format et timing afin que les « *Actives Players* » reçoivent bien les mêmes informations quel que soit leur niveau hiérarchique. En conséquence, il apparait nécessaire de contrôler l'adéquation entre les impératifs qui viennent d'être énoncés et des normes organisationnelles mettant bien l'accent sur l'implication du « *Top Management* » pour qu'il soit en contact avec les « *Front Line Agents* ». Ainsi, le besoin diminuera de voir le *« Middle Management* » jouer constamment le rôle d'intermédiaire. Une telle configuration aura de multiples effets. Le *«Middle Management »* verra disparaître ce fardeau qui est de garantir constamment que les objectifs sociétés et standards sont transmis correctement à travers l'organisation. Avec des tâches de

traitement de l'information en vertical s'amenuisant, le « *Middle Management »* pourra mieux se concentrer sur des analyses comparatives, sur de meilleures pratiques ou encore les transferts de technologies afin de relier efficacement ressources et compétences entre les parties prenantes. Doté d'une connaissance intime de la plupart des aspects des entreprises coopérantes, le *« Middle Management* » pourra ainsi mettre à profit les connaissances et l'expertise provenant des activités des *« Front Line Agents »*. Encore faudra-t-il que des canaux de communication adaptés ou des forums de prise de décision existent dans toute l'organisation. Ce faisant, le *« Middle Management* » pourra préserver son rôle central de liaison horizontale grâce notamment à un *« Top Management* » capable de créer un contexte axé sur la valeur pour soutenir et récompenser les comportements de collaboration.

Dans ces conditions, les *« Front Line Agents* » auront également un rôle déterminant en exploitant au mieux les réseaux personnels facilités par de telles relations horizontales. C'est pourquoi, il apparaît fondamental de bien contrôler que le *« Top Management* » se consacre vraiment à la création d'un sentiment d'identité partagée afin que les efforts disparates puissent être efficacement reliés à des normes inter-organisationnelles qui louent le principe de coopération. Parce qu'un tel système vise à faciliter les liens que les transferts de connaissances intensives nécessitent, il sera nécessaire de contrôler que des contacts réguliers s'opèrent bien horizontalement à travers les frontières organisationnelles afin de créer des transferts de savoir et d'expertise spontanés.

Dans un tel système, le contrôle des relations inter-organisationnelles et de leurs « *Active Players »* visera à garantir que le « *Top Management* » définit le contexte, les réseaux de « *Front Line Agents* » fournissent les conditions propices aux processus horizontaux et le « *Middle Management* » facilite les liens entre les parties prenantes. A cet égard, on peut noter que Bartlett et Ghoshal (1993) mettent l'accent sur l'établissement sur le terrain d'un large éventail de groupes de travail, d'équipes et de comités afin de se prémunir d'isolationnisme et briser l'esprit de clocher. Afin d'exploiter un cadre bien en place pour fixer des objectifs et apprendre, le *« Top Management* » se devra de privilégier la mise en œuvre des leviers nécessaires pour inspirer et renforcer le processus dit de renouvellement.

En résumé, le contrôle se concentrerait alors sur les catalyseurs ou *« Enablers »* proposés dans le chapitre 3, section 1 et jugés nécessaires aux leviers clés ou *« Key Levers »*. Pour établir de nécessaires diagnostics, et via des audits internes ou externes, il sera possible d'avoir recours

à notre proposition de grille d'analyse du niveau de maturité en contrôle de relations inter-organisationnelles largement explicitée dans le chapitre 3, section 3. En fonction des attendus des *« Active Players »,* il s'agira ainsi de contrôler que les catalyseurs retenus participent bien à la bonne exécution des trois processus critiques que nous venons d'évoquer et que des outils de contrôle adaptés sont en place.

Différemment dit, les « *Active Players* » agissent sur trois processus critiques. Ces processus et leurs éléments constitutifs agissent sur les leviers clés ou « *Key Levers* » des IORs. Ceci participe à la réussite des IORs pour lesquelles un contrôle approprié se justifie. Ce contrôle porte sur les catalyseurs ou « *Enablers* » des « *Key Levers* », en fonction de leur impact attendu sur les processus critiques de chaque « *Active Player* ». Il s'agit alors de déterminer si ces mêmes « *Active Players* » assurent bien leur mission en ayant un impact bénéfique sur les catalyseurs ou « *Enablers* ». Ce faisant, une véritable gouvernance imbriquée est mise sous contrôle.

Comme cela est explicité par Donada et *al.* (2012), si une telle gouvernance imbriquée répond bien aux besoins d'une stratégie orientée client, elle laisse aussi penser que ses effets vertueux ne seront durables qu'avec les bases d'une solide confiance inter-organisationnelle établie entre les partenaires d'échange à tous les niveaux. C'est pourquoi, faisant le lien avec les « *Key Levers»* évoqués plus haut, une telle approche devra pouvoir s'appuyer sur un questionnement crédible de la compétence et du rôle attendu des différents acteurs dont la capacité d'échanger à tous les niveaux est indispensable pour réussir. C'est en cela que nous avons souhaité pouvoir monter en généralité et quitter intellectuellement la question spécifique des arrangements coopératifs de toutes sortes pour soulever des questions plus générales comme celles du contrôle de la compétence et du rôle de la *direction générale* que nous situons au cœur de la réussite ou de l'échec du contrôle des relations inter-organisationnelles.

Une telle approche a pour objectif de mettre en exergue le trop souvent manque de pertinence des approches instrumentalistes et autres modes de contrôle prônés de nos jours au sein des entreprises et préconisés parfois avec acharnement par des strates dirigeantes soucieuses de pouvoir s'appuyer sur des artefacts cognitifs. Ces derniers peuvent en effet rassurer ou « gaver » d'information les acteurs des marchés financiers qui, faut-il encore le rappeler, ont jusqu'à ce jour souvent déterminé le potentiel de richesse des dirigeants industriels.

Pour finir, il est attendu que ces travaux apporteront ainsi une contribution suffisante pour inciter à penser différemment les relations inter-organisationnelles et la dynamique de leurs rouages alors même que la plupart des recherches empiriques conduites ces vingt dernières années développent peu ces perspectives. Malgré les recherches sur les réseaux qui, en particulier, redonnent explicitement aux fournisseurs leur responsabilité dans la performance des échanges, les travaux publiés restent encore beaucoup trop discrets sur les mécanismes de contrôle concrets à mettre en place pour assurer aux candidats aux coopérations inter-organisationnelles des échanges et des relations durables véritablement créateurs de valeur. S'attachant à mettre en ordre et à organiser une expérience poussée de problématiques inter-organisationnelles au sein de l'aéronautique civile, cette thèse cherche ainsi à développer des connaissances susceptibles de fournir des repères convenant à l'expérience des acteurs des IORs et viables pour cheminer vers leurs buts, entendus comme la création de valeur entre parties prenantes dans le cadre de coopérations inter-organisationnelles.

Enfin, dans le souci de formaliser schématiquement tout ce qui précède mais aussi de mettre à l'épreuve de la cohérence l'approche retenue dans cette thèse, un schéma proposé par Dameron (2011) a été utilisé, ci-après. L'intention est de décrire les tenants et les aboutissants constitutifs de la logique retenue pour conduire la rédaction de cette thèse dont le paradigme épistémologique revendiqué est celui du constructivisme pragmatique au sens donné par von Glaserfeld (2001) et Le Moigne (1995). Ce modèle peut être lu ainsi: au cœur du processus se retrouve la question de recherche retenue. Sur la gauche, se retrouvent les éléments constitutifs de la problématique envisagée sur lesquels la recherche proposée pourra s'ancrer avant de pouvoir aboutir à une contribution théorique. Celle-ci s'articulera sous forme de proposition autour de la taxinomie des relations inter-organisationnelles, d'un séquencement correctement établi d'un certain nombre de leviers critiques, d'une architecture organisationnelle capable de structurer l'action des parties prenantes, et notamment celle de la direction générale pour laquelle une nouvelle forme de contrôle sera envisagée. Pour tout cela, il s'agira d'abord de pouvoir s'appuyer sur des courants théoriques pertinents en sélectionnant des théories mobilisables. Une part importante de cette thèse sera consacrée à une revue de littérature portant sur le mouvement des relations humaines ; la théorie de l'encastrement relationnel et structurel ; la théorie des réseaux sociaux ; la théorie du capital social ; la théorie des coûts de transactions ; la théorie des ressources et dépendances ; la théorie de l'agence ; la

théorie de l'approche par les marchés; la théorie de la connaissance et du savoir dans la firme ; la théorie de la création de savoir organisationnel.

Ce faisant, il est attendu qu'un accès au terrain significatif et adéquat rende possible des aller-retour avec la théorie pour fournir des éléments nécessaires à l'élaboration d'une grille d'analyse utilisée sur trois configurations de relations inter-organisationnelles complémentaires dans leur résultat. Une phase de modélisation conférera alors des attributs d'explicitation de résultats à partir desquels il sera possible de monter en généralité et d'ouvrir d'autres perspectives de recherche. Le schéma suivant, adapté de Dameron (2011), a pour but d'illustrer ces propos :

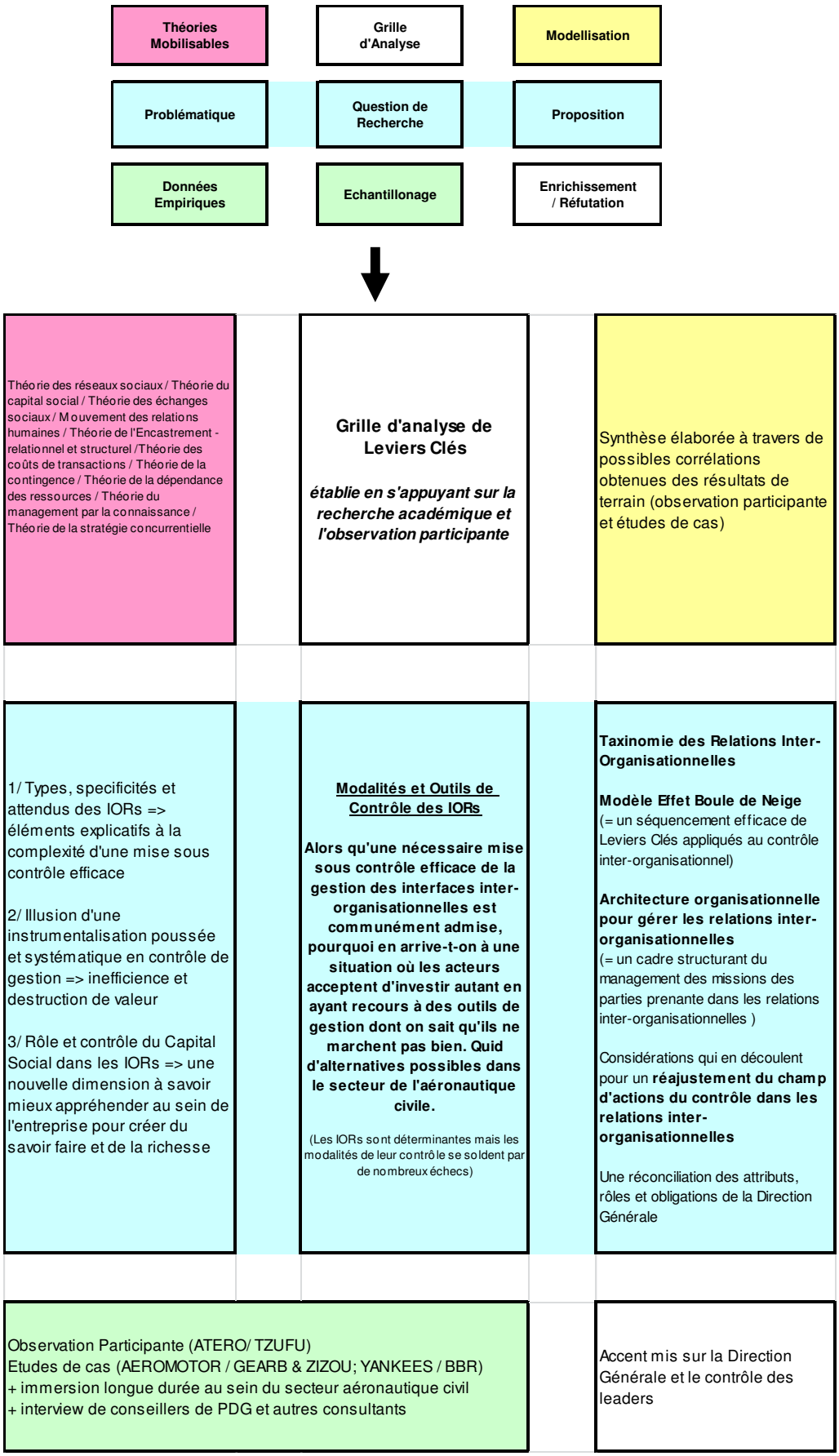


Figure 7 – Représentation pratique des tenants et aboutissants constitutifs d'une thèse

THESIS IN ENGLISH

ABSTRACT

From vertical integration to disintegration, specific stakes and purposes reveal the immediate aim and characteristics of inter-organisational cooperating arrangements within civil aerospace whose demonstrated repetitive failures raise a justified interest in better understanding, from a management control viewpoint, the means and the methodologies advocated or deployed across firms to achieve successful *Inter Organisational Relationships* (IORs)[19]. In particular, it is worth reviewing the setting and implementation of strategic management control means and devices by focusing on the following scope: organisation structure, style, synergy achievement or systems, and with a key assumption: a single theoretical perspective cannot provide a thorough understanding of the complexities of this phenomenon (Chiles and McMackin, 1996; Smith *et al*., 1995).

In this context, it is fair to admit that there is already extensive academic literature which explores the efficiency of transactions, their effectiveness and whether they are more successfully performed within a firm through vertical integration, or outside a firm through inter-organisational interfaces management. In particular, it is frequently stressed that this will depend on the types and characteristics of these transactions, namely asset specificity, volumes or technology uncertainty and transaction frequency (Williamson, 1975).

In the frame of buyer-seller relationships specifically, inter-organisational interface configurations have been much explored and it is generally accepted that non achievement of *ex-ante* targeted or expected results of IORs is most often attributed to the difficulty of managing them, as underlined by Ireland *et al.*, (2002). Some studies underline that for a given transaction configuration, namely *Reciprocal* (Thompson, 1967) or *Vassalage* (Donada and Nogatchewsky G., 2006) success will depend on the ability of the buying firm ability to coordinate and control inter-organisational interfaces.

Some theoreticians have also shown that the benefits of vertical integration will stem not from ownership or integration per se, but rather from the ability to exert decision control (Heide,

[19] *Inter-organisational Relationships* can refer to a number of realms that relate to formal, non-equity-based or contractual relationships between legally autonomous parties, and the academic contribution to this field is vast.

1994). In particular, assuming that governing by means of authority is not limited to intra-firm settings but can be achieved between firms through contractual or legitimate means that can produce the effects of hierarchies, exercising decision control is also a valid consideration in the frame of IORs.

Moreover, despite the long standing appeal of authors like Otley (1994) or Hopwood (1996), and while research into inter-organisational relationships is flourishing, it is also generally accepted that this domain is not fully endorsed by accounting researchers. Some accounting studies do exist (Scapens and Jazayeri, 2003) but they mainly brought to light the need to enlarge the scope of activity of *Management Control*[20] in order to stop confining "*the activity of management control within the legal boundaries of the organization*" (Otley, 1994, p. 293) and to recognize the "*importance of management accounting mechanisms in the management of alliances*" (Dekker, 2004, p. 28). Some of these studies deal with the *structures* chosen to govern IORs that are considered critical for the success of alliances (Ittner *et al*., 1999; Osborn and Baughn, 1990); with *effective governance* which is viewed as a source of inter-organisational competitive advantage (Dyer and Singh, 1998; Ireland *et al.* 2002) and with *coordination mechanisms* or other processes used for managing IORs (Grandori and Soda, 1995; Ireland *et al.* 2002). Importantly, *Transaction Cost Economics* (Williamson, 1993, 2008) has heavily influenced this topic in predicting institutional "*forms chosen to govern a transaction"* (Dekker, 2004, p. 28). This aspect is all the more interesting as major criticisms have also been made against *Transaction Cost Economics* (TCE) which is considered to not have fully taken into consideration the social mechanisms of governance, while IORs are often embedded in a rich and influential social context (Dekker, 2004, Ghoshal and Moran, 1996). In other words, isolating the transaction from its context can be considered a major mistake as it neglects interactions between individuals.

But in reality, this proves that one single theoretical perspective is not available yet to provide a thorough understanding of the complexity of inter-organisational interface *Strategic management control*. On one hand, it is fair to recognize there is an increasing motivation for the monitoring and control between organisations along the entire supply chain, especially within the aerospace industry. This can be explained by the increasing number of firms motivated by establishing IORs in order to achieve mutually beneficial outcomes in

[20] Management Control is defined as a process to direct the behaviour of individuals within/between organisations in order to achieve organisational goals.

cooperatively performing value creating activities[21], as developed by Borys and Jemison (1989), Dyer and Singh (1998) or Zajac and Olsen (1993).

On the other hand, *Management Control* perspectives and devices developed over the last decades - Dekker (2004), Dyer and Singh (1998), Gulati and Singh (1998), Håkansson and Lind (2004), Ireland *et al.* (2002), Kaplan and Norton (1992, 1996), Powell (1987), Tomkins (2001), Williamson (1993, 1994, 2008), etc. - remain questionable or unclear.

In fact, authors have greatly insisted that increasing levels of dependence and of uncertainty have translated into an increasing need for coordination and joint decision making (Dyer *et al.* 2001; Galbraith, 1977; Thompson, 1967). Accordingly, they stressed the importance of using control mechanisms to manage the interdependence of tasks (Gulati and Singh, 1998) by arguing that "*concerns about anticipated coordination costs are particularly salient in alliances which can entail significant coordination of activities between partners and yet have to be managed without the benefit of the structure and systems available in traditional hierarchies*" (Dekker, 2004, p. 784). This may explain why inter-organisational interface management has, for many years now, been progressively attracting research interest increasingly.

However the why and how to put things into practice on the battle field has not yet been sufficiently explored. The subject of management control mechanisms within inter-organisational interfaces along with their contribution to performance - *not only their justification or expected finality* – still deserves more empirical research with special emphasis on organisational architectures, business processes and a refined use of accounting and strategic management control techniques (formal and informal) as underlined by Tomkins (2001). This is precisely the purpose of this thesis which explores the specific case of civil aerospace, a sector within which my ten plus years of personal and practical experience[22] should provide legitimate and effective insight.

Civil aerospace is a capital intensive and truly international environment. Eminently political, this sector is also mainly driven by technological and competitive focus. This requires an

[21] This is what Dekker (2004) calls adopting a value-creation perspective in IOR, which is different from value-appropriation perspective from TCE and that proves to be only a subset of organisational issues in IOR.

adequate management of products, geographical and cultural diversity through strategic alliances[23], vertical partnership and buyer-seller co-operations in particular. Accordingly, the associated inter-organisational interfaces management must face the decentralisation of assets and the delegation of responsibilities which can be assimilated to the management of "federations of companies".

From an inter-organisational relationships viewpoint, and beyond an obvious cost optimization dimension, this raises the challenge of successfully aligning and supporting joint initiatives, building and leveraging respective capabilities, or creating a purpose for both co-operating stakeholders. Such reciprocal relationships are thus expected to enable the sharing of specific strengths such as knowledge, resources or investments with risks occurring for mutual (rather than individual) gain. If not properly controlled, this necessary mutual dependence is unlikely to succeed or may have to deal with numerous causes for the non-achievement of the results identified initially, as demonstrated by numerous examples. Thus, over the last decade the number of alliances has grown rapidly across all industries at an average rate of 25 per cent per year (Parise and Casher, 2003). However, alliances do not have an effective track record: 50 to 60 per cent of alliances fail within three years (Ellis, 1996; Parise and Casher, 2003; Segil, 2004). While it is often suggested that this lack of success is probably driven in large measure by the frequent tensions between competition and co-operation inherent in alliances, and not successfully controlled and managed, we assume that it is still legitimate to further study what may be the root causes of these failures.

Based on existing academic literature but also on participating observation *(fieldwork)* and other case studies, we propose to identify *Key Levers.* Particularly, those dealing with questions such as the following: how can different types of inter-firm relationships affect different types of transactions? How can *Embededness*[24] solve coordination problems without the need to integrate vertically or implement costly monitoring systems? Can existing combinations of trustworthy collaborations have a real impact without long-term perspectives? To what extent does an actor's ability to access a contract or network strategically depend on the quality of the relationships that connect it to other actors?

[22] Since 1999, I have been working within civil aerospace where I was involved in purchasing, project management and industrial roles within international leading aerospace companies.
[23] Strategic alliances are viewed here as a set of cooperative arrangements between two or more firms with an intended common strategy that rests on win-win attitudes adopted by all stakeholders.
[24] This notion is extensively developed in chapter 3, section 2.

Consequently, what should the associated management types be? Or as previously developed by Granovetter (1985), are critical transactions, the transactions on which a firm depends most and that are embedded in a network of social relationships that produce positive and unique outcomes, hard to imitate via other means?

While such an approach praises the view that inter-organisational management control cannot be fully satisfying through the unique transactional approach and suggests as a minimum that formal control devices should not prevail over informal control management, the purpose of this thesis is in fact quite straightforward. Supported by a critical analysis of *Inter – Organisational Relationships* (IOR) and associated control devices deployed across major civil aerospace organisations, but also by addressing the intrinsic complexity of IORs, this thesis aims at emphasising on the causes for discrepancies observed between the goals declared by firms and their real achievement when dealing with IORs Strategic management control. In this regard, an analytical characterisation of IORs referenced herewith is supported by a maturity level grid analysis built upon widely acknowledged academic research positions.

Building on a qualitative study, a model of organisational architecture is also considered for strategic inter-organisational management within civil aerospace. Heavily inspired by standard authors like Chandler (1962), Bower (1970), Cyert and March (1963) or Bartlett and Goshal (1993), such a model is expected to highlight a new scope and key attributes for strategic management control which can, for example, support positions defending the need for a transformation of management control from traditional accounting to more managerial attributes. Alternatively, such a refined scope of strategic management control is also appreciated in a perspective of reconciliation between Williamson (1975, 1985), Uzzi (1997) or Granovetter (1985) who respectively epitomize Transaction Cost Economics, Structural and Social Embeddedness theories.

In particular, this appreciation is made for the sake of innovation and knowledge management and offers new kinds of devices and tools worth considering for successfully implementing inter-organisational cooperating arrangements. In this regard, a peculiar insight is dedicated to the control of Top Management teams viewed as the cornerstone of successful IORs.

INTRODUCTION

As our economies are becoming increasingly globalized, more and more firms have been positioning themselves on foreign markets. The boom of international business development is particularly symptomatic of this trend. This explains the increasing use of strategic alliances, which have rapidly become more popular with a growing number of multinational firms[25] over the years.

Motivations to form strategic alliances are most often related to the logic that each firm involved in the alliance can provide complementary strengths which will eventually help build and sustain a collective competitive advantage for all participants. Some of the major benefits of alliances and cooperative relationships include access to unfamiliar or untapped markets, risk sharing, scale economies, shared technology, and decreased costs.

For instance, economies of scale can be achieved when two or more firms pool their resources, thereby maximizing efficiency based on the needs of the project. Cooperative strategies also allow small companies to join forces to compete against an industry giant. When firms do not have the same strengths, creating alliances can allow them to share technology. This, in turn, can help them produce more efficiently or at a higher quality, provided that firms learn to identify which other companies can offer complementary skills or technology.

These alliances took the shape of calculated agreements between two or more firms to cooperate in any value chain activity, from R&D to Sales (Cullen, 1998). Such arrangements aim at attaining competitive positions, and accessing resources and knowledge from specific cooperating firms. Alliances are thus expected to help and renew resources and competences through cooperation with an external firm with an existing market position. This phenomenon was analysed in depth by Doz, (1996), Dyer and Singh, (1998), Dyer *et al.* (2001), Kale *et al*.

[25] From 1987 to 1992 more than 20,000 new alliances formed in the U.S, up from 5100 between 1980 and 1987 (Harbison and Pekar, 1998).

(2002), Khanna *et al.* (1998), authors who also lay great emphasis on the wealth of knowledge that alliances are likely to generate, which in turn enables firms to develop new competences.

For their part, Morris and Hergert (1987) focus on some key characteristics entailed in alliances such as the sharing of accountability, the respect for individual identities, the continuous transfer of resources between stakeholders, or the indivisibility of projects. Accordingly, alliances ought to focus on reaching and conveying common interests (Jolly, 2001) while also preserving individual independence beyond of the scope of the alliance.

This definition is of prime importance for this study as it reveals the ambivalence of alliances (especially between buyer and seller firms) by insisting on the necessary establishment of a balance between co-operation boundaries on the one hand and the autonomy of the companies involved on the other. In other words, such a vision of alliances assumes reciprocal links and the establishment of what we define as a mutual dependence to manage. Accordingly, it is argued that this particular understanding of alliances corresponds to a bilateral relationship characterized by the commitment of two or more partner firms to reach a common goal and which entails the pooling of specialized assets and capabilities (Jorde and Teece, 1989).
Dussauge *et al*. (2000) define a strategic alliance as an arrangement between two or more independent firms in order to collectively execute a specific project through the joint coordination of the required knowledge and resources rather than operating separately or after merging operations. Such alliances no longer stem from the need to co-produce but rather, and increasingly so, to develop complex solutions that require different stakeholders provide resources, competences and know-how fundamental to the survival of their cooperation (Jolly 2001). Importantly, authors have also underlined that the initial structure of inter-organisational relationships must plan gains and achievements, along with a joint learning process: hence the notion of cooperation.

To summarize, it is generally accepted that cooperative strategies or alliances entail Inter-Organisational Relationships (IORs) which are expected to offer many potential advantages to their participants yet at the same time they can be riddled with multiple specific issues. Inter-organisational cooperating arrangements are in essence very complex and can give rise to a number of different specificities. Particularly, inter-organisational interfaces can refer to a number of realms that relate to formal or non-equity based contractual relationships between legally autonomous parties. Also, "*a common theme among managers from both failed and*

successful strategic alliances is the importance of building mutual trust and commitment among partners. No matter how mutually beneficial and logical the venture may seem … without trust and commitment the alliance will fail entirely, or it will fail to reach its strategic potential" (Cullen, 1998). It is also important to stress that the contributions made by partners to the project should not be limited solely to capital. One firm may bring technical skills and another may bring knowledge of the market. In fact, there are many skills that a firm can bring into the relationship: managerial expertise, production facilities, or access to limited resources. However, even though the skills brought to the table by said partners are complementary, competition may eventually drive them apart and cause the venture to fail. Consequently, management control and the structures possibly associated with IORs prove to be fundamental issues, as they will determine what can successfully control and drive the concrete implementation of the huge cooperative efforts at stake.

Finally, the academic contribution dealing with this field of study can be applied to a large variety of cases, but for the purpose of this thesis, decision was made to concentrate on inter-organisational interfaces management control within a well-known[26] and exciting market: civil aerospace. The following sections will lay out the detail the rationale for this choice.

[26] Since 1999, I have been working within civil aerospace where I was involved in purchasing, project management and industrial roles within international leading aerospace companies.

1. INTER-ORGANISATIONAL INTERFACES WITHIN CIVIL AEROSPACE

This part provides first elements about the driving principles which can explain why inter-organisational management is critical and a real challenge within civil aerospace. Afterwards, it will be possible to deal with more theoretical considerations.

Since the late 1990s industrial companies – and particularly most aerospace manufacturers (engines, landing gears etc…) - intensified the outsourcing of entire modules and multiple industrial competences without necessarily foreseeing all the possible implications of this choice. The rate at which outsourcing has been practiced has grown exponentially and, for example, in most cases 50 to 70 per cent of the total value of American aerospace OEM products has already been subcontracted (Morgan, 1997; Trent and Monczka, 1998). A direct consequence of this is that the aerospace industry shifted from being a well-integrated industry - characterized by a large proportion of centrally undertaken activities and a low number of activities outsourced to third parties - to becoming a quite disintegrated industry, characterized by supposedly well-functioning highly decentralized, market-mediated relations between independent firms.

Within that redefinition of the market landscape, it became increasingly usual to have products separated into different modules and therefore produced in integrated as well as disintegrated frameworks. Initially triggered by the reorganisation of production in order to address lean production[27] methods at much earlier stages, this approach consisted in drastically reducing manufacturing depth by consolidating the number of suppliers and by the transfer of extensive quality, quantity, time and cost responsibilities to suppliers for assembly groups and modules.

As described by Håkansson and Lind (2004), under such circumstances large companies steadily became increasingly complex as they started to quasi-continuously redefine the boundaries of their firms. In practice, this occurred through joint ventures, alliances, strategic partnerships, outsourcing and decentralized organisations and thereby through an increased mutual dependence across the entire value chain, justifying that companies had no choice but to learn to work within a network of players.

Just as in the automotive industry, where this phenomenon was initiated decades ago, the consequence within the aerospace industry was that the different degrees of integration and the way they were managed by firms rapidly started to determine their competitive position. This is supported by the view that competitive advantages were clearly no longer determined by the characteristics of a single firm alone but rather the result of competition among and within a constellation of actors. Interestingly, an AEROMOTOR Vice President told us "*in order to actually be No.1, you have to have a supply chain that is interlinked and intertwined, a supply chain doing its best in multiple directions. If you don't, then one of the links over all will not perform well and therefore one of our services will be less competitive*".

Certainly, one of the main reasons for such a trend is that outsourcing is a very attractive practice for upper management due to the stock market metrics used to assess companies, because the effect outsourcing has on financial ratios is straightforward, as developed at length by Dobler and Burt (1995). In short, shedding specific assets allows a company to increase return on assets and return on investments, while decreasing the head count clearly increases the revenue per employee. In addition to creating a leaner firm, successful outsourcing is expected to decrease the costs of outsourced goods relative to those produced in-house through renegotiations using scale effects or threats to turn towards low-cost sources. Beyond simply creating a leaner organisation, outsourcing is thus a means to decrease the costs of outsourced goods relative to those produced in-house. Consequently, the cost of the goods sold decreases which in turn is expected to have a significantly positive impact on earnings[28] (Hensley *et al.*, 2003), something obviously highly strategic for companies driven by cash flow management and stock market expectations. The official messages of major Aerospace industry corporations consistently reveal those strong expectations, as revealed by the following recent declarations made by CEOs from major civil aerospace companies. The CEO from a major French corporation said "*…despite the uncertain aerospace market and an unfavourable and volatile euro-dollar exchange rate ... corporate improvement initiatives have generated significant free cash flow, a key indicator of financial performance ... lower*

[27] Management methods such as just in time (JIT), time based management (TBM), lean production and business process reengineering (BPR) aiming at eliminating all buffers within companies.

[28] Generally, materials and services constitute more than half of an average supplier's costs in these sectors. For a supplier with revenues of $2 billion, even a 5 per cent reduction in the cost of direct and indirect goods would thus raise operating profits by 40 to 50 per cent. Other ways of generating that kind of impact — a 50 per cent increase in revenues, for example, or the elimination of 10 per cent of the workforce — are much more extreme.

working capital requirements … allowed us to reduce our debt despite major investments in R&D and acquisitions".

A leading British corporation recently expressed a similar message, as its CEO drove home that his *"... Group expects revenue to be similar to that of 2009 and is confident that recurring operating income should increase moderately … (while)… Free cash flow is expected to represent approximately half of the recurring operating income. ... financial results demonstrate the resilience of our business… a strong financial position with average cash balances increasing by £260 million to £635 million… The triennial valuation of the Group's largest pension scheme has just been completed and confirms that 2010's cash funding will be maintained at a level similar to that of 2009. This demonstrates the benefits of the early action taken to amend the terms of the scheme and to adopt an investment strategy that reduces volatility".*

Another CEO offered quite a self-explanatory statement to justify the wave of outsourcing occurring in civil aerospace as he declared that *"... we have maintained our focus on costs and improving operational efficiency. Every year for the past ten years, revenue per employee has increased, showing a 16 per cent improvement in the year to £271,000 in 2009. We are now selling more than twice as much as we were ten years ago, with 2,000 fewer people."*

Beyond these official declarations made by CEOS for the purpose of formal financial communication exercises, the challenge of cash management can also be illustrated by a personal experience. Let us take, for example, a well-known aerospace company forced to sign a deal with a major customer, provided that the latter would pay once its aircraft were flying. Considering the overall lead-time for assembling an aircraft to which we can add the lead-time for the assembly of company Y's own sold product but also the timeframe for company Y to pay its own suppliers (driven by formal legal constraints such as laws obliging payment to suppliers within 40 days). This proves that generated revenues can be cashed in much later than expenses incurred by the activity of company Y. One way to address such a problem is to reduce customers' payment terms. But in practice, this is not possible since, as indicated previously, aircraft makers have become uncompromising in their selection process. The remaining alternative approach consists in minimizing internal needs in cash by either reducing structure costs - which is possible by focusing on core business, hence the need to

outsource – or by getting modules[29] from suppliers and thus make them bear most cash constraints. This is actually a root cause for the trend we wish to promote: namely diverticalization through outsourcing to reduce companies weighted average cost of capital.

Yet, as always, we must look at the other side of the coin, and such practices should not blind us to their obvious drawbacks. In particular, these practices most often inevitably translate into a loss of control over manufacturing, processes and technologies as such demanding capabilities are increasingly expected fall onto suppliers. In the wake of this redefinition of the industrial realm there is undeniably a certain loss of control at the production level, which leads to further disintegration and modularisation, this in turn leads to increased standardisation, which in some cases proves to be a very dangerous trap, as pointed out by Dietl *et al*. (2009) when describing that phenomena within the IT sphere.

These strategic risks, or one might even call it a paradox, taken over the past decades can be illustrated by the increasingly competitive pressure between aerospace manufacturers trying to undercut traditional cost models on spares, which forced civil aerospace actors to imagine ways of protecting their historically very lucrative spares value streams against the *disintermediation phenomenon*. This phenomenon occurs when competitors, or even in some cases existing suppliers, use some of the components of the Original Equipment Manufacturer (OEM) to offer services of value to end customers (airlines). In this scenario, if the OEM does nothing, it will have to face the commoditisation of its own products but also the loss of customer relationships, which proves crucial in the civil aerospace world. This phenomenon is comprehensively analysed by Rossetti and Choi (2005) who explains that within civil aerospace, although most parts were manufactured by a variety of external suppliers, for a long time they were shipped through OEMs who could then ensure distribution channels of high quality and well controlled. The *disintermediation phenomenon* was imposed by the Federal Aviation Administration (FAA), which requires that the company authorized to manufacture a part is entirely responsible for its quality. Consequently OEMs were forced to inspect most of the parts they outsourced. Facilitated by government regulations in particular, this has long been a strong leverage for OEMs to effectively control their supply chain and ensure that aircraft operators are not tempted to interact directly with suppliers (Rossetti and Choi, 2005). But in some cases, extensive outsourcing practices led to something which

[29] Plug & play delivered assembly ready for direct assembly into the 'Main Build'.

would have been unimaginable 25 years ago: suppliers that once had long-standing relationships with aerospace OEMs emerged as direct competitors and no longer thought twice before doing business with airlines themselves. On the other hand, whereas the ability to manage "connected" assets within a business has always been important to profitability and growth, a new but well-recognised very difficult challenge consists in managing "disconnected" assets with suppliers and partners/partner companies. Focusing on their own core competencies[30], companies now have to leverage the skills and expertise of suppliers, and this is not a simple task as costs statistics also reveal a growing dependency on suppliers or partners for a competitive edge in quality, speed to market and design (Kenny, 1998).

For these reasons – albeit not comprehensive - inter-organisational interfaces management has proved to be critical within the aerospace industry, but a long path awaits.

[30] *Core Competences* defined as the set of firm-specific skills and cognitive processes directed towards the attainment of competitive advantage. As well as action skills, these competences comprise cognitive processes and management processes (McGee, 2006).

2. INTER-ORGANISATIONAL INTERFACES FROM A STRATEGIC MANAGEMENT CONTROL VIEWPOINT

This part provides specific arguments about stakes imposed to strategic management control and justifies sound reasons for the research proposed along with the contribution targeted in this thesis.

So far, most attention, in research but also within companies, has been given to the reasons and motivations for the development of inter-organisational relationships (alliances, JV, buyer-seller contractual arrangements or other types of co-operations). Paradoxically, but not necessarily surprisingly so, the way in which they should be managed once they are established has been much less explored despite its importance for partnering companies which cannot content themselves with mere theoretical orientations.

This is precisely what Strategic management control of IORs deals with, as it is assumed to focus on safeguarding the devices deployed for reaching strategic objectives through *"the process by which the partners influence, to varying degrees, the behaviour and output of the other partners and the managers*" expected to work jointly as proposed by Child and Faulkner (1998, p. 187). In this case, it can be defined as a system of organisational information seeking and gathering, accountability and feedback (Dekker, 2004). In the frame of IOR, it aims at assessing, through consistent evaluation and monitoring of organisational behaviours and performances, if plans are implemented and goals achieved. Such a system is designed and managed to sensibly evaluate, enable or even force relevant joint activities that will contribute to the development and achievement of the goals and strategies identified by the stakeholders involved. Accordingly, Strategic management control is meant to ensure that IORs adapt to changes in their substantive environment and that the work behaviour of stakeholders is well appreciated or measured by reference to a set of operational and non-operational sub-goals (which conform to overall objectives) so that discrepancies can be reconciled and corrected when appropriate. In particular, Child and Faulkner (1998, p. 185-187) identified multiple reasons why securing control over the management of IORs is paramount but can also be problematic (e.g. when addressing a lack of cohesion and unity which threatens performance, given that there is also a genuine difficulty in aligning strategic objectives and the organisational and national cultures of both entities).

Introduction

Within the aerospace industry, given the level of product technicality and the regulatory constraints which already prevent from taking advantage of truly competitive conditions from a large number of suppliers, buying companies are facing the issue of dependency - inevitably likely to increase critically - towards suppliers. Increasingly, a number of suppliers could be in a position to improve their bargaining power on long-term relationships with "super primes", while the latter may find it increasingly difficult to manage and control their own supplier base. As a result one can broadly observe a widening of the gap between firms, which increases dependence between buyers and suppliers and certainly pushes companies to work more and more but also better and better collaboratively because competition is no longer between one company and another but between one supply chain and another. Obviously, such a situation does not necessarily suggest that there is no other alternative than to turn to a high level of integration in-house. For example, the retention of a certain depth of value-adding activities – by concentrating on core competences in strategic areas – is justifiable. This is comprehensively developed by Donada (1997) when addressing the recent history of this evolution and the associated changes in types of buyer-seller relationship types.

However, such a shift of paradigm is not a given for many reasons and raises a number of questions and dilemmas around the means deployed for controlling and managing inter-organisational interfaces. As underlined by Dietl *et al. (*2009), excessive disintegration can favour the erosion of control systems and thus have a negative impact on long-term competitiveness. Manufacturers that follow an extensive outsourcing strategy without maintaining forms of control over their partners/suppliers lose differential potential and are no longer able to appropriate an adequate proportion of the value created.

So far, only scant attention has been paid to the form of Strategic management control Systems that would suit strategic alliances. In fact, most often, researchers deal with criteria that should guide decisions to outsource. Accordingly, much has been said regarding the size of contracts, bidders at stake and expectations in terms of cost savings. However, the means necessary to deploy, control and achieve successful IORs have barely been debated. Indeed, considerations regarding *"how the inter-firm MCS (Management Control Systems) can be designated to suit the particular characteristics of the outsourcing relationships*" are limited in number (Langfield-Smith and Smith, 2003, p. 282).

Such a situation raises a number of questions: why should we consider that spending and earning money is the most rational and relevant way for successfully managing and organizing a collective activity? Why should we take for granted that the financial logic should increasingly remain the main mode and determinant of rationality in organisations and IORs management? On the contrary, most industrial business environments – including aerospace - require that involved actors are somehow strictly integrated by different relationships settings which can hardly be limited or even represented by quantified elements.

Consequently, understanding inter-organisational interfaces management practices proves strategic and can in many cases stem largely from the capacity of buyer firms to manage their dependence with regards to their resource to control their suppliers (Cooper and Slagmulder, 2004). Such a view is broadly developed by Dietl *et al.* (2009) who insist that *"relationship attributes between the central coordinator… seem to be key influencing factors*" for the success of IORs and are inevitably related to certain types of review and analyses. For instance, it is generally recommended to better understand the construction of individuals' actions despite potential antagonisms, to better appreciate others means like sharing of experience.

On a different level it is interesting to refer to Håkansson and Lind (2004, p. 51). The authors extensively explored "*the theoretical basis for the connection between coordination forms and the need for information*". In particular they developed arguments that while "*accounting and the classical coordination forms of hierarchy and market are closely related concepts. New forms of coordination … have opened up new challenges to how accounting should be designed and practised*." This stems from the idea that relationship coordination may cause a problem from an accounting point of view since contemporary accounting depends on defined, limited entities whereas these new forms of coordination "*blur the clearly defined boundaries which accounting presupposes and requires*". According to them, the different forms of coordination are not simply an alternative but can be used in coordination, and relationships between companies can be viewed in different ways as testified in their case study on telecommunication companies. This is indicative of another problem: the manner in which accounting is applied when it comes to combining new forms of coordination.

In reality, such positions make it clear that designing new ways of using accounting methods justifies combining "*the use of relationships coordination with the current accounting*

methods". In this realm, when considering that "*the lack of a well-developed theory of the interaction between trust and information has been a fundamental gap in our knowledge*" (Tomkins, 2001, p. 161), and to better measure or grasp the potential success of a new co-operation, it is relevant to fully understand possible control mechanisms at play … but not solely from an exclusive accounting perspective.

This perspective is supported by Otley (1994, p. 293) who underlines that *"traditional Strategic management control techniques have been manufacturing based with relatively little attention paid to (...) the control of knowledge based workers where the key resource is time and the key outputs include innovation and responsiveness to customers' demands*". Accordingly, a revisited appreciation of the notion of control can be useful to better appreciate and understand how each individual adjusts his behaviour depending on what he perceives from others. This eventually helps understand how there is a growing coherence regarding interpersonal relationships. Also, as underlined by Dekker (2004, p. 27), "*in several social science disciplines, such as economics, strategy, organisational and management research, the IORs has become a research topic of substantial importance. Accounting researchers, however, have been slow to incorporate the concept of IORs into their research. It has been for some years that more attention to this issue is called for (e.g. Hopwood, 1996; Otley, 1994)".*

Consequently, we would conclude that new stakes are obviously imposed onto strategic management control with the emergence of forms of IORs which will rely increasingly on knowledge sharing and developed. As suggested by Håkansson and Lind (2004, p. 68), *"interaction between companies seems to have a substance and a variety that need to be conceptualized and modelled in a much more elaborate way than was done so far*". Accordingly, we find it interesting to study inter-organisational interfaces strategic management control mechanisms, both recommended or already in use, because their characteristics will inevitably determine the construction and the management of industrial co-operation (e.g. buyer-seller). This can have a strong and positive impact on necessary sustainable *Capabilities* aimed at maximizing *Core Competences* which will eventually deliver strategies through value creation. Such a statement is reinforced by arguments developed by Dekker (2004) when insisting on the equal importance of the *structure* chosen to govern IORs because it is critical to its success (Ittner *et al.*, 1999; Osborn and Baughn,

1990), and on the key impact of its *effective governance* as a source of inter-organisational competitive advantage (Dyer and Singh, 1998; Ireland *et al.,* 2002).

But in the long run, most agree that those questions align with prominent control problems encountered within co-operations: co-ordinations, tools effectiveness or relevancy and interpersonal relationships management. This thesis aims precisely at exploring such specific topics.

3. OBJECTIVES AND TARGETED CONTRIBUTION IN INTER-ORGANISATIONAL MANAGEMENT CONTROL

After underlining key assumptions and stakes due to some academic deficit related to strategic management control, this part intends to provide indications about the approach taken in this thesis. In particular, this is about the proposal to examine in depth how theoretical *Key Levers* in the management control of IORs are tackled and controlled in real life. Also it is indicating elements of complexity related to IORs management and that will be addressed in the following chapters. These aspects are used to raise interest in this thesis. After providing clarifications about interface management in civil aerospace, this part also underlines the interest in management control within civil aerospace and justifies the contribution proposed in this thesis, in particular with regards to knowledge management and the control of general management teams.

In order to better frame this study, it is contended that some key assumptions can be useful with regards to current practices and other study justifications from a strategic management control viewpoint. This is the objective of the following lines.

Firstly, it is generally accepted that the success of a company is heavily conditioned by its competitive advantages whose specificity is that "*whatever its source, ultimately it can be attributed to the ownership of a valuable resource that enables the company to perform activities better or more cheaply than competitors*" (Collis and Montgomery, 1995, p. 120).

Secondly, the establishment of a competitive advantage also depends on the degree of integration and the way it is managed along the entire value chain, because this will determine the competitive position of individual firms (Dietl *et al.*, 2009)

Thirdly, we contend that value creation architectures are defined as "*the structure and relationships of all the value adding activities that are carried out by various actors to bring a product or service to market*" (Dietl *et al.*, 2009, p. 26). This is an important point to consider as we find it critical to fully understand which value architecture is best suited to allow the emergence and the development of competitive advantages through specific and enhanced core competences. This view is also supported by Kenny (1998, p. 15) who insists that "*success will come not only by extracting maximum value from a company's traditional*

assets of plant, property and equipment, but by extracting value from the entire supply chain". Dyer and Singh (1998) also insist that competitive advantages are jointly generated in an exchange relationship and cannot be generated by one firm in isolation.

Finally, a successful co-operation can be defined as a means of earning superior financial returns through "unfair advantage". The latter is made possible as successful co-operations are a device to create, exploit and defend firm-specific imperfections in the market vis-à-vis competitors. The strategic management control of those targeted co-operating arrangements is there to concretize or safeguard such a device. As in Anthony (1965) in particular, said strategic management control can be defined as a system of organisational information seeking and gathering, accountability and feedback designed to ensure that the enterprise adapts to changes in its substantive environment and that the work behaviour of stakeholders is measured by reference to a set of operational sub-goals (which conform with overall objectives) so that the discrepancy between the two can be reconciled and corrected where appropriate.

In this context, while most agree that strategic alliances do not pay their way in many cases because the means employed fail dramatically, it seems fairly justified to correctly manage contingencies associated with co-operation types and IORs determinants at play as it can be critical for achieving success. The control mechanisms at play within IORs can actively participate in the creation and the management of the "*conditions that motivate the partners to achieve desirable or predetermined outcomes*" (Dekker, 2004, p. 30).

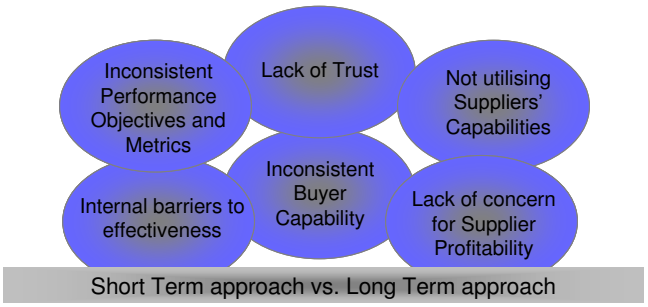
From that point of view, IORs management control is critical for "*realizing for the partners mutually beneficial outcomes through a co-operative performing of value adding activities***"** (Dekker 2004, p. 30 in reference to Borys and Jemison, 1989; Dyer and Singh, 1998; Zajac and Olsen, 1993).

In other words, most agree that the success of competitive positions depends heavily on effective working and cooperative inter-organisational relationships management which has been excluded for too long [31] from long-term and strategic thinking across major corporations. In fact, even though the relevance of an inter-firm perspective is acknowledged (Baraldi,

[31] Not necessarily from a theoretical perspective but definitely so in terms of the concrete implementation of specific measures

2008), the integration of the preliminary insights into an economically rooted concept of strategy and organisation remain too superficial (Chesbrough and Appleyard, 2007).

Generally speaking, there seems to be a lack of research into a systematic way of understanding the different components of competitive advantage that might be derived from market structure, the firm itself, or the firm's relations[32] with other actors. In fact, this domain suffers from a research deficit, and existing industry-neutral explanations are insufficient to fully understand value-adding activities on a global basis. Such a situation is actually paradoxical as over recent decades, the evolution of the purchasing and suppliers functions within major industrial groups suggests awareness that buyer-seller relationship management is crucial and is considered key to succeed in value chain management. In accordance with the arguments we developed above, this translated into the implementation of multiple dedicated strategic management control systems expected to deliver tangible results. Multiple supplier portals for instance provide good visibility on such systems and tools that I actually experienced personally within the companies I was involved in. However, their existence alone does not confirm the success of the intentions initiated by buying firms, as can be seen in numerous failed attempts. Albeit not easy to admit, said control initiatives and their associated devices are widely reported to be not efficient enough. Overall most of the approaches developed so far have consistently failed (Cox, 2004). A good example is the result of a vast survey launched in 2007 by AEROMOTOR across its entire supply base and represented below:



Source: Internal Document Aeromotor

Figure 8 - Supplier Relationship Survey Results – "AEROMOTOR"

[32] Such relations occur in diverse qualities or types and the inter-firm profit achievement can only be adequately analyzed when taking intra- as well as inter-organisational resource processes and control into account (Duschek, 2004).

These results highlight the complexity in implementing effective Strategic management control of suppliers mechanisms while at the same time, it is generally agreed that adequate buyer-seller relationships and effective control of suppliers are necessary. In this particular case, and following these results, a team of talented professionals was set up within AEROMOTOR in order to roll out commodity segmentations with a data-driven strategy process. Taking into account technical complexity, business risk and availability of supply, the intention was for each segment to have the appropriate approach in terms of processes, behaviours and management as well as in terms of monitoring the tools that had been identified for each element of the relationship. Several approached were tried to remedy the poor outcome of all previous efforts deployed by AEROMOTOR purchasing teams. Unfortunately, recent exchanges I had with them confirmed that they led to no major changes (see case study in chapter 2, section 3) which proves quite embarrassing if not dangerous for the stability of the company.

More generally and following Hamel *et al*. (1989 p. 134), "*collaboration is competition … Successful companies never forget that their new partners may be out to disarm them. They enter alliances with clear strategic objectives, and they also understand how their partner's objectives will affect their success*". This fact can have quite a significant impact and justifies scrutinizing effective co-operative relationships, as we will proceed to doing through with this thesis. Indeed, the above paragraphs provide sound reasons for re-evaluate the purpose of effective inter-organisational co-operating arrangements, their *raison d'être* and the methods that are proposed (and their implementation) in order to successfully achieve the expected ambitious results. However much remains to be said about the concrete deployment of methods and associated tools.

Certainly, this field study of co-operations and inter-organisational interfaces management could be approached through several management science domains, as testified by the number of research papers released within fields ranging from marketing, strategy, to organisation and more recently inter-organisational strategic management control. Interestingly, Dekker (2004, p. 28) reminds us that "*despite the extensive attention towards Inter-Organisational Relationships (IOR) governance in the literature, research into the actual structuring, management and control of these relationships has had less attention"* (Gulati and Singh, 1998; Sobrero and Schrader, 1998). Such a view is underlined by Håkansson and Lind (2004, p. 56) who insist that "*until now the accounting literature has paid little attention to*

cooperative coordination, especially when the company is considered to be intertwined in a complex network of relationships".

Referring to Hopwood (1996), we can find additional reasons to contend that strategic management control is a valid perspective of analysis given the potential "new" role it has to play when dealing with IORs management. Namely, "*one of the most suggestive of Hopwood's points was that, although there had been rhetoric of change and redirection in the strategic management control research to keep pace with the new organisational realities, in practice the research community had largely continued to be satisfied with its fixation on the traditional hierarchical organization.* (Caglio and Ditillo, 2008, p. 865).

Presenting management accounting and control as substantially important for the management and performance of IOR, Grandori and Soda (1995) or Ireland *et al.* (2002) suggest it is worth studying the coordination mechanisms and processes used for IORs management. This field "*warrants more empirical research with emphasis on business process*" (Tomkins, 2001, p. 164). This is confirmed by Ireland *et al*. (2002) when they report that the high failure rates of IORs can be attributed to the difficulty of managing them. On that topic some authors will focus on the structures chosen to govern IORs and critical to success (Ittner *et al*., 1999; Osborn and Baughn, 1990). Others will put the emphasis on effective governance as a source of inter-organisational competitive advantage (Dyer and Singh, 1998; Ireland *et al.,* 2002). The view that management accounting mechanisms in the management of alliances are of prime importance is also underlined by Dekker (2004). The author insists that it is worth fully taking into account the social mechanisms at play in such contexts, particularly when dealing with governance and assuming that IORs are often embedded in a rich and influential social context, which suggests that non-functionalist theoretical approaches should also be considered.

In this direction, Thrane (2007, p. 267) suggests that non-functionalist theoretical approaches would enable a departure from simple control patterns *"regarded as either following market-based, hierarchical, or trust/relation perspective*" and thus capitalize on analyses of the multiplicity and complexity of trajectories to which inter-organisational relationships may be related. But overall, despite many contributions in the management accounting literature to explore the forms and features of controls and accountings in inter-organisational settings, a deficit exists with regards to the multifaceted reality of practices. Inter-organisational

interface strategic management control theoretical considerations may actually be of relatively low interest if the theoretical methodologies and promoted advantages aimed at creating value and enabling competitive advantages are not appreciated against the achievement of concrete and real-life results.

Importantly, those positions mentioned above also reveal the relevancy of approaching the question of effective IORs, not only because of the lack of previous studies (Yin, 1989), but also to offer a new approach from a control perspective which is not limited to traditional hierarchical concepts or formal "instrumentalist" approaches. Dekker (2004, p. 47) admits that "*no assessment could be made of the performance consequences of the alliance [studied] and in particular its governance structure. Underlying the theoretical framework is the assumption that aligning the alliance's governance structure with its transaction and task characteristics will result in higher performance*". This illustrates why it is probably of interest to inquire into the concrete and real accomplishment that can be referred to if compared with standard theoretical views. In particular, while "*there is limited case-based research that explores important issues in the development of these relationships from both the buyer and supplier perspectives"* (Langfield-Smith and Greenwood, 1998, p. 332), understanding why theoretical principles are so difficult to implement or concretise on the ground in real business life[33] proves justified.

Consequently, the approach taken in this thesis consists in assessing the consistency of academic contributions and the proposed methodology advocated and deployed across companies though they may offer limited insights into the multifaceted reality of practice. This is due to complex and varied combinations of control traits empirically observed and that are not always, or not sufficiently, taken into account. As developed by Caglio and Ditillo (2008), causes for their not being taken into account are multiple: either variables conceived for intra-organisational analysis have been simply transplanted to inter-organisational settings without questioning their appropriateness; or the impact of these variables has been analysed by evaluating one variable at a time or, when more variables are included in the investigation, the relationships between them are assumed to be linear without considering any interactive effects. Herewith, *Transaction Costs Economics* (Williamson, 1985)[34] is worth considering.

[33] while we also contend that exploring this topic requires a sound understanding of the rationale for IORs that would create value or sustain *competitive advantages.*
[34] Prevailing academic approach that will be developed further in chapter 3.

Introduction

As developed by Dekker, (2004) the main strength of *Transaction Costs Economics* (TCE) is its ability to predict the form of governance structure (i.e. market, hybrid, hierarchy, or 'the degree of hierarchical governance') as a function of transaction characteristics (Chiles and McMackin, 1996). This prediction, however, for a number of reasons, is insufficient to adequately explain the management and control of IORs. As developed by Dekker (2004), as a result of its singular focus on the notions of opportunism and transaction cost minimisation, TCE does not have the ability to recognise the variety in IORs forms and goals. Secondly, the static nature of TCE has resulted in a negligence of the organisational mechanisms used in IORs governance. Furthermore, due to its lack of dynamism TCE has taken little account of the social mechanisms of governance, while IORs are often embedded in a rich and influential social context as we will point out in chapter 3.

Consequently, a key question could deal with the appropriateness of the strategic management control devices and methods proposed or developed so far: is it more an issue of instrumentation and management tools application? Is it more about a relationship management issue? Or perhaps is it something else? Dekker (2004) has already outlined these particular concerns, and insists that it is necessary to properly *appropriate concern* and *co-ordinate requirements* before expecting an effective and efficient use of control mechanisms in IOR. But in order to explore those questions further, we propose to examine in depth how theoretical *Key Levers* in the management of IORs are tackled and controlled in real life. Quite logically, it is therefore assumed that it is necessary to focus on the formation process and other key characteristics of successful IORs by relying on academic research. It is only after this that it makes sense to put this overall understanding into perspective against concrete and self-experienced case studies through the prism of well admitted *Key Levers*. In this context, it is proposed to consider various architectures that can be established to create value and then look at the proposed management of these IORs in cases of disintegration types, which inevitably condition the devices and other tools required for with management control. Nevertheless, such an approach also needs to be properly grounded by an appropriate theoretical frame. The latter is necessary to study IORs in their complexity when admitting that research on strategic management control dealing with IORs requires a "prior" reflexion on the diversity of forms of inter-organisational relationships. Indeed, it is relevant to consider that not only one but several relationship types may exist. Accordingly, it is also justified in order to anticipate that the associated inter-organisational control may be different for each one of them.

Drawing largely from *Transaction Cost Economics* (TCE), *Organisational* theory and trust-based literature, some management accounting contributors have therefore suggested the existence of different control patterns in inter-firm relationships, as underlined by Caglio and Ditillo (2008). These archetypes, categorised as market-based, hierarchical, or as alternative models variously labelled, have been conceptualized, despite the resemblance of terminology, on the basis of different elements which we will later review in detail.

Another interesting perspective is developed by Van de Ven (1976) who defines buyer–seller relationships as a social system of actions, open to its environment. The author does not consider this relation type as involving only two separate and distinct entities but rather as involving multiple players from those entities. Those relations between multiple stakeholders (buyers and sellers, buyers and quality experts, engineers from those entities) are heavily intertwined at different levels which are described by Granovetter (1973, 1985, and 2005) through the *Embeddedness theory* reviewed in chapter 3, section 2. Each player or actor has his own personal agenda while at the same time being involved in dually collective activity within his own company and vis-à-vis the partner. This reasoning leads us to assume that inter-organisational cooperating arrangements need be defined as a social activity within which there are interactions between customers, shareholders, suppliers, employees, etc. which are all more or less heavily involved with a unique subjectivity. In terms of management control, this justifies going beyond functionalist approaches in order to study the influence of social practices (*i.e. interpersonal relationships*) on the performance of inter-organisational practices and to reinforce justifications about the relevancy of such considerations that link economic and sociological approaches within the unit of analysis that is inter-firm relationships.

Interestingly, when defining Strategic management control as a the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives, Anthony (1965) insisted mainly on planning and control through accounting rationales but considered little few aspects related to socio-psychological or behavioural issues. The reason for that was certainly his focus on control at the middle-management level which "*consists in accomplishing organisational objectives through the activities of departments*" (Daft and Macintosh, 1984, p. 48). Albeit not specifically dealing with inter-organisational interfaces management, Otley (1994, p. 294)

recalls a definition proposed by Lowe (1971). It is a slightly broader view underlining that strategic management control is "*a system of organisational information seeking and gathering, accountability and feedback designed to ensure that the enterprise adapts to changes in its substantive environment and that the work behaviour of its employees is measured by reference to a set of operational sub-goals (which conform with overall objectives) so that the discrepancy between the two can be reconciled and corrected for*".

In order to underline the flourishing research into IORs, I personally found it relevant to turn towards Otley (1994) who was one of the first authors urging researchers in accounting management to broaden their scope of thoughts and activities in order to enlarge their fields of study across the inter-organisational sphere. According to him, there is a real need for enlarging the scope of strategic management control in order to establish a much needed adequate and increasing control between value-chain constituents. By 1996, Hopwood reinforced that view when regretting however that so called new management accountings still maintained their hierarchical orientation, and that most accounting management researchers were paying little attention to inter-organisational relationships despite its strategic and critical dimension for companies. "*Budgeting, planning and performance evaluation are invariably seen in vertical terms. Whether it is concerned with bringing intelligence from the bottom of the organization to the top or pushing down the intentions and objectives of the top, accounting is centrally implicated in the mobilization of the organisational hierarchy"* (Hopwood, 1996, p. 589).

Alternatively, it can also be contended that the control exerted by the buyer on its supplier is a process by which the buyer (namely stakeholders within the buying firm) influences the supplier's actions (namely stakeholders within the selling firm) in favour of its own expectations. Accordingly, the notion of control can also be associated with a process of exerting influence which can itself be related to the notion of power. Thus by defining control as a process of influence, the subject of power is brought into the overall equation.

As a matter of fact, those few examples reinforce the view that defining the notion of inter-organisational control is not a simple exercise, and underline the increasing importance of the social dimension. As suggested by Otley (1994, p. 293), most accounting studies led in this domain reveal the need to stop confining "*the activity of strategic management control within the legal boundaries of the organization*" while one must allow for an increasing monitoring

and control attempt between organizations along the supply chain. Yet, a unified definition of that new inter-organisational control type is not easy to establish when the demonstration of its effectiveness and its efficiency is still awaited. The question about the effectiveness and efficiency of the new approaches to strategic management control was successfully demonstrated over the past decade, as research regarding inter-organisational control has certainly become increasingly comprehensive to include *joint-ventures* (Groot et Merchant, 2000), companies' networks (Dumoulin, 1997; Dumoulin and Gbaka, 1997 ; Håkansson and Lind, 2004), buyer-supplier relationships (Anderson *et al.*, 2000 ; Gietzmann, 1996; Guibert et Dupuy, 1997; Langfield-Smith et Smith, 2003; van der Meer-Kooistra et Vosselman, 2000) or strategic alliances (Das and Teng, 1998; Dekker, 2004; Tomkins, 2001).

Many contributions in the management accounting literature have been published in an effort to overcome the deficit mentioned earlier and to explore the forms and features of control mechanisms and accountings in inter-organisational settings. However, most agree that it is still quite limited given the diversity of inter-organisational relationships and associated issues related to control[35]. Furthermore, as suggested by Caglio and Ditillo (2008), some limits are still appalling as illustrated by the fact that "*the extant literature reports collaborative uses of inter-organisational accounting techniques that are not completely convincing since they have been unilaterally witnessed and advocated*" or that "*authors have sometimes positioned themselves as contributors on networks (while) in reality, they have focused on dyadic inter-organisational relationships"* which neglected a critical characteristics of inter-firm relationships i.e. they are often "*nested within a wider network of relationships*".

Such considerations and some ambiguity related to how inter-organisational relationships have been studied reinforced our decision to address the subject of co-operations and inter-organisational interfaces management from a strategic management control viewpoint. They also provided arguments on the object of this study i.e. IORs strategic management control and its related effectiveness. We will now proceed with the development of arguments regarding the selected field of study to address inter-organisational management control stakes.

[35] A study from Ireland *et al.* (2002) underlines that most of the time high failure rates of IORs can be attributed to problems of relations management

Introduction

Many types of sectors and alliance could provide a relevant framework for conducting this kind of research. In our case, we focused on IORs within the aerospace industry given the following specificities: the absence of hierarchical links within this domain where vertical integration started disappearing in the early 1990's, giving way to quasi-systematized disintegration; the possible competition between all protagonists (i.e. seller or suppliers); the fast-paced changes (market tends, technology, financing solutions, new lifestyles in which transportation is booming, etc.) which inevitably require the near-continuous reconfiguration of transactions and relational dimensions as well as the emergence of new forms of IORs that are based on knowledge shared and developed between value-chain stakeholders.

From an inter-organisational control perspective, the singularity of inter-firm relations in the aerospace industry reinforces the importance of fully taking into account the social dimension of activities in which interactions will occur between customers, shareholders, suppliers, employees… parties which are all more or less invested with formal authority, while all actors can be viewed as individuals with a unique subjectivity yet also evolving within a social context which, in turn, is intrinsically subjective (Bourguignon, 2006). Academically, this position is obviously supported by the fact that where transactions are highly uncertain or the transaction environment is very risky and parties are characterised by competence reputation - experience in networks and a risk-sharing attitude (and most often asymmetrical bargaining power) - authors like van der Meer-Kooistra and Vosselman (2000) and Langfield-Smith and Smith (2003) propose an archetype founded mainly on trust, sustained by personal consultation and intensive communication and, in general, by informal-social forms of control. In these cases, behaviour control is not considered appropriate, and formal control is said to put the emphasis on output controls that develop over time through the sharing of private information.

From their standpoint, Håkansson and Lind (2004) illustrate the viability of the business relationship or cooperation model, on the basis of which coordination is not centrally orchestrated and the entities involved match their plans and interact to seek a suitable solution, in situations where activities are complementary and dissimilar. This type of situation is actually the one which prevails within the aerospace industry.

From a different perspective, when the level of uncertainty is high because of low *ex ante* programmability of contributions and asset specificity is moderate, Speklé (2001) suggests the

establishment of outsourcing relationships with a limited number of suppliers. This would allow a comparative assessment of their performance (hybrid form of exploratory control) but would also imply an increasing mutual dependence to be managed and kept under control by the buying firm. There too, characteristics of the civil aerospace sector worth exploring can be identified. In fact, given these different but often complementary views, and from a strategic management control perspective within the domain of civil aerospace, exploring those inter-organisational interfaces management mechanisms will actually lead us to better appreciate key determinants of knowledge management (Nonaka, 1994) which we suspect are critical in the success of co-operations. This discernment is all the more interesting as knowledge management proves critical when referring to Nadler and Tushman (1999) but also before them to Schumpeter (1935).

Those authors consider that today's post-industrial economy is shifting from an economy based on manufacturing and commodities to one that places the greatest value on information, services, supports and distribution with an increasing place for tacit knowledge. With tacit knowledge, people are not often aware of the knowledge they possess or how it can be valuable to others. Effective transfer of tacit knowledge generally requires extensive personal contact and trust. It is not easily shared. It involves learning and skill, but not in a way that can be written down. Tacit knowledge consists often of habits and culture that we do not recognize in ourselves. It is is thus viewed as a foundation for competitive advantages because technological, market, customer preference, organisational knowledge can be relatively easily copied (Maskell *et al*., 1998) whereas tacit knowledge is the most important means of production as already suggested by Schumpeter (1935) many years ago. The main question mark therefore concerns how to control this tacit knowledge and its multiple possible combinations; the impact of which will be heavily determined by the knowledge networks at play and, most agree, critical learning enablers.

Given such topics dealing with people and knowledge, networks and organisational architectures, it is thus interesting and relevant to consider the Embeddedness theory (Choi and Kim, 2008; Granovetter, 1985; Uzzi, 1997) and put it in perspective against TCE (Williamson, 1985) in the context of main theories identifying different sources of competitive advantages (market-based view, resource-based view and relational views)[36].

[36] From the market-based perspective, competitive advantages are the result of strategic positioning in imperfect markets (Porter, 1980).

The following chapters give us the opportunity to go through these considerations by relying on a comprehensive fieldwork within civil aerospace.

The resource-based view identifies firm-specific resources as the main source of sustainable competitive advantage (Barney, 1991).
The relational view attributes competitive advantages to relationship-specific assets, knowledge-sharing routines, complementary resources and capabilities, as well as effective governance mechanisms. It is suggested that these advantages are jointly generated in an exchange relationship and cannot be generated by one firm in isolation (Dyer and Singh, 1998).

CHAPTER 1 - RESEARCH APPROACH

This chapter aims at providing elements of understanding and justification for the epistemological posture and the methodology which are driving this thesis. Also, it provides detailed indications about its structure through the highlight of both arguments and rationale for the plan adopted along with its sequence and its key salient.

SECTION 1 - CONSTRUCTION PRINCIPLES

This section provides detailed explanations about the epistemological posture and the methodology adopted in this thesis. In particular, it aims at clarifying the way this thesis was elaborated in order to provide tangible arguments in case of controversial criticism. A specific focus is proposed to justify the ethnographic approach adopted. This is done before detailing the plan and the structure of this work.

1. EPISTEMOLOGICAL POSTURE AND METHODOLOGY

In the framework of research in IORs management, it is complicated to put a real paradox to one side. In other words, while research on alliances or co-operations has been addressed by a multitude of disciplines for decades, knowledge on the subject is not necessarily mature at present, as testified by what is commonly experienced within ever-more complex organisations. In fact, it seems that this acknowledged dimension of complexity would require increasingly more longitudinal case studies, capable of capturing both the complexities and the dynamics of inter-organisational co-operating arrangements. Such an approach would not necessarily mean increasingly sophisticated case studies. On the contrary a bit more simplicity may be necessary to enable replications through field work and more systematic simulations.

My professional situation was an advantage in carrying out this exercise, but also required in terms of reflexivity, which can explain why at the beginning of this exercise I found it very useful to keep the above in mind to force myself to really think about the kind of methodological approach I could use for this thesis. In particular, while admitting that further

knowledge on inter-organisational cooperation is necessary, relying on the description of various methods used but also on resulting knowledge associated with research activities as detailed by McGrath (1964) was of great help to me. Accordingly, I could appreciate the importance of first identifying the basic domain to consider for research along with its targeted issues; then gathering data through archival and field studies but also examining possible relationships between various outputs before closing the loop with the original method. Those principles influenced me greatly when building the structure of this thesis as I expected them to enable me to accurately capture the complexities and dynamics of co-operations.

In addition, from the beginning of this journey, I have been convinced that my research should consist in analysing reasons and mechanisms for failure concretely experienced by most stakeholders when dealing with inter-organisational industrial cooperating arrangements. Without adopting an excessively managerial perspective, I have been eager to unveil a number of necessary core competences worth considering in order to build successful *inter-organisational relationships* (IORs), which I found appropriate for a thesis on management.

Another key specificity of the proposed research relates to its field of application i.e. civil aerospace and its ethnographic dimension. In addition to its intrinsic characteristics[37] well suited for addressing the proposed research question, the civil aerospace industry was the exploration field I chose in order to take advantage of a unique opportunity of total immersion[38] and access to key critical stakeholders from parties involved (functions, buying or selling firms). Such a decision was probably influenced by the fact that ever since I started working in the industrial world more than ten years ago, I have been particularly curious to understand more fully why so many resources can be invested in such a cause as de-verticalisation or outsourcing. In any case, I have been consistently amazed to see that such strategic orientations are quite often presented as a panacea without ensuring that well reputable and appropriate means were put in place and delivered measurable performance, especially in terms of IORs management control. Specifically, I have been continuously concerned by the difficulty in explicitly clarifying whether such strategic orientations are

[37] Today's Civil Aerospace environment tells us that airlines have been continuously attempting to shed costs since deregulation took place in the 80's. Such a trend actually impacted the whole civil aerospace supply chain which conveys great interest to this industry when dealing with inter-organizational interfaces control management

[38] This was possible given my past and current employments within most significant civil aerospace firms.

suffering from inadequate approaches deployed by stakeholders or from something else entirely.

However, I quickly came to realise that the difficulty with this type of approach is the possibility of my being influenced by different ontological perspectives as a result of the absence of any specific epistemological position. Consequently, I rapidly felt it necessary to stipulate a deliberate epistemological stand and the main methodology rationale behind this work as recommended by Otley and Berry (1998)[39] in particular.

In this context, I must also admit that since the beginning I have not been really keen on imposing a strict and rigid frame of access to what I could observe on the field. The prime explanation for this is that I have always been conscious of preserving the unique opportunity I was given to be professionally fully involved within the civil aerospace industry. I never wanted to deliberately influence answers from the individuals I was in contact with. On the contrary, I always felt it important to allow them indicate as often as possible what might be worthy of interest or not from their own viewpoint. Clearly my intent was to profit from of diverging viewpoints, tensions or contradictions that could occur in various circumstances, as suggested by Ahrens and Dent (1998).

In reality, providing that my work is based on a comprehensive field study, we must admit that such an approach offers a flexibility that can be effectively linked with contextual elements, which I believe can certainly help academic research reach a clearer understanding of the practitioners' vision of the world as suggested by Tomkins and Groves (1983). Drawing on Briers and Chua (2001), not only does it allow us to study what is not necessarily statistically quantifiable but it may also reveal positions that would not be naturally shared by non-dominant agents without formal communication devices. In addition it forces us to not to put aside what could fall outside the scope of standard representations albeit legitimate to researchers, as highlighted by Chapoulie (2000).

Obviously, this approach certainly works in favour of a kind of "*inductive*" inclination, which is all the more interesting as it may make it possible to better appreciate the subjective dimension of individuals' actions. Accordingly, this is also close to "*interpretive"* approaches

[39] The authors recommend to being clear about the initial theoretical position in order to interpret results of a study in a way which can indicate the theoretical modification empirical observations may trigger.

as defined and heavily influenced by Wilhelm Ditlhey and Max Weber. The key idea here consists in assuming that understanding subjective viewpoints of individuals means that their vision of the world is taken into account along with the intention to interpret what their behaviour might mean. Interestingly, in the frame of management control, such a contemplative posture seems to be increasingly considered as advocated by Covaleski and Aiken (1996), in particular.

However, this kind of posture can also be reproached for putting aside key contextual elements such as social structures; a criticism based on the fact that such a posture is viewed as an attempt to understand actors' subjective views through a substitution with comprehensive contextual elements which are not necessarily fully appreciated by stakeholders.

On one hand, this is why the explanatory power of the framework studied herewith is deliberately evaluated in the light of empirical evidence gathered through a "*participating observation*", interviews and case studies. Notes were taken in several meetings, reviews and a countless number of unstructured interviews were undertaken with miscellaneous companies' staff members occupying a wide variety of functions. Moreover, additional notes were taken about day-to-day work with systematic description of the environment and practices observed. This method is based on systematic attention given to the environment, practices observed and the use of transcripts of formal or informal interviews, discussions and meetings. Particular attention is given to behaviours and cultural specificities (attitudes, body language, lecture content, voice tone, etc.). In addition, internal and external corporate documents (internal notes, e-mails, press reviews, financial statements, etc.) as well as academic research papers were extensively studied.

In total, seven major civil aerospace firms[40] firms were observed either to put the emphasis on the context and develop around characteristics about IORs management control within civil aerospace (chapter 2, section 3) or to build an anchoring about IORs management control strategy, devices and tools in practices within civil aerospace (chapter 4). Resting on a participating observation and case studies, around 70 individuals have been approached or

[40] For confidentiality purpose, the name of these companies were changed within the whole thesis document.

interviewed. Supported by interview grids (detailed in appendices) these exchanges were not systematically recorded but notes were always taken during or after the interviews.

The latter could be more or less structured but certainly benefited from a total immersion[41] and a proven track record presented as evidence of ability to understand the topics discussed. When formally structured, those exchanges could last between one and two hours. Not only interviewed individuals were explained the purpose of my work but they were also guaranteed that strict confidentiality would be secured. Regarding the participating observation, a journal was written daily during ten months.

The following charts provide a quantified overview of the typology of individuals approached in the framework of this research:

[41] Namely, I have been employed and therefore have evolved within this sector since 1999. During that period, I have occupied multiple roles and functions heavily impacted by but also impacting on inter-organisational interfaces management.

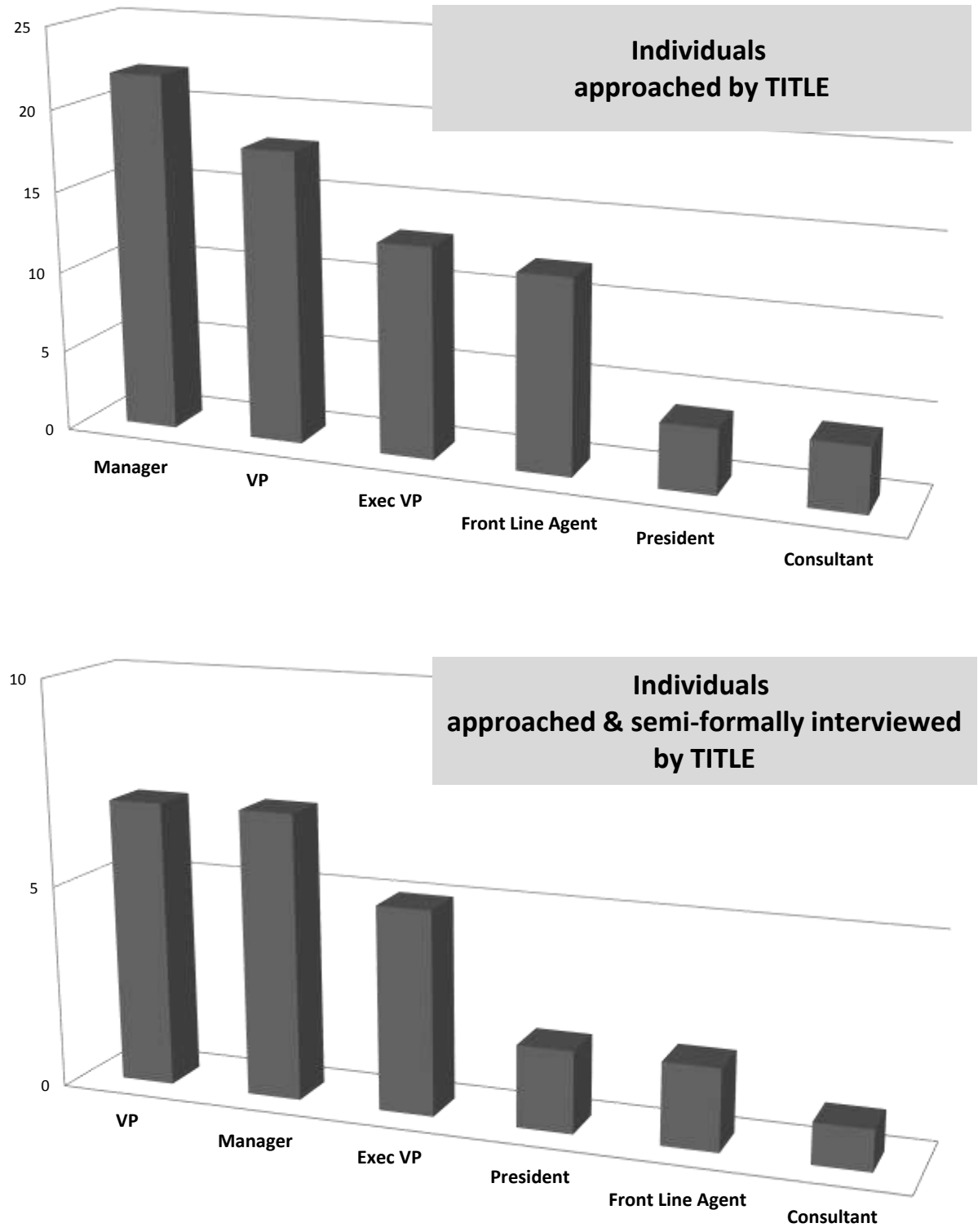


Chart 1 - Typology by titles of individuals approached in the framework of this research

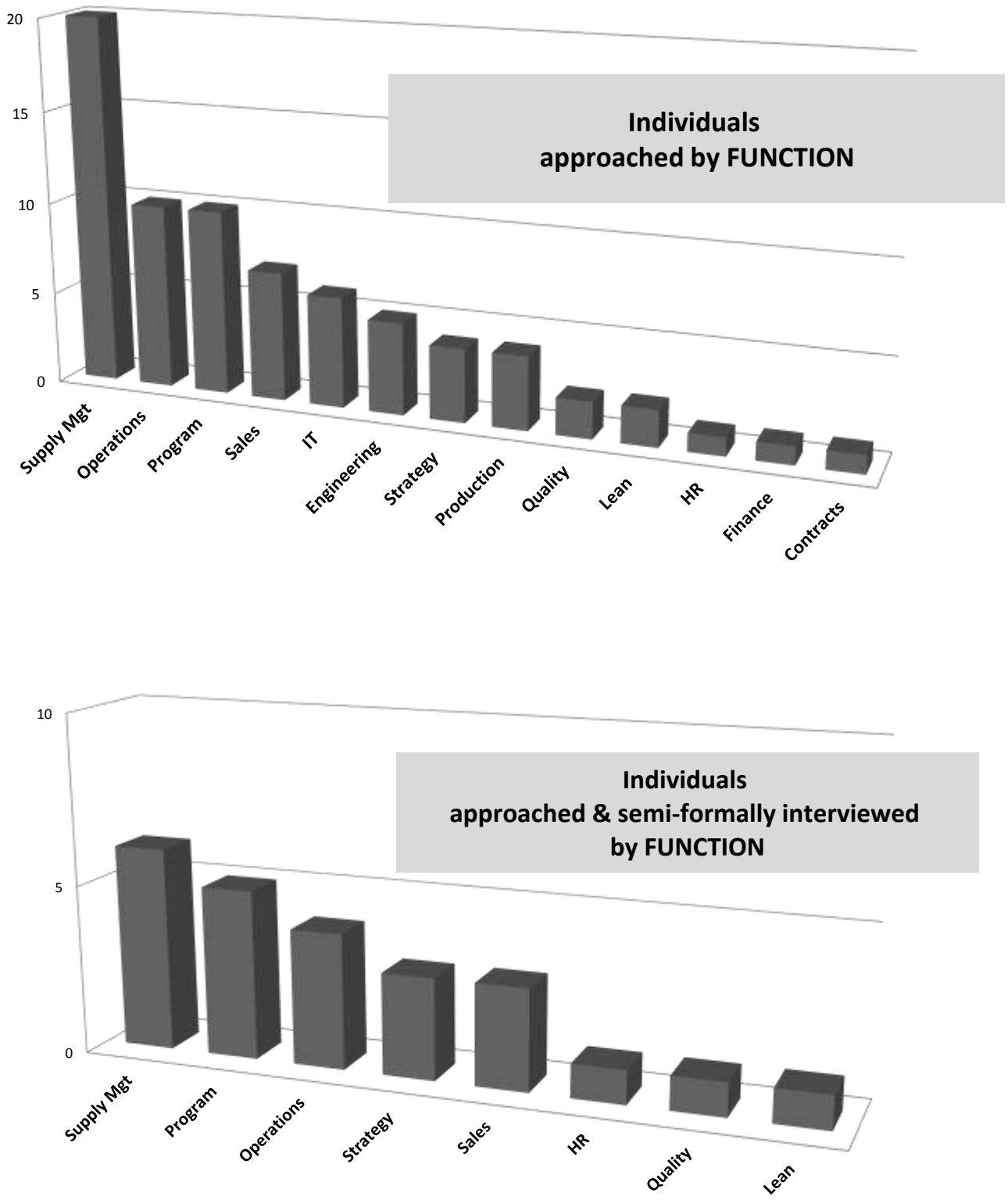


Chart 2 - Typology by function of individuals approached in the framework of this research

In my opinion, this approach allows reflection on occurrences studied within a clearly identified and well-known context. It is considered necessary for taking into account the dialectic relationship that exists between IORs management control and civil aerospace organisations involved in this study. An attempt to contextualize is then expected to provide meaning to something that may sometimes seem irrational (Scapens and Roberts, 1993) but is all the more appealing as Hugues (1996) or Roy (2006) demonstrated that achieving an understanding of the influence at play between stakeholders is critical before understanding any professional context. This position is reinforced by Chapoulie (2001). The author underlines that the behaviour of individuals is highly dependent on respective influences particularly within groups. Interestingly, I have come across this belief in most people I have had contact with since I started working within civil aerospace.

Eventually, all these considerations convinced me to opt for a form of "*emerging research strategy*" (Mintzberg, 1979) with special emphasis on "*sociological imagination*" principles advocated by Mills (1959). The author is actually not in favour of procedures that are too rigid, but insists that each individual would be best served by building his own methodology. Though I would not assimilate it entirely to *Grounded theory* practices, it may be worth noticing that researching in this way aligns to some extent with what Glaser and Strauss (1967) identified, namely, a relatively inductive method of developing theory. In this way, it proves that a qualitative approach is well suited if based on in-depth case studies in order to develop an explanation of the phenomena observed.

On the other hand, with a need for sound academic referential that could certainly strengthen the interpretation, the meaning and the credibility resulting from my own observations, I also felt it appropriate to capitalize on previous studies in management control and intra-control for dealing with inter-organisational relationships management control. My intent was to capitalise on appropriate past academic contributions to set a much needed framework in order to give meaning to the on-field observations or case studies proposed. Consequently, the decision was made to work from concrete facts and evidence from everyday business life with the deliberate intention to challenge or confront them with multiple prevailing theoretical approaches and authors who can legitimately be associated with the subject of IORs strategic management control.

Accordingly, I believe that such a research approach can benefit from total immersion, a method that can be useful in a wide variety of contexts. This is precisely why I anticipated that great clarity was certainly necessary in the way this thesis was written in order to maximize its benefits and because such guidance will inevitably be subjected to controversial criticism. Hence, the following additional precisions with regards to the very specific approach I decided to adopt may interest the readers.

Three major phases constitute the basis of this research. The first phase consists mainly in a 10-years participating observation and specific case studies with regards to practices being used in civil aerospace when dealing with IORs. Academic references are also extensively called upon in order to establish a theoretical position on which it will be possible to build for reviewing the object of this thesis. At this stage, my main concern was to frame my access to a unique, vast and privileged field of study in order to identify and select relevant *Key Levers*[42] at play in the frame of *Reciprocal inter-organisational relationships* (Thompson, 1967). In this type of relationships, the activities of each group are dependent on the stakeholder's. Such relationships are characterised for instance by what is extensively reviewed through the Resource & Dependence Theory (Pfeffer and Salancik, 1978) and by high failure rates attributed to the difficulty of managing them (Ireland *et al*., 2002). Also, due to increasing dependence and increasing uncertainty, such relationships are said to require increasing need for coordination and joint decision making (Dyer *et al.*, 2001; Galbraith, 1977; Gulati and Singh, 1998). In such a context, "*concerns about anticipated coordination costs are particularly salient in alliances which can entail significant coordination of activities between partners and yet have to be managed without the benefit of the structure and systems available in traditional hierarchies*" (Gulati and Singh, 1998, p. 784). Finally, it is also important to bear in mind that the structure chosen to govern such IORs proves critical to its success (Ittner *et al*., 1999; Osborn and Baughn, 1990).

Importantly, by calling upon academic references, a strong emphasis is deliberately put on *Transaction Cost Economics, Relational Exchange View, Knowledge and Embeddedness*

[42] A Key Lever (X) is understood as a necessary condition for the possibility of something else (Y) so that the latter cannot obtain without the former (…) if Y cannot obtain without X, this is not just because certain natural laws governing the actual world and discoverable by the empirical sciences make this impossible (…) but because certain metaphysical constraints that can be established by reflection make X a condition for Y in every possible world.

theories, in order to underline and justify the proposed exploration of the necessary opposition between formal and informal management control.

The second phase of this thesis consists in making use of principles reviewed and established in the first phase in order to fully identify and articulate key salient features of *Key Levers* when dealing with failing or succeeding IORs management control. In this framework, a Key Levers and strategic management control analysis grid is established. This grid is established on the basis of an extensive academic review therefore taking appropriate academic contributions into account in a non-biased way and in the frame of reciprocal[43] inter-organisational interfaces. The proposed *Strategic management control analysis grid* will process and categorize comprehensive qualitative data obtained in the field. This categorisation will be reinforced by considering valid *Enablers*[44] of those *Key Levers*. In order to maintain coherence and fully justify the approach proposed, it is considered critical to insist on the meaning and the key attributes of those enablers thanks to a well substantiated academic literature review. This will be all the more important as a questionnaire will be established from the analysis grid and used for assessing the IORs studied in this thesis and comprehensively detailed in chapter 4[45].

After running the proposed assessment scoring of the studied IORs, a critical analysis then becomes possible. In order to strengthen the relevancy of the scores obtained, feedback from a population of academics specialized in strategy and control management will increase the credibility of our findings. Subsequently, these findings can be interpreted the light of what can be assimilated to a *correlation*[46] between the results obtained and the level of success specific to each IORs studied, with a particular focus on the tools and mechanisms used.

The next phase consists in the consolidation of the scores obtained from the field and by using the established grid analysis supported by comprehensive literature about both intra- and inter-organisational management controls. Subsequently, the interpretation of those results is expected to provide sound arguments for considering inter-organisational management control refinement scope and devices. This is particularly true when considering a specific

[43] by reference to Thompson (1967)
[44] Enablers participate in the Key Levers effectiveness
[45] For this second phase we selected two experienced inter-organizational working together projects in addition to the one benchmark within the aerospace -if not the industrial world- for what an inter-organizational long lasting and flourishing cooperation could ideally be.

organisational architecture that can provide credibility because it is addressing the structure dimension of IORs and be inspired from a model developed by Bartlett and Ghoshal (1993) that deals with the managerial theory of the firm. In other words, building on the interpretation of the results achieved and reported in a structured manner as described above makes it possible to outline a representation of the scope which must be covered by inter-organisational strategic management control in order to be successful. Such a refined scope is likely to provide key indications as to why inter-organisational interface management is failing so much. Such a refined field of study is also expected to reveal or justify necessary roles from stakeholders involved in the formation process and management of inter-organisational relationships. As far as they are concerned part, these roles - considered in the framework of a well suited vertical partnership organisational architecture - are expected to provide key indications about roles and tasks that could be legitimately scrutinized by strategic management control when dealing with inter-organisational interfaces within civil aerospace.

Overall, a deliberate effort has been made to be disciplined, interdisciplinary and have an active mind in order to try and cross-fertilize more or less successfully multiple approaches belonging to the inter-organisations theory while taking due account of the following warning: *"As an eminent economist once observed, cross-fertilization might easily result in cross-sterilization (...) This does not affect what has been said about the necessity of following up, at least in a fragmentary fashion, the developments of all the 'neighbouring fields'" (Schumpeter, 1954: 54-55).*

In conclusion, I have gone through a process consisting in drawing generalized conclusions from a finite collection of specific observations confronted to appropriate academic research. Consequently, it is fair to consider this general process as an abduction approach which consists in capitalizing on observations worth challenging and discussing (Koenig, 1993, p. 7) with coming and going between theory and on field observations. This kind of methodology is well adapted to complicated contexts which can be influenced by multiple, varying and ambiguous factors as commonly experienced within civil aerospace. However, the purpose of this analysis is not so much to establish universal rules but instead to produce valid and robust theoretical conceptualisations.

[46] Such a correlation is not meant to be statistically driven.

Undoubtedly, recognising the limits of this methodology is all the more necessary as it is used to conduct the analysis of a phenomenon in a way which is not much explored, and at the same time, the analysis of this phenomenon is not much explored either. Therefore, generating findings meant to be singular does present some drawbacks. This implies that the limitations of this research are tied to its design and its implementation. Certainly, it would be valuable to put findings (or part of them) to the test on a broader population which would not necessarily belong to the civil aerospace industry. This is in line with the view that parting from a logical construction of our findings and extending it to an empirical more comprehensive study may certainly be useful in the future. Yet, although this aim is quite straightforward, the ability to build on it requires a number of additional precautions with regards to initial assumptions about the retained concepts of organisations (Chia, 2003), for instance. In order to validate the viability and the relevancy of the contribution submitted herewith, such a study may thus gain more credibility should an associated research model be systematized. Also, referring to Perret and Seville (2003), and contrary to positivist research which might rely on well-established and accurate validation criteria, the kind of approach adopted in this thesis has no choice but to rely on less obvious validation criteria such as empathy for instance, the personal ability to put oneself in someone else's shoes and thus understand things from different perspectives. Yet, it is also fair to admit that it is hard to fully appreciate the validation criteria that can be used in the framework of an interpretivist study. Consequently, judging the quality of the research work produced in this thesis is certainly more difficult than with a positivist research. However, I intend to avoid falling into the trap of neither an exclusive logical positivism nor a too simplistic normativism.

Alternatively, one should properly appreciate that *"... theories are false because all abstract from data and simplify the world they purport to describe. Our choice, then, is not between true or false theories so much as between more or less useful theories. And usefulness (...) stems from detective work well done, followed by creative leaps in relevant directions*" (Mintzberg, 1979, p. 584). For this reason, a comprehensive presentation of the method applied to collect data, interpret and formulate results is used to reinforce the credibility of this thesis, in which rigor and coherence are two key drivers.

Finally, though we are aware that possibilities of dialogue between sociology and economy may be quite tenuous, it is believed that the construction of the approach proposed in this thesis is likely legitimatize the view that (translation is our own):

> *"The attempts made by economics to annex social sciences as a whole can be done through the doubtful and unfounded extension of theories on the behaviour of individuals applicable to precise contexts to human behaviour as a whole, or by diluting the object of economics in tools that have lost any true semantic value…it is as if, like a mere IT software, economics were reduced to a simple syntax, when, in order to provide content for their proposals, social sciences very much need this semantic analysis"* (Searle, 1985, p. 42).

2. JUSTIFICATION FOR AN ETHNOGRAPHIC APPROACH IN MANAGEMENT AND ELEMENTS OF REFLEXIVITY

The goal of the following part is to formulate a legitimization of how I chose to make use of the access I was given to the field of civil aerospace. This comes as an attempt on my part to further justify the kind of ethnographic methodology adopted through a long-lasting participating observation, supplemented with specific case studies. It is also intended to share with the reader a form of self-analysis about the research methodology adopted for this thesis.

The ethnographic approach I decided to adopt was certainly heavily influenced by authors dealing with the notion of reflexivity which proved to be quite a new concept for me. In particular, I found it useful to rely on Covaleski and Dirsmith (1990). Those authors strongly advocate such an approach as it may help clarify and share with readers as many as possible of the elements that may have influenced the results obtained from the field in one way or another.

Alternatively, this exercise proved sound as it certainly helped me steer clear of, insofar as possible, a certain form of ethnocentrism. I believe that forcing myself to formalize and share the conditions of my research and its characteristics also provided me with the opportunity to offer more relevant and appropriate observations and analyses. Consequently, though such an exercise may not be very usual in management research, I saw it as a possibility of limiting biased views - especially when interpreting subjective aspects - and thus mitigate as far as possible the risks[47] derived from an ethnographic approach.

One of the most interesting aspects for an ethnographic methodology stems from its intrinsic purpose as reported by Van Maanen (1979). According to the author, such a methodology aims at describing a culture analytically, which makes it possible to escape from merely theoretical considerations in favour of concrete facts. This approach is thus expected to provide some means of avoiding influencing those facts with pre-determined theory.

However, the study of a culture, which concerns anthropology proper, does not really suit the purpose of my work, which aims at dealing with management. Certainly, by ethnographic methodology I understand to some extent what Sanday (1979) named the “semiotic mode”

which is different from both the "holistic mode" and the "behaviourist mode". This is justified and permeated by an original sustained intent to provide meaning to an indigenes' viewpoint through profound and in-depth descriptions. However, I would also like to stress that for this analysis, I do not consider my observations as independent from both social and historical contexts. In fact, the academic contribution which illustrates my position is more related to a *"process of documentation acquisition by direct contact with the phenomena under study – including communications collected in situ and the direct observation of behaviours"* (Chapoulie, 2001, p. 242).

The author qualifies this methodology as ethnographic methodology, which is more proper to sociologists than anthropologists and that we can easily take for granted. In fact, from the outset of my research I have defended the idea that in qualitative studies it is important to offer an alternative to traditional questionnaires because the latter are actually not necessarily suitable to contextualize views, feelings and analysis reported through indigenes. Such a position assumes that traditional questionnaires render it complicated to see interpretations of what is sensed by the interviewees themselves emerge inductively. This position is more or less in line with the idea that (translation is our own) *"if we consider that the meaning of social actions and objects is constituted by actors in their interactions, and that this meaning undergoes a constant process of transformation, no better access can be provided than that of direct observation by the researcher"* Chapoulie (2000, p. 12).

For Peneef (1995), the critical dimension of direct observation is all about going beyond systematic oppositions such as explicit versus tacit rules; formal versus informal power and so on, in order to capture the very subtle peculiarities that exist between individuals in any relationship and in turn, to reflect in the final analysis the fact that informal relationships, conflicting or contradictory viewpoints along with symbolic aspects in inter-actions are fully taken into account. Though this does not substitute for entirely formal interviews, which are interesting in their own right, informal data gathering conveys the power to give shape to possible divergences between official speeches and practices observed. This proves very useful to identify multiple analysis categories. Such a view suggests that "*in situ"* observation is most appropriate in capturing what is considered critical for an individual (Roy, 2006). Following this reasoning, I multiplied informal interviews which made it possible to gather

[47] Those risks were listed by McKinnon (1988) who identified four types of threats

potentially very instructive anecdotes, unique stories or even gossip with the conviction that such a gathering of information can represent a powerful device for transmitting an indigene know-how (Wacquant, 2000) and for reinforcing the founding myth of the group (Elias and Scotson, 1965).

Notwithstanding the above, it is also fair to acknowledge that the configuration of my professional life during the writing of this thesis meant that participating observation strengthened by well-targeted case studies was the most suited format for my research. I entered the civil aerospace industry in 1999 and over the years, I have been progressing within international major firms. I first worked as commodity manager responsible for the *Metals commodity* (machined complex parts, raw material and special processes) across mainland Europe (supervising eight buyers and Supplier Quality Agents) on behalf of a major Anglo-Saxon OEM. Two years later, I joined an English thrust and propulsion provider that develops, manufactures and commercialises engines across major international markets (civil aerospace, defence, marine and energy). In this company I was initially responsible for developing engineering value analysis and markets sourcing initiatives enabling to cash in cost reductions within an operations business unit. As of 2003, I was promoted to head of strategies, operations and business relationships management with top Partners (100MEuros annual purchase). This job consisted in deploying the company's global purchasing strategy for a specific business unit. Within a matrix and decentralised organisation (Europe, North America) I was in charge of the management of multi-disciplinary teams (engineering, quality, six sigma, purchasing, logistics) whose primarily task consisted in negotiating and managing buyer-seller joint activities focused on operations improvement & cost reductions in addition to the coordination of major outsourcing and plants transfer programmes. In this role I ran multiple business valuations (financial analysis, investments decisions and contract reviews) in support of strategic decisions but also had to liaise with key senior internal stakeholders to secure their input, approval and necessary resource contributions in support of sourcing strategies. In 2006, I changed role and became deputy to the President of the same firm in France. This consisted in building and developing relationships with France-based operators and aircraft manufacturers, in assisting businesses units – Civil, Corporate & Regional, Defence & Strategic Sourcing- in their strategies and campaigns for buying and selling products & services from/to French industry. One of my key tasks was to facilitate the French industrial understanding of the company's business and operations in their ambitions for providing products & services and to participate in the development of favourable

relationships with local institutions like Chamber of Commerce & Industries. In 2008, I joined an international French aerospace company where I was in charge of the company's global industrial strategy development. With sites in Europe, Canada, Mexico and China, this role consists in defining and deploying the company industrial policy through strategy establishment; alliance and JV scenario constructions along with investments decisions; modelling of load capacity projections and structural costs adaptation in addition to make or buy arbitration. On new programmes, I was also requested to produce and defend company development strategies (costing, footprint, investments). From a process management viewpoint I was responsible for renewing and deploying organisational processes dealing with industrial & strategy management.

More specifically, when I started in my current position, I was assigned the very specific task of formalizing a process and the appropriate IT tools in order to develop a homogeneous performance monitoring tool across the company as a whole. Said tool was expected to be able to identify root causes for suppliers' quality and deliveries results, which was to be produced in a common format and shared with suppliers in an appropriate way. The targeted impact of this project was to direct focus on the right issues when dealing with suppliers' performance, provide negotiation levers, help construct the right supplier panels and set the basis for buyer/seller business and operations reviews which were non-existent when I initially joined the company. This mission was perfectly suited to field of research in terms of the object of the research, namely buyer/seller inter-organisational control management, but also given the scope of stakeholders potentially at stake.

In this context, a particular aspect I was given to arbitrate related to the duration of my participating observation. On one hand, given the specificities of my job I could be very well immersed as advocated by Sanday (1979) or Dent (1990). As testified by a number of authors who insist on the importance of the duration of what can be called the *in situ* presence, this possibility played a key role in my research because my situation certainly enabled me to be trusted by the individuals I was working with. As pointed out by Becker (1963), this trust may have played a great role with regards to all the elements I have been given to study in the frame of this thesis. Moreover, I did not suffer from classic roadblocks this type of approach has to face: within the company, being directly involved and respected, I was not viewed with suspicion and I was able to access most of the information I was looking for. This does not

mean that I have not refrained from sharing things with due regard to confidentiality and safeguarding the total integrity of my work.

On the other hand, I believe a serious risk was to remain trapped in this kind of observations for too long. Consequently, I deliberately decided to continue writing my journal until I knew the final outcome of the one inter-organisational co-operation establishment I was personally involved in. This took almost eight months, but obviously could have lasted longer.

In any case, it was important for me to align myself with the direction evoked by Weber (1989) when referring to an accessible environment of acquaintanceship and the interest in being actively involved. This is an essential aspect of the ethnographic process according to authors like Roy (2006), Peneff (1992, p. 10) or Weber (1989, p. 19-23). Gaining the respect and trust of the individuals observed at all hierarchical levels – which can be a very delicate aspect of a long participating observation that is specific to ethnographic processes – did not take me long as I could make use of my position *vis-à-vis* my counterparts and other colleagues who, for example, were not afraid of sharing confidential elements with me, for example. Feeling that I was one of their peers, most individuals I interacted with had no problem granting me the trust necessary to maximise my direct participating observation.

I had initially anticipated different levels of blockers depending on the observed individuals' respective cultural background or functional positioning. However, I found some very useful guidance by reading positions developed by Dent (1991), Ahrens (2008) or Ahrens and Chapman (2002). Dent (1991) was of great help as he published a formidable ethnographic study in relation with accounting. In particular, his recommendation regarding the non-relevancy of an *arm's length analysis* for research dealing with cultural and social aspects, but also the manner in which he collected and used data provided me with serious confidence in the approach I had chosen. Ahrens, who taught at Warwick Business School from which I graduated (Executive MBA), provided me with some useful guidance through his "*ethnography of management knowledge*" and other studies about ways of integrating financial control into management practices. These authors actually made me even more comfortable with regards to my choice for a direct and participating observation, especially for dealing with tacit dimensions observed and that are real within civil aerospace. I believe this aspect is critical as the essence of the work I propose is essentially based on my direct implication in the context under study.

Albeit slightly different from contributions dealing with observations only, Townley's (1997) position[48] was also quite engrossing because she proposes informal interviews in addition to a participating observation. In my view, informal interviews are a wonderful complement to a significant participating observation as they make it possible to obtain different experienced perspectives fairly quickly and that can still be used against direct observation output. Given constraints of time, combining both participating observation and informal interviews helped me build a much broader scope of study without losing sight of the research question.

This approach does however present drawbacks, which should be taken into consideration. Through a posture that can be qualified as indigenous anthropologist by reference to Schwartz (1993a), the risk of unconscious bias cannot be denied. More or less deliberately, such a way of conducting research may orientate the course of events if it does not respect a key principle (translation is our own): *"observe and listen to people, rather than interrogating them, to give them the initiative of their own prioritisations and let them be the masters of their own words"* Weber (1989, p. 21).

This might be one of the reasons participating observation is wrongly associated with "action research" which consists in understanding an environment through its reactions against manipulation from the researcher. Personally, I felt there was quite a fine line between the two approaches and I must admit that I sometimes struggled not to fall into a sort of consultancy approach[49]. While it is true that there is no such thing as zero risk, I can assert however that my effort if not ability to stay detached has been real and concrete since the beginning of this journey. I believe it is for this reason that I managed to combine both my job as an industrialist and my task as a researcher throughout the last three years. But most importantly, this is also the reason why I strongly believe that I should not be regarded with suspicion. Contrary to consultants and by reference to the industrial sociologists Lloyd Warner and William Foote Whyte from the Harvard group who were said to adopt Top Management orientations, I was not an outsider with different working conditions or motivated by fairly different perspectives from the individuals I was observing. This is a key aspect of my methodology because from the outset of this study I made great efforts to avoid the influence

[48] This approach is thus different from authors limited to the observation through documentations analysis (Ezzamel, 1994), for instance.

from Top Management's positions. Reading Dalton (1959) proved quite beneficial in this regard as the author eloquently underlines the risks of being oneself directed by the Top Management, which for me was not a problem though I am fully aware that the risk prevails despite precautions taken.

In the context of this study, I was willing to rely on but also share concrete elements from my journal and other informal interviews. It was also important for me to favour observed elements and authentic exchanges obtained through interviews. However the transcription of this is not always easy and may not be sufficiently well formalized to counter-balance suspicion about the real existence of gathered factual elements. This is why I have made use of such a large number of abstracts and quotes in chapter 4, which deals with inter-organisational strategic management control in practice. My intention in doing so is to avoid from reproaches made to a number of authors (Ahrens and Chapman, 2002; Berry *et al*., 1985; Ezzamel, 1994; Oriot, 2004) because they claim they have gone through on-field observations though they never quote any abstracts in their writings. Beyond my aspiration for integrity, making use of journal abstracts or *verbatims* from conducted interviews was in my view a great way for the reader to relate to my position as a researcher with elements directly reported from the field. Besides, I tried to use those factual elements in order to explicitly justify the rationale of various positions I was able to express. Contrary to authors like Wacquant (2000), I did not chose to provide a complete description of a day as it would be cumbersome and have a negative impact on the understanding of possible interpretations as they would possibly be too diluted. Still, I did not hesitate to provide quite long abstracts once they were appropriately sequenced to support my interpretation and my argumentation. In particular, this is why I hope this is powerful enough to highlight, review and justify the "*Key Levers*" proposed in chapter 3 based on my interpretation of the feedback obtained from the field. This is a key dimension for characterizing the writing of this thesis, and I would like to insist that I have not used all those abstracts simply to increase the page count. Quoting these numerous abstracts aims at illustrating how I conducted my own analysis and at providing some coherence throughout the exercise as a whole.

Finally, by basing my research on the analysis of a phenomenon that I believe has not been explored very much certainly presents the drawback of generating findings that are singular.

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49 This is probably not a surprise as I was myself directly involved in the construction of some inter-organizational interfaces studied in this thesis.

As mentioned previously, there are limitations to this research. They are tied to its design and its implementation despite the numerous precautions taken. Importantly, in the future I look forward to having the opportunity to put the initial findings proposed in this thesis to the test on a broader population, and not necessarily from the civil aerospace industry. But at this stage I think it is fair to consider this research as part of pragmatic constructivist epistemological paradigms, based on a qualitative approach and ethnographic practices.

To sum up, it is also possible to refer to McKinnon (1988) who proposes four categories of threats associated with the methodology applied to conduct this research. Regarding potential effects linked to my presence as an observer, I did not come across any stumbling blocks. Given my position in the various organisations addressed, I was never perceived as a potential threat by the individuals with whom I was liaising. Also, I did not really suffer from limitations on data access, and the individuals I approached were most of time honest and genuine.

However, such a constructive context is not protected from intrinsic or natural limitations. This is what McKinnon names the "*human spirit limits*" and refers to unconscious mistakes or omissions and unsuitable testimonies. In practice, the way these testimonies were analysed and their organisation in the proposed categories ("*Key Levers*") are certainly subject to debate. Accordingly, I must admit that personal limits and bias must also be taken into account. As mentioned previously, I did my best to segregate research from my job. Still, nearly 15 years of experience in this environment must undeniably have some sort of impact. My perception of things is inevitably selective, influenced by my previous and current assignments. My descriptions are also most probably biased by a form of personal interpretation. While reflecting on Mir and Watson (2000, 2001), taking such a logical construction of findings to an empirical more comprehensive study would certainly be necessary to validate further the viability and the relevance of the contribution proposed in this thesis. There is no doubt that the credibility of such a study would be reinforced by the establishment of a research model that can be systematized. This could be the purpose of future research. Yet, I felt it was also important to lay foundations beforehand by offering a structured thesis based on an appropriate plan, which is presented in the following section.

SECTION 2 - STRUCTURE OF PLAN AND KEY SALIENT

This section proposes the rationale behind the choice of plan adopted in this thesis with in particular an articulation of its five key constituents which are *value creation*, *co-operations*, *core competences*, *management control devices* and case studies.

1. ARGUMENTS AND RATIONALE FOR THE PLAN STRUCTURE

As explained above, an abductive approach was adopted for this thesis and I must admit that from an early stage, I was convinced of the need to adequately structure the plan for such a thesis. This proved critical to thoroughly process the output from my participating observation and the case studies proposed by limiting the risks of confusion regarding how my field observations should be capitalised on, and by substantiating findings in a structured manner.

Not surprisingly, some specific and structuring elements heavily influenced the way in which the proposed research question could be addressed. As developed in the methodology section, a central idea for me consisted in identifying relevant *Key Levers* for establishing successful IORs. Based on those *Key Levers*, an analysis grid would be established so as to conduct a sort of management control assessment of the IORs identified for this study. Importantly, for each *Key Lever* considered, possible control form types (formal or informal) would be considered and their effectiveness critically appraised.

Building on such a process aims at highlighting critical aspects that could be at the root of failure and success of inter-organisational interface management. Accordingly, and by building on a comprehensive academic review in management control, a sound formulation of reasons why formal control should not prevail over informal management control is justified. Associated findings are then expected to be used from a strategic management control viewpoint. Along these lines, particular attention should be granted to aspects related to the scope of management control activities, devices and tools, but also to organisational architectures along with roles expected to be fulfilled by inter-organisational stakeholders.

In particular, a focus on buying and selling firms is certainly valuable because such relationships are at the heart of industrial dynamics: on the one hand the “buy share” is

steadily becoming dominant in companies' cost of sales; on the other hand, technical specifications and characteristics but also production methods implied in tight buyer-seller IORs are increasingly marked. This has been consistently demonstrated since the early 80's, as companies have been dramatically increasing their level of outsourcing which forces them to rely on effective "*working together principles*" with their suppliers. In this respect, it is worth noticing that such a disintermediation phenomenon is not specific to civil aerospace. For instance, in 1985 the purchase amount reported by a French car maker was less than 40% of its cost of sales while currently the buy share is closer to 80% of cost of sales.

In fact, such a perspective reinforces the need to fully understand the *raison d'être* of inter-organisational co-operating arrangements as well as of the associated targeted results compared to real achievements. Furthermore, when dealing with co-operation, it proves quite logical to further explore the topic of competitive advantage and core competences at play with inter-organisational relationships from an economic performance stand, but also from a knowledge perspective, as developed by Nonaka (1994). This implies questioning the meaning of competitive advantages and also the extent to which they can be quantified or measured. Also, it raises questions on how IORs can participate in the development of firms' core competences to make a difference and to provide competitive advantages and subsequently value creation. Such a view is actually well supported by authors like Learned *et al.* (1969), Christensen *et al.* (2006) or even as far back as Schumpeter (1954) who underline that the performance of organisations depends on their ability to optimise cost efficiency or service niche markets. Accordingly a certain level of agility is necessary to improve speed to market and cope with rapid adaptations.

Overall, with emphasis on controlling mechanisms and the performance drivers of organisations established through co-operations, but also turning towards the formation of determinants of inter-organisational relationships, it seems relevant to develop an understanding of specificities and characteristics regarding the extent to which the effectiveness of inter-firm relationships is critical in the success of IORs capable of creating competitive advantages for value creation.

Consequently, it is assumed that the formation process and the characteristics of inter-organisational control at play within co-operations are worth exploring through questions like the following: how can different types of inter-firm relationship affect the development of

different types of transactions more or less successfully? What are the possible drivers linked to the control and the coordination of exchange structures? More specifically, what role do the social dimensions of the transactions play in controlling and co-ordinating exchange structures (Ring and Van de Ven, 1994)? To what extent does an actor's ability to access the opportunity of a contract or a network strategically depend on the quality of the relationships it can have with its sources of supply? What could connect these actors? How are the economic actions of actors shaped by social contexts? What is the formation process and scarcity of embedded ties? Is it correct to assume that the critical transactions on which a firm depends most are embedded in networks of social relationships that can produce positive and unique outcomes hard to imitate through other means (Granovetter, 1985; Uzzi 1997)? What factors affect the different results of embedded relations? How can co-ordination difficulties be resolved without the need to integrate vertically or erect costly monitoring systems? What sorts of strategic devices and mechanisms are most appropriate with regards to IORs? Particularly, with the high volume or technological uncertainties encountered most of the time within civil aerospace and as suggested by Hage and Alter (1997), for such business may relational governance become a more suitable alternative than market governance providing that it is embedded in a network which allows a firm to flexibly use different specific kinds of expertise and production facilities from the various firms that make up the network?

Finally, while these questions are obviously not comprehensive, it is also reasonable not to neglect practical elements and arguments entailed in the participating observations and case studies on which this thesis is based to support theoretical considerations. Readers may therefore legitimately ask for sufficiently detailed understanding of provided ethnographic inputs. Such a task would be expected to provide clear information on the characteristics entailed in the field study proposed, such as the targeted industrial co-operation between a Chinese and a French aerospace company observed across several months. This particular case will notably depict how a buying company attempts to manage the possible counterproductive effects of highly dependent and in the future antagonist buyer-seller relationships in order to create a sustainable *Competitive Advantage* through the establishment of an ambitious co-operative industrial partnership.

Taking into account all the above considerations, we next set out to specify the sequential analysis approach that is adopted in this thesis through a representation which captures the

five key constituents (*Value Creation, Co-operations, Core Competence, Management Control devices, Case studies*) of this thesis architecture and their induced links.

2. REPRESENTATION OF THE SEQUENCED RATIONALE AND CONSTRUCTION KEY SALIENTS

The proposed architecture of this thesis is described with the following representation:

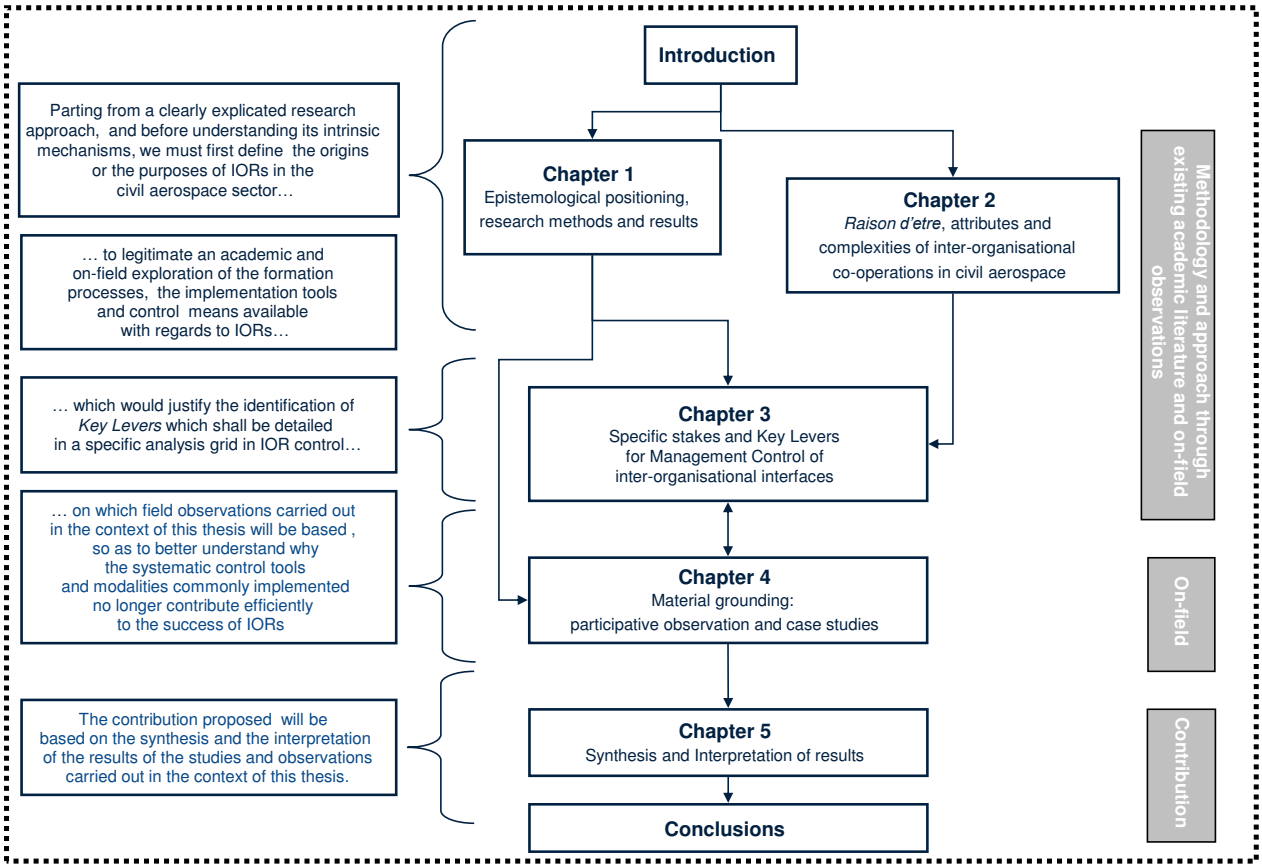


Figure 9 – Thesis Plan

But above all, what is important here is the rationale targeted through this plan. Certainly, it is assumed that this plan is relevant as it will support the progressive construction of a sound demonstration. The latter must be based on theoretical as well as practical perspectives in line with an abductive approach. Moreover, let us not forget that this demonstration is meant to explore value creation rendered possible through inter-organisational cooperating arrangements, which themselves require specific core competences that include in particular appropriate inter-organisational management control devices and mechanisms. Accordingly, various iterations were taken into account to establish the structure of this thesis. For each step (*Value Creation, Co-operations, Core Competences, Management control devices)* objectives and associated means have been clearly identified.

As will be developed in chapter 2, my personal strong interest in studying inter-organisational interfaces management within civil aerospace along with an obvious justification for a study conducted from an inter-organisational control management perspective convinced me to approach the topic of co-operations and inter-organisational interfaces strategic management control through a comprehensive review of *raison d'être* for inter-firms cooperation or more specifically what Caglio and Ditillo (2008, p. 866) name "*inter-organisational relationships, inter-firm settings, hybrid organisational forms, and networks"*.

After outlining the rationale for and challenges in creating value within civil aerospace specifically, it is then proposed to review key characteristics and possible formation processes of IORs management control devices and tools which are instrumental in the establishment of necessary core competences by stakeholders involved in inter-organisational co-operating arrangements. Prior to presenting the latter, a case study conducted across a major civil aerospace OEM is used to provide tangible justification for such an approach. In chapter 3 section 3, supported by existing academic literature dealing with management control holistically and IORs management in particular, elements of the challenge at stake are established and critically assessed. In chapter 3 section 2, emphasis is put on formal and informal control devices along with the necessary structures of control worth considering in order to offer credible *Key Levers* and control type fundamentals. An anchorage is then proposed through a participating observation and two major case studies. Across three IORs types, this is done by describing and highlighting what does or does not work in the implementation of previously identified advocated *Key Levers* and types of management control. Subsequently, an interpretation of related findings can be conducted before providing the readers with a singular theoretical contribution.

In order to schematically formalise the above by stating the fundamental aspects of this thesis, but also to put the coherence of the proposed approach to a test, the thesis roadmap adapted from Dameron (2011) was adopted. Below, it ascertains the whys and wherefores of the logic chosen to conduct such an exercise, which had the self-proclaimed epistemological paradigm of an exercise of pragmatic constructivism, as defined by von Glaserfeld (2001) and Le Moigne (1995).

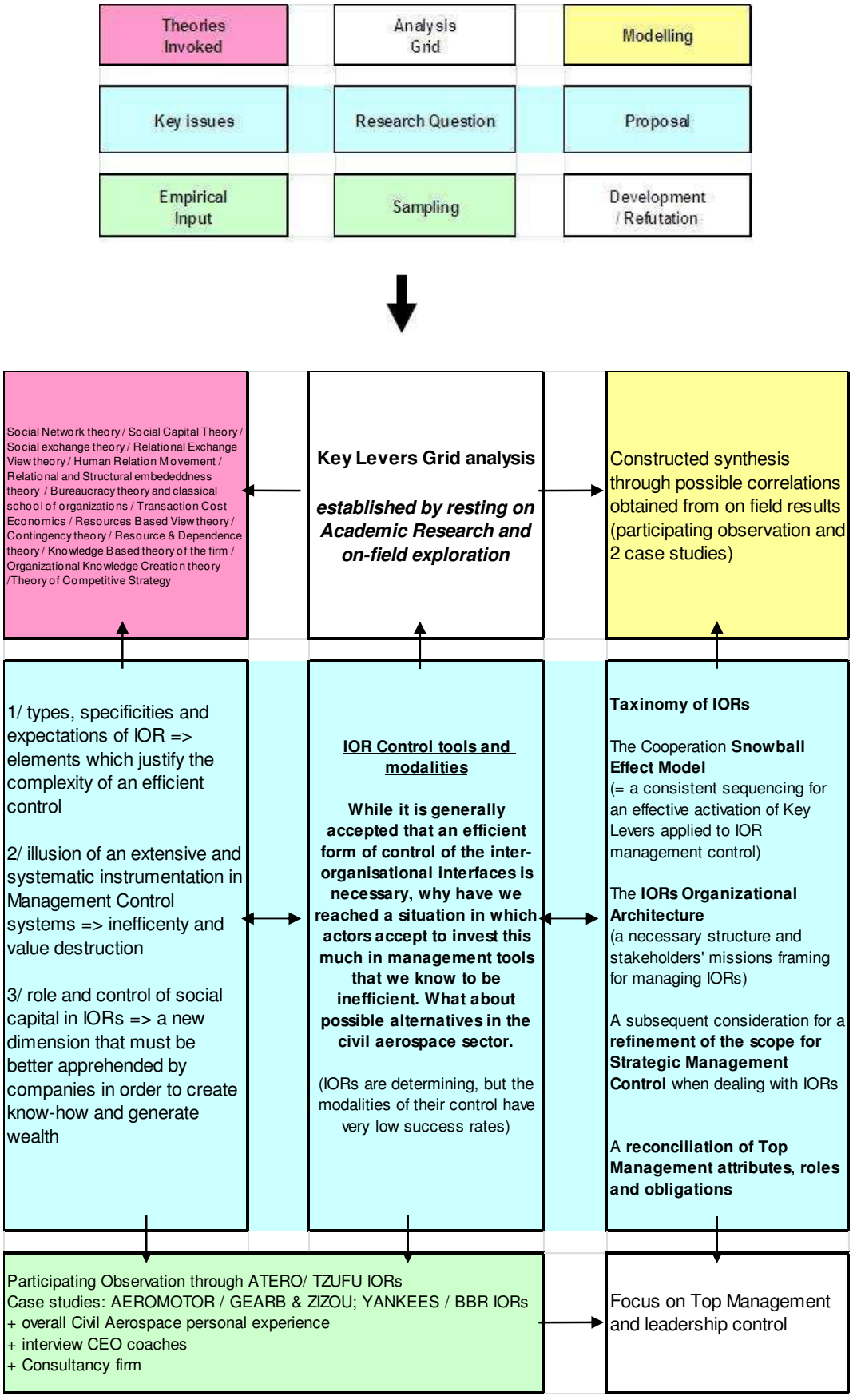


Figure 10 – Practical Representation of a Thesis Roadmap

CHAPTER 2 - *RAISON D'ÊTRE* OF INTER-ORGANISATIONAL RELATIONSHIPS *(IORS)* MANAGEMENT WITHIN CIVIL AEROSPACE

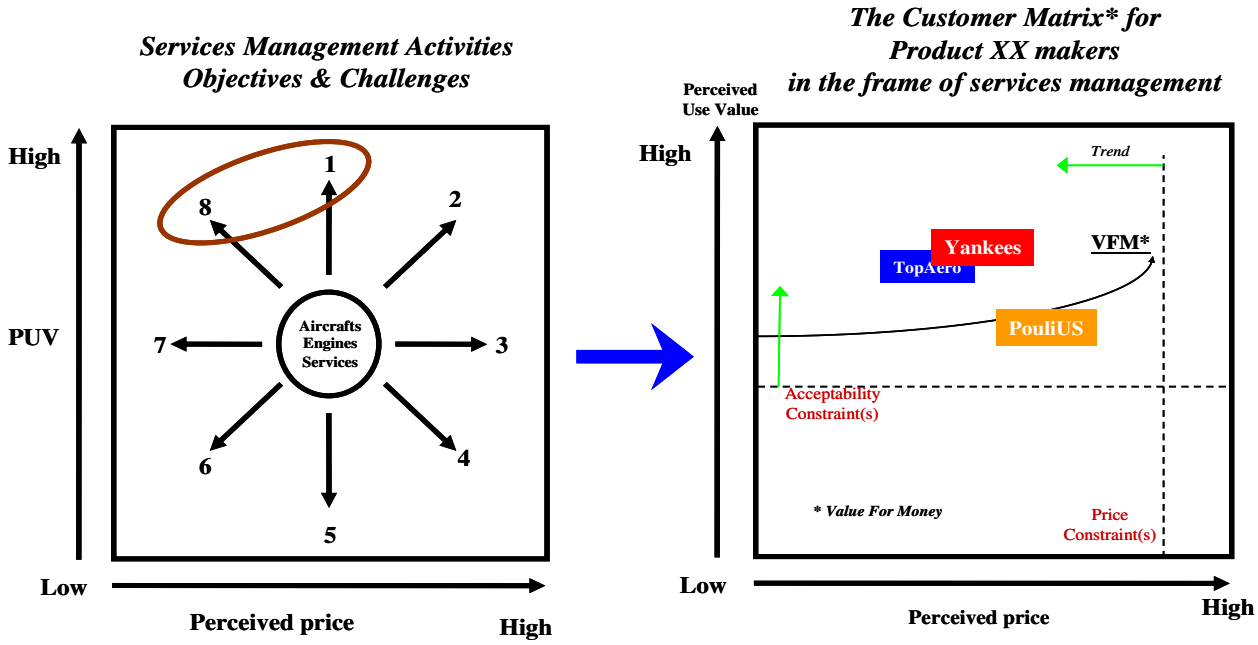
PRELIMINARY KEY CONSIDERATIONS

Although it is not my intention to dwell at length on the theoretical aspects of strategy management and associated constructions, a few reminders do prove useful in order to set the context of this research appropriately. Accordingly, we should be able to legitimise an academic exploration into the formation process and the reality of the impact of IORs strategic management control devices and tools within civil aerospace.

First it is a general contention that building *Competitive Advantage(s)* is a fundamental purpose for a firm. Associated intrinsic characteristics are comprehensively reviewed in the literature dealing for instance with the market based view or the dynamic capabilities theory which identify different sources of competitive advantages. This was successfully captured by Faulkner (1995) through his research into international strategic alliances. It is also commonly recognised that "*a firm is said to have a competitive advantage when it is implementing a value creating a strategy not simultaneously being implemented by any current or potential competitors*". As suggested by Barney (1991), this competitive advantage becomes sustained when these competitors are unable to duplicate the benefits of the selected strategy, which supposes a continuous renewal that relies on *Core Competences*.

Through the research initiated by Hamel and Prahalad (1990), it is contended that *Core Competences* entail the following characteristics: they provide potential access to a wide variety of markets (global, sectors, traditional and low cost airlines, for instance). They can also make a significant contribution to perceived customer benefits of the end product and it is difficult for competitors to imitate them. Accordingly, *Core Competences* must be able to enhance a company's competitive position and profitability by increasing its products or services *Perceived Unit Value* without negative impact on its *Perceived Price*. This can be represented by strategic options one and eight hereafter, which illustrate civil aerospace

engine makers services management activities and the strategic orientations commonly targeted by engine makers along with trends observed on their market:



**Adapted from Faulkner et al. (1997), Competitive and Corporate Strategy, fig.2.1, p 10*

Figure 11 – Strategic orientations and civil aerospace engine makers services management activities

In line with authors such as Wernerfelt (1984) and Barney (1991) who consider that the resources of firms determine their strengths and weaknesses, it is assumed that growth stems from rare specific resources rather than profits generated through a given product positionning (Teece *et al.*, 1997). Distinctive competences would thus come from resources that are both idiosyncratic and difficult to imitate. According to Learned *et al.* (1969) or Barney (1991), those kinds of resources prove to be a unique source of competitive advantage and will determine the strengths of firms that can protect them successfully through appropriate mechanisms. However, these types of non-imitable resources are often not available within one single firm, which eventually gives rise to obvious justification for diving into the IORs challenge.

Already, Morris and Hergert (1987) had noticed that five major sectors accounted for the vast majority of inter-organisational cooperating arrangements: automotive, aerospace, telecommunications, computers and electrical goods. This trend is still true today, and its root causes are fairly well understood. Indeed, these industries are consistently characterised by

high entry barriers, globalisation and scale-economies constraints with rapidly changing technologies in addition to risk and uncertainty which are certainly sound attractive reasons to establish IORs.

This position can be reinforced by referring to Mattsson (1987) who defined strategic co-operation as *"a particular mode of inter-organisational relationship in which the partners make substantial investments in developing a long term collaboration effort and common orientation"* for a number of key reasons: globalising markets, rapidly changing technologies, ever-shorter product-life cycles, high investment requirements or companies' limited core competencies and resources, as developed by Faulkner (2004), who identified both external and internal factors at stake when dealing with motives for alliances.

Alternatively, from a management control perspective, it is probably worth remembering some theoretical basics related to the motivations behind make or buy decisions and the establishment of other inter-organisational relationships. Certainly, the search for a unified theory is still on-going. In particular, it is difficult to unify an approach which deals with the factors influencing the boundaries of a firm with another relating to the internal structure of the firm. Moreover, contributions that have quickly followed one another over the last few years have possibly not yet been fully digested or understood. Nonetheless, almost forty years of research efforts in management control have provided some contributions worth bearing in mind with regards to different aspects of the nature and existence of IORs. In particular, strong emphasis has been put on the role of incomplete contracts viewed as a common and significant driver in make or buy orientations. Starting with the contributions of early neo-institutionalism (Coase, 1937), it has long been considered that generated by the existence of transaction costs, the intrinsic incomplete nature of the contracts has had a key role in the explanation of the factors affecting the trade-off between firm and market. Moreover, and given the difficulty of specifying *ex ante* all the features of an IORs (e.g. due to the non-observable actions of agents and inherent uncertainty) the new property rights theory proposed a number of formalised make versus buy models which assess the benefits and costs of vertical integration.

Notwithstanding the above, it is however important to recognise that the existing theoretical literature on IORs formation is fragmented or even scarce when dealing with aspects related to concrete deployment and management. Regarding the formation of IORs, several authors

have contributed to this field, such as Contractor and Lorange (1988). But they often involve "*a mixture of motives, intentions, and objectives*" as suggested by Barringer and Harrison (2000, p. 367), which reinforce the idea of fragmentation and the multifaceted nature of IOR.

Within this world of divergent views, it is also worth noticing that strategic transformation is generally recognised as a critical requirement for achieving high levels of performance. Still, it seems more difficult to recognise that a firm's competencies lie not so much in physical assets as in skills, talents and behaviours or other activities that account for the strategic success of an organisation, such as IORs, for instance. The idea here is well that knowledge has become increasingly important as a contributor to a firm's success in industrial competition. The new economy is about growing value of knowledge as in input and output, making it the most important ingredient of what people buy and sell.

From an early stage, Schumpeter insisted heavily on such a dimension, which has also been deeply investigated by Nonaka (1994). Quite interestingly, these principles are also often stated by top key decision-makers. For instance, the CEO of one of the company I worked for used to hammer messages like:

> *"… we will continue to invest in technology, in our product and service portfolio, in the capital assets required to deliver growth, in our international footprint and in our people." (Mr X, CEO Aeromotor)*

In the course of my professional life in civil aerospace, I was also lucky enough to meet Mr JP., President and Chief Executive Officer of a booming North American airline. Once, he gave an explanation of how his company was successful in generating cash when so many other airlines, which had been around for a long time, were strapped for cash and either in the midst of, recently out of, or facing bankruptcy.

> *"It is a long story, but I think it can be summed up in a few phrases: conviction over purposeful missions, people-centric strategies and smart, fiscal conservatism. Since the deregulation of our industry in 1978, both S. and A. H. have been very clear about their commitments to customers and the regions they serve. Understanding your customers—their needs and wants—and the requirements of the regions you represent is the starting point to developing defensible competitive positions. From there, recognizing that business is a relational prospect - that success is a function of being good at building value-relationships with those who depend on you - is essential to building lasting loyalty, which is a key ingredient in any successful business model. Both airlines have been disciplined about reinvesting in their companies and maintaining healthy cash balances which support robust investment in the up-cycles and safe harbors in the downturns."*

In 2002, I also attended a training session in Malaysia designed for high-potential managers belonging to the company for which I worked at the time. During these intense days, we attended courses from Professor Saias (who then taught Strategy at Wharton Business School). In his courses, this professor strongly insisted on the fact that successful companies must understand that being a technology- and new product introduction-driven company was no longer enough to succeed. In reality, competitive edges would now be derived from companies' willingness to invest in people and knowledge as well as in product and markets.

In fact, all the above references which are drawn either from academic references or from personal professional experiences aim at suggesting that success may heavily depend on the ability to adequately appreciate that economics is not deterministic, predictable and mechanistic but process–dependent, organic and always evolving (Arthur, 1999). This reinforces the need to invest in people and knowledge in order to "*have the vision to foresee, to imagine what shapes the next games will take*" (Arthur, 1996, p. 107). Consequently, acquiring a thorough understanding of the resources and key competences of an organisation is critical, especially when the latter is likely to deal with capabilities difficult to imitate. Based on such an understanding, it may then be reasonably possible to adequately control resources for building and managing strategies capitalising on the right resources and competences, i.e. the resources capable of crafting competitive advantages (Coyle and Quah, 2002).

At this stage, it is critical to highlight that performance and its associated management control processes are not only a matter of figures, metrics or "hard" skills but can also deal to a great extent with a proper appreciation of "soft" skills and sociological elements.

The three following sections aim at first well setting the scene through a review of the change of paradigm which occurred in civil aerospace. Then, generic purposes of inter-organisational relationships are reviewed in order to justify the relevancy of their study in light of civil aerospace. Finally, a case study is proposed to further materialize previous considerations.

SECTION 1 - A CHANGE OF PARADIGM WITHIN CIVIL AEROSPACE

After providing visibility on major stakes at play in civil aerospace for the next decades, this section lists a number of arguments that justify the criticality of core competences related to IORs management. This will then introduce the inextricable link between value creation and co-operations arrangements addressed in the second part of this section.

1. A HISTORICAL PERSPECTIVE OF THE CIVIL AEROSPACE BUSINESS MODEL EVOLUTION

Basic principles tell us that businesses strive to keep fixed costs low and revenues high and stable. In the case of civil aerospace, these factors are reversed. Fixed costs are generally very high and revenues are very volatile. This industry is capital intensive, given the need to invest in or maintain expensive aircraft, and has been generating lower and lower returns on invested capital for a number of years now. On top of that, airlines are heavily regulated which also has a strong impact on the entire value chain. All of these are very heavy burdens, which is why this industry is now facing dramatic transformations. Within civil aerospace and since the 90's, there has been a clear awareness that old line companies unable to meet new challenges and satisfy some *Key Success Factors*[50] will clearly be forced out of the market.

While the U.S. airline industry has long been considered the largest airline industry worldwide, most also agree that it has been in a chaotic state for a number of years. Already in 1993, a U.S. government report indicated that the industry had "*lost huge amounts of money in the past three years, and it has never made a sustained, substantial return on investment ...*"[51]

[50] defined as those competitive factors that most affect industry members' ability to prosper in the marketplace, *Key Success Factors* by their very nature critical to future competitive success and all firms in the industry must be competent at performing or achieving them.

As reported by the Air Transport Association[52], the loss recorded from 1990 through 1994 was about $13 billion. From 1995 through 2000, the American airlines earned approximately $23 billion and then lost about $30 billion from 2001 through 2005. From 2006 through 2008, the airlines earned about $2 billion while in 2009 they lost about $2.5 billion. In fact, in 2009 operating revenues dropped by 16.9 % to $155 billion, resulting in the deepest two-year contraction in the industry's history and extending industry losses to $58 billion over a nine-year period beginning in 2001. However, some U.S. airlines have consistently demonstrated that they are able to compete successfully[53]. Focusing on the eight major US airlines[54], *Southwest Airlines* is probably the one with a long record of success.

Regarding new U.S. interstate airlines after the deregulation in 1978, McCabe (1998)[55] suggests that twelve key success factors explain their success or failure. This position is supported by a computer model of an airline designed to simulate the operations over the time periods studied – for most of the airlines over a five-year period. The major output of these simulations was summarised by McCabe (2006) as follows: "s*uccessful airlines must do many things well. Not doing well in any one area may not result in failure as we define it. However, performing very poorly in any one area, or poorly in two or more areas, appears to make success elusive*". Still according to this author's findings, for an airline to transform into -in part- a service business and to be successful it must be effective in four general areas: 1) attracting customers; 2) managing its fleet; 3) managing its people, and 4) managing its finances.

The ability to reach the associated key success factors in a satisfactory manner analysed in the light of the actual success or failure of the eight airlines considered is represented in the table below:

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[51] The "National Commission to Ensure a Strong Competitive Airline Industry. Change, Challenge and Competition: A Report to the President and Congress". Washington, D.C.: U.S. Government Printing Office, August, 1993.

[52] Air Transport Association of America, Inc. Economics; Annual Revenue and Earnings; Retrieved 19 October 2006 from http://www.airlines.org, selected years.

[53] They were capable to report for two or more years growth in annual profitability (increasing positive net profits, not just operating margins) and growth in revenue services rendered (available seat miles flown).

[54] by capacity offered (available seat miles) and their capacity rankings: American Airlines (AA) (1), America West Airlines (HP) (8), Continental Airlines (CO) (5), Delta Air Lines (DL) (3), Northwest Airlines (NW) (4), Southwest Airlines (WN) (6), United Airlines (UA) (2), and US Airways (US) (7). It should be noted that America West acquired US Airways and will now operate as the US Airways Group from their onwards, but the two will operated separately for a while. In addition, Delta and Northwest were operating under bankruptcy court protection at the time.

Airlines' Competitive Strength Assessment: ranking on 12 KSFs* (source: Dr McCabe, 2006)						
	Good	Above Average	Average	Below	Poor	Success / Failure
American Airlines		1	4	5	2	Poor
America West	3	3	3		3	Above Average
Continental Airlines	2	2	4	2	2	Average
Delta Air Lines	1	1	5	1	3	Poor
Northwest Airlines	1	2	2	1	5	Poor
Southwest Airlines	6	3	1	1	1	Good
United Airlines	1	3	3	2	2	Average
US Airways	1			4	6	Poor

*** For details of KSFs, see appendix XXX**

Table 1 - Airlines' Competitive Strength Assessment: ranking on 12 Key Success Factors

By considering the rankings of these eight major US airlines' on 12 specific factors as well as their individual rank regarding their ability to prosper in the marketplace, McCabes' study (1998) highlights how on the one hand the conditions of the business changed after the deregulation took place in 1978, and on the other once more raises a key question: why is this industry able to continue to attract enough investors to maintain all these airlines in a business where chaos may just be in the nature of such a crazy business.

For the author, a possible cause of this is linked to an economic phenomenon known as "core theory" which is about a "… *mathematical formulation of the competitive environment of an industry. As in many mathematical models, there may be many, one, or no solutions to the equations of the model. According to this theory, the model for the airline industry has no solution. Therefore it is an "empty core." A lot of things have changed in the ensuing decade, but the industry still seems to be just as chaotic as before*". Though not entirely incorrect, it would however be excessive to take such a radical position for granted. For example, Telser (1988, 2007), the University of Chicago economist whose work includes research about the

[55] "Why Airlines Succeed or Fail: A System Dynamics Synthesis." (Ph.D. diss., Claremont Graduate University, 1998).

"core theory", is still exploring that theory with respect to the airline industry while other economists pursue other theories. Consequently we should be prudent. However, what these debates do suggest is the "inextricable" nature of the dilemma that civil aerospace currently faces.

Without much risk, one can put forward the idea that when the commercial airline deregulation took place in the early 1980s, profits were replaced with losses and airlines started to feel the heat, which in turn imposed new conditions for success through new organisation modes and new ways of thinking, since the economic systems of global commercial aviation which had been developed decades prior and rapidly became outdated. Since the late 1990's in particular, the nature of the markets and business paradigms has evolved rapidly across the whole civil aerospace industry, where it proves paramount to develop better, cheaper, and faster products, and deliver more value to customers. This is related to a key characteristic of this business in which success is traditionally very much dependent on companies' ability to face very specific business cycles.

The underlying reasons for this are multiple: airlines sell a perishable commodity and commodity prices are highly dependent upon supply and demand. Airlines also buy new aircraft when they can confidently forecast near-term increases in demand, which is clearly influenced by the international economical and political environment. Moreover, when demand is high, it can take more than twelve months after the purchase order to receive a new aircraft. When one airline starts to place new orders, the entire industry tends to follow. Obviously, no airlines want to lose market share because they have too few aircrafts, and at the same time no airlines want to fly "older aircraft" when their competitors are flying "new" equipment. At this point in time, the industry is enjoying high demand and favourable pricing.

However, it has been historically demonstrated by the business cycles previously mentioned that eventually the party comes to an end. The economy then enters a downturn; demand falls below the collective forecast and orders, prices and profits plummet. Production falls, prices increase along the supply chain and profits crash. While the amplitude of this cycle may be reduced over time through better technology and management, most professionals agree that commercial aircraft cycles will never be eliminated.

Additionally, in the long term, it is clear to most operators that the increasing competitiveness of the market threatens the certainty of revenue growth while cost growth continues inexorably. Hence the need to become more adaptable to market changes while traditional cost cutting and operational efficiency have reached their limits and therefore require new approaches. In 2002, already, this was the message driven home by Leo van Wijk (President & CEO of KLM Royal Dutch Airlines & Chairman of the Association of European Airlines). At a Conference held in Brussels (European Aviation: towards a sustainable industry, European Aviation Club) he particularly insisted on the fact that every airline needs to re-assess its revenue and costs structures.

Below is an attempt to capture this message in one snapshot:

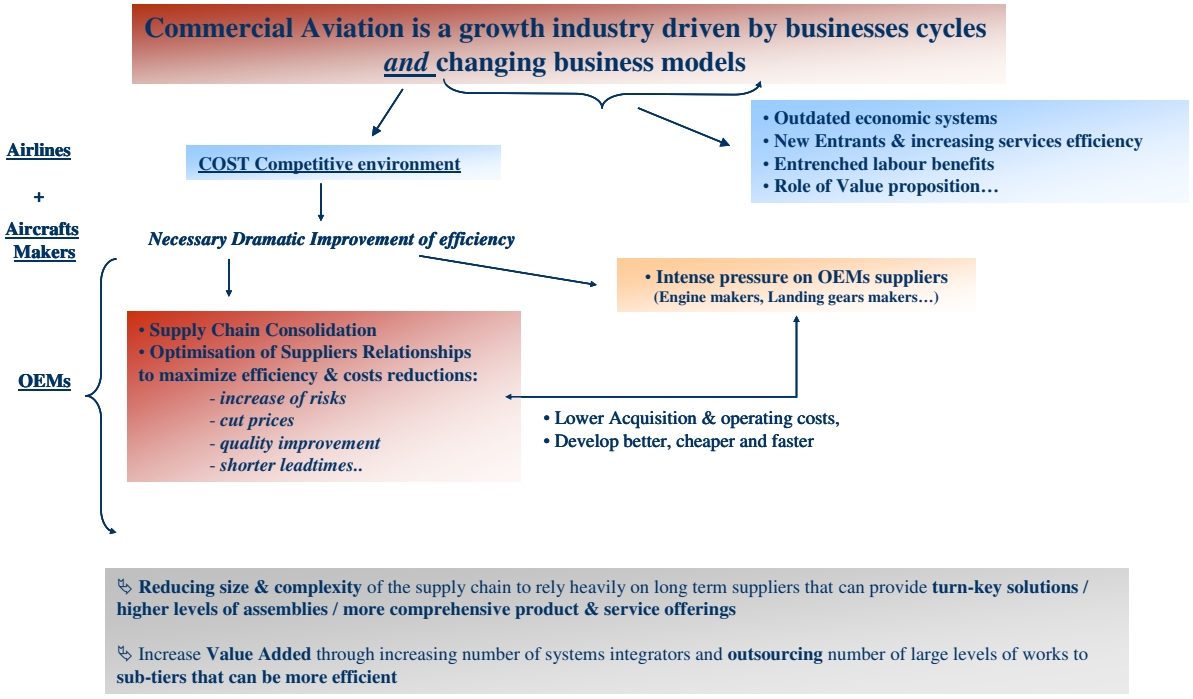


Figure 12 - Key Salient of the Civil Aerospace Industrial business Model

Business cycles and changing business models have been stimulating cost competition across airlines forced to deal with outdated economic systems, new entrants and increasing service efficiency along with entrenched labour benefits. This translated into a necessary and dramatic improvement of efficiency across aircraft makers which then put increasingly intense pressure on OEMs. Consequently, the latter entered a process of supply chain

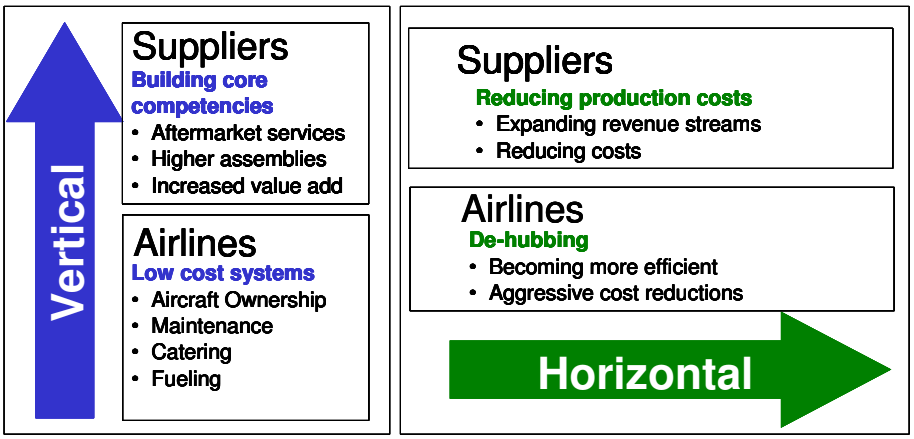
consolidation through continuous attempts to optimise relationships with their suppliers in order to maximise efficiency and costs reductions. This inevitably entailed multiple consequences such as the increase of risks, price cutting and necessary quality level improvement in addition to shorter leadtimes. Possible associated levers implemented as a response have consistently been a reduction of the size and complexity of the supply chain, with an increase of added value through an increasing number of system integrators as well as the increasing outsourcing of works to sub-tiers.

As described by Håkansson and Lind (2004), a large number of industrial actors have actually experienced the same changes in their way of driving operations for the last 25 years: management methods such as just in time (JIT), time based management (TBM), lean production and business process reengineering (BPR) have been increasingly introduced to eliminate all buffers within companies and thereby increased the companies' dependence on customers and suppliers.

Following that trend, the products or services proposed consist of technologies that are at significantly different stages of development while customers impose different and sometimes conflicting demands. Despite the difficulty of the task, companies therefore have no choice but to operate within a network of relationships with quite different characteristics and the ability to manage such a situation successfully has proved to be a strategic differentiator. The same phenomenon can be applied to the aerospace business with a very specific supply chain with no other choice but to rapidly improve their operational structures and efficiency to compete successfully in such a deregulated and cost competitive environment. This is what Boeing did in the late 90's when, through manufacturing and procurement improvements on its B737 line, Boeing achieved a 44% reduction in Flow Time, a 64% reduction in inventory, and a 44% reduction in Work in Process. However, the impact of these internal measures would be very limited without a significant contribution from an appropriate management of external suppliers. The civil aerospace environment leaves airlines and aircraft makers with no choice but to place intense pressure on their suppliers and demand better-performing aircrafts and aircraft systems with lower acquisition and operating costs. Between 1998 and 2002, Boeing reduced its supplier base from over 3,500 to slightly more than 1,500 and as a result of successful efforts to reduce costs, the company's operating margin improved from 3.6% in 1998 to 8.4% in 2001 (Aldermann, 2002). Another concrete and more recent example is the project implemented by Airbus in 2006. Following the disclosure of serious slippages

on the A380 program, Airbus launched their Power 8 program in which one prime objective consisted in restructuring their supply chain to reach an objective of € 2.1 billion per year savings, starting in 2010.

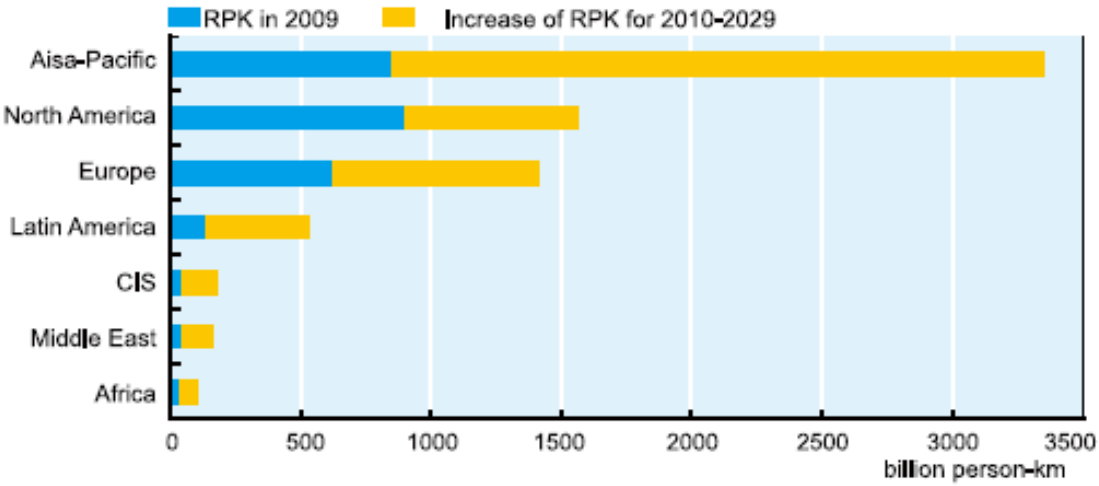
Given that 65-75% of direct costs are derived from procured items, civil aerospace companies are heavily depend on their supply chain. The latter is forced to offer better performing systems with lower acquisition and operating costs, continuously improved quality and shortened manufacturing lead times in order to provide increasing responsiveness through the endless search for an optimal system which oscillates between vertical and horizontal consolidations as represented below:



Source: Aldermann, H., (2002), "Industry Consolidation: Review and Outlook, The Trend Continues", Third Annual Aviation Industry Suppliers Conference in Europe (AISCE), Toulouse, 2002

Figure 13 - Drivers of consolidations in Civil Aerospace

This is an immense challenge, but it is necessary as in the next 20 years the global air transportation industry expects a growing RPK (Revenue Passengers Kilometers) at an annual average rate of 5.3% from 2010 to 2029.



(sources: IATA, 2010)

Figure 14 - Forecast on RPK Growth in Different Regions of the World

Asia-Pacific and Latin American regions are expected to have the fastest growth in terms of RPK, which is expected to reach an annual rate of over 7% in the next 20 years. The Middle East and African regions will have an average annual growth rate of 6%; Russia and the Commonwealth of Independent States will have an average annual growth rate of nearly 5%; the two mature markets of Europe and North America will experience a growth rate around 4% and 3% respectively. Within the forecast period, the Asia- Pacific region will become the market with the highest RPK, with North America and Europe following closely behind. The air routes between Europe and the Asia-Pacific region will achieve the highest RPK with a growth rate of 5.6% in the next 20 years. The North-Atlantic air routes are second with a growth speed of 4.3%. The air routes from the Middle East to the Asia-Pacific region are expected to experience the fastest growth at a rate of 7.5% in terms of RPK.

In such a context, and with no alternative but to reduce costs through supply chain consolidation, it is commonly assumed that success will be heavily driven by the optimisation of the relationships of stakeholders of the entire value chain which is now considered necessary to maximise efficiency and cost reduction but also to continuously improve quality and share increasing risks (financial and technological). For example, effective buyer-seller relationships can obviously speed up product-development cycles and hold down costs. Driven by economic performance interests, this is also most often seen as an opportunity to sustain growth and profitability because airlines have no choice but to focus on managing the daily risks associated with the revenue side of the business equation, while much of the cost-

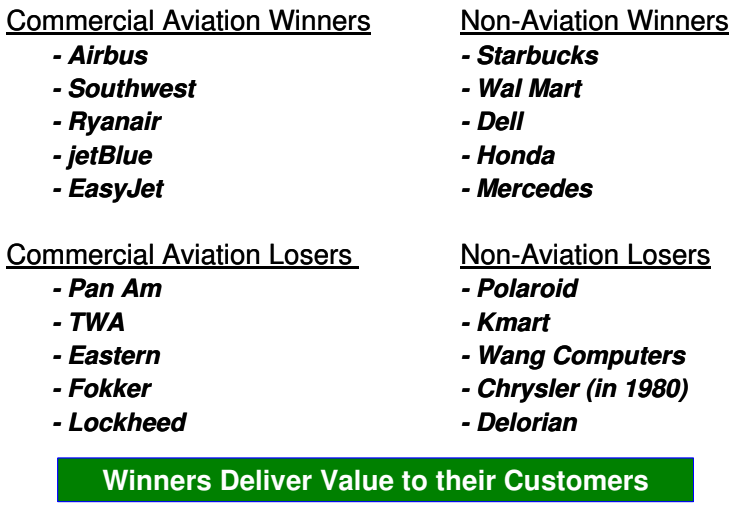
related elements of delivering products to the market can be fixed by specialist suppliers with lower pricing as a result of expertise and economies of scale.

Nevertheless, offering products that are cheaper or produced faster may no longer be the sole key to brining in business. In particular, "for business-to-business suppliers**,** the traditional competitive advantages, based on superior products and relationships, are under pressure. Purchasing organisations are getting more sophisticated, low-cost competitors from China and India are more and more widespread, and innovations are being imitated more rapidly" (Baumgartner *et al.,* 2005, p. 80). This is reinforced by Kenny (1998, p. 16) who suggests that it proves key to "*think in terms of managing the business on behalf of your customers*", which in civil aerospace means that ultimately airlines are allowed to focus exclusively on their core competency i.e. passenger and fret transportation. This is a radical change in this business world which needs to *"integrate those rules into operations in order to be able to realize the promise"* expected as recommended by Byron *et al.* (2006, p. 44-45). In particular, the vast majority acknowledges that a close working relationship between value chains stakeholders has become paramount. However, most actors also recognise that it is a huge challenge to make it happen while targeting a market is of "*little value if the company cannot easily develop the capabilities required for serving customer requirements*" (Grant, 1991, p. 181). This is in line with Nadler and Tushman (1999, p. 48), who deal with the transformation of business organisations in the 21st century and suggest that we have "*truly entered the Post-Industrial economy. We are rapidly shifting from an economy based on manufacturing and commodities to one that places the greatest value on information, services, support, and distribution*".

Holistically, it is thus contended that aerospace OEMs need to extend their natural capabilities in order to develop new leverages. However, it is also quite legitimate to assume that capabilities required for developing the necessary core competences can be considered from many angles of research. In line with the subject of this thesis, we will focus on an angle that presents a true interest: inter-organisational interfaces management dealing with joint ventures, acquisition of specialist companies and outsourcing of appropriate capabilities.

2. VALUE CREATION AND COOPERATING ARRANGEMENTS

The above section aims at providing visibility regarding the stakes of evolution of civil aerospace over the last decades. In this regard, at a conference in 2002 Alderman H., an aerospace industry expert, shared his thoughts on the characteristics of this industry. Notably, he insisted that leading companies were the ones which had found ways to continuously reduce costs and also increase the services they offer with their products in order to create value for their customers as illustrated below:



Source: Aldermann, H., (2002), "Industry Consolidation: Review and Outlook, The Trend Continues", Third Annual Aviation Industry Suppliers Conference in Europe (AISCE), Toulouse, 2002

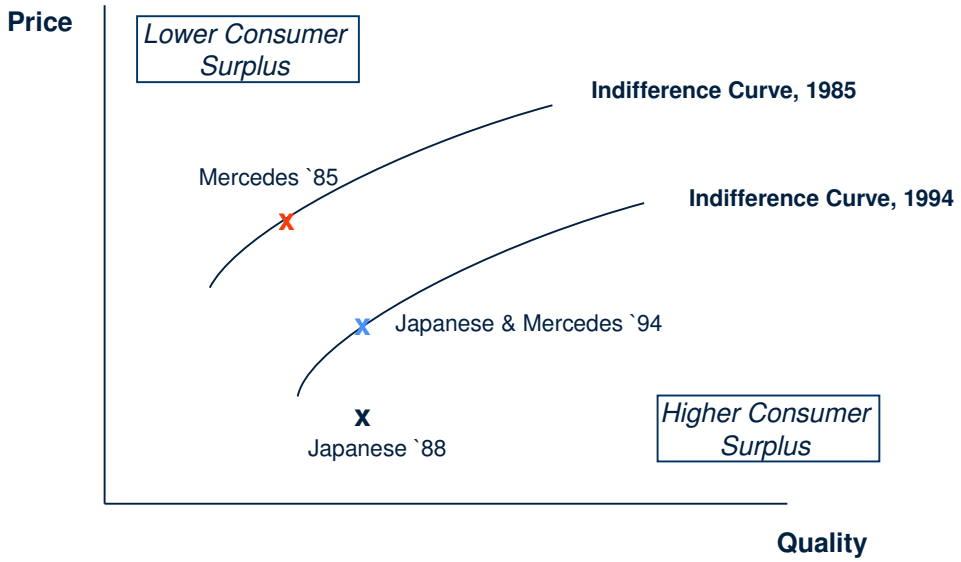
Figure 15 - Winners and Loosers in the delivery of Value to Customers

Although the above representation is somewhat outdated, and some of the examples provided may no longer be appropriate, it still raises key questions, including the issues pertaining to the meaning of value creation for a firm. According to Porter (1996), value creation is of prime importance for firms and their activities as by essence their purpose is to create value for their customers and thereby generate returns. In this regard, it is interesting to refer to McGee (2005), a former professor of mine at Warwick Business School, who insists that the concept of value is central to economics and to the understanding of competitive advantage.

According to McGee, both *Perceived benefit* and *Consumer surplus* should be considered. The latter is based on a specific understanding of profit. It is the profit that a consumer makes from a purchase. This is reflected by the following formulae:

Perceived Gross Benefit – (user costs + transactions costs + purchase price paid) = Consumer Surplus

Consequently, a firm capable of delivering consumer surplus should be capable of successfully competing. A possible illustration of the latter consists in establishing *Value Maps*, in which the price of the product is represented on a vertical axis and the quality of performance characteristics of the product are represented on the horizontal axis, as illustrated in the following example taken from Besanko *et al.* (2000) and representing the luxury car market in the US:



from Besanko, Dranove and Shandley (2000), The Economics of Strategy, 2nd edition, Wiley.

Figure 16 - Value Map of the Luxury Car market in the US

The price-quality combination available to consumers is thus shown by an upward sloping schedule named *indifference curve* because at each point of the curve the consumer surplus is identical. Consumer surplus is then lower above the curve due to higher prices while it is higher below the curve given lower prices. McGee (2005) explains that in the absence of a breakthrough either in terms of product or process, pricing products below the indifference curve will only be possible by sacrificing margins. Alternatively, step change innovation will set new conditions from which, a new indifference curve below the previous will materialise. This will generate higher consumer surplus and as a result will provide the means to gain both

volumes and profits, taken from competitors who are behind their times, and unable to innovate enough.

Reflecting on the luxury car market proposed above, it should be emphasised that when the Japanese luxury automobiles were introduced in the late 1980s, their quality was comparable to the German Mercedes but at lower prices. Providing a serious consumer surplus to the market they gained strong market shares. This was possible because they gave consumers an opportunity to gain overall through an increasing consumer surplus.

It is also contended that in addition to consumer surplus, other variables or contributors along the firm's value chain contribute to the creation of value. In this perspective, it is proposed to talk about *value creation packages.* The latter refer to consumer surplus as explained above but also include firm profits, returns on labour and capital, in addition to returns to suppliers. Accordingly, it is implied that value creation capabilities are clearly not limited to commercial positions or prices. They entail elements of effectiveness and efficiency internally or externally respectively through the notion of returns on labour and capital and the notion of returns on suppliers. In fact, such a perspective was embraced by Porter (1980) who developed the concept of value chain entailing a series of activities performed to create value for firms. Accordingly, value creation happens when firms sustain profits exceeding their industry standard. This is possible because firms can rely on competitive advantages over rivalry. For the author such competitive advantages are possible through either costs advantage or differentiation advantage. Respectively, both are meant to enable firms to deliver benefits similar to their competitors but at a lower cost, or deliver benefits that exceed those of competition. While the author refers to positional advantages that describe the position of leading firms' whether in terms of costs or of differentiation, it is also interesting to consider the Resource Based View Theory (Barney, 1991; Prahalad and Hamel, 1990; Wernefelt, 1984). This theoretical perspective contends that resources and capabilities contribute to the creation of competitive advantages that are a source of value creation. This is a key aspect when dealing with inter-organisational co-operating arrangements. Firms will hardly ever own all the necessary resources and capabilities to create value through the competitive advantages as defined above.

It is important to underline that such a view supposes that resources are not profit and loss items (revenues, cash flow), which are flows of money. It suggests that resources are not

ratios (market share, return on sales) or ambiguous and abstract concepts (leadership, market power) either. In this theory, resources refer to the fact that they originate on the demand side (customers, dealers) as well as from the supply side (capacity, products, staff, and cash). It further discusses that the soft attributes of tangible resources are commonly seen as critical (staff skills, product functionality, customer size) while indirect resources (attitudes of key stakeholders like customers, staff and investors) should not be neglected. Finally, and importantly in the context of this thesis, these types of resources may also fail because some elements such as patents and trademarks, proprietary know-how, customer base, reputation or brand equity cannot be easily and comprehensively covered by one single firm.

The same can apply to capabilities. Viewed as the ability to make an effective and efficient use of the resources available, capabilities are seldom a given for a firm. Obviously, a firm cannot be good at everything, all the more so as these types of abilities are not necessarily documented explicitly. This is actually the reason why it is complicated for competitors to imitate others.

Consequently, the ability to enable competitive advantages for creating value can be made possible through efficient inter-organisational relationships and co-operating arrangements established to complement the gaps in resources and capabilities of co-operating stakeholders. In this context, it is certainly interesting to refer to Dyer and Singh (1998) and the Relational View which "*attributes competitive advantages to relationships-specific assets, knowledge-sharing activities, complementary resources and capabilities as well as effective governance mechanisms"* as underlined by Dietl *et al.* (2009, p. 26). The same authors conducted a case study on the European Automotive Industry and value creation architectures. In particular, they mention the case of Fiat which recovered from very difficult years after successfully capitalizing on *"the structures and relationships of all the value adding activities that are carried out by various actors and companies*" to bring its products and services to the market through a remarkable ability to be embedded within different relationships on both the production and the distribution side. The example of Fiat in the automotive industry perfectly illustrates the extent to which inter-organisational interfaces management can bring about a genuine strategic dimension as long as it has an impact on the possible degrees of integration along the value chain and therefore can be determinant in asserting competitive positions

depending on two key dimensions: production depth and product control[56] as defined by the authors.

In addition, it can be interesting referring to McNeill (1963) as it was reported by Smith et *al.* (1995, p. 7) to insist on the difficulty, but also on the importance and the rewards of co-operation:

> *"In a series of military campaigns lasting until 448 B.C., a coalition of more than 20 Greek cities defeated the powerful empire of Persia. The success of the Greeks can be primarily attributed to their construction of the 200 ships used to defeat the Persian navy at Salamis in 480 B.C. The secret of the Greeks' victory was their conceptualizing the ships themselves as projectiles that could ram and sink enemy vessels. To do this successfully, however, the Greek ships had to be speedier and more maneuverable than the ships they were attacking, qualities that required a very high degree of cooperation among the ships' rowers. They had to row in virtually complete unison and be almost perfectly coordinated to outstrip and outmaneuver their opponents. Training and other methods of inducing rhythm and synchronisation were important in achieving this high degree of cooperation and coordination among the rowers. Winning the battle, however, also depended upon the accurate coordination of the 200 ships into effective fleet attack formations. Otherwise the Greek ships could have interfered with each other, and chaos would have occurred. Additionally, attaining initial cooperation among the various Greek city states was important in defeating the Persians. This cooperative military achievement was the prerequisite for the subsequent flowering of Greek culture, with all of its contributions to the development of the philosophical, scientific, political, economic, and educational systems of the Western world".*

Even though this may be a bold comparison, this reference implicitly illustrates the view that trust between stakeholders is critical in co-operations, by opposition, for example, to the Market Power Theory which *"does not take into account the trust which collaboration may engender … it is in this respect a fairly deterministic perspective, which does not readily accommodate the way in which evolving relationships between firms can alter the rationalities and strategic visions held by their policy-makers*" Faulkner (1995, p. 19).

More obviously, this reference is also quite interesting as it can to some extent illustrate Fayol's position (1916) insisting that inter- and intra-organisational coordination is critical for co-operation which would itself be paramount for management and *vice versa*. Additionally, all the above references suggest that making a difference may not be determined by the characteristics of individual firms alone. A competitive advantage is rather "*the result of competition among and within different constellations of actors"* (Dietl *et al.*, 2009, p. 28-29) which is made possible by increasing coordination efforts that have to rely on appropriate skills, resources and settings in order to keep and maintain control so as not to lose targeted

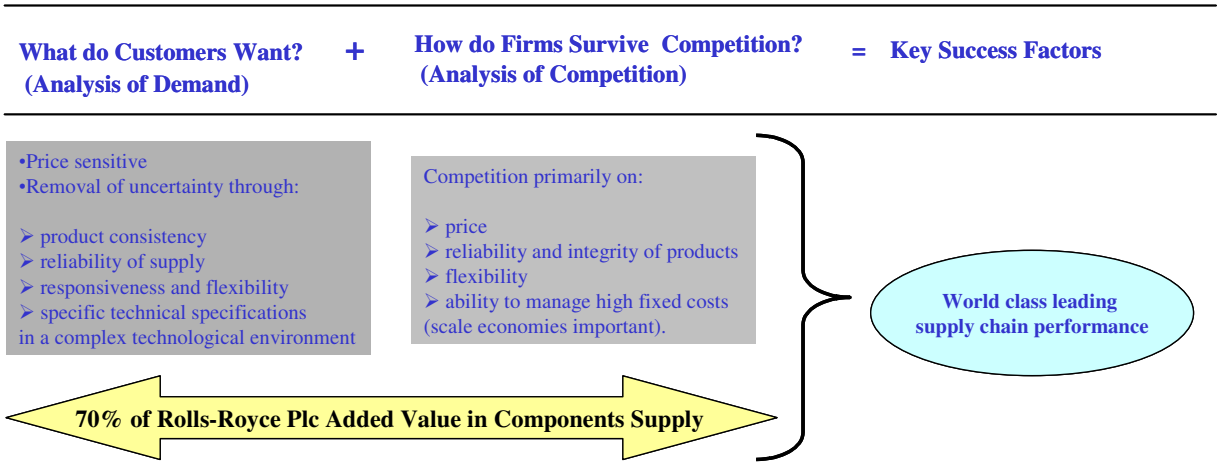
[56] *Production depth* stands for [value part designed and produced in-house/ total value of components and parts]
Product control relates to control by formal and informal safeguards.

differentiation potentials. This statement is not new, as it was already advanced by Fayol (1916) when dealing with functions of management, and was later reinforced through the human relations school of management.

As reminded by Smith *et al.* (1995), authors like Thompson (1967) and Lawrence and Lorsch (1969) also insisted on the importance of successfully establishing inter-relations among experts within organisations and put the emphasis on integration mechanisms within companies. This can legitimately be applied to inter-organisational co-operating arrangements as developed at a later stage. In this respect, as underlined by Smith *et al.* (1995, p. 8), it can also prove interesting to refer to *"Beer, Eisenstat, and Spector (1990)* [who] *pointed out that coordination is necessary for innovation and competitive success."*

Generally speaking, using the above examples and references aims at highlighting a number of necessary capabilities and resources that can "earn rent" (McGee, 2005) or create value through the formation of core competences such as successful inter-organisational interface management. This explores the idea that successful inter-organisational interface management is a key success factor for building strategic capabilities in firms.

This is particularly true in civil aerospace nowadays, as is illustrated in the next figure of how a leading engine maker sees supply chain management. Based on an analysis of demand - in terms of what is expected by customers - and of competition - in terms of what is paramount for the firm given competition – it is suggesting that world class supply chain performance management is a key success factor:



Adapted from Mc Gee, J. (2006), "Industry Dynamics and Competitive Advantage - The Market-Based View", Strategic Advantage Module Course, Warwick Business School

Figure 17 - Supply Chain Management viewed as a Key Success Factor

This conceptual representation can be reinforced by what happened in the 80's, when many prestigious companies that were highly integrated started suffering from their 'gigantism'. Too much bureaucracy and the lack of agility made it impossible for them to cope with an environment that was changing faster and faster every day. Furthermore, the increasing competition did not have to manage the heritage which comes with several years of existence, which enabled new competitors to be more flexible and gain market shares. In such a context, former dominant giant corporations had no choice but to concentrate on what they would define as their core business in order to survive. Consequently, an increasing share of their past work was handled to sub-contractors who were, at first, in charge of executing simple tasks. The involvement of sub-contractors developed fairly quickly through systematic competitive bidding phases. Based on technical requests issued entirely by their customers, these sub-contractors were expected to deliver reliable and competitive products within the best timeframe. An increasing number of potential bidders therefore appeared either with their own specialisation or positioned themselves only on a certain amount of total production requirements. This was all the more feasible in the civil aerospace industry as it is a market where products can be separated into different modules. Those products can thus equally be produced either in integrated or disintegrated environment.

Holistically, academic researchers have written extensively on the limits and constraints of traditional supplier-buyer relationship systems that were implemented in the 80's. Powell

(1987), Kalwani and Narayandas (1995) or Dyer and Ouchi (1993) for instance insisted on the cost of and the difficulty in managing large numbers of suppliers. These constraints were also enhanced by the limited leverages available to buyers when trying to deploy and secure improvement activities or productivities within their supplier network. On one hand, the latter were most often reluctant to share a reasonable piece of their cake with their customers. On the other, best practices praised by buyers and described as a remedy to lack of competitiveness were scarcely implemented despite significant investments in time and resources from both sides.

Such a situation was actually reinforced, if not generated, by the emergence of Lean Manufacturing[57] in the late 80's when the whole Western industrial world refined under a strong influence from the Toyoto Production Systems[58]. Given the intrinsic characteristics of these methods, two forms of buyer-seller relationships developed: manufacturing co-operations[59] and strategic co-operations[60] as represented hereafter:

Vertical Integration	Subcontracting	Operational Co-operation	Strategic Co-operation
Internalisation and overall control of the industrial branch by final producer	Pitting several suppliers against one another, who will ultimately execute the orders of the final producer	Implementation of Just In Time with suppliers who remain subcontractors	Selection of a few suppliers who will contribute to the design of major functions of the product
Mass production		Lean Manufacturing	

Table 2 - The evolution of vertical relationships in the Industry

(adapted from Donada, 1997, p. 96)

Theoretically, through strategic co-operation, much more responsibility falls upon suppliers as long as the buyer only defines the functional and economical specifications of the product.

[57] "Half the human effort in the factory, half the manufacturing space, half the investment in tools, half the engineering hours to develop a new product in half the time. Also, it requires keeping far less than half the needed inventory on site, results in many fewer defects, and produces a greater and ever growing variety of products (John Krafick, Researcher for IMVP, 1990).

[58] Originally developped and deployed in the 50's, the prime objective of Toyota production System was to rely on a production system that was so lean that it could stand up to the industrial maturity of Western actors in the automotive sector. Very soon, the latter understood how beneficial such an approach could be and started to apply it for themselves.

[59] Co-operation is defined as an agreement between two legally independent companies, that combine or join assets (which are often specific) in order to extend their common and individual goals.

The supplier is responsible for designing and manufacturing the product on its own. Equally, the supplier may also decide to outsource some elements of the products ordered by the original buyer. Consequently, such a form of co-operation can bring about irreversible implications for the original buyer. The latter loses significant expertise (divesting of technology, tacit knowledge exported, industrial assets use, etc.) in the product in question from the moment it no longer designs it or it stops producing it, which in turn produces an increasing dependence of the buyer vis-à-vis its supplier.

As suggested by Donada (1997), examining this evolution, which can be encountered in most industrial segments, provides the insight necessary to better understand what is at stake with externalisations and inter-organisational cooperating arrangements. On the one hand, the buy share in products' COS (cost of sale) is increasing relentlessly. On the other hand, actors (buyers and suppliers) are more and more intertwined for longer periods of time. Hence the obligation for buyers to do their utmost to ensure the effectiveness of most types of exchanges. Depending on their level (macro or micro) these exchanges will rely on different levers. As underlined by van der Meer-Kooistra and Vosselman (2000) exchanges need to be governed by legal frameworks at a macro level while task co-ordination or performance monitoring will relate more to micro levels. Whatever the level, certain requirements are interesting to explore for the subject under study.

For the benefit of this study, this thesis will later focus mainly on the micro level. In this logic, forceful arguments are developed by Fine (1998) who argues that it is central to companies to have the capacity to design powerful and efficient supply chains, and that inter-firm transactional activities have become crucial because in industrial sectors such as aerospace, car manufacturing, electronics and information technology, as well as in most service businesses, the economic performance of firms that outsource is due and related, to a large extent, to the suppliers who contribute roughly to 70% of the added value of products sold.

This trend can be illustrated by the rate at which outsourcing has been growing exponentially since the late 1990s in civil aerospace and, for example given that in most cases 50 to 70 percent of the total value of the products of American aerospace OEMs has already been

[60] The nature of customer-supplier relations evolved from a traditional adversary model to a more strategic co-operation. Donada (1997) refers to the latter as partnership; we prefer the term strategic co-operation.

subcontracted (Morgan, 1997; Trent and Monczka, 1998). This trend is also confirmed by numerous surveys that have been carried out by consultancy firms dealing with Top Management Aerospace & Defence companies. One of these longitudinal surveys is conducted by annually, and it reveals explicitly the criticality of IORs management by considering both Programme Management and Supply Chain Management among the four top priorities reported since 2007.

This comes as no surprise, as throughout growth and crisis civil aerospace firms have no choice but to focus on Programme and Supply Chain Management because the capacity to efficiently deliver is critical to a company's commercial success and profitability. The motivations for placing Supply Chain management as a priority however may vary, depending on the context (crisis, recovery or boom). Before the recovery experienced in 2010, and after several years of aggressive production ramp-up, many aerospace firms had no choice but to start scaling down their production, thereby passing the pressure on to their suppliers. Yet, this did not mean that control was no longer necessary. On the contrary, major risks related to the resilience of suppliers emerged and adequate control measures to prevent suppliers default became increasingly justified, especially as a result of the lack of financial stability inherent to that period. This explains prevailing trends encountered across most Aerospace firms such as an increasing need to monitor bankruptcy risks, cash constraints, to name a few, across the entire supplier network. Since 2010-2011, with a recovery announced by most specialists, controlling IORs has become a means of securing deliveries during a period with high production rates and ramp-ups that could cause saturation at all levels of the supply chain. Typically, within the company I was working for in 2012, I was appointed Ramp up Project Leader. This role consisted in designing and implementing control mechanisms to monitor critical suppliers for direct and indirect procurement given the projected increase in purchasing volumes estimated at +60% within the following five years.

Yet, it is fair to recognise that in many cases, no matter how much attention is given to Supply Chain Management, it is still unable to systematically prevent significant delays (up to 47 months) and cost overruns (up to 78% of the initial cost in recent years).

Overall, the above considerations aim at not only reinforcing the view that the ability to establish successful co-operative partnerships can heavily contribute to the creation and the sustaining of companies' competitive advantage, but also that it is based on a core

competence assimilated to state-of-the-art IORs management. Consequently, it is no surprise then that inter-organisational cooperative arrangements have long been praised as a panacea for creating value and dealing with possible demanding contextual configurations (downturn or boom).

However, even though the importance of IORs has been commonly acknowledged for a while now, some vagueness and scepticism still prevail and its integration into clear or economically rooted concepts of management control seems somewhat problematic. This situation was actually remarkably brought to light by Barringer and Harrison (2000). The authors proposed a theoretical explanation for inter-organisational relationships based on several theoretical paradigms (transaction costs economics, resource dependence, strategic choice, stakeholder theory of the firm, organisational learning and institutional theory). In doing so, they aimed at highlighting that inter-organisational relationships can either be based on economic rationale or on behavioural rationale (as illustrated below) while each paradigm taken individually is not sufficient to provide the rationale for and the key salients of IORs.



Figure 18 – Theoretical Foundations of Inter-organizational Relationships
(Barringer and Harrison, 2000, p. 382)

In addition, by proposing that *"in considering the potential for interorganizational relationships to create value, the simple cost/benefit analysis is insufficient"* (Barringer and Harrison, 2000, p. 367) because other benefits from successful IORs can be achieved (reputation, skills enhancement, and networking), the authors remind us that successful IORs cannot easily be quantitatively controlled. Consequently, it is assumed that IORs management control is not only strategic, but also likely not to be limited to economic-value oriented tools and devices. In this regard, it is interesting to notice that *"... the decision to participate in an interorganizational relationship must be a probabilistic assessment of strategic rather than economic value"* as noted by Barringer and Harrison (2000, p. 368).

KEY TRANSITION

In the previous sections, and by emphasising the shift of paradigm operated within civil aerospace, the need to create value through successful and sound inter-organisational co-operative arrangements was put forward.

We also insisted that value creation relates to Inter-Organisational Relationships (IORs) viewed as a complex set of interactions between individuals, common sense, ability to react but also to develop elements of trust and co-operation. This is in line with the general idea that "*value creation is dependent upon the ability of partners to integrate their core competencies*" (Pekar and Margulis, 2003, p. 59) on top of which it is also accepted that IORs management can be assimilated with a core competence.

Importantly, this position can easily be applied to what is at stake within civil aerospace given its evolution over previous decades. Yet, and though they may be very desirable, most often IORs prove quite difficult to establish and sustain, and existing academic literature on this topic and the practices observed on the ground are rather fragmented.

Consequently, in the following sections and through a perspective that goes beyond the boundaries of the firm, it is proposed to further analyse the purpose of the shift from integration to disintegration along with the mechanisms and strategic consequences. Following this line of thought, it is proposed to first investigate in much more depth the rationale and the root causes for different degrees of integration of value-adding processes. Based on appropriate academic research but also on field experiences and observations, this will lead to a better understanding of the *Key Levers* at play and worth controlling when setting the basis of a targeted success that would heavily depend on inter-organisational interface management abilities.

SECTION 2 - GENERIC PURPOSES OF INTER-ORGANISATIONAL RELATIONSHIPS

In chapter 2, section 1 our considerations were based on a strategic management viewpoint. In order to do so, we turned to self-explanatory authors such as Faulkner and McGee[61], Porter or even Hamel *et al*. (1989 p. 134) who insist that "*collaboration is competition ... Successful companies never forget that their new partners may be out to disarm them. They enter alliances with clear strategic objectives, and they also understand how their partners' objectives will affect their success.*"

This approach helped to clearly lay out the relevant stakes at play within civil aerospace. The following lines intend to focus more on management control perspectives, and review in more depth key determinants of inter-organisational relationship settings. This will provide insights into prevailing inter-organisational theories and some principles with regards to the stakes of IORs (e.g. make versus buy arbitration motivations, causes for buyer-seller IORs and different possible types of co-operation forms). This should highlight key aspects regarding the complexity of IORs that should be taken into account when analysing causes for IORs failures. Accordingly, it should also provide strong arguments for evaluating the pros and cons of strategic management control approaches, types of control and associated enablers.

Also, it is implicitly considered that very specific approaches certainly prove necessary for establishing close working relationships that can deliver tangible results in the long run. In particular, people and knowledge management appear to be the cornerstone of this great challenge, and knowledge management procedures may need to be enhanced in the context of disconnected assets like in civil aerospace. Also, the coaching of the actors involved may be revealed as a real need that justifies a great emphasis on social context management and not only on technical and financial expertise.

Overall, this section can be viewed as a main part of the literature review proposed in this thesis. It should provide elements of answers to the questions above with a focus on the Resource Based View and Knowledge theories along with Make or Buy practices.

1. RATIONALE FOR IORS FROM A CONTROL VIEWPOINT

The approach proposed in this thesis does not consist in describing at length all the different types of strategic alliances or industrial IORs that might work. The main objective of this work is to understand how and to what extent the implementation of strategic management control mechanisms and tools will, in the long run, influence or determine the success of firms.

Logically, assuming that in industrial companies each action is motivated by a specific purpose, it is also contended that before judging how actions are designed, implemented and managed, it is appropriate to better understand the root causes and the purposes of these actions. For example, it would be quite inappropriate to deal with buyer-seller inter-organisational interface strategic management control without understanding what can prompt buying companies to co-operate with suppliers and what can convince them to externalise activities. It is only after this has been established that it becomes reasonable to try to analyse and assess how recommended decisions will be controlled, because this will inevitably be aligned with the targeted purposes. Depending on what they are looking for, is it not the case that various stakeholders try to establish appropriate control devices capable of providing levers for mitigating risks, managing uncertainty and sticking to effectiveness, efficiency and others benefits expected through co-operations at play?

In this line of thought, it is contended that inter-organisational cooperating arrangements are a device serving the strategy of company X while *strategic management control* is there to safeguard that device, the determinants of which must be correctly appreciated before being put under control. As proposed in the following pages, such an appreciation can be made through a review of key determinants of IORs settings supplemented with a focus on *Resource Based View* and *Knowledge Creation* theories as they may bring to light key characteristics narrowly associated with co-operations in today's new organisational forms. Also, the issue of externalisation of activities is addressed.

[61] both were my professors at Warwick Business School between 2003 and 2007 - in particular, McGee was the supervisor of my Executive MBA dissertation. Certainly, they heavily influenced my understanding of strategic management topics.

1.1. Main determinants of IORs settings

Smith *et al*. (1995) established five broad categories to organise the range of theories covered by the co-operative literature. This categorisation proves useful for grasping key aspects that should be taken into account when considering the rationale and determinants for IORs. The first driver highlighted by the authors refers to the *Exchange theories*: co-operating arrangements are established to maximise benefits in terms of economy or psychology (Blau, 1964). Those theories justify co-operation by something beyond the sole cost dimension. This is why their scope covers the fields of psychology, sociology, political science, and economics which have been shown to be similar in "*how the exchange process is related to cooperation*" (Smith *et al.,* 1995, p. 17). Consequently, the *Exchange theories* embrace a vast range of theories (transaction cost, social psychology, reinforcement, symbolic interaction, rational or normative decision-making) which are considered appropriate for explaining the rationale and key mechanisms at play in the constructions of IORs.

Attraction theories are the second category of theories that can explain inclination for co-operating. Here, we can refer to researchers like McAllister and Bregman (1983) and their research on variables (values, status similarities and differences, complementary needs, aspects of personality, goal congruence, and information needs) that may influence stakeholders' mutual attraction or opposition. Such theories of interpersonal attraction offer a means to address "*noneconomic, uncalculated costs and benefits of cooperative relationships*" (Smith *et al*., 1995, p. 18), but it is true that they bear some obvious similarities to exchange theories.

Smith *et al.* (1995) then continue and present *Power and conflict theories (*Emerson, 1962; Pfeffer and Salancik, 1978), which are deemed to address both conflict and co-operation, which need to be considered by opposition to make sense. This position argues that the diversity within the attraction or opposition variables evoked with *Attraction theories* can feed hostility due to perceived injustices or inequities at the root of conflicts while their opposite will generate sound factors for co-operating. This perspective can also justify looking into systems of castes in organisations or other barriers to co-operation due to a lack of cohesion between stakeholders. Consequently, the authors underline the existing overlap with *Attraction theories* and also bring forward some arguments for understanding the dynamics of IORs which can provide insight as to how control is most likely to be exerted: formally or

informally. The more powerful one of the members of the relationship is, the more likely it is to adopt formal demanding approaches, and *vice versa.* .

Social learning and its process, or imitation and modelling is also included by the authors in the *Modelling theories* which refer to academic contributors in the context of co-operations between individuals and in organisations (Bandura, 1971; DiMaggio and Powell, 1983). Praising "*conformity, consistency and the creation of norms of cooperative behaviour through contrived group, organizational, and societal cultures*", the authors (p. 18) insist that co-operating arrangements are inevitably influenced and legitimised through such practices implemented by what they call *"referent individuals, groups, or organizations"*.

Most importantly, the authors then present the *Social Structure theories*, which underline structural elements and factors impacting the creation but also the duration of inter-organisational arrangements. It enables the analysis of aggregated conditions of the system, necessary for understanding a possible emergence and duration of successful co-operations (Blau, 1964). In this line of thought, the social position of individuals, groups, organisations, and networks are considered differentiated but also interrelated constituents of structural systems. In particular, this suggests that co-operations should not be limited to one relationship only, but go beyond it. This may justify the importance of *Network theories* (Uzzi, 1997) within which co-operations are evaluated against a network of multiple relationships.

Despite some obvious overlaps, the above theoretical perspectives further justify that the complexities of co-operations cannot be explained with one single unified theory. Inevitably, this complicates any attempt to better understand how and to what extent the implementation of strategic management control mechanisms and tools will influence or determine the success of IORs in the long run. For this reason, we would argue that it might be helpful to offer an even more in-depth analysis of the intrinsic characteristics of IORs.

Based on existing academic inter-organisational literature, Oliver (1990) suggests that there are six key drivers or "*contingencies*" in the formation and development of inter-organisational relationships. The first is *necessity* which refers to IORs that are developed in order to cope with a legal or regulatory requirement from higher authorities (e .g. government agencies, legislation, miscellaneous bodies). In this respect, Whetten (1981) proposed to distinguish IORs structures from mutual adjustments (voluntary), alliances (intermediate) and mandated structures, which are quite numerous in the aerospace industry especially in defence. The next key driver proposed is *asymmetry*, which is based on the *Resource and Dependency Theory* (Pfeffer et Salancik, 1978). It suggests that IORs established with other firms aim at securing the control of specific critical resources needed but not owned. Scarcity of resources will thus convince firms to enter co-operating arrangements in order to exert a form of control, despite the fact that it creates a mutual dependence. In this context, relationships are a matter of power and dependence. Their profile will depend of the expectations of their stakeholders. In contrast to asymmetry, *reciprocity* assumes that the formation of IORs can be based on "*motives of reciprocity*" (Oliver, 1990, p. 244). In these cases, co-operation take precedence over domination and IORs are driven by shared and mutual interests. Such a model of reciprocity is rooted in exchange theory (Blau, 1964; Emerson, 1962; Levine and White, 1961) and is also addressed in the relational exchange approach (Dwyer *et al*., 1987; Macneil, 1980). The latter stipulate that scarcity of resources fosters co-operation rather than competition which implies that the IORs formation process requires an appropriate balance between stakeholders' respective obligations and commitment.

Efficiency is more of an internal than an external contingency. In these cases, IORs are thus prompted by an organisation's deliberate attempt to improve productivity (input/output). In this context, the establishment of IORs will be determined by "*transaction cost economization"* (Oliver, 1990, p. 245). As stated by Williamson (1975), the market option generates purchasing and transaction costs, while integration implies production and internal organisation costs. Given those types of costs, the formation of IORs will be determined by comparing the two options. Nevertheless, quantifying transaction costs is complicated as testified by the case study proposed in chapter 2, section 3 and also by my personal experiences. In practice, empirical tests conducted by Walker and Weber (1984) suggest that most often arbitration is mainly driven by internal cost-production criteria for which

accounting may be able to provide full visibility, yet the latter cannot be taken for granted for transactional costs.

Stability was identified as another contingency which can influence the formation of IORs in response to environmental uncertainty (Aldrich, 1979; Pfeffer et Salancik, 1978; Thompson, 1967; Williamson, 1975). Such uncertainty exists because it is not possible to be aware of environmental fluctuations ahead of time. Uncertainty is also generated by the scarcity of resources against the degree of concentration of exchanges between partners. These circumstances prompt organisations to develop IORs cooperating arrangements in order to provide some stability and reduce their vulnerability.

Lastly, *legitimacy* is based on the Institutional theory (DiMaggio, 1988; DiMaggio and Powell, 1983; Fennell and Alexander, 1987; Meyer and Rowan, 1977; Meyer and Scott, 1983), which assumes that reinforcing a reputation or being aligned with the prevailing norms, rules, beliefs or expectations is a serious motive for developing IORs. In this context, structural organisational orientations are not necessarily driven by the organisation itself and its own specific objectives but rather by a certain pressure from institutional environments. This relates to the notion of isomorphism developed by DiMaggio and Powell (1983).

Generally speaking, the table below, adapted from Nogatchewsky G. (2004, p. 31), offers a summary of recognised key determinants for inter-organisational relationship settings and associated theories:

IOR determinants	Rationale & Purpose	Key Drivers	Theoretical Framework	Key Words
Necessity	Abide by the law of various regulation	Existence of a law or regulation and the associated authority capable of imposing rules	No specific theoretical framework apart from some authors considerations like Whetten (1981) who studied various types of IORs depending on the mandatory dimension of the structures addressed	Driven by external environment Key words : rules, regulation, law
Asymmetry	Encroach upon an organisation in order to control it and its resources through the exercise of a certain power	External threats or limitation on resources availability	Dependence and Resources Theory (Pfeffer et Salancik, 1978)	Driven by external environment Key words : Dependence, power, strategy of influence, *rapport de force*
Reciprocity	Win-win co-operations and mutual dependence with shared agreed purposes.	Partners fit, a successful working together activities	Social Exchange Theory (Blau, 1964 ; Thibaut et Kelley, 1959) developed by Relational Approach Theory authors (Dwyer et al., 1987 ; Macneil, 1980)	Driven by stakeholders' comparable intrinsic characteristics and level of congruence between them Key words : relational norms, mutual dependence, trust, commitment
Efficiency	Option in favour of disintegration versus verticalisation as market costs of acquisition and transactions are lower than internal variable and structural costs.	Reliable , consistent understanding of costs and advantages of an inter-organisational relationship	TCE (Williamson, 1975 ; Coase, 1937)	Driven by both internal environment and cost of the relation Key words : transaction costs, production costs, efficiency
Stability	Mitigation of external risks	Uncertainty and environment hazards	TCE (Williamson, 1975), Dependence and resources Theory (Pfeffer et Salancik, 1978)	Driven by external environment Key words: uncertainty, external factors mitigation
Legitimacy	Respect norms, beliefs and expected common practices by resting on tight links between each other	Institutional norms	Neo Institutional Theory (DiMaggio et Powell, 1983)	Driven by external environment Key words: isomorphism; mimetism

Table 3 - Summary of recognised key determinants for inter-organisational relationship settings and associated theories

(adapted from Nogatchewsky, G., 2004, p.31)

These determinants offer interesting and relevant insight to accurately assess the drivers of most decisions taken for establishing inter-organisational co-operating arrangements. Also,

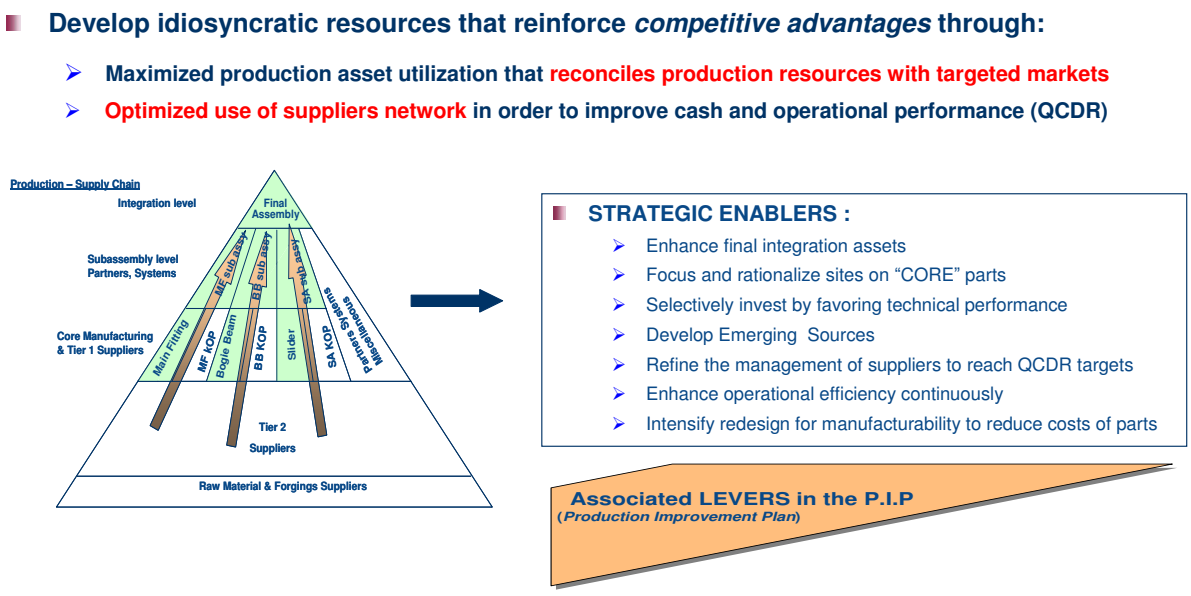
they can help anticipate potential key aspects that should be taken into account when considering *Key Levers* for IORs.

In addition, we would argue that it seems relevant to concentrate on both the *Resources Based View theory* and the question of *Knowledge Creation*. Indeed, these approaches may help clarify or reveal the motivations of firms for establishing inter-organisational arrangements as the former deals with the learning and experience of non-imitable resources and the latter is tightly linked to the learning processes which are at the source of competitive advantages commonly targeted through inter-organisational arrangements (alliances, technology transfers etc…) and which most often translate into the externalisations of activities.

1.2. Resource Based View, Knowledge Creation theories and the externalisation of activities

The *Resource Based View* was heavily influenced by Wernerfelt (1984) and Barney (1991). It assumes that a firm's strengths and weaknesses will be determined by its resources. It focuses on the growth of the firm through specific and unique resources rather than on profit generated through various markets positioning (Teece *et al.*, 1997). The rationale is that IORs provide complementary resources to be shared between co-operating firms.

Accordingly, stakeholders involved in IORs will be able to create a certain form of relational income that can thus be reinvested in developing additional idiosyncratic strategic resources difficult to imitate. By doing so, stakeholders build unique resources. Those resources can thus provide a competitive advantage as defined in Chapter 2, section 1 and determine the power of the firm (Learned *et al.*, 1969; Porter 1980). This logic has influenced the industrial strategy implemented within a world leading aerospace company as represented below:



Source: Internal Document dated 2010 - ATERO

Figure 19 - Industrial Strategy in ATERO

More specifically, Wernerfelt (1984) defines resources as tangible but also intangible assets, such as technology, brand name but also know-how. Those assets are critical because they will determine the strengths or the weaknesses of the firm. Alternatively, Teece *et al.* (1997)

define resources as definite and specific devices which cannot be reproduced elsewhere such as business secrets, industrial assets but also specialised expertise. Importantly, in addition to the difficulty in reproducing them, those resources cannot be easily transferred because of high transactional or transfer costs but also because of the tacit knowledge they may entail.

Barney (1991) proposes a broader definition for resources and competencies by considering all the firm's assets, capacities, organisational processes and knowledge. Depending on their specific characteristics, it is proposed to categorise them into physical resources (Williamson, 1975), human resources and organisational resources (Barney, 1991). Finally, Barney (1991) insists on a legitimate link between both concepts of resources and competitive advantage.

In direct link with the topic of IORs, the Resource Based View theory implies that stakeholders involved in inter-organisational co-operating arrangements do not wrongfully take advantage of their partners but rather ensure that most of the benefits that can be drawn from their co-operation are fairly redistributed. Inevitably, such a fragile equilibrium requires appropriate control.

Alternatively, the ontological dimension of knowledge creation (Nonaka, 1994) can also be considered fundamental in the link made between IORs and the establishment of distinctive competences. This line of thought is supported by extensive academic literature on knowledge transfers (Nonaka and Takeuchi, 1995; Walz *et al.*, 1993). By concentrating mainly on the creation, the transfer and the integration of knowledge within organisations, those academic positions stipulate that knowledge is a genuine source of competitive advantage for firms.

The focus on knowledge creation, transfer and integration proves critical in today's dynamic environment, because co-operations and competition will determine continuous innovation. In this respect, Kogut and Zander (1992) develop the notion of combinative capacity i.e. the ability to recombine, utilise and capitalise on already existing knowledge.

On the other hand, a complementary explanation for a necessary development of IORs but also a major paradoxical consequence from both knowledge creation and resource based view theories is the recognition of the need for the externalisation of activities[62]. Most organisations

[62] *Externalization of activities* understood as the result of Make versus Buy arbitrations conducted by the buying firm.

no longer deny that developing and maintaining a vast range of expertise and devices in-house necessary to preserve or reinforce a competitive advantage (skills, know how, machines, etc.) may no longer be sufficient to bring in revenue. Following this line of thought, it is generally accepted that a company's performance and the types of exchange it will engage in are not determined solely by the quantity of inputs necessary for producing, cost reductions or market shares growth, but also by its ability to procure productive resources and exploit and value them over time.

Accordingly, IORs are expected to largely contribute to the combination and maximisation of companies' strategic resources (Donada, 1998). But most importantly, from the *Resource Based View a*nd *Knowledge Creation* perspectives, it is understood that people set up alliances and partnerships because outsiders can often bring a fresh and often valuable perspective to the table, since a primary value of alliances and effective working relationships is the access it provides to different experiences, perspectives and knowledge. For instance, Hagel and Brown (2005) suggest that companies should in fact take advantage of their different technical backgrounds which, in turn, address different segments. By doing so, those companies would become more creative through accelerated learning. This is reinforced by the view of Aaker (2005, p. 207) who insists that "*strategic alliances play an important role in global strategies because it is common for a firm to lack a key success factor for a market*" such as manufacturing capability and to remedy this deficiency internally might require excessive time and money. Based on the case of IBM, Ohmae (1989) also underlines that strategic alliances[63] are a key part of global competition. They therefore should be seen as a long-term commitment and not as a tactical device to provide a short-term fix for a problem but rather as something which requires a shared contribution and respective adaptations of needed assets or competencies.

This of course is at odds with tactical outsourcing which is viewed as an end in itself to reduce costs and increase return on capital employed as suggested by the basic principles driven by the following formulae:

$$\text{Profit } (\Pi) = [\text{Price } (P) - \text{Cost of Sale } (COS)] \times \text{Quantities } (Q) - \text{Fixed Costs } (Fc)$$

$$\text{Capital } (K) = \text{Working Capital } (WC) + \text{Fixed Assets } (FA)$$

[63] A strategic alliance can be defined as a "collaboration leveraging the strengths of two or more organizations to achieve strategic goals" (Aacker, 2005, p. 206).

Return on Capital (ROC)	=	Margins	x	Capital Turnover
	=	Π / (PxQ)	x	(PxQ)/K
	=	Π	/	K
	=	[(P – COS) x Q – Fc] / (WC + FA)		

Analytically speaking, the above suggests that increasing ROC is possible by increasing the numerator [(P – COS) x Q – Fc]. This would be possible by increasing prices but it is not really what markets may expect. Increasing the numerator is also possible by reducing COS, which corresponds to outsourcing prices down negotiations while a reduction of Fc goes with a necessary reduction of structural costs. Another option is a reduction of the denominator through a reduction of working capital and fixed assets which is theoretically possible by outsourcing activities with stocks thus transferred to suppliers who will also spend the money for capital expenditures necessary.

In fact, this suggests that externalisation cannot be easily justified with only economic calculation. Rather than a tactical remedy for enhancing financial performance, it is suggested that organisational business relationships must be approached from a long-term perspective. While we had heavily insisted on the strategic dimension of IORs in chapter 2, section 1, we would now suggested that *Resources Based View* and *Knowledge Creation* theories are elements that should be taken into consideration in the evaluation of IORs, because this orientation offers the opportunity to combine the many IORs determinants listed in chapter 2, section 2. This goes beyond arguments traditionally put forward by industrial economists when considering that joint activities and buyer-supplier relationships can add value to both the buyer and the supplier by improving product quality, productivity lead time and cost reductions (Ansari and Modarress, 1990; Donada, 1998; Frazier *et al*., 1989; Lamming, 1993) provided that it is fully acknowledged that managing relationships should aim at constructively developing partnerships with suppliers (Langfield-Smith and Greenwood, 1998) at the root of strong competitive advantages.

Yet, this may not be a given in everyday business life. With that in mind, the following section aims at providing an insight into current practices regarding the deployment of make versus buy strategies through a self-experienced construction of a brand new process deployed within my employing firm.

2. MAKE OR BUY: A SELF-EXPERIENCED CONSTRUCTION OF A HOLISTIC PROCESS WITHIN A MAJOR CIVIL AEROSPACE COMPANY

As mentioned earlier, in his study about the industrial sector and associated firms' strategic decisions, Porter (1980) proposes a strategic analysis of vertical integration within the industrial sector. Advantages put forward are based on combined operations, less expensive control and coordination, and more efficient information management. Importantly, he argues that vertical integration is synonymous with direct access to technologies, minimised risks of shortage, increasing options to differentiate and rise of barriers to entry. Also, outsourcing can be considered as a source of productivity - through scale effects, critical mass with a specialisation on core competences based on learning cost reduction and innovation – through cross-sector transfers. Thus, it is expected to contribute substantially in reducing the burden of structures.

Notwithstanding the decentralisation of the decision-making power, a direct consequence of outsourcing is also the weakening of the firm, as outsourcing also translates into procurement risks and loss of confidentiality. Within civil aerospace, this is critical as major firms, but also their suppliers, need to preserve both technical and commercial secrets. Moreover, from a cost viewpoint, and as a result of fixed costs, the agility of the value chain is potentially hindered much more by opposition to a disintegrated value chain. More capital is continuously required in order to maintain investment levels across larger owned assets, substituting sources is costly and may be quite deterring, exit barriers are higher while it is harder to learn from external the know-how of external sources'. Lastly, managing load and capacity is more demanding because the scope of activities is much broader and the associated financial accounting is more complicated in practice.

Given this dilemma, it is relevant to refer to the *Resource Based View* theory applied to IORs (Jap, 1999). As underlined in chapter 2, section 2, this theory proposes that a firm is a collection of productive resources (Penrose, 1959) with their respective strategic dimensions. Particularly, some of them are so specific that outsourcing them would mean dropping competitive advantages. Consequently, a critical activity for Top Management is to develop competitive advantages through means similar to the ones advocated by Porter (1980) but also through a clear identification and management of both types of resources: generic and specific. In doing so, a firm would do better to develop IORs which would make it possible to

focus on specific resources internally and take advantage of external expertise for generic resources.

In other words, IORs are critical because they are a very potent means for companies to combine and capitalise on strategic resources. Through externalisations, IORs are thus meant to best utilise suppliers' know-how and their innovation skills; to increase flexibility by optimising structures and improving return on investments through scale economies or synergies; to dilute risks and value the best strategic competences. On the other hand, externalisation makes it more risky to secure the procurement of goods, and confidentiality regarding technical know-how or commercial strategy may be endangered. Consequently, make versus buy decisions require appropriate analysis and control as they can involve organisations on a very long-term basis. This implies that all necessary means can be deployed and properly managed from a control viewpoint in order to maximise a successful translation of objectives into reality.

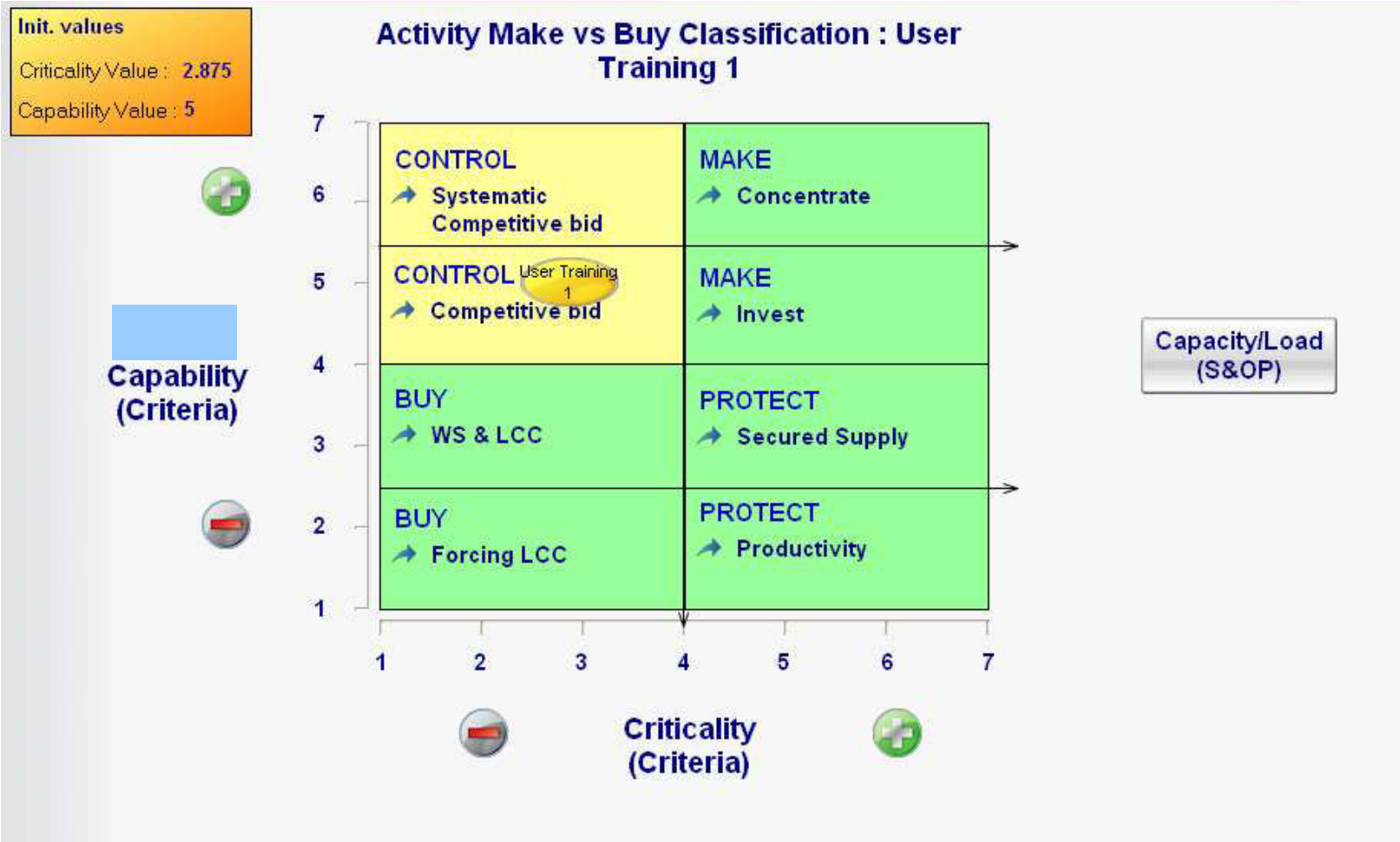
Still, my personal experience within that field is testimony to the fact that reality can be rather different from those theoretical considerations. In 2008, I was recruited by a major aerospace company as industrial strategy director (nota: names deliberately modified for confidentiality reasons). Reporting to the Executive Committee, I was thus directly involved in topics dealing with externalisation and "*Make or Buy*" decisions. This therefore put me in an ideal position to experience the process of the establishment of an IOR. This was all the more engrossing as no formal process or procedure was available when I joined the firm. Consequently, my first task consisted in elaborating processes and mechanisms viewed as a key requisite before proceeding with the externalisation of activities *per se*.

During this exercise the following principles were considered: a strategic alliance can be defined as *"consisting of two or more organizations that contractually pool resources to achieve a long-term strategic purpose that is not possible for a single organization"* (Judge, and Ryman, 2001, p. 71). Alternatively, a strategic alliance can also be defined as a *"collaboration leveraging the strengths of two or more organizations to achieve strategic goals"* (Aacker, 2005, p. 206) which implies a long-term commitment. A make or buy arbitration is not a tactical lever to provide a short-term fix for a problem but instead it requires a shared contribution and respective adaptations of needed assets or competencies. This is at odds with transactional sourcing. Accordingly, it is contended that inter-

organisational co-operating arrangements can really enhance the firms' overall performance provided that organisational business relationships are approached from a long-term point of view. This perspective is reinforced by Gummesson (2004) and the ROR (Return on Relationship) calculation he offered, which aims at demonstrating that a relationship advantage enables one to differentiate oneself from others, thus reinforcing a competitive advantage.

Moreover, the approach I developed aimed at providing the appropriate scope and control mechanisms for the process as a whole from the very beginning, and I received strong support from the IT department to manage the geographical diversity of potential stakeholders. An application was thus imagined to provide support and a dedicated structure to formalise purchasing and production strategies, but also to trace and secure any related information.

In a nutshell, an industrial management control tool was established. It offered two different modules: the *Activity Make vs. Buy matrix* and the *Commodity analysis tool.* As a result, a process and procedure were also established. As this process was an original concept, I took the precaution of involving most of the internal stakeholders in the validation of the following principles: first define and characterise activities as defined in a Make versus Buy procedure and based on an evaluation of their criticality (business and technical capabilities) and their capability (internal performance compared to external performance). Secondly, balance this evaluation with a result of load and capacity analysis experienced in manufacturing sites in order to identifying a most suitable Make versus Buy approach as illustrated hereafter:



Source: Internal Document dated 2010 – ATERO

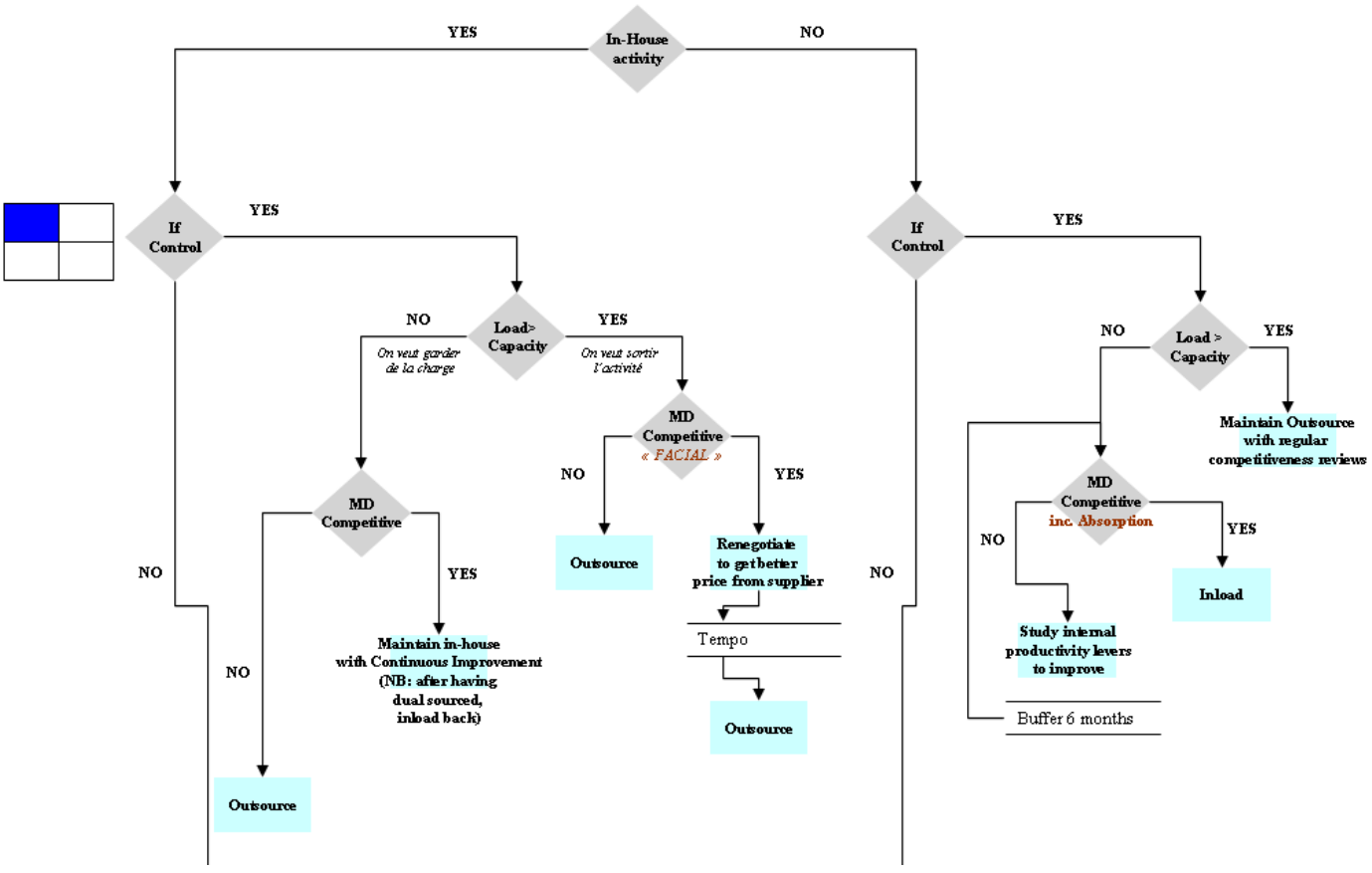
Figure 20 – The Make or Buy Matrix Positionning in ATERO

Once positioned in the above matrix, activities could thus be attributed with a specific option for the firm according to the following generic reading grid:

MAKE	***Activities*** which will be provided in-house and further investment may be made
BUY	***Activities*** where the **criticality rating** enables outsourcing and that cannot be provided **competitively** by internal sourcing without capital investment
CONTROL	***Activities*** that may continue to be provided internally whilst competitive but without further investment. Meanwhile competitive external sources will be developed to enable outsourcing of those ***Activities***
PROTECT	***Activities*** which are business critical but the company is either not competitive or does not already control the source. This class may justify investment or additional commercial protection

Table 4 – Definition of Make or Buy orientations advocated in ATERO

For each option, a flow chart was then to be used in order to visually represent a clear and straightforward process that provides rules to proceed as illustrated below:



Source: Internal Document dated 2010 - ATERO

Figure 21 – Abstract of the Make or Buy Flowchart in ATERO

In the example proposed above, the activity was placed in the control category after running capabilities, competitiveness and load-capacity assessments. A straightforward application of the flow chart provides guidelines to determine whether it is an "in-house" activity, if load exceeds capacity and if the company is competitive compared to alternatives. Those alternatives are assessed through a Commodity analysis tool consisting of different modules and which aims at evaluating commodities against complexity, business impact and scarcity criteria.

Finally, a formal escalation process was established in order to make things happen after sound orientations had been recommended and were worth deploying. Unfortunately, for confidentiality reasons, I cannot provide more details, but the procedure in place bears witness to the fact that a robust process to manage and control make or buy activities was designed and implemented. This tool received the blessing from Top Management and direct reports from them and competitor intelligence also revealed that it was copied by a major competitor.

However, fairly quickly, it appeared that people from departments that were expected to get involved in the matte (production, purchasing, finance, engineering) were not motivated or disciplined enough to make good use of the formal process proposed. This methodology was never criticised nor rejected by the many stakeholders involved but it did not work satisfactorily. Having said that, formal industrial committees involving Executive Committee members are still held every month, such an outcome is all the more frustrating as formal company audits conducted twice between 2008 and 2011 praised this methodology, its mechanisms and its devices.

Generally speaking, regardless of the exact reasons for such a stalemate within my employing company, and without necessarily assuming that it was due to the non-implementation of processes of the utmost quality, it is interesting to refer to Pekar and Margulis (2003). Obviously, the authors do not focus on the specifics of my employing company, but they do highlight failure constituents of inter-organisational cooperating arrangements which certainly add further justification for having efficient and structured Make versus Buy processes within companies. Interestingly, they underline that compared to acquisitions, alliances are more complex and time consuming to negotiate and close. In their report based on a survey involving 500 CEOs whose companies had engaged in alliances successfully, reasons for alliance failures are multiple: the decision to select the first actor identified, unwillingness or

lack of ability to engage early enough "*in frank dialogue on objectives, tactics, and constraints"*, non-involvement of the ultimate managers of alliance in the due diligence process, non-effective and non-collaborative communications relying on poorly structured agreements. The authors also report quite an appallingly low success rate for both new business launch and expansion into new geographic markets via acquisition or alliances as illustrated hereafter:

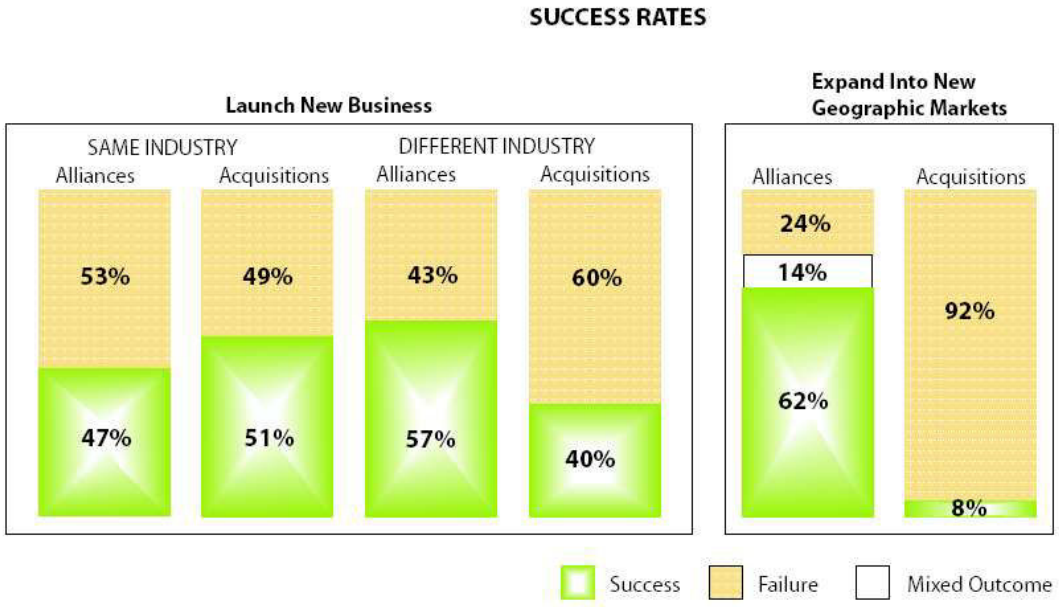


Figure 22 - Success Rates in Inter-Organisational alliances

(from Pekar and Margulis, 2003, p. 57)

Interestingly, Cox (2004) who studied a lot of possible types of inter-organisational business relationships underlines that implementing strategic alliances and effective business relationships between buyers and sellers is not an easy task. For example, asserting that difference might not only lead to innovation but also to disagreements, the author asserts that conflict is actually inevitable when different cultures and practices are brought together in the frame of IORs. Accordingly, the author recommends the due consideration of the personnel deployment, as the people who will be interacting most frequently with the partner should be flexible, curious and open to new ideas. On the other hand, he also suggests that in any case, frictions should not be perceived negatively as not all frictions are detrimental. Instead of tightening and smoothing the relationships to make tensions more predictable, the author recommends addressing the challenge of taking that friction and converting it into something productive.

Certainly, all these sometimes quite subtle orientations require time and effort to fully understand the configurations of inter-organisational interfaces and to check any track record from previous partnerships and alliances. This should actually be done before moving forward with negotiations that hammer out details such as a clear-cut vision of the ultimate goal, the milestones that will measure progress and mechanisms for resolving conflicts and disagreement along the way, because motivations and intentions do not often seem to translate into reality. The following case study will hopefully be able to illustrate this point comprehensively enough.

SECTION 3 - IORS MANAGEMENT CONTROL WITHIN CIVIL AEROSPACE: A BUYER-SELLER CASE STUDY

After reviewing generic purposes of IORs with a focus on civil aerospace, it is now well suited to make use of a case study in this section. This case study reinforces the position that implementing appropriate management control mechanisms in IORs is not given for granted, in particular due to the high complexity of IORs management in civil aerospace.

1. CONTEXT AND CHARACTERISTICS

Most industrial stakeholders admit that they have no choice but to successfully address the issue of IORs management, especially when high dependence is at stake[64]. In particular, within civil aerospace where dramatic changes have occurred in the last decades as detailed in chapter 2 section 1, IORs prove to be increasingly necessary to make a difference. Unfortunately, success stories are not abundant and most often stakeholders are very disappointed. As a matter of fact, most agree that significant efforts are still necessary in order to implement the appropriate control mechanisms, as the challenge ahead is not insignificant.

For instance, Tomkins (2001, p. 162) underlines that many academic researchers have contributed to the realisation that "*one should not expect the information needs for alliance or all business networks to be the same*" given the numerous possible combinations of alliance types as well as the variety of possible emphasis in understanding what business networks are. Rationales for IORs can vary depending on the authors (Debresson and Amesse, 1991). But what matters at this stage is the idea that the complexity possibly related to IORs diversity makes it extremely difficult to translate intention into action. In concrete terms, this becomes apparent when appreciating the cost of quality control between buyer and sellers. Other sorts of co-operation exercises such as budget constructions of cost reduction activities provide evidence of the difficulty of making it happen. For example, Tomkins (2001) insists that capacity limits within a given organisation could affect its partner, which in turn would need to increase its load. This situation would then require the construction of an inter-organisational budget before the construction of the budget of both organisations. Nice in theory but unlikely to happen in reality.

Interestingly, in their attempt to describe constraints linked to joint cost reductions activities Goldratt (1990) and Tomkins (1999) developed ideas regarding a theory of constraints approach to efficiency improvement. We will not detail those perspectives herewith, but generally speaking it is interesting to underline that both authors emphasise that the implementation of seemingly attractive theoretical recommendations is in fact a nightmare in many cases as revealed by multi-organisation collaborations which raise complex questions regarding cost management, budgeting, financial leverages or cost of capital analysis, notwithstanding escalation processes.

I have been working within the industrial sector for more than thirteen years, and from the very beginning, I was involved in activities dealing with purchasing, supply and supplier relationship management. Consistently, year after year, and regardless of the actual company I was working for, the same conclusions were systematically drawn: given the high amounts dedicated to purchasing compared to the rest of the company's costs, it is essential to find ways to improve the Quality, Cost, Delivery and Responsiveness performances of suppliers.

The trouble is that after a decade I realise that the same kind of conclusions can still be drawn. In other words, it seems that much of the efforts and energy devoted by professional teams seldom leads to a successful implementation of any kind of road map, as for example the one below, which I established in 2003:

[64] Crozier (1964), Penrose (1959) or Pfeffer and Salancik (1978) suggest that the level of dependence should guide strategic actions, management modes and relationships.

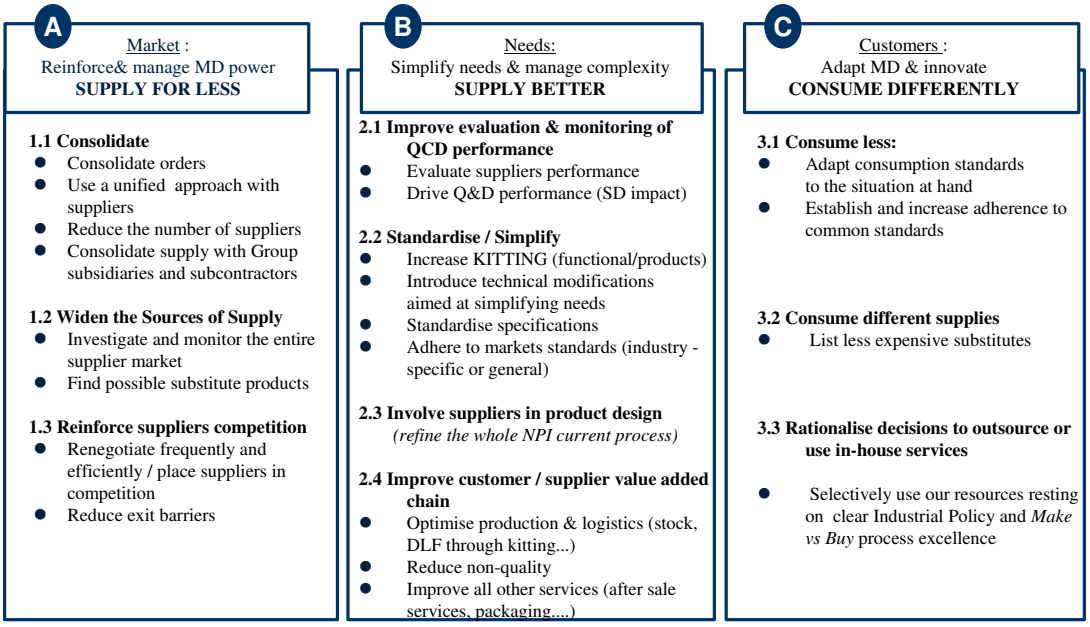


Table 5 - An example of Supplier Management Performance Improvement Road Map

This view can be reinforced by many examples where a co-operative form claims to increase efficiency but rapidly has to deal with the consequence that the agenda of the firm becomes unclear. This gives rise to truly complex situations and "*it is not an easy task to control this muddle*" as Håkansson and Lind (2004, p. 51) describe in their case study on telecom companies[65]. In a survey conducted in the automotive industry, Hensley *et al.* (2003, p. 24) also conclude with a most troubling message: *"Auto suppliers know what they should be doing but simply can't do it".* Yet, the automotive world is most often commonly considered as being ahead of others, including civil aerospace, in terms of best practices with regards to co-operations and buyer-seller relationships management.

On the ground, this was also the case in one of the firms for which I worked, as you can see in the following memo released by Program Senior VP regarding the approach advocated by the Strategic Sourcing department for developing activities with a potential strategic Chinese firm:

[65] According to a senior accountant: "*Some months ago we put a lot of effort into creating accounting information for a new organizational unit. However, when we had finished, the top management closed the unit. It is like going on water logged marshland, the more effort you put in, the more you sink. It is important that you can find the right balance between all the different demands all the time*".

> ***De :*** *Mrs X*
> ***Envoyé :*** *mardi 1 septembre 2009 18:57*
> ***À :*** *Mr Y COO; VPs; Buyers; Sites managers; Programs;*
> ***Objet :*** *RE: TZUFU - ATERO meeting 9th Sept*
>
> *The content is good, the message clear, the plan as well (I've added a few comments inside the presentation to take into consideration). I guess the evaluation of technical difficulty by package has been carried out and is in line with the plan. However, globally speaking, my comment would be that I do not see what has changed and will ensure the future is brighter than the past:*
>
> - *why did we fail (apart from the demand drop which is not a sufficient explanation),*
> - *what do we propose to change to succeed (technical support? resources? …)*
> - *what do we need "Tzufu" to change to succeed (how will they be able to quote accurately first time? How do we ensure competitiveness of their prices, etc..,.*
> - *who commits to what in order to enable the situation to change.*
>
> *I am just afraid "Tzufu" will think they have already seen similar presentations last year, the year before and the years before that… Unless the "Tzufu" team has changed*
> *And that leads to the question: internally, what are we prepared to change to ensure the success of this plan?*

In reality, a generally acknowledged concern is that regardless of the level of dependence, within the "*purchasing world*" as we know it in the civil aerospace, so-called strategic sourcing activities have actually been solely cost- and product- oriented for too long. In particular, these types of initiatives often proved to focus excessively on a short-term perspective while "*make or buy"* decisions, governance modes and advantage of cooperation for partners should be taken into account on of a more long-term basis.

2. CASE STUDY OUTPUT AND INTERPRETATION

In order to further assess this perception of current practices within the aerospace world when dealing with industrial co-operation types related to buyer-seller interactions, decision was made to explore incumbent practices regarding the management control of suppliers, and their implementation in inter-firm relationships, which can be viewed as a targeted core competence.

The following case study was based on more than twenty semi-structured interviews[66] conducted with senior purchasing, strategy development and sales agents from different industrial companies involved in civil aerospace and from different countries (England, France and Italy). More precisely, the stakeholders involved were involved in activities related to the business of Aeromotor – a blueprint company specialised in civil aerospace propulsion systems within which I also worked and its modules providers, namely GEARB and ZIZOU. Consequently, and given my positioning as supplier business executive, I must admit that it was fairly easy for me to discuss with these interlocutors who were quite enthusiastic about sharing their own perceptions and thoughts with me.

For about two hours, each of them was interviewed regarding the IORs environment in which they believe their respective firms evolve. First, they were asked to provide their view on the strategic dimension of supply chain management in the performance of their company. I quickly came to realise that there was a general consensus illustrated by the following comment:

> *"if you haven't got a strong supply chain and you are not managing that supply chain from top to bottom, then you haven't got a robust process to deliver the requirements … It should definitely be strategic, so that you set a robust supply chain, which can deliver what you need when we need it" (Senior VP Program, Zizou).*

This strategic dimension was all the more reinforced as the stakeholders approached were developing internal service capabilities *"in order to actually be No.1* (…) *you have to have a supply chain that is interlinked and intertwined, a supply chain doing its best in multiple directions. If you don't then one of the links over all will not perform well and therefore one of our services will be less competitive*" (Strategy VP, Aeromotor). An obvious reason is that delivering services in civil aerospace propulsion business is a critically important point for the

customer because "*... there is limited time to perform services, it is capped in terms of costs and the supply chain performance is expected to deliver that service whatever it is quickly, and to a cost and quality level that is critical"* as indicated by a manager from Aeromotor Services operations within which responsiveness is crucial whereas repeatability is not a given.

Key senior VPs interviewed were quite unanimous about the critical dimension of supply chain management as well as of the need for a profound change, as is reflected in the following positions:

> *"... we are no longer familiar with the supply chain as built up in the last decade...it is now an organisation that has the responsibility of the capital of the company. It is very important from a financial viewpoint, acquiring material, transforming and delivering."(CEO - GearB)*
>
> *"It has now become strategic in the sense that if you look at the ratio between make or buy compared to a few years ago, and also to the type of technology associated to some of the materials, having a strong robust supply chain organisation is fundamental. If you have the best lean manufacturing approach internally but also have a bad supply chain you are stuck, wasting money and time" (Purchasing Executive , Aeromotor)*

According to interviewees, a company's performance would therefore be critically determined by the effectiveness of its supply chain management. They also emphasised that the latter should not be reduced to material acquisition. Its scope is much broader, and involves strategic financial and industrial implications which impose necessary profound changes, in particular through effective co-operations.

However, as indicated by a senior VP Program from an Italian leading company evolving in the business for several decades, this context also has a downside which, according to him, is directly linked to the difficulties encountered "*because some of the critical suppliers are not well integrated in the supply chain. While you obtain a commitment from a partner to perform for the success of the program, the critical and monopolistic suppliers are not always committed in the same way. They are not "sub-contractors" committed in such a way that you can get the best out of them*".

[66] By resting on the method recommended by Miles and Huberman (1991).

Subsequently, the requirements, pros and cons of strategic alliances and buy-seller co-operations were also explored in order to get the view of practitioners on how buyer-seller companies should work together to deliver superior performance in terms of framework and relationships; on the need for strong relationships and the how issues of dependence, trust and relational norms should be dealt with. Interestingly it was unanimously reported that *"…a co-operative approach is the most productive. Whether customers or suppliers adopt that approach or not depends on the attitude of both parties. If one of the two parties doesn't want to do it … if the customer is seeking to be opportunistic at the expense of the supplier… you can't unilaterally impose a co-operative approach as a customer or a supplier.*" (President France, Aeromotor).

In this respect, a Senior Program manager interviewed insisted that with one of his customers, trust and sufficient exchange had made it possible to overcome information asymmetry in the course of his professional experience. Another suppliers' management manager said it was very helpful to clarify and address "*more and joint mid-long term strategic dimensions and questions in order to give us more confidence in our co-operation. Faith is important especially after losing strategic programmes. Faith must be maintained*". Accordingly, one of the individuals I interviewed stressed the power of "… *an international programme office, the office that acted as an interface with the partner to renegotiate the specific contract. It makes life easier because this interface has a comprehensive vision and understanding of the positions of both parties, to assess whether one request is reasonable or not and to also provides an overview view on all the other collaborations. For example, on one agreement you have accepted this, on another you have accepted this…and then it is more reasonable to make decisions. Sometimes we face problems that are impossible to resolve with the direct program manager or the buyers … whereas the intermediation, the support of these entities can supply what seems like a miracle solution*". What this segment suggests is that overall, co-operating parties should force themselves to discuss openly, despite suspicion on both sides and even though the associated difficulties complicate things.

In this regard, it is generally accepted that such a position is potentially threatened by the fact that *"… JVs are highly unsuccessful because … you have two partners whose objectives usually differ. Strategic alliances, it depends what you mean … founded on a good business understanding and good connections and relationships at the Senior level… these sorts of relationships are sometimes as efficient as ten years of contracts*". In the same logic, one

could insist that *"... JV is a good way but obviously is difficult to manage. To be successful, you do need to have a very personal relationship at each level; it is crucial. If you don't have trust you can't make it happen. You need to have a good level of trust and confidence between the two organisations*" (Program Director GearB).

Consequently, it was quite meaningful to hear from the sellers interviewed that "…*what could improve things is to develop joint activities with buying firms whereas the relationships between engineers are not sufficient nowadays"* (Commercial Director - GearB).

This position is well aligned with a commonly shared view in civil aerospace that the expectation of suppliers is to have a wider scope of collaboration with customers so that together they can build a certain type of relationship in which to invest and see the kind of infrastructure they are going to create together as recommended below:

> *"It is true that we are interested in enlarging our collaboration with customers but we have to understand the structure of collaboration… know the framework of collaboration wanted by customers" (CEO – GearB).*

In fact, most answers provided by the individuals approached testify that the establishment of well working strategic vertical alliances between buyers and seller makes sense as a means of maximising expected mutual gains through co-operation, even though the way views were expressed could differ from one person to another as indicated below:

> *"The relationship is important in order to be sure that the people understand each other" (Purchasing Executive - Aeromotor).*
>
> *"…in today's business practices: you have the need to establish a stable and structured team to gain all the best from a flexible supply chain capable of overcoming all difficulties by taking the best from all the member of the team. Obviously at a point all the team member must be ready to work as real partner and not to take advantage from the others..."(Purchasing VP – Aeromotor)*
>
> *"In civil aerospace YES … [it is key] to establish long-term relationship but this is not a standard rule. All depends on the capitalistic characteristics of the activity. In capital-intensive activities like ours, long term and relationship [should] prevail, no doubt." (CEO - GearB)*
>
> *"…it shouldn't be founded on a 50-page contract. This should be a good business understanding of what we are trying to achieve, a commercial and a legal understanding … that this relationship is not for five years, it might be a formal ten-year contract but in fact it is forever. You are really trying to build a long-term work relationship with that supplier and then put in place the means to work together whether it is on technology or manufacturing development of whatever. It is really for mutual benefit." (Program Director – Zizou)*

However, my interviews also revealed that good intentions do not necessarily become a reality, namely because of the difficulty in establishing the appropriate relationships - as previously suggested - along with effective business interfaces and shared objectives.

> *"I think it is necessary. It is realistic. The only thing is that it takes us too much time to react and we are not proactive enough on adjusting our organisation and way of doing business to meet that goal or to meet that reality" (VP Program – Zizou)*

> *"… One roadblock is that there are few people capable of making the links between the two sides (engineering and production), which raises a fundamental question of skills as well" (VP Engineering – Aeromotor)*

Accordingly, I found it legitimate to further inquire into how buyer-seller companies should work jointly to deliver superior performance. On the buyers' side, the most meaningful positions combined different expectations as suggested by the following:

> *"I expect to have a firm relationship with suppliers, a very firm handle on costs and supply". (Commodity Leader – Aeromotor)*

> *"We should adopt the Toyota relationship model basically. And that's more than just a purchasing organisation, that's got to be a company philosophy and to do business with everybody… total collaboration … help (their) engineers to be constantly working with suppliers, helping them to do things to save money, etc." (Purchasing VP – Aeromotor, North America)*

> *"… a very strong personal relationship with the supplier and the framework. You can be frank and honest, have a very open, sincere strong relationship… create a framework for both parties to work within. So the supplier can see that it is not a customer inflicting or imposing a system on them, which is a win-lose situation…create the right framework"*

On the sellers' side, even though final objectives may differ from those of the buyers, enablers at stake seemed quite comparable when considering commonly shared views of the individuals interviewed. The notion of framework came up several times thus reinforcing the importance of building conditions "… *which will enable me to provide my customer with the support they need, which is also one way for me to lock in my strategic customer",* as expressed by a Program Director. The same idea was advanced by stakeholders from another firm who insisted on the fact that since they were responsible for a module ending in Aeromotor's final product, they would like to have a clearly established structure that always involves them any time the module has to be repaired and overhauled. According to an experienced VP Program from GearB, this would require setting up "*a team to support the supply chain while in the aftermarket there should also be some systems to have full involvement in both good and bad ...* [which] *is a very difficult subject as this is a new way of doing business that leaves customers unprepared. It is not easy to define the portion of*

collaboration, the notion of part value, service value". This position actually underlines that interpersonal relationships are fundamental, especially in the civil aerospace business, which, generally speaking, is a business where everybody knows each other. People move around, but you always meet the same people. However, notwithstanding the above, it is also important to have a method to resolve problems which is sometimes "*more effective* [to have a method that is] *not emotional and very structured to resolve issues rather than to stay in a room with your friends*" (VP Engineering – Zizou).

These findings reflect the idea that the IORs framework and relationship types are very much interconnected, as stated by the CEO of GearB in asserting that "*...we can speak about the possibility of sharing some risks and opportunities in doing business together… We have to think seriously about organisational aspects jointly with interpersonal aspects management".* On one hand, this underlines the importance of a well-defined framework. On the other hand, it suggests that organisational dimensions should not put aside the impact that strong relationships might have, which was confirmed by buyers and sellers:

> *"Definitely yes … as an example between AEROMOTOR and our partner, on a Friday where we were supposed to sign on the Monday, there was a problem and it was absolutely necessary for the Chairman of our partner to have the right relationship with me as we have an interpersonal relationship"(Managing Director – Aeromotor)*
>
> *"…if someone knows you and trusts you and has a relationship, and you are in need of special assistance, basically they are more likely to give their assistance."(VP Program – GearB)*

These last testimonies highlight what was reported by a Purchasing Director from Aeromotor who insisted that "*… the less we are dependent with suppliers or the fewer suppliers are dependent on us, then the relationship is not so strong ... if both parties recognise that dependence, then certainly they should be thinking about how they can build on that dependence and make it better for both parties but it still does depend on both parties wanting to do that*". This then lays emphasis on the issue of dealing with mutual dependence by considering that "*when dependent, you have no choice but develop links. Otherwise, conflicting modes appear too quickly and make it difficult to progress things constructively*" as reported by a commodity buyer from Aeromotor. This opinion is actually not very surprising for what occurs in civil aerospace where *"... we are entering a phase of the business where we have to face the difficulties together… the relationship has to be such that both companies work for the success but are also ready to share the pain in the same manner. This is a new approach that we are living in this period ... There should not be uncertainty in*

the way the relationships will be managed over thirty years" (Managing Director – Aeromotor).

In fact, particularly within civil aerospace, "*... they* [customers] *know that they cannot live without us* [suppliers]. *In fact they are dependent to us towards business development, hence they need to know what we are doing and need to ensure that we will operate and keep us strength in our business for the long term. On the other hand we are dependant to their business improvement and development to ensure our revenues for the coming future.*" (VP Program – Zizou).

Hopefully, these restrictions provide sufficient justification to explore how all these elements can be successfully combined in practice. In this respect, for a Purchasing Executive, a first consideration we should keep in mind is that *"maybe one way to secure … is enabling the fact that there is a mutual interest and that both companies have everything to win together"* because achieving mutual gains proves necessary through long-term exchanges by relying on successfully managed dependences that can clearly encourage the parties to strengthen ties. Importantly, many actors reported that most often, despite sensible principles, the fact that everything depended on and turned around a contract was not helpful in the long run.

Moreover, we should acknowledge that most valuable insights related mainly to trust and relational norms are perceived as key aspects enabling the construction of strong relationships, which can limit risks of opportunism and foster co-operation. Again, a vast majority of buyers and sellers interviewed shared a similar view as reflected by the following quotes:

> *"Trust is a key asset. A personal relationship is key… Changing the people in the two companies has helped to rebuild the relationship … what we are doing is creating trust, which is absolutely essential if we want to have long term relationships." (Sales Director – GearB)*
>
> *"… I am a very strong relationship fan. Two reasons: in today's market place there is opportunistic behavior to certain extent on pricing. But having the relationship through the supplier base is absolutely key to encourage suppliers to help you when you need them…Unfortunately we do not take enough time to develop that side of things. Absolutely not" (Purchasing Executive – Aeromotor)*
>
> *"Clearly, trust relationships at the beginning allow the construction of durable rules, which are likely to overcome crisis situations… I do believe that trust is fundamental". (Senior VP Procurement – Aeromotor)*

However, this type of consensus does not provide practical insights as to how buyer-seller inter-organisational relationships could or should be successfully managed. This issue becomes all the more problematic when we take into account that most stakeholders approached agreed that contracts are far from sufficient to ensure that *"whatever the relation type, it must rely on a business equilibrium and trust in relationships"* as underlined by a Senior VP Program from Aeromotor.

In this exercise, I was faced with the difficulty of obtaining concrete and clear ideas from the individuals I interviewed regarding effective ways to make things happen rather than vague answers. However, I was able to capitalise on the discussions that my questionnaire had rendered possible when dealing with the reality of control mechanisms in IORs management along with putting into perspective the most common objectives of buyers objectives alongside generally accepted concrete achievements.

Firstly, and quite surprisingly, a major roadblock for buyers when managing suppliers, and especially dominant suppliers, was explained by a Purchasing Executive from Aeromotor who didn't hesitate to admit that *"...we know very little about most of our suppliers and what they're thinking and what their strategies are, and what their needs are".* Implicitly, this means that heavy contractual management does not offer solutions to this type of problem. This is actually a key paradox of current purchasing practices, which focus on the need to increasingly contractualise everything while at the same time, most stakeholders also admit that this will not increase the level of control over suppliers. This situation may seem rather concerning, especially when up against thoughts from industry actors, such as this former North America VP Purchasing from Aeromotor who, when I asked him what can be reasonably expected from suppliers, answered the following: *"I would expect from the dominant supplier that, because of their positions and capability, theoretically they would be able to deliver the products that are needed on time ... etc. That's what I would expect, but my expectation is unrealistic, because it doesn't appear that dominance and delivering performance are really connected. So in truth I don't expect much from my dominant suppliers*".

Still, I must admit that I personally was not very surprised by this confidence being myself in charge of two major dominant suppliers with whom I had quickly come to realise that long term agreements were important because they can give a frame work, but it is also wrong to think that they will protect against any form of opportunism. In fact, most of experienced stakeholders within civil aerospace acknowledge that there is a form of hypocrisy related to the management of suppliers and that influencing or controlling them is more about creating a smoke screen as suggested the following:

> *"On dominant suppliers, I am not sure we do intervene with them, I am not sure how much power we would have with them to change the organisation. ..." (Purchasing Executive – Aeromotor)*
>
> *"With some suppliers, financially driven, clear in their strategy where shareholder value comes first and customer comes behind shareholder value, clearly changing that status quo is not going to be possible". (Purchasing Executive – Aeromotor)*
>
> *"Encroach on my organisation? No, for sure. AEROMOTOR can push to create small spots and highlight specific aspects only... NO, I don't think so." (CEO – GearB)*
>
> *"...They try to avoid [dominance of suppliers], that's why they try to keep a competitive market and have at least 2 bidders for the same item. Otherwise you get into a monopolistic situation where you cannot control the opportunism of your suppliers" (VP Program – Zizou)*

Taking cynicism further, when referring to purchasing savings targets, there is a common view that *"... any metrics we tend to set as a company, we set a budget based on science and logic and you cut and cut and cut and by the time you finish with it, you end up with an unrealistic target and you have no idea how you got there. It is just somebody very senior in Finance who decided to cut a certain amount of millions on your previous budget… I do think we set unrealistic target across our business"* as admitted by a Purchasing Executive.

Nevertheless, it was also quite interesting to note throughout my inquiry that all the stakeholders interviewed had given up on the idea of managing and controlling buyers-seller relationships through contractual or formal mechanisms, and most of them believed that improving business interfaces could make a difference and actively contribute to a better control of inter-organisational relationships. On the seller side, the VP Program from Zizou insisted that *"... the MD from Aeromotor was the only interface we had to deal with all matters, with the limit that he was not autonomous to deal the Revenues Sharing Partnerships issues…but at least it was a very solid interface… a person to whom to refer, when having a problem… unfortunately, this is a bit limiting [when] this person is not in charge of the whole activity".*

A similar idea regarding the interfacing ability was mentioned by another agent of Aeromotor's suppliers who advocated for "… *having one entity in charge of partners or vendors activities on different regions programmes and capable of interfacing with suppliers. This would probably unlock roadblock and could balance things with a comprehensive perspective*" which is in line with another strongly advocated suggestion *"... to see buyer – seller organisations having regular service quality meetings with the relevant affiliates e.g. supported by the exec management of the division, the interest of the client".*

On the buyer side, what transpired was the desire for regular events throughout the year in which buyers and sellers could have proper communication through "... *more face-to-face meetings, a steering committee at the highest level at headquarters, and then you have to have a lower steering committee with the affiliates of these groups. So it needs to be at different levels because you have to meet the headquarters that defines the objective of the clients but you have also to meet with the people that are responsible of operations or the entities of the affiliate you are dealing with as well. These guys have a clear understanding of all the*

problems, communication problems, existing between the two companies that the people at headquarters are probably not aware of." (EMEA Business director – Aeromotor).

The above considerations regarding the importance of securing business interfaces that can supersede contracts are also entailed in the following comment by the CEO of GearB: "… *they* [customers] *establish long term relationships with agreements that are in fact contract that you spend hours negotiating. Then alongside that… we need to have a kind of confidence between the supplier and the clients. Otherwise you won't be able to make the contractual basis and its long-term agreement work well. You won't be able to proceed with day to day issues and support customers... Consequently, it is paramount to have efficient interfacing mechanisms for contract and operations alike".*

Lastly, a major lesson learnt from this case study is the existence of recurring practical issues that must be addressed even though, as reflected above, these considerations are often taken for granted. For instance, it is obvious that there are issues regarding the suitability or the compatibility of the vision and objectives established between buyer and seller. These mismatches or discrepancies do not always prove as caricatural as the singular perceptions that *"...a firm cannot unilaterally impose a co-operative approach as a customer or a supplier*" but it is fair to consider that "*sometimes we* [seller] *have the perception that buyers pursue unrealistic objectives because in the end we* [seller] *have to be very pragmatic in this industry. Everyone should have a clear understanding of the business itself and the part of the business put together in order to predict and maintain the company at the proper financial level for the future*" as reported by a VP program from GearB.

Alternatively, a Program manager at Zizou underlined that "*... each buyer would like to be preeminent in our* [Zizou] *relationship and would like to drive our* [Zizou] *business according to their rules…a strategic alliance would help to devote more energy to clients. It is possible but again we have cultural issues hence we would probably need several years to implement such models*". This position is all the more interesting as it refers to issues related to cultural dimensions that were confirmed by a business development executive from Aeromotor who used the example of situations within his own personal experience *"…headquarters establish some rules that are not followed in Thailand, Africa…There is a lack of consistency in the way relationships are managed and this the reason for the complications in the type of relationship management which we could see between customers*

and suppliers… you have to strengthen your relationships … [without] new ways of doing business you will face issues like people not caring about these rules or these LTAs…"

On a slightly different level but still indicative of issues with cultural behaviours, I remember that in my former Supplier Business Executive position at Aeromotor, Zizou agents criticised us for being condescending, as illustrated by their comment that "*if we* [Zizou] *are in a situation in which we deliver parts on time… Aeromotor almost disappears. When we* [Zizou] *have problems Aeromotor comes with the royal guards…etc…but this is not how relationships should be between Partners because the major players should always be present: in good times and in bad*".

Beyond such practices, which reveal some networking or social capital management limitations, this latest example also suggests that there are critical issues related to a certain degree to a lack of organisational flexibility. This might be driven by a market place that is changing too fast compared to firms' ability to adjust internally to ways of doing business and new organisation types to support the business in civil aerospace, as explained by a Strategy Manager from Aeromotor*: "we have got to create the time with the suppliers to make our initiatives work. We move on too quickly".*

In this respect, we should bear in mind that the current systems of information to monitor and assess the organisation of dominant suppliers seem to be miles away from satisfying stakeholders. While these controlling tools are often promoted initially because they are expected to provide the necessary quantifiable visibility of what is going on within buying or selling firms, this rapidly gives way to disillusion as testified by the following positions:

> *"I don't believe Aeromotor has any efficient assessment tools"*
> *(NA VP Purchasing - Aeromotor)*
>
> *"I am not sure we have efficient means to be well connected with a global supplier. Sitting here I may have a relationship with one of the X facilities, but I don't have relationship with the figure X, you know what I mean. Indeed it is an issue"*
> *(Purchasing Executive – Aeromotor)*
>
> *"I am not sure we have efficient means to be well connected with global suppliers" (Global VP Purchasing Director – Aeromotor)*
>
> *"…We have difficulties with our IT systems… not proactive enough to take the information…"(VP Program – GearB)*

These statements may surprise those who have never dealt with buyer-seller relationships, all the more so as it is not difficult to have an idea of the huge amount of money spent in developing information systems and other IT applications across companies. However, once more, I must admit that I was not really surprised by these confidences, which are indicative of a deeper fundamental problem. In fact, when I discussed the specific topic of communication and information exchange management with the No1 of all Purchasing and suppliers management from Aeromotor, he drew an initial conclusion as seen in the following quote:

> *"I do not think you can ever do enough communication. In our case with our major suppliers we run these Global Suppliers Forums where we have our COO and the Senior Engineering giving a genuinely top high level business overview to our suppliers. I am sure we should do more but a dominant supplier has to understand the business, engineering strategies where we are going... otherwise they don't know how to position their company to support us. Then we need to systematically go down through all the levels of each organisation, sharing strategies and information. Today, I would say we probably don't do enough."*

Quite naïvely, I then asked myself why it was not possible to do more considering that a vast majority of players agreed it was necessary to avoid situations where *"… many things need to be done… you put in place a lot of structures and framework agreements and rules of the games trying to establish long term relationships with the client but beyond these agreements, all the field issues are not communicated to you…"* (Program Manager- Zizou)

Interestingly, positions expressed by both buying and selling firms with whom I discussed were quite homogeneous. Information asymmetry is considered to be invalidating but this is most often the result of deep-rooted problems. These problems range from inefficient organisational structures in place to cascade things down or escalate them up, poor networking capabilities and an inefficient mastery of events due to a lack of time and resources spent on appropriate things at every organisational level, as captured in the following positions:

> *"… The way most purchasing organisations are structured there aren't enough people to engage in dialogue and communication. We don't normally sit and discuss things when there are significant problems, not on a regular basis." (Sales Director – GearB)*

> *"… Global Suppliers Forum… an opportunity for Senior executives to meet their counterparts. For the big guys then it is probably not too bad. We do hold the business reviews quite regularly in my side of the business anyway with those guys and meet the senior relatively regularly and we always exchange information. I think where it falls down is at the next tier." (Purchasing Executive – Aeromotor)*

> *"…in terms of visibility there is a real lack of information and clearly some corrective actions have to be implemented. This is not only the desire from the sub-tier to be much more informed*

> *but this could really help to better organise the structure and to react properly where and when there could be difficulties" (Program Manager – Zizou)*

This situation can be considered worrying insofar as, with the above considerations taken for granted, it is fair to admit that a global Purchasing Executive from Aeromotor is not wrong when he says about suppliers: "*I don't think we actually manage them. I am not sure we can manage them. We connect with them, we deal with the issues, problems, we try to work through issues, but I don't think we manage them*".

Most often buyers seem to pursue unrealistic goals and relationship management strategies in circumstances that are not conducive to the desired outcomes. As a result of a limited understanding of how to use power and leverage it, but also due to inadequate surveillance, communication and information exchanges in particular, it seems almost impossible for the buyers from Aeromotor to really encroach upon the organisation of their dominant suppliers when they are supposedly structured around some sort of hierarchical influence.

In fact, a bureaucracy-based control strategy is often promoted yet it doesn't seem appropriate or at least easy to implement. Sharing a strategy, a vision and objectives which are compatible with those of suppliers is considered paramount but is neither implemented systematically enough, nor in a sufficiently structured manner. Such a weak situation may be quite frustrating, or in any case surprising, in as much as stakeholders involved seem to have a clear idea of what IORs management should entail. This is at least what is captured in appendix 5, which offers verbatims which condense what an ideal buyer-seller inter-organisational interfaces management should be according to individuals interviewed in the framework of this case study.

To summarise, reflecting on this case study, Aeromotor still needs to find more appropriate ways to convince dominant suppliers to co-operate, develop and share the benefits of effective co-operations; to better understand the types of business relationships that exist and how to leverage them effectively. This case study suggests that creating or even restoring suitable relationship types with dominant suppliers proves necessary, and that successful management with a long-term orientation and commitment in buyer-seller relationships can add real value. In practice, buyers may wish to exert bureaucracy-based control mechanisms, suggesting that partners should structure their exchanges through formal ties and, notably, by establishing contracts that are as comprehensive as possible. However, this case study has also brought to

light that dominant suppliers find it legitimate and far from impossible, to refuse to submit to contracts or to accept direct intervention from the other party.

It is important to note that it is generally accepted that tools for controlling suppliers have not been successfully implemented. While information asymmetries between firms need to be minimised, we have to admit that there is room for improving highly-dependent buyer-seller relationships by means of a better adapted management and transmission of information. The latter is considered essential to make objective and informed decisions regarding the relationships and actions that involve buyers and sellers. Based on Håkansson and Lind, (2004), this viewpoint resembles the paradox of the situation where activities at stake have to be performed by different companies because, although they are closely complementary, they are also dissimilar. The challenge is that different companies must align their plans, both qualitatively and quantitatively. As suggested by the authors, a basic feature of this kind of coordination is interaction and this type of coordination cannot be centrally orchestrated, as in the hierarchical situation, or carried out by the total structure, as in the market situation. Coordination will heavily depend on the information available on counterparts in order to establish a sort of overlap of the knowledge of both parties and to build a relationship based on a common understanding, which should improve the efficiency of their relationship in the long run. Interestingly, most stakeholders interviewed in this case study were convinced that it is paramount to develop positive relationships to strengthen employee and organisational performance. This was perceived as a necessary step for bringing about both buyer's and seller's willingness to better co-operate.

Though it was admitted that the conditions to work together effectively have not always existed, some preconditions are commonly shared by the buyers and sellers I interviewed: business relationships and exchange mechanisms need to be re-modelled to cluster activities around respective core competencies; two partners should contribute assets and competencies over time to obtain strategic advantages. Focusing on the network of roles and relationships, the definition of an appropriate organisational architecture of IORs is viewed as a necessary step which implies a necessary renewal of the business and organisational systems currently in place. Inevitably, this may require a significant change in the approaches to working together which certainly deserves appropriate and fine-tuned management control.

However, this conclusion may be quite surprising as such a major concern has been on the agenda for a while despite the existence of organisations like IAQG and EN9100:2009 practices (see www.iaqg.com). More specifically, these organisations are expected to contribute actively to the creation and maintenance of dynamic co-operations between international Aviation, Space and Defence companies in order to deploy best practices and processes approaches in management control and performance improvements in quality, delivery and consequently costs on all products and services throughout the value stream in civil aerospace.

Conversely, in spite of significant amounts invested by firms to run audits and training sessions, the above may not be a surprise for those considering that this type of quality and organisational management control is much ado about nothing.

KEY TRANSITION

This thesis aims at better understanding from a management control viewpoint the means and devices advocated or deployed across civil aerospace firms to achieve successful Inter-Organisational Relationships (IORs). Consequently, up until now, emphasis was deliberately put on developing a better understanding of the paradigm change which has been taking place within the civil aerospace industry for several years now. This shift in the rules corresponds to strategies which rely increasingly on inter-organisational co-operating arrangements because they can, at least in theory, contribute to the creation of value.

This was followed by a review of IORs generic purposes. This was based on part of existing academic research dealing with the strategy and co-operative literature in addition to practices which I experienced personally within this industry. Sharing my personal experience, when dealing with Make or Buy arbitration topics, along with a specific case study within civil aerospace should exemplify concretely that promising plans, even though soundly justified, are unfortunately often far from being successful in the case of strategic IORs.

The previous sections were thus developed to legitimise an academic exploration into the formation process and the reality of the impact of IORs strategic management control devices and tools within civil aerospace firms. They have brought to light the need to find a fit between the types of co-operating arrangements and the types of control, along with an underlying question regarding the root causes for failures when faced with the stubbornness of stakeholders. And this is precisely what the following sections set out to explore.

CHAPTER 3 - KEY CHARACTERISTICS REVIEW OF IORS STRATEGIC MANAGEMENT, CONTROL DEVICES AND TOOLS

PRELIMINARY CONSIDERATIONS

Through the following literature review, and assuming that, the IORs comprise a rather heterogeneous phenomenon (Dekker, 2004) our first objective is to build a comprehensive understanding of the complexity of IORs and their key characteristics. This is viewed as a necessary step before deciding on which relevant control types, along with their associated devices and tools, are relevant to study, and how this should be done.

This approach is also based on the assumption that there must be a necessary fit between the complexity of targeted inter-organisational co-operating arrangements, management control types, and therefore the management control practices that are potentially applicable to given IORs, and relevant to analyse with regards to the mechanisms and tools deployed across firms.

Importantly, the purpose of this approach consists in emphasising the management control methodologies and tools in the long run, rather than focussing on the range of management control generic principles which have already been explored at length, as testified by the vast academic literature available to date (Anthony, 1988; Chiapello, 1996; Doig *et al.*, 2001; Håkansson and Snehota, 1995; Heide, 1994; Mintzberg, 1979; Nogatchewsky G., 2004; Ouchi, 1977, 1980; Williamson, as of 1975).

Finally, through this literature review, we intend to insist on the relevant links between the field study of this thesis i.e. civil aerospace and the academic sources invoked.

The three following sections provide a substantial input in terms of literature review dealing with management control and academic contributions about IORs strategic management control devices and tools from which it was possible to capitalize in a third time.

SECTION 1 - A REVIEW OF ACADEMIC CONTRIBUTIONS IN MANAGEMENT CONTROL

This section puts the emphasis on the different complexity types of IORs that deserve specific management control types. It is capitalizing on the specific contribution from the organisational management control field. By doing so, we are underlining that the field of intra-organisational control is certainly much more substantiated at present than what is available in the framework of inter-organisational interfaces management. Also a focus is made on the IMP group studies viewed as a valuable insight before dealing with IORs management control devices.

This will set the basis of the *IORs Management Control Challenge* as we understand it. It will help identify first constituents of *Key Levers* in IORs. In this regard, the section 2 about specific IORs management control tools and devices will also be fundamental to establish a list of the above mentioned *Key Levers*, cornerstone of this thesis as detailed later in chapter 3, section 3.

1. ARGUMENTS FOR A NECESSARY FIT BETWEEN DIFFERENT TYPES OF COOPERATING ARRANGEMENTS AND DIFFERENT TYPES OF CONTROL

As already evoked in chapter 2 section 2, and by referring to Smith *et al.* (1995), academics have greatly helped better understand possible types and rationale for IORs. They bring to light specific elements of complexities specific to IORs which are expected to create *transactional value* through effective but also efficient resource pooling, task determination or workshare division (Dekker, 2004). This is particularly true in buyer-seller relationships and their associated activities in which firms must consistently deal with two recurring and major challenging obligations critical to their success: sowing the seeds of effective IORs and exerting appropriate control. These challenges are all about establishing and managing a form of mutual dependence where it proves critical to co-ordinate people and tasks successfully across organisational boundaries. Now, increasing dependency and increasing uncertainty require an increasing need for co-ordination and joint decision making. Certainly, depending

on the transaction types and conditions at play, the level of complexity potentially experienced and to be managed can vary significantly as is demonstrated by the different types of transaction characteristics captured by several authors, and more specifically through the categorisation proposed by Thompson (1967) regarding *pooled*, *sequential*, and *reciprocal* interdependence as represented hereafter:

POOLED	SEQUENTIAL	RECIPROCAL
Discrete contribution to and drawn from common pool of resources given low coordination requirements as partners have little need for any ordering activities	**Typical buyer-seller relationship with transfer of resources from one partner to the other**	**Stakeholder's activities are necessary inputs for each other's activities**
Discrete contribution to and drawn from common pool of resources given low coordination requirements as partners have little need for any ordering activities	**Typical buyer-seller relationship with transfer of resources from one partner top the other**	**Stakeholder's activities are necessary inputs for each other's activities** *Resource & Dependence Theory (Pfeffer and Salancik, 1978)* *High failure rates of IOR attributed to the difficulty of managing them (Ireland et al., 2002)* *Increasing Dependance, increasing uncertainty requires increasing need for coordination and joint decision making (Dyer et al., 2001; Galbraith, 1977; Gulati and Singh, 1998)* *"* Concerns about anticipated coordination costs are particularly salient in alliances which can entail significant coordination of activities between partners and yet have to be managed without the benefit of the structure and systems available in traditionnal hierarchies*" (Gulati and Singh, 1998 p: 784)* *The structure chosen to govern IOR is critical to its success (Ittner et al., 1999; Osborn and Baughn, 1990)*

Table 6 - *Pooled*, *Sequential*, and *Reciprocal* interdependence categorization

(adapted from Thompson, 1967)

With limited ordering activities, the parties in relation experience limited co-ordination requirements, and thus provide quite a discrete contribution while they expect to draw from a common pool of resources which is specific to pooled interdependence. Alternatively, as proposed by Dekker (2004, p. 30), "*in a situation of sequential interdependence, for instance a typical buyer–supplier relationship, resources are transferred from one partner to another and co-ordination is characterized by ensuring an appropriate fit between the points of contact (Borys and Jemison, 1989), for instance by cross activity programming (Grandori, 1997; Thompson, 1967)*".

Finally, the third category, reciprocal interdependence - which is the most relevant category for the purpose of this thesis - is characterised by a mutual dependence between the parties involved in joint activities. This requires a good adequation between those parties' respective assets and means, which implies sophisticated but effective co-ordination mechanisms. In this framework Borys and Jemison (1989) underline that, it is necessary to ensure proper communication and on-going adjustments wherever needed. This context is actually representative of the framework of inter-organisational relationships in civil aerospace (chapter 2, section 1) where joint activities focus on continuous innovation through complementary technology sharing, improve of development times and new technology development based on people's learning and development skills (Gulati and Singh, 1998).

Multiple approaches provide meaningful insight. Particularly, some analyses and studies of make or buy decisions (Walker and Weber, 1984), of appropriate modes of governance (Heide, 1994) and of the advantages of collaborations between partners (Hamel *et al.,* 1989) have thus significantly helped achieve a better understanding of what is at stake. As such, they should be duly addressed to adequately configure and manage IORs with varying degrees of complexity.

When dealing with civil aerospace, the proposal made by Walker and Weber (1984) is actually interesting to explore because the authors identified key variables inherent to transactions and relevant to this sector, as well as the recent change of paradigm it experienced, as portrayed in chapter 2, section 1. Obviously, one should certainly proceed with caution when assessing the results of their study, which may not be applicable to all situations. However, the authors successfully underline the intrinsic complexity of IORs management which is presented as being eminently influenced by *volume* and *technological uncertainty*, *production cost* advantage of the supplier, effect of the *supplier competition* or *experience of the buyer*. In fact, the authors established a model to analyse make versus buy decisions, which is based on *Transaction Cost Economics* but also highlights the vast scope of control aspects which need to be considered to define, implement and monitor IORs.

Referring to Heide (1994, p. 71), it is noteworthy that the author took into account a significant amount of the available contributions from organisation theory, law and economics in order to establish different forms of governance depending on "*how specific inter-firm processes are carried out*". Hamel *et al.* (1989) however adopted a more strategic perspective,

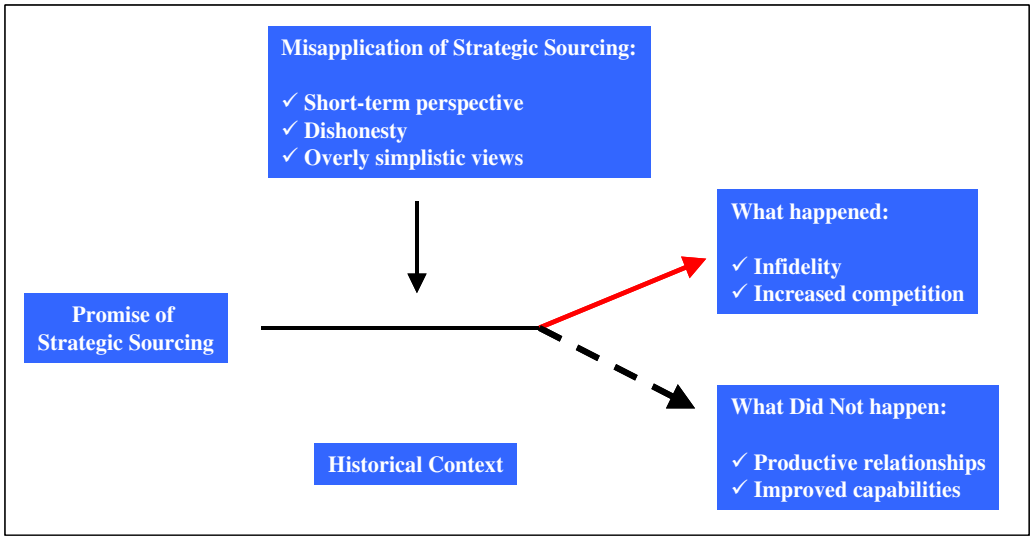
but proposed an interesting position regarding the impact of unilateral learning on mutual learning and the mutual capacity to build by ensuring that stakeholder's efforts are redeployed and refined for the benefit of mutual development and the acquisition of new skills.

In both cases, the authors suggest that suitable types of control will necessarily differ depending on the purposes considered by stakeholders. Moreover, these approaches seem all the more relevant when applied to the civil aerospace environment, within which it is correct to consider business relationships as being dynamic in nature and varied in terms of importance, intensity, strength and commitment (Cheung and Turnbull, 1998) and quite complex (Håkansson and Snehota, 1995).

Given this level of complexity some may even be thoroughly sceptical regarding the virtues of interdependence or what we call "mutual dependence". They may prefer independence, insisting on the dangers of opportunistic partners and creeping dependence. Consequently they may recommend avoiding multi-company level strategy developments, and only using alliances or any other co-operative arrangement as a temporary measure, unless it is limited to contractual and transactional exchanges which are reviewed on a regular basis. However, many have also argued the case for co-operative relationships and strategic alliances viewed as a key part of global competition with regards to knowledge creation in particular (Gulati and Singh, 1998; Macbeth, 2002; Ohmae, 1989). It is generally admitted among those devotees that strategic IORs require a higher level of inter-organisational trust and interdependence, but can pay off handsomely.

Yet, it is also legitimate to argue that a deliberate choice or 'wishful thinking' alone cannot be sufficient to achieve success when dealing with IORs and inter-organisational alliance strategies. This is the position developed by Rossetti and Choi (2005) regarding *Strategic Sourcing* in Civil Aerospace which offers a representative picture of the dimension of complexity inherent to IORs management control. These authors define *Strategic Sourcing* as a methodology aiming at integrating the buying firm's strategic decisions with those of its key suppliers, thereby promoting trust and decreasing transaction costs … "*it is more than simply reducing input prices. It is designed to align the capabilities of the supply base with the buyer's market opportunities"* (p. 4). However, as highlighted by the authors, this virtuous intention has often been misled since the 90's and in most cases, aerospace companies failed

in implementing specific strategic sourcing analytical and operational initiatives as seen in the following representation about strategic sourcing promises and reality:



Source: Rossetti, C., Choi, T., (2005) "On the dark side of strategic sourcing: experiences from the aerospace industry" (fig. 1, p.47), **Academy of Management Executive**, Vol.19 issue 1, p46-60

Figure 23 - Strategic Sourcing Promises and Achievements

In the aerospace industry in particular, after establishing long-term contracts and written principles for mutually-dependent relationships, the buying firms started to exert pressure on their suppliers quite aggressively, by focusing mainly on quantitative targets (primarily driven by a transactional cost reduction philosophy). Very soon, these practices disillusioned suppliers, who naturally became increasingly intolerant to broken long-term agreements, legitimately perceived as unfair practices. This misapplication of the tenets of *strategic sourcing* often resulted in the disintegration of the existing supply chain and weakened the buying firm's long term competitiveness as suggested by the *disintermediation phenomenon* developed earlier in this thesis.

Doig *et al.* (2001) remind us that while *strategic sourcing* should aim at improving overall performance, the reality was the complete opposite as most of the surviving suppliers continuously increased their power towards their customers which ultimately translated into the impossibility of gaining effective control levels in the management of interfaces. Consequently, and despites many precautions (contracts, *Key Performance Indicators* systems) invoked by stakeholders, buyer-seller relationships failed in many cases.

In this respect, in the framework of buyer-seller IORs, Langfield-Smith and Greenwood (1998) underline that a classic mistake which is often made is the assumption that the buyer and the supplier are sufficiently equipped to make their own changes and improvements in "soft" areas, while clearly major difficulties can be encountered within this domain. Specifically, Langfield-Smith underlines this characteristic when reviewing the Toyota system for which it is certainly important to recognise that the Japanese automotive industry co-operative partnerships – often praised as models that should be reproduced - succeeded in an environment characterised by vertical structures that benefited from a very specific cultural dimension, where the group mentality prevails over individualism.

Alternatively, Fernandez-Revuelta Perez and Robson (1999, p. 389) provide a potentially relevant insight with regards to the complexity specific to IORs. Potentially applicable to IORs, the authors offer a sound explanation of the reasons why organisations may end in a stalemate, as described above. The authors refer to organisational hypocrisy which stems too often from a lack of consistency in the way things may be managed: "*Inconsistencies or disjunctures between 'talk' (more or less informal agreements or discussions in and between organizational groups), decisions (formal decisions or policies recorded within the organizational hierarchy and usually enacted through written documents, including plans and budgets) and actions (crudely, what organizational actors 'do', as opposed to what they have formally agreed or informally said they would do) often reflecting multiple and perhaps contradictory organizational goals or objectives*."

This position is probably hard to validate straightaway. Still, whether this position is deemed legitimate enough or not, regardless of the type of IORs configuration at stake, it is fair to contend that the positions advocated by academics do raise several potential issues which are difficult to address when dealing with IORs management control. Currently, it is still argued that it is difficult to offer clear and straightforward management control unified methodologies that could become concrete benchmarks for their practical application within firms. Although this statement may seem somewhat hasty, the few, but representative, academic positions referenced above confirm a key element inherent to the complexity of IORs management: the difficulty in controlling them.

This situation is one we should take into account for this thesis, as its purpose is to identify and understand why management control mechanisms and tools have not been successful in

preventing IORs from failing. In other words, the problem addressed within this thesis deals with the fact that in the end, as underlined by Langfield-Smith and Smith (2003), even though ideal or very appealing on the paper so far, most theoretical arrangements proposed to date very often result in failure. This can be the result of the many possible combinations of reasons and forms of IORs which are not addressed effectively or in practice due to the lack of appropriate governance structures, control system tools and instruments.

Nevertheless, this statement could not be accepted if it were not recognised that a comprehensive body of work is available, especially regarding the multiplicity of combinations and governance types. Equally, much research work is available in the field of the outsourcing of activities (Anderson *et al*., 2000; Langfield-Smith and Smith, 2003; van der Meer-Kooistra and Vosselman, 2000), inter-organisational cost management (Cooper and Slagmulder, 2004), control in alliances (Das and Teng, 1998; Groot and Merchant, 2000), control in business networks (Dekker, 2004; Tomkins, 2001), and value chain analysis (Dekker, 2003).

But interestingly, and from an accounting point of view, Håkansson and Lind (2004, p. 61) underline that "… *scholars writing about accounting and co-operative co-ordination have focused on isolated individual relationships and have considered the relation to be a distinct co-ordination form*". According to these authors, this may be a mistake for relationships with numerous types of co-ordination forms involving a number of sub-units from the partnering companies: "*the interaction between companies seems to have a substance and a variety that need to be conceptualized and modelled in a much more elaborated way than has been done to date*" (2004, p. 68). Thus, reinforcing a critical notion concerning the network of relationships between sub-units, this article raises the question of control and co-ordination forms for which Ezzamel (1994) insists that accounting and its development are surely intertwined with models of co-ordination already proposed to be developed further. Certainly, this matter requires special and renewed attention from a control and accounting management viewpoint as underlined by Håkansson and Lind. (2004, p. 54-55) who suggest that "*in the relationship case, there is neither a clear boundary, nor do we have any matching internal coordination form. Thus, relationships must be a problem from an accounting point of view, given that accountancy has been developed in accordance with the hierarchy-market dichotomy. There must be a need to change accounting when used in a network situation*". Following this line of thought, accounting should be a base which facilitates the establishment

of a necessary mixing or overlap that can create the type of "mutual dependence" necessary to build fruitful compromises between stakeholders.

Leaving the specific accounting sphere, another interesting perspective worth detailing is the one proposed by Cox (2004). He insists on the importance of understanding the type of business relationships at stake (symmetrical or asymmetrical) and avoiding misleading economic or commercial concerns. Consequently this author developed recommendations regarding Win-Win and mutuality[67]. More specifically, the author stipulates that when working with critical suppliers, understanding how to use power and leverage effectively, along with a position of relative power, ought to overcome problems like commercial opportunism and lack of transparency of information[68] on the commercial consequences of operational practices for both parties in a transaction. In other terms, this ability to use power and leverage it effectively would certainly enhance IORs management control, even in the cases of tricky "*rapports de force"*.

In the framework of buyer–seller interactions, causes for IORs complexity and related failure can also be alternatively appreciated through a parallel made by Barnard (1938) and summarised by Charreire and Huault (2002) when considering conditions under which an individual is likely to accept an authoritarian communication. Assuming that the individual is the supplier, the latter will thus do its utmost to satisfy its customer (representing the authoritarian communication) provided that the supplier can understand this communication and that the supplier believes it is compatible with its organisation's interests when making decisions (no conflict generated) or that it is compatible with its own general interest. Consequently, the supplier will also need to be mentally and physically capable of accomplishing what is requested of it. These four conditions – designed to be jointly fulfilled– justify once more the need for an appropriate but also fairly complex control of IORs in order to maximise chances of success.

In this context, it is therefore not surprising that new orientations and considerations are increasingly and consistently promoted to urgently review practices along with their implementation in the field of strategic management control of inter-organisational

[67] Understood as different format of mutual gains
[68] Source of information asymmetry favours opportunism and may move a potential win into a partial win or lose scenario for one party in the relationship.

relationships. However, succeeding in this attempt is all the more difficult as various forms of IORs have been praised increasingly (Das and Teng, 2001; Nooteboom *et al.*, 1997; Ring and Van de Ven, 1992), for many years. Conversely, despite multiple generic advocated principles, control tools and mechanisms that could be established and properly articulated are far from being explicitly detailed by researchers[69].

In fact, it is interesting to underline that research into concrete effective tools and structures of management control within IORs has, so far, received little attention from academics – or at least compared to IORs governance (Gulati and Singh, 1998; Sobrero and Schrader, 1998).

For example, many prescriptions for managing buyer-supplier relationships (Ellram, 1995; Landeros and Reck, 1995) cannot easily and systematically be applied or implemented in highly dependent configurations. Also, it is generally accepted that many prescriptions designed and deployed for a practical implementation across major corporations have barely recorded great success. Particularly, issues arising from social contexts or attitudinal changes for instance, have not really been addressed although they are inevitably instrumental in improving and developing activities.

Given this lack of input, it seems relevant to refer to a categorisation of IORs in order to try and set the scene properly, within a clear framework. This should offer a better visualisation of each IOR's respective intrinsic characteristics (at least for the ones we intend to deal with). As mentioned previously, this is seen as a necessary step to better frame the complexity of the issue at stake before critically assessing and reviewing the relevant control forms and tools that we wish to explore.

Yet, it is equally relevant to refer to a study conducted by Nogatchewsky G. (2004) which deals with buyer-seller relationships contingency types and can be extended to most co-operating inter-organisational arrangements.

In her study, the author offers a similar table as the following one to summarise the most appropriate control types depending on the type of IORs at stake:

[69] This fact was actually already more or less reported by Dekker (2004, p. 46) when he insisted that "*few empirical descriptions are available of specific control mechanisms used in inter-organizational relationships*".

Configuration		Market	Seniority	Partnership	Vassalage
Client-supplier environment		Low inter-dependence	High unilateral dependence of suppliers	Strong inter-dependence	High unilateral dependence of client
Purchasing structure		Centralised	Centralised	Matrix-based with support functions	Decentralised
Buyer control	On results	Financial	Financial	Financial	Operational (quality, deadlines)
	On behaviours	Internally	Internally	Vis-à-vis suppliers	Internally in purchasing methods
Supplier control		Seize market opportunity	Exert power	Ensure convergence of goals	Reduce uncertainty

Table 7 - Guidance for most appropriate control depending on the type of IORs

(adapted from Nogatchewsky G, 2004, p. 374)

We would like to underline that this guidance grid, although based on extensive academic research, is actually different from Oliver's contribution (1990) which we developed in chapter 2, section 2 Illustrating further the dimension of complexity which should be taken into account when dealing with IORs, it suggests that depending on the prevailing configuration or contingency at play as well as specific IORs purposes, certain forms of control might be preferable to others In this representation, four possible configurations are proposed with different characteristics regarding dependence between stakeholders. These differences justify various types of managing structures (e.g. central or not purchasing, matrix purchasing organisations) that need to be combined with different control levers and purposes, which deals with formal and informal management control.

Another element of complexity specific to IORs can be provided by the position developed by Tomkins (2001). In the framework of IORs, the author underlines the importance of considering direct and indirect effects of company decisions on the network levels identified, which may be easy to assert in theory but is much more complicated to do in practice. Also, it is contented that relationships are caught between interdependencies, trust and information needs which will inevitably change as personal relationships develop. This idea underlines the importance of the relational context as a whole, which must be fully taken into account when appreciating tools and accounting techniques under study. In this logic it would be misleading to consider for example, that management control tools like contracting can reasonably be seen as a "*primarily and ex-post control device*" (p. 177). According to Tomkins, contracting added value deals more with setting-down goals and methods in order to enable mutual planning.

Additionally, the complexity of IORs management can be even more marked when considering that internal organisations also have a key influence. No consensus has been reached on this position, as demonstrated by the three major inter-organisational literature approaches – *transactional (Williamson, 1975), power and dependence (Pfeffer et Salancik, 1978), relational (Blau, 1964; Dwyer et al., 1987; Macneil, 1980).* Interestingly, these approaches are based on assumptions and principles that differ greatly from one another, or maybe even be seen as opposites. However, they all consider that organisations in relation are "black boxes" with internal characteristics which have nothing to do with inter-organisational relationships. Other researchers have addressed this topic from a different perspective. For instance Ouchi (1977, 1980) offered significant contributions to further understand the complexity of IORs. This was made indirectly as his focus was on intra-organisational stakes. However, his position highlighted quite an interesting multi-dimensional and integrated conception of relationships and their specific implications in terms of the management control mechanisms which can be applied to IORs. For their part, the IMP[70] group elaborated a specific integrated model for analysing buyer–seller industrial relationships and a model for analysing networks.

However, although none of the approaches mentioned above address the practical implementation of control mechanisms and consequently do not analyse the effectiveness of the principles advocated, it is certainly relevant to capitalise on them in order to exercise sound judgement regarding the control tools or devices to be put in place when dealing with IORs strategic management control. This is the purpose of the following parts.

[70] IMP stands for *Industrial Marketing and Purchasing* and is a vast international research program mainly focused on marketing group

1.1. Specific contribution from the Organisational Management Control field

Based on the previous section, it is fair to say that there is no unified theoretical framework available when dealing with IORs. While they rely on different epistemological assumptions, IORs theories can be complementary, sometimes contradictory but seldom compatible. Consequently, although this thesis must deal primarily with inter-organisational management control characteristics and its associated challenges, it is probably interesting to capitalise on more advanced academic work in order to lay down sound theoretical perspectives. This is possible thanks to the extensive research already available on (intra-) organisational management control, in particular with Ouchi's typologies (1977, 1979 and 1980).

Research in organisational management control initially focused its attention on intra-organisational matters. Anthony (1965, 1988) contributed greatly in this respect by insisting on the notion of influence on behaviours that should be conferred to accounting control in particular. This notion of influence was reinforced by Hopwood (1974), but also by Chiapello (1996) who, in a literature review, proposed a brand new concept on control after capitalising on both Hopwood and Anthony's respective contributions. In particular, Chiapello (1996) proposed six characteristics that should be taken into account when dealing with management control: the source of influence which comes down to who or what; the "*object*" of influence or the towards what; the answer from and the attitude of the "*object*" influenced; the most suitable phases for controlling; and of course both the process and the device used for exerting control.

This position reflects that different control types may be more or less suited depending on the organisational situations and the associated complexity to which they relate. This is the starting point adopted by Ouchi, before he established a typology which should certainly be taken into consideration in studies within civil aerospace given a usual information asymmetry and lack of grasp on the value chain components). The author suggests differentiating the control of results and the control of behaviours which will be more or less possible depending on the ability to measure results and the knowledge of the transformation process at stake. This is illustrated hereafter:

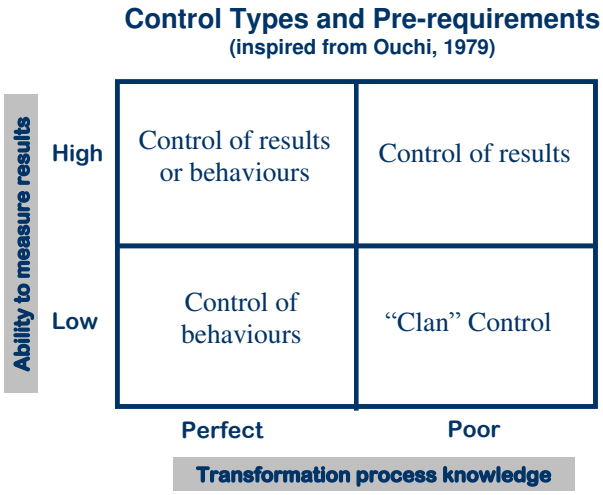


Table 8 - Control Types and Pre-requirements

(from Ouchi, 1979)

Whenever both the transformation process knowledge and the ability to measure are respectively poor and low, his proposal is to implement control means from the very beginning, before jumping into action. This could be for example through the proper recruitment of actors[71]. In this case, this clan control type is meant to satisfy a number of criteria expected to translate actors' ability and motivation to act for the benefit of the organisation, even though formal control is not possible. According to Ouchi, what really matters is the contingency control factors i.e. the ability to measure results and to understand the transformation processes at stake. These factors lead to the definition of a typology which differentiates results and behaviours. The particular case of the transformation process is poorly known, and its results not easily measurable. This gave birth to the clan control type.

This view is reinforced by Daft and Macintosh (1984) who insist that clan control is quite a powerful control mechanism because it can cope with working under conditions of uncertainty and when work activities are difficult to measure. This particular situation is actually relevant for civil aerospace because since the early 90's and its disintegration wave, this industry has been characterised by both quantitative and qualitative uncertainty with regards to all value chain actors.

In this logic, the proposal made by Ouchi (1980) can be considered as a refined categorisation of control types which is in fact an organisational adaptation of the *Transaction Cost Economics* (TCE) developed by Williamson (1975). The author refers to market, bureaucracy and clans which will be further detailed in chapter 3, section 2. Interestingly, Ouchi (1980) insists that clan co-ordination relies on traditions and the common values and beliefs, which add an extra layer of complexity with regards to the management control of relationships, because the object of control is not necessarily quantifiable and objective.

Though not exhaustive, these few examples suggest that the field of intra-organisational control is certainly much more substantiated at present than what is available in the framework of inter-organisational interfaces management. In reality, albeit not surprisingly, a large proportion of inter-organisational management control research has been capitalising on the multiple contributions on intra-organisational management control for many years. At least, this was the case with the contribution made by Ouchi (1977, 1980) and the typologies he proposed.

Referring to van der Meer-Kooistra et Vosselman (2000), it is possible to contend that research in organisational management control mainly focused on relationships within organisations through the study of different centralisation levels dealing with the decision making process. In the same logic, it is interesting to underline that Anthony (1965, 1988) proposed a framework within the organisation which is broken down into management centres which are said to be the starting point of prolific research into formal behaviours and control. Following the same line of thought, and despite an obviously dominant *Bureaucratic Control*[72] in most firms, it is worth mentioning the horizontalisation of control of relationships phenomenon, observed within organisation and industry networks. Importantly, these relationships are no longer meant to be hierarchical but to develop between entities that must be co-ordinated without any formal and structured authority. This highlights the possibly necessary relationship between control and trust and certainly justifies an interest in the Dyad and Industrial Networks studies, which we will present in the following pages.

[71] It must be noticed that Ouchi limited this posture to personal recruitment questions. However, this scope will be rapidly enlarged through other culture and social control research.
[72] Consisting in results and behaviours control through procedure and accounting control.

1.2. The IMP group studies - A valuable insight before dealing with IORs management control devices

Until the late 1970's, the main focus along which the industrial marketing theory[73] was developed, dealt with the study and the modelling of industrial buying behaviours (Cova and Salle, 1992). Rapidly, those studies were then criticised for having unilateral characteristics and a questionable main assumption i.e. purchasing decisions would rely on the model of stimulus-answer. This convinced other researchers to offer alternative models. Particularly, the IMP (Industrial Marketing Program) group started looking into buyer-seller relationships and then into industrial networks, which is of great interest in the framework of this thesis in order to further specify the complexity entailed within IORs and therefore better appreciate what is at stake with *Key Levers* and the management control mechanisms that may derive from it. By doing so, this group developed a model of interactions and management control within industrial networks.

This model is a descriptive and explicit framework regarding industrial market dynamics. It takes into account the *embededdness* of social relationships in exchanges (Nooteboom, 1996; Turnbull and Valla, 1986) and is based on the following key theories: dependence and resources theory (Pfeffer et Salancik, 1978), neo-institutional theory (DiMaggio and Powell, 1983) and social exchange theory (Blau, 1964; Thibaut and Kelley, 1959) which was itself developed by authors regarding the relational approach theory (Dwyer *et al*., 1987; Macneil, 1980).

In this context, Cova and Salle (1992) proposed an interaction model based on three key postulates regarding industrial market dynamics, as represented hereafter:

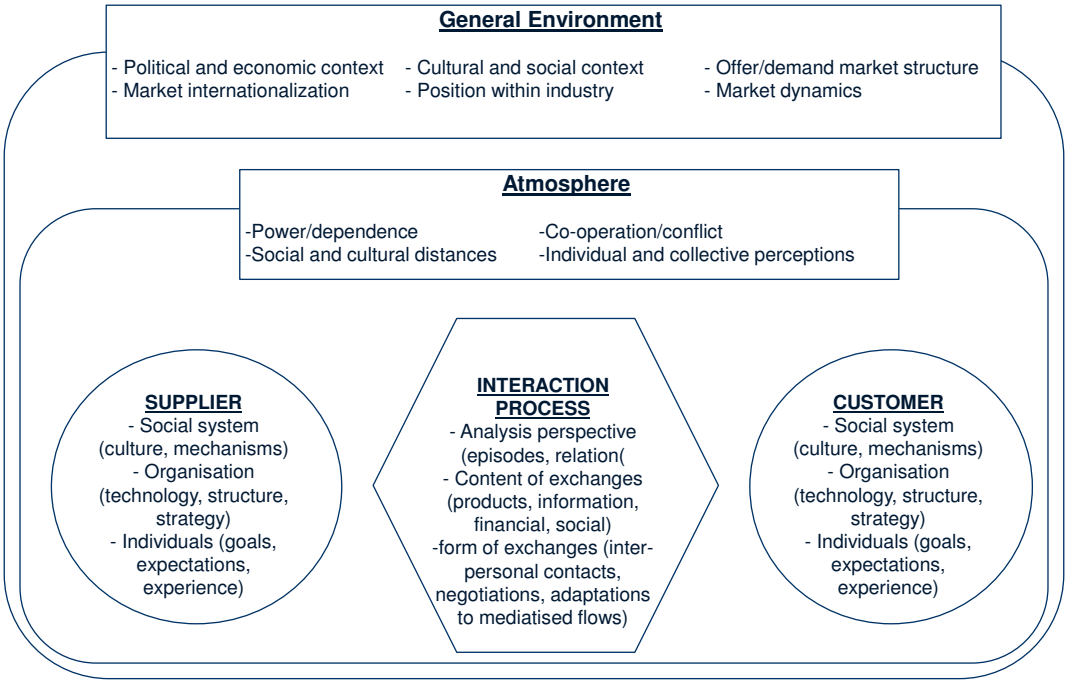


Figure 24 - IMP interaction model

(adapted from Cova and Salle, 1992, p. 99)

This model stipulates that buyer and seller cannot be studied apart from one another. The interdependence of stakeholders must be taken into account along with the similarities and complementarities of their respective tasks. Additionally, it is assumed that the structure of industrial markets is stable[74] which therefore entails assessing buyer-seller relationships over the long term. Lastly, on industrial markets the seller (or customer) is not meant to be passive. This conveys that marketing strategies cannot be restricted to the buyer's influence and manipulation through a marketing-mix that is expected to obtain a specific answer. Consequently, the behavioural "stimulus-response" model proves invalid. In this logic, the purchasing process is not viewed as an action/reaction process but as an interaction as proposed by Ford (1998). This means that the customer can (or must) have a strategy to adapt in some cases to its supplier's characteristics. Furthermore, the customer may also in some cases demand that its own supplier adapts (Brennan and Turnbull, 1998).

[73] Six phases can be identified: (1) need identification, (2) determining specifications and quantities to satisfy said need, (3) finding suppliers capable of satisfying need, (4) evaluating supplier proposals, (5) selecting supplier(s) and (6) performance control in terms of satisfaction of the need initially identified.

[74] According to Cova and Salle (1992), 59% firms increase by no more than 10% their customer base year on year. Firms spend more time in managing their suppliers' portfolio rather than develop relationships with new customers.

Interestingly, Håkansson (1982) specified four main interaction drivers: the process, the participants, the atmosphere and the environment.

The process deals with exchanges of products, services, information or financial and social services. Those exchanges can relate either to isolated events occurring between buyer and seller or to the full duration of IORs. Standardising exchanges or establishing routines help clarify the stakeholders' expectations with regards to respective accountabilities and missions. These expectations may even become institutionalised i.e. they are not questioned. Increasingly, communication between firms and actors along with formal exchanges are producing joint communication matrixes and schemes. Successive adaptations may lead to radical changes within these relationships and particularly in the context of *rapports de force*. With varying degrees of awareness, those adaptations can apply to products and prices as well as on the parties' organisational structures and practices.

Relationship participants heavily influence interactions because all relationships are affected by the objects of the interactions, but also by the intrinsic characteristics of stakeholders. Consequently, it is interesting to differentiate the specific elements of every organisation (e.g. technology, structure, strategy) and the characteristics of the individuals that compose it (profiles, objectives, expectations). It is thus assumed that the role, the hierarchical level and the mission of individuals involved within IORs significantly influence its outcome.

The prevailing atmosphere between co-operating firms will determine their interactions. This can be related to power-dependence, conflict management, trust or opportunism but also social capital divergences among actors. The atmosphere is likely to evolve over time, depending on the events that both parties experience. Importantly, it is assumed that what can be called the "management control ability" is only partial and limited to the very beginning of IORs (at least "reciprocal" ones). Experience gained over time makes it possible to fine tune perceptions, and influence the other party more or less radically.

Lastly, the environment understood as the "broader context" is obviously critical for fully understanding the political, financial context but also the market structure and the positioning of all actors.

According to Håkansson, this model identifies all the variables that need to be taken into account when dealing with buyer-seller relationships and differs from the stimulus-answer model. We are keen on extending it to all IORs. In particular, this model attributes an active role to parties involved in the exchanges, and the relationship *per se* is not at variance with the transaction itself. Additionally, it contends that interacting firms are not "black boxes" and should be understood through their organisational specificities and also the characteristics of the individuals that compose them.

This model provides an interesting structure in the framework of our approach, but it is also important to discuss the drawbacks of this model that have been reported. This is all the more important as they may reveal or suggest difficulties encountered for many years in the materialisation or what I call concretisation of generic principles in the establishment of effective and efficient mechanisms and tools. For example, the notion of atmosphere is quite vague. As it does not provide any specific rules to apply, this model may suffer from the lack of a well-defined framework to be properly considered. I would also add that it possibly does not cover interactions between organisations and individuals.

On the other hand, a literature review can also confirm that this model does provide some useful insight, as it has been the foundation of multiple studies, for example to improve knowledge of this process (Cunningham and Turnbull, 1998; Proença and Castro, 1998), to emphasise the relation between the interaction purpose and the context at play (Turnbull and Valla, 1986), or to address the complexity of contacts between individuals within and in between firms (Gadde and Håkansson, 1993). Importantly, authors such as Anderson *et al*. (1994), Cheung and Turnbull (1998) or Gadde and Håkansson (1993) have capitalised on this model in their respective research dealing with industrial networks.

As previously mentioned, the establishment of interaction models has helped reinforce the recognition of existing interactions between the organisation and its environment. In particular, this position has alimented research into networks among authors in organisation and strategy theory like Jarillo (1988), Miles and Snow (1986) and Thorelli (1986). Not surprisingly but also key in the framework of our thesis, sociologists in organisations (Cook and Emerson, 1978; Granovetter, 1985; Uzzi, 1997) have significantly contributed as can be observed by what we will review later in subsequent sections.

According to the IMP group, industrial networks should be assessed through the actors in charge or intending to control multiple activities and their corresponding resources, which are at the root of both co-operation and competition existing within industrial networks. This is illustrated through the following model proposed by Gadde and Håkansson (1993, p. 81).

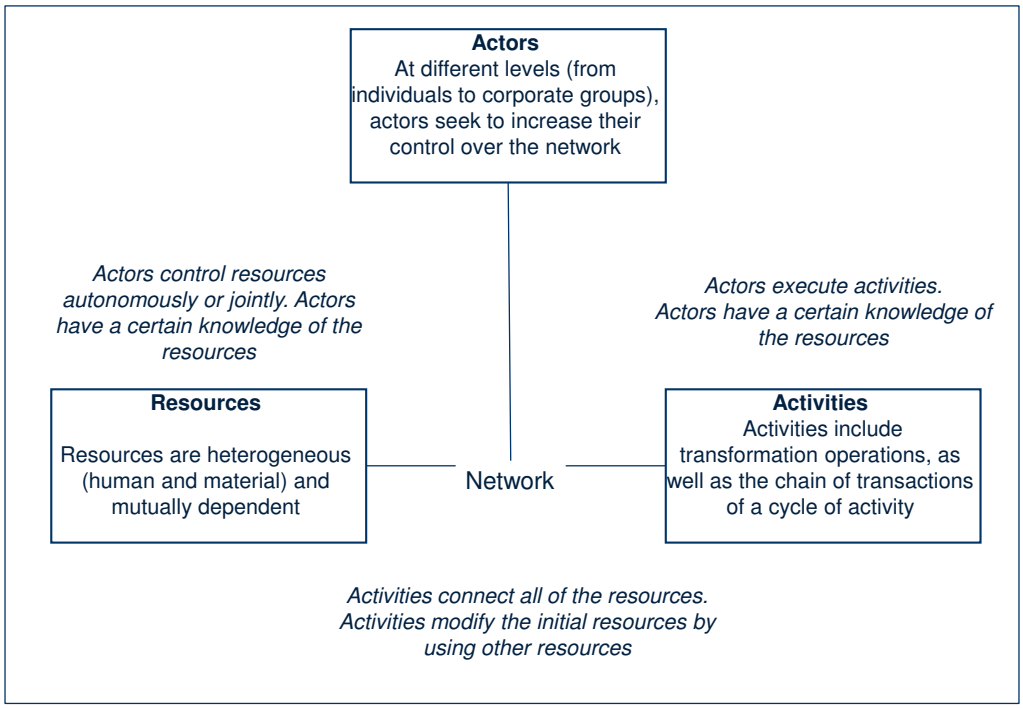


Figure 25 - The Network Model

(adapted from Gadde et Håkansson, 1993, p. 81)

Resources (capital, cash, technology, individuals and skills) are the responsibility of actors within a firm. Their intrinsic value is related to the output or activities they are capable of generating. The management control of those resources can be secured by their owner himself (the firm possessing them) or indirectly through IORs satisfactory management. As suggested by Pfeffer and Salancik (1978), management control can apply to the owned resources of a firm or to the influence on network members necessary to have access to specific resources. This relates to the notion of value chain management control on which we heavily insisted previously. In developing complex value chains to create value, overall co-ordination has become more or less paramount. This is determined by the type of dependence that exists between stakeholders, as was developed by Thompson (1967) and detailed in chapter 3, section 1. The author proposed a model a relationship types and specificities which details different stages depending on the level of mutual dependence existing between stakeholders. *Sequential interdependence* is characterised by successive but not overlapping activities,

while *Reciprocal interdependence* refers to activities conducted simultaneously or overlapping. The type of interdependence is thus considered critical to correctly appreciate co-ordination requirements which may imply that *"embededdness"* and mutual adjustment suits more reciprocal types. This relies on the fact that within the industrial network model, actors are meant to be unique. They possess resources and launch their own activities with a potential impact on the structure of organisations themselves but they are also determined by their dependence[75] within their network.

Importantly, the model proposed does not suggest a radical segregation between intra-and inter-organisational structures. Contrary to classic approaches (Anderson *et al.*, 1994), the boundaries between firms are not thought to be obvious. The environment can be impacted by a firm and external actors may also have an impact on partnering firms. This position does not suggest that the notion of border between a firm and its environment is unfounded, but it advocates that an intrinsic peculiarity of the firm lies in its links with other external firms, hence the key dimension of networks. This element is particularly important for this thesis, as most strategic IORs belonging to the *Reciprocal* category defined by Thompson (1967) and civil aerospace has been experiencing this overlapping of influence, resources and organisations for decades.

Providing consistent explanations regarding the complexity at stake within IORs is certainly a key attribute of the IMP group studies. Through the prism of networks, the model suggests that individuals are not part of one organisational group but evolve in distinct sub-groups which have to co-ordinate their own activities with respect to other sub-groups both internally and externally. Consequently**,** the notion of *embededdedness* is reinforced explicitly, which adds to the complexity of IORs management control when the actions of stakeholders are mutually dependent as is the case within *Reciprocal* relationships (Thomson, 1967), because respective objectives are difficult to achieve independently.

Overall, the IMP group studies' research puts the emphasis on key and different constituents of firms interacting: *social system*, *organisations* and *individuals*. Based on this position but also on the contribution made by Van de Ven (1976) with regards to inter-organisational relationships, it can thus be assumed that both intra- and inter-organisational complex

[75] This dependence will be determined by both financial and relational investments.

relationships are worth considering when dealing with IORs strategic management control. Consequently, it is relevant to put aside the conception of firms being "black boxes" and advocated by classic approaches. On the contrary, a key assumption taken for granted is that IORs relate to unbounded systems. With their studies about the *Dyad and Industrial Networks*, the IMP group researchers listed tangible arguments for admitting that transactions exist between the system and the environment i.e. a system approach wherein involved stakeholders belong to a group but also sub-groups with their own respective purpose, while they are also involved and committed together within a collective purpose. Various actors in this system have distinct purposes despite working together and a commonly accepted target. This dimension proves critical and should not be avoided when establishing management control tools and devices likely to succeed in the framework of IORs management.

2. A CONCEPTION OF THE IORS MANAGEMENT CONTROL CHALLENGE

The above sections provide helpful insight into IORs management and its complexity often encountered in civil aerospace and particularly salient when dealing with control. The position developed by the IMP puts emphasis on critical constituents of interacting firms, i.e. *social system*, *organisations* and *individuals.* This underlines the complexity at stake with IORs management and subsequently with its management control devices, which, in rigidly structured companies, are addressed with more formal than informal mechanisms.

Capitalising on intra-organisational management control research, a number of authors (Adler, 2001; Ding *et al.*, 2013; Dekker, 2004; Donada *et al.*, 2012; Håkansson and Lind, 2004; Langfield-Smith and Smith, 2003; Ding *et al.*, 2013; van der Meer-Kooistra and Vosselman, 2000) have contributed greatly to the development of research around IORs management control. They highlighted multiple elements of complexity which certainly justify the decision to concentrate on the inter-organisational relationships management control challenge defined as *"the process by which the partners influence, to varying degrees, the behaviour and output of the other partners and the managers of the alliance itself*" (Faulkner, 1995, p. 187). In that respect, the following sub-sections deal with the necessary constituents of inter-organisational management control as defined above, along with its key characteristics through a focus on the management control of knowledge creation.

2.1. Key insights in IORs management control, including specific expectations from Management Accounting

IOR management control relates to the ability to successfully enact a "*value-creation perspective"* (Dekker, 2004) and thus create transactional value for co-operating firms through effective and efficient management of resources pooling, tasks determination and division of work sharing. The parties are thus expected to enter a mutual dependence in managing all agreed sub-tasks in particular and it becomes critical to "*co-ordinate across organisational boundaries to ensure a fit between their points of contacts*". In this logic, an arising difficulty or dilemma relates to this increasing dependence within an increasingly uncertain environment, which in turn may increase the need for co-ordination and joint decision making (Dyer *et al.*, 2001; Galbraith, 1977; Gulati and Singh, 1998, Thompson, 1967). Under such circumstances, Gulati and Singh (1998, p. 784) stressed the importance of using control mechanisms because "*concerns about anticipated coordination costs are particularly salient in alliances, which can entail significant coordination of activities between partners and yet have to be managed without the benefit of the structure and systems available in traditional hierarchies*".

In this respect, academic authors developed various approaches consisting in capitalising on intra-organisational management control research. The same authors have also been reproached with the fact that their variables of analysis "*conceived for intra-organisational analysis have been simply transplanted to inter-organisational settings without questioning their appropriateness* (while) … *on the other hand, the impact of these variables has been analysed by evaluating one variable at a time or, when more variables are included in the investigation, the relationships between them are assumed to be linear without considering any interaction effects*" (Caglio and Ditillo, 2008, p. 867). Yet, these authors have been very helpful in covering a large range of issues or difficulties related to inter-organisational management control, which in this section justifies further attention in order to better appreciate control problems rather than control solutions (Caglio and Ditillo, 2008, p. 891).

At this stage, what really matters is that most of those authors commonly deal with the question of management control of interactions in the sense that it demands the management of collaboration and conflict despite hindering roadblocks and the fact that, most often, nobody has a complete control of events. This is especially true within civil aerospace, as

nobody is protected against unforeseen dramatic circumstances (e.g. wars, accidents, strikes, take-overs) while most activities are dispatched across multiple stakeholders from external organisations which contributes to fostering a poor *transformation process knowledge* with reference to Ouchi (1980). Besides, both parties may be driven by their own exclusive interest or at the very least, have their own appreciation of the events or requests entailed in inter-organisational activities. Self-interest may engender a strong inclination to influence others, which in some cases can lead to a complex process of give-and-take or even open the door to all sorts of blackmail and eccentric promises. In this respect, Gulati and Singh (1998, p. 784) stress the importance of using control mechanisms to manage task interdependence when they mention "*concerns (...) in alliance which can entail significant coordination of activities between partners and yet have to be managed without the benefit of the structure and systems available in traditional hierarchies*". In such cases, it is interesting to underline that the *Transaction Cost Economy theory* (Williamson, 1985) prescribes formal control or even vertical integration. Yet, alternative approaches are also worth taking into consideration, such as the position defended by Grossman and Hart (1986), contend that, on the contrary, using formal control can only be a temporary measure and is not a panacea. In fact, in this perspective, formal contracts or asset ownership should be supplemented by options consisting in using informal instruments (relational contracts in particular) which contradicts the *Transaction Cost Economy theory.*

For this reason, in the framework of this thesis, it is certainly most appropriate to insist on Ouchi's (1980) refined approach - which relies on an organisational adaptation of TCE – along with applications of its principles that may be linked with IORs. This approach is all the more interesting as it is also possible to include the work done by Dumoulin (1997), who carried out a similar exercise by applying Ouchi's typology to inter-organisational networks. In doing so, the author distinguished networks within the market approach which proves most appropriate. This is the case for dynamic networks suited for competitive, chaotic and quite disordered environment. Under such circumstances, inter-organisational control is expected to be secured not through consideration, but rather through prices and competences between stakeholders. It is interesting – if not naïve – to see that the management control approach applied accordingly consists in establishing contractual arrangements in order to establish generic conditions for working together. The types of alliances specific to civil aerospace, which we intend to study in this thesis do not fall into these types of networks, therefore, this point should not be given too much attention in this study. Yet, it is hard to believe that

competences can reasonably be granted through simple contractual documents alone. A minimum amount of experience sharing may be necessary; and assessing only results and actions is unlikely to enable a proactive control, defined as something which is not limited to the control of results only. However, this scenario is consistent with the principles exposed by Ouchi when there is no real intention to get to know or influence the transformation processes at work within the value chain, and no ability to monitor results subsequent results as defined through contractual arrangements.

With stable networks, Dumoulin (1997) proposes two options, which this time are adapted to the kind of configurations experienced within civil aerospace when dealing with inter-organisational interfaces. On one hand, in configurations in which one party prevails (or at least, supposedly so), a hierarchical mode of relationships is established with "satellites", as Dumoulin call them, that are weakened by a structural deficit *vis-à-vis* the prevailing party. The latter is therefore in a position in which, theoretically, it can encroach upon the satellites' organisation and thus control both results and transformation processes through continuous involvement in daily operations, not limited to specific projects. Such strategies are commonly praised or advocated within the industrial community. However, the case study presented in chapter 2, section 3 suggests that, in reality, those orientations are not a given and some pragmatism may certainly be necessary before drawing specific conclusions.

On the other hand, Dumoulin proposes that stable networks can involve parties whose respective autonomy and expected added-value contributions are paramount. Initiated after in-depth selection phases, these types of co-operations are heavily dependent on individuals and know-how specific to each company. Such dependence is explained by the necessary trust that exists between the parties involved and a form of mutual dependence, which eradicates opportunism, or at least fosters a sufficient level of commitment to deliver performance. In this case, the author refers to *clans* as per Ouchi's typology: contracts are substituted with informal reviews between experts whose networking activities should provide a sense of belonging and contribute to the construction of a common culture which can largely compensate for the absence of formal control attempts.

This point of view offers the benefit of exemplifying that control of relationships is possible from a non-hierarchical perspective. On the other hand, operational actors will legitimately argue that in real business life, this perspective is quite a candid and naïve strategy because

"*no measure means no control*" as most of us have probably heard repeatedly within various companies. Now, especially in the framework of inter-organisational relationships, encroaching upon the counterpart's organisation is not an easy task, as testified by the case study proposed in chapter 3 section 3 or following sample of answers made by most senior operational players interviewed within the civil aerospace industry in response to the question of whether an organisation can encroach upon its partners or suppliers' own way of working:

> *"Honestly, if you have got a dominant supplier that has some capabilities... I think the LTA do work well as long as the relationships are strong".*
>
> *"You can encroach on a dominant supplier organisation if you can show that your strategy and your corporate goals and objectives and intention are compatible with theirs, and there is something in it for them, as well as if they are going to give you preferential treatment or support you in a way that allows you to achieve your goals. So there must be something in it for them, otherwise they just play their dominant card."*
>
> *" If I interpret encroach like some entry deeply and interfere or to …no but they can do a lot… I mean that when you have a tight relationship, you have to prepare the two organisations to meet. In doing that, to some extent you encroach on the other organisation in order to establish the best connection and, to some extent, through suggestions you can force or suggest to the supplier (maybe sometimes ad-hoc) to modify the organisation, at least to flow down information in the proper way. And entering step by step you can also - if the personnel involved is not appropriate or if there are some situations in the organisation that do not work or do not fit very well- strongly suggest to modify them in order to make it work. This way of interfering can actually be disruptive. The other way that may help better achieve the goal is to offer a model either step by step or when the market situation is changing. Offering a model is an elegant way to tell the partner I am offering something that is working rather well in a large organisation that is making profit… this is some sort of the appeal that could talk the supplier into being attracted and modifying its organisation.*
>
> *Years ago, when there was the AB model (6sigma) others were attracted because they considered it a valid models to be copied/adapted … but strictly speaking, I think encroaching the organisation can happen if there is not anything that could be an obstacle or work against the common view…"*

These testimonies come as no surprise, but they do also reveal quite a paradox and somewhat inextricable conditions. On the other hand, they can spark genuine interest as they may also justify studies into the control of inter-organisational relationships from a non-hierarchical perspective. Moreover, this orientation is all the more appealing as research in organisational control has long concentrated on relationships within firms by considering various degrees of decision-making power centralisation (van der meer-Kooistra and Vosselman, 2000) which obviously proves incompatible with regards to IORs characterised by a horizontalisation of control relationship requirements across networks of firms.

Along these lines, authors with a stated preference for accounting (Hopwood, 1996; Otley, 1994) have insisted that the scope of control should be enlarged to take into account a new

perspective i.e. putting firms under control should not necessarily be associated with formal and structured bureaucratic control approaches though long promoted by those studying budget, planning or performance assessment.

More specifically for accounting within clan co-ordination, Ezzamel (1994) identified a key mission consisting in contributing to the establishment *of common values and beliefs*, and *sustaining tradition* within organisations. This does not mean that accounting methods developed and used in hierarchical co-ordination types should be rejected, as they may occasionally prove useful in a clan setting phase. Yet, common values and tradition are such that the prime objective of control should deal with the *socialisation process* rather than exclusively support managers with information for decision making and performance evaluation.

Albeit radically different from previous conceptions, these views have become more common in recent years, and the need to explore the effects of accounting across organisational boundaries has been stressed by highly respected academic authors (Hopwood, 1996; Otley *et al.*, 1995). This has certainly reinforced the expected role of accounting in the establishment of collaborative inter-organisational business relationships as promoted by Seal *et al.* (1999).

Interestingly, in the framework of co-operative co-ordination and control perspectives, it is also worth mentioning here a particular study conducted by Berry (1994). Based on a case study on an alliance between an American and a Japanese automotive equipment maker, the author underlined the use of clan control within this alliance which was characterised as follows: the parties had open discussions, communicated their problems, and shared their knowledge and information showing that clan control can be a suitable mode of control in IORs, despite possible different experiences of the collaboration. In the same direction, when dealing with buyer-seller relationships, and particularly suited to the context within civil aerospace, Nogatchewsky G. (2004) proposes management control configurations which associate the idea of challenge associated with IORs management control. In the case of a *Market configuration*, the main driver within existing IORs should be the ambition to take advantage from all possible market opportunities. For this reason, from a management control viewpoint, controlling results and occasionally controlling working processes through markets is advocated. This can primarily be achieved through formal control. Another configuration offered is the *Lord configuration* from a buying firm perspective. In this

situation one party will have no hesitation in imposing its power through certain devices and means. The latter remain mainly formal, applying control through the market and the organisation on the results, the working processes, the behaviours and other choices of orientations. Such practices are made possible by alienating the other party. The third configuration proposed by the author deals with *Partnership*, for which the generally accepted purpose is the compatibility of the goals established by stakeholders. For this configuration, the management control modalities proposed are quite different from the previous ones: in all aspects (results, process, behaviours, strategic and operational choices, stakeholder characteristics), there needs to be complementary formal and informal control types with a strategy of interference from one of the parties. The final possible configuration is what the author named *Vassalage configuration,* in which case the reasonable purpose can only consist in reducing uncertainty through a control of the other party's characteristics during the selection phase. This option is not overly ambitious but certainly is very pragmatic and realistic. Consequently, management control attempts will rely on contracts with an intention of capitalising on all stakeholders' good relationships. From the point of view of the dominant party, control will be formal but influenced by social aspects, while the other party will rely on individual interactions for building a sort of emotional control.

This specific configuration type can be put in relation with the position developed by Dekker (2008), in which the author analyses the way firms select their partners, and the related suitable governance mode in the case of IORs. The author argues that control modes and subsequent consequences can be moderated by the inter-personal experiences that exist between the parties, and also that selection and formal governance modes are not exclusive but complementary for addressing inter-organisational control issues. A few years earlier, in 2004, the same author had underlined that formal control mechanisms may be key in managing some fundamental aspects of IORs (*appropriation of concern and co-ordination of interdependent tasks*). However, he also recommended that a proper lever for mitigating risks on those two fundamental aspects and subsequently expensive formal governance modes (assuming it works) was to ensure a proper selection of the right partner. But most importantly, he also insisted that "*sociological perspectives on governance contend that account should be taken of the social context in which the relationship is embedded*". This consideration is not minor as it obviously reinforces the idea that informal control types are also possible – maybe necessary – due to repeated interactions at the root of IORs' embeddedness in an influential economic and social context (Dekker, 2004, p. 31).

Interestingly, Ouchi (1979) insisted that the lack of effective control mechanisms would justify resorting to a system of hierarchy, whose associated notion of authority grants reciprocity through sharing purposes. However, resorting to hierarchy is not always easy for IORs, and particularly within civil aerospace. In this case, reciprocity only becomes possible through socialisation. This necessarily implies some cohesion, a shared culture or the appropriation of concerns between stakeholders.

Alternatively, dealing with the role of accounting within the supply chain from the perspective of transaction cost theory, van der Meer-Kooistra and Vosselman (2000 and 2006) identified three types of control patterns within inter-firm relationships: a market-based pattern, a bureaucracy-based pattern and a trust-based pattern. A few years later, the same authors agreed that the relationship between management control systems (MCSs) and trust is quite complex and open to debate (Dekker, 2004; Tomkins, 2001; van der Meer-Kooistra and Vosselman, 2006) whereas Woolthuis *et al.* (2002, p. 2) developed a slightly different view regarding trust and formal control in IORs by underlining that both were "*at least as much complements as they are substitutes*".

In this respect, Dekker (2004, p. 29) produced key structuring proposals and heavily insisted on two limits inherent to TCE: its "*singular focus on the notions of opportunism and transaction cost minimisation*" which prevent stakeholders from embracing variety and a large range of IORs forms and goals; "*its lack of dynamism*" which puts aside "*the social mechanism of governance, while IORs often are embedded in a rich and influential social context*". Consequently, the author contends that both formal and informal control mechanisms are necessary in IORs management control which can be justified through the requirements of both *appropriation of concerns* and *co-ordination* because they jointly describe that "*collaborating firms need to manage the creation and to safeguard the appropriation of value*" (p. 30). This position is critical as it legitimises offering an alternative to a transactional approach (TCE) with elements from both relational and social approaches, and reinforces the view that inter-organisational management control is not simply a question of minimising transaction costs or reducing opportunism. Admitting that empirically established descriptions of specific control mechanisms suitable for IORs are not common and that research into inter-organisational relationships (IORs) is far from being fully endorsed by accounting researchers, the author agrees with Otley (1994, p. 193) who insists

on the need to stop "*confining the activity of management control within the legal boundaries of the organization*".

Dekker (2004, p. 28) stresses "*the importance of management accounting mechanisms in the management of alliances*" but also contends that a TCE approach is not suitable enough because it does not fully take into account "*the social mechanisms of governance while IORs are often embedded in a rich and influential social context*". Based on such characteristics and necessary attributes granted to IORs management control, Dekker (2004) offered an additional argument to assert that both formal and informal control mechanisms are necessary in IORs management control**.** Consequently, and based on *Goodwill* and *Capability* trust[76] in reference to Sako (1992), Dekker (2004, p. 32) proposes *ex-ante* and *ex-post mechanisms* respectively to align actors' interests or reduce co-ordination requirements before implementing the IOR, and to process information with an on-going performance assessment. This is illustrated with the following table established by the author:

Formal and informal control mechanisms in inter-organizational relationships

Outcome control	Behavior control	Social control
Ex-ante mechanisms		
Goal setting Incentive systems/reward structures	Structural specifications: • Planning • Procedures • Rules and regulations	Partner selection Trust (goodwill/capability): • Interaction • Reputation • Social networks
Ex-post mechanisms		
Performance monitoring and rewarding	Behavior monitoring and rewarding	Trust building: • Risk taking • Joint decision making and problem solving • Partner development
FORMAL CONTROL		INFORMAL CONTROL

Table 9 – Formal and Informal control mechanisms in IORs

(adapted from Dekker, 2004, p.32)

Now, much can be debated about the relation between formal and informal control mechanisms: are they complementary or inversely related? Furthermore, materialising formal control as per the proposed definition is relatively easy to imagine from a methodological and

[76] *Goodwill trust* is the expectation that another will perform in the interests of the relationship, even if it is not in the other's interest to do so, and essentially relates to not behaving opportunistically.
Capability trust relates to expectations about another's competencies to perform a task satisfactorily.

an instrumentalist viewpoint, but informal control is certainly more loose or vague. In particular, with trust presented as a key constituent of informal control, what are the relevant needs for information contributing to trust generation within IORs, and which are the trust-generating mechanisms worth controlling?

These aspects are discussed in chapter 3, sections 2 through a cross analysis of both formal and informal control approaches with a particular reference to the position developed by Tomkins (2001) regarding the question of needs for information within increasingly numerous interactive structures.

Overall, most of the above references reinforce the view that IORs management control is conspicuously complex in its purpose and presents a tremendous challenge because its modes and mechanisms will depend on multiple possible types of relationships. An illustration of the high complexity of IORs management control is offered by Birnberg (1998, p. 42). In his view, inter-organisational management control is really about the "*management of the degree of absolute and relative commitment; the symmetry of the rewards; the extent of uncertainty present; the degree of mutual trust between the parties; the length of the relationships*". Sometimes such co-operating firms may even compete against each other, which is very usual within civil aerospace, often depicted as a rather incestuous industry as we underlined in chapter 2, section 1.

Highly complex, this ambitious programme strives for the growth of firms and their survival, access to complementary resources enabling firms which work together to renew their competence and to tackle new environments while their motives and purposes may differ. Consequently *Key Levers* may need to be scrutinised in order to mitigate potential hazards.

For instance, Mohr and Spekman (1994) underline the notion of *supplier commitment,* namely the extent to which suppliers are flexible in response to requests made the buyer. This is in line with suppliers' willingness to help in special circumstances, when an emergency take precedence, or the ability of buyers to rely on their suppliers to ensure that all the explicit requirements are properly fulfilled (or at least when an agreement exists.)

For their part, Narasimhan and Kim (2002) suggest the importance of what they call the *buyer commitment* i.e. the level of strategic partnership with suppliers, suppliers' participation in design and in the process of procurement and production. Also these authors explain the

extent to which *formal impersonal communication,* i.e. the level of information exchange with suppliers through information technology, the establishment of quick ordering systems and stable procurement through the network. The key dimension that is given to communication is relayed from a more technical angle by Kotabe *et al.* (2003) who insist on the *quality, timing level and type of technical communication between development engineers of the buying firm and its partners*. More pragmatically, Womack *et al.* (1990) consider critical the degree, to which supplier relationships have, over the past two to three years, resulted in improved product, design, process, and product quality for the buyer firm. For Carr and Pearson (1999, 2002), communication is appreciated from a managerial angle, measured with "*loyalty in the relationships*", the "*frequency of face to face planning and communication*" with suppliers and the degree of corporate level communication on important issues. From a different point of view, Kale *et al*. (2000) suggest that "*level of mutual trust*", respect and interactions between buyers and suppliers at multiple levels is critical.

Obviously, these examples may not be exhaustive but they display a number of specific factors that need to be considered and put in perspective against the construction of inter-organisational co-operations. Based on the research literature reviewed in previous sections, it is thus contended that the motivation of actors in establishing an industrial co-operation, their mutual understanding and knowledge but also the attitudes and behaviours of the stakeholders involved are critical. Relationship management types established within co-operating firms and networking management practices in place may also heavily determine the outcome of IORs co-operating arrangements in addition to the level of consensus within and outside these organisations. Lastly, it seems that a lack of vision is unlikely to be compensated by high proficiency in drawing up contracts, co-ordination of tasks and product portfolio management. In addition, it is necessary to consider one last but very specific element of the complexity of IORs management control which is related to *Knowledge Creation,* viewed as a fundamental motivator for inter-organisational co-operating arrangements, as detailed in chapter 2, section 2.

2.2. Knowledge Creation theory and IORs Management Control

Quite logically, transactional and relational approaches are probably the approaches on which inter-organisational management control has mostly focused until now. With its transactional approach, TCE seeks to safeguard mechanisms aimed at deterring external co-operating firms from behaving opportunistically. Those mechanisms are meant to be proportional to the specific assets at stake, the level of uncertainty and the frequency of exchanges. This position is supported by the agency theory which stipulates that inter-organisational co-operating arrangements are threatened by potential poor selection processes, poor competence assessment and unfair individual behaviour, at the root of the lack of effective or efficient co-operation. Consequently, both theories propose to rely on specific governance structures and contracts in order to align the interests of co-operating parties.

Conversely, the relational approach focuses primarily on understanding the mechanisms necessary to establish a long-lasting co-operation. The lack of harmony between both firms' goals is not a top priority. Priority is put on trust, involvement and relational norms which focus on information exchanges, solidarity and flexibility. Those norms can be explicit or implicit and correspond to expected behaviours that are shaped during the relationships. Combined with joint and collaborative activities, such norms and behaviours make it possible to secure a successful co-ordination of inter-dependent tasks in order to redistribute fairly the contribution achieved through co-operating. The appropriation of concerns is only partially addressed.

Already presented in chapter 2, section 2 the Resource Based View is also a key contribution in IORs management control. Another key theoretical perspective dealing with IORs management control is related to the power and dependency approach which also raises the issue of the appropriation along with companies' strong motivation to reduce the uncertainty induced by their dependency towards other companies, although this is generally acknowledged as a means to obtain resources that are not available in-house. In particular, the restriction of information sharing, the ability to increase agility and other pressuring means are commonly advocated in this perspective.

In addition to those main theories, it is however legitimate to contend that the *Knowledge Creation* theory (Nonaka, 1994) should be considered with due interest, especially when

dealing with civil aerospace. In chapter 2, section 2 we already outlined the rationale for associating both knowledge creation and the establishment of IORs. It was proposed that the ontological dimension of *Knowledge Creation* is fundamental in the link made between IORs and the establishment of distinctive competences. IORs were thus described as a strategic device and incentive for setting an appropriate framework enabling knowledge creation. However, no answer was provided regarding the necessary types of management control approaches, devices and mechanisms that should be developed to contribute to the creation and management of knowledge between firms involved in co-operating arrangements. In reality, much has been said about the key dimension of knowledge in management without necessarily comprehensively detailing the means needed to create or sustain knowledge. For this purpose, the dynamic theory of organisational knowledge creation may be helpful. In particular, it argues that *"organisational knowledge is created through a continuous dialogue between tacit and explicit knowledge via four patterns of interactions, socialization, combination, internalization and externalization*" (Nonaka, 1994, p. 14). In this pattern, knowledge is considered explicit when it can be transmitted in formal and systematic language. Tacit knowledge on the other hand can hardly be formalised and communicated. It deals more directly with things that are experienced at a personal level (Polanyi, 1962). This distinction is critical from a management control viewpoint as obviously, whatever its type - explicit or tacit - knowledge creation will not be self-sufficient, and requires specific orchestration means and devices to make things happen on the ground.

Referring to Nonaka (1994, p. 20) "*organisational knowledge creation takes place when all four modes of knowledge conversion form a continual cycle triggered by such actions as team interactions, dialogue, metaphors, coordination, documentation, experimentation, and learning by doing, etc...".* The author also describes organisational knowledge creation as "*an upward spiral process from the individual level to the collective group level, and then to the organisational level, sometimes to the inter-organisational level".* Consequently, he proposes four key components of the theory of knowledge creation: the *SECI Process*, the *Concept of "Ba", Knowledge Assets* and *Leadership*. In particular, when dealing with IORs management, the SECI steps are interesting to consider, as they deal with elements of socialisation, externalisation, combination and internalisation, which can almost automatically be related to inter-organisational exchanges aspects. Based on extant literature on knowledge transfers (Grant, 1996; Walz *et al*., 1993) in particular, it is possible to better define the meaning of the four elements that make up the SECI steps. Socialisation can thus be understood as a process

of sharing tacit knowledge between individuals, and the development of close or even intimate relationships between internal and external individuals. In the framework of this process, physical proximity in particular is critical as it is expected to help acquire knowledge. Externalisation can be assimilated into the formal counterpart of socialisation. It can be understood as a process aimed at communicating and sharing tacit knowledge after its translation into forms that can be understood by others. Typically, this is what is currently experienced within civil aerospace with emerging markets who seek to acquire western technologies through the orchestration of technology transfers. In the same logic, this combination is a systematisation of former and new explicit knowledge in order to be able to diffuse and spread it among individuals. More specifically, internalisation deals with newly created explicit knowledge to be converted into the tacit knowledge of co-operating firms.

Given what is understood within the SECI steps and from an IORs management control viewpoint, the interest in setting effective management control mechanisms capable of sustaining such objectives can be established. Indeed, it is a question of enabling interactions between tacit and explicit knowledge in order to create new knowledge through the "*spiralling process"* evoked by Nonaka (1994, p. 34) between both types of knowledge. Inevitably, this process cannot be self-regulated, and is likely to require specific management control devices. Particularly, informal control (as defined in chapter 3, section 2) finds a legitimate *raison d'être* in the elements of socialisation representing the interaction between individuals through mechanisms such as observation, imitation or apprenticeships. Formal control (as defined in chapter 3, section 2) is not undermined either when considering the idea of combination of explicit knowledge through meetings and conversation or the use of information systems. Meanwhile, it has been shown to be quite legitimate to establish appropriate control mechanisms so that explicit knowledge can be converted into tacit knowledge through internalisation, whereas externalisation will convert tacit knowledge into explicit knowledge. Said differently, following the proposals of the *Knowledge Creation* theory, inter-organisational interfaces have to be established and managed in such a way that the tacit knowledge held by individuals is mobilised and spread for exchanges and continuous enhancement through the SECI steps. More holistically, this also relates to the concept of "Ba". This concept is defined as a shared space within which knowledge is embedded. It is a place *"for resource concentration of knowledge assets and intellectualizing capabilities within the knowledge creation process "Ba" is expected to collect knowledge applied and*

integrate it which falls typically in the kind of IORs management control prerogatives" (Nonaka, 1994, p. 35).

A good example used by Nonaka and Konno (1998) is that of project teams, which, by definition, with different skills from multiple individuals have to be brought together to add value and generate knowledge. This example provides insight into excellent examples of Bas, specifically designed to enable knowledge creation and sharing in companies such as NTT DoCoMo and Toyota. Additional comprehensive information is also available through academic literature on the dynamic theory of knowledge creation, organisational knowledge creation and the role of middle managers. Consequently, and assuming that knowledge separated from "Ba" becomes information (Nonaka, 1994), questions regarding the management control of inter-organisational shared spaces can be legitimately raised as long as these ingredients become part of a great challenge which consists in adequately managing and controlling the interactions at stake between firms committed to working together in order to create value through knowledge creation and innovation. For instance, the management control of information which is concrete because it takes shape through networks is certainly different from the management and control of tacit knowledge which is intangible by definition.

KEY TRANSITION

The arguments developed so far confirm that in order to deal with the requirements of sharing complementary technology to boost innovation and create knowledge, but also to jointly reduce costs, inter-organisational co-operating arrangements definitely require successful management control approaches, mechanisms and tools. Most importantly, academic literature suggests that necessary inter-organisational relationship management control types are inevitably multiple, varied and specific to each IOR. Meanwhile, a major difficulty encountered resides in fragmented or even sometimes conflicting solutions commonly proposed as detailed in chapter 3, section 1.

Consequently, establishing a ***Co-operation Complexity and Key Levers Fit (CCKLF)*** matrix may be justified when exploring IORs management control devices and tools. This can provide support to correctly understand how various sub-group actors can be reciprocally influenced to achieve their individual objectives, but also how they should co-ordinate with each other to successfully deliver a collective result within an appropriate structure. If that is not the case, potential recommended management control approaches are at great risk. They are indeed likely to fail badly in the long run. On one hand, the tools and devices implemented to exert management control types might not be adapted to a certain level of complexity, which is inevitable. On the other hand, it is probably impossible for them to be handled without any suitable organisational structure, especially in the case of civil aerospace. In this context, three "archetypes" have been defined in academic literature: the control of results through the market, the control of behaviours (and therefore ultimately results) through bureaucracy and another form of behaviour control. The latter is possible through the clan as developed by Dumoulin (1996), Håkansson and Lind (2004), through trust in capabilities, willingness and commitment as suggested by van der Meer-Kooistra and Vosselman (2000), Adler (2001), Langfield-Smith and Smith (2003) or, according to Dekker (2004), through the socialisation of individuals[77].

[77] The term "social control" is also developed by Langevin and Naro (2003) in their literature review dealing with organisational control devices. In their view, social control is about complementary processes consisting in creating or reinforcing the socialisation of individuals in addition to their appropriation of organisational purposes i.e. (1) selection and training processes for members from the organisation (2) management style processes aimed at enhancing communication between actors and their involvement (3) factors constituting cultural variables of organisations (myths, symbols) and (4) external socializing mechanisms like training or ex ante assessment by a community of professionals.

These perspectives, though multiple and more or less complex, are obviously generally accepted and quite necessary to bear in mind when tackling what is at stake when dealing with IORs management control approaches, devices and tools. With regards to bureaucracy and TCE in particular, Dekker (2004, p. 31) reminds us that there is obviously a glaring lack of related TCE research with very little produced regarding "*the examination of the organisational mechanisms of governance*" (Grandori, 1997; Sobrero and Schrader, 1998; Zaheer and Venkatraman, 1995; Zajac and Olsen, 1993). Moreover, the author insists that by "*isolating the transaction from its context and treating it as an independent event*" (Dekker, 2004, p. 31) TCE would actually elude a necessary dimension of control which takes into account the social context which in turn could "*result in informal coordination and monitoring and high trust between partners*" (Klein *et al*., 2000). This view is all the more relevant as it is in line with commonly encountered circumstances within civil aerospace...

Overall, the table below captures an understanding of sound management control approaches and principles, on which to rely when dealing with the inter-organisational relationships management control challenge:

Approaches Types	Object of Control	Key topics addressed	Devices	Performance Criteria
Transactional Approach	Transaction	1) Co-operation 2) Skills & competence assessments	Governance structures Contracts	Efficiency (economical performance)
Relational Approach	Relation	1) Co-ordination 2) Appropriation	Trust Relational norms	Harmony and positive joint development
Resources (and Competences) base view	Organisation	1) Appropriation 2) Skills & competence assessments	Formal isolating mechanisms Maintenance of causal ambiguity	Economical performance
Power and Dependency Approach	Organisation	1) Appropriation 2) Skills & competence assessments	Formal tights/links to structure exchanges More or less coercive influencing strategies	Effectiveness, satisfaction level
Knowledge Creation	Relation, Organisation	1) Tacit and explicit know-how sharing	SECI Process, the Concept of "Ba", the Knowledge Assets and Leadership management	Innovation level, number of breakthroughs
IMP Group	Relation, Organisation	1) Buyer-Seller Relationships 2) Industrial Networks	Model of interactions and management control Social Embededdness	Stakeholders' reciprocal ability to adapt to their characteristics

Table 10 – Management Control Approaches and Principles

However, this synthesis does not specify much about concrete devices and tools. This view confirms that there is a certain level of maturity in the co-operation literature dealing with management control principles and approaches. Still, it is not developed with regards to management control tools, devices and mechanisms. This is a major void when considering that successfully addressing the IORs Management Control Challenge**,** proposed in Chapter 3, section 1, is inevitably and highly dependent on appropriate management control tools and devices, necessary to contribute towards the construction of core competences through the resolution of three main types of problems (Caglio and Ditillo, 2008): co-operating issues, co-ordination issues and appropriation of concerns[78].

Finally, referring to Donada and Nogatchewsky G. (2006) or even van der Meer-Kooistra and Vosselman (2000) and Håkansson and Lind (2004), it must be taken into account that control devices and mechanisms cannot be disconnected from a specific structure of control, because the latter is probably necessary to frame and cement efficient inter-organisational activities. This is aligned with the view that strategies get implemented through management controls, organisational structures, human resources management and culture. Importantly, it is also considered that in implementing desired strategies, managers can use, with more or less satisfaction, many management control techniques such as Balanced Scorecards; Total Quality Management and Kaizen approaches; Activity-based and Target Costing, etc... In this logic, the following sections set out to specify further types of control devices, mechanisms and structures that may be adapted to the intrinsic complexity of IORs.

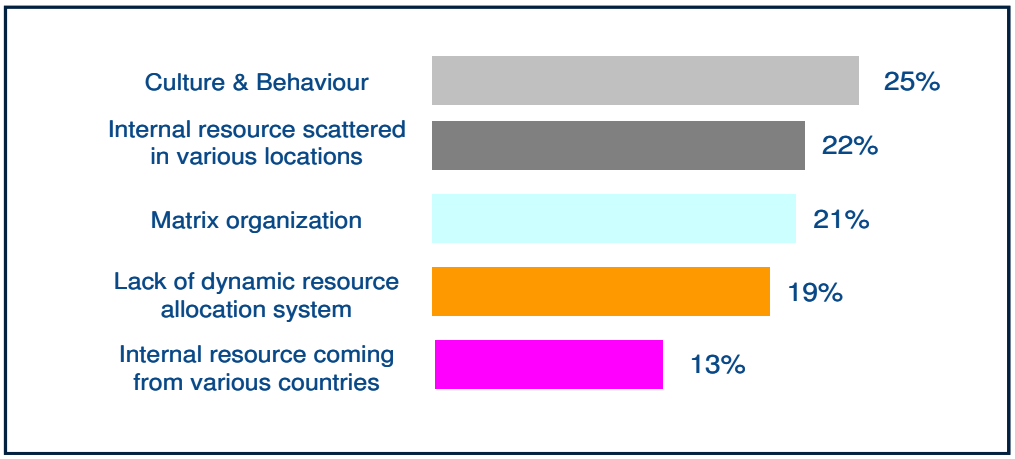
In short, the previous sections provide tangible arguments and references to support the idea that definitely, IORs management control should deal with the control of actors' behaviour (social and cultural), actions (which is measurable), and processes or ways of doing things, especially with regards to capabilities and knowledge creation management. This comes down to what we named the Inter-Organisational Relationships Management Control Challenge.

[78] Co-operating issues: providing that a well-established congruence of goals exists, co-operating firms need to rely on tools and mechanisms which help align interests in order to encourage knowledge creation and innovation processes in particular.
Co-ordination issues: as detailed in chapter 2, section 2 about key determinants of IORs settings, co-operating firms do not expect overlapping activities but complementary ones. Consequently, they develop tasks interdependencies and joint activities, which requires good standard co-ordination.
Appropriation of concerns: a fair redistribution of the wealth coming out from inter-organisational co-operating arrangements is necessary and exchanged resources should not be misused.

Thus defined, the IORs Management Control Challenge consists in building and managing core competences for creating value (e.g. knowledge creation). It requires particular attention to *Key Levers* specific to the configurations at stake (i.e. market, hierarchy and trust/clan). Those *Key Levers* deal with the following areas: motivation of actors in establishing an industrial co-operation; mutual understanding and knowledge management; stakeholders' attitudes and behaviour; networking and relationship management types established within co-operating firms; management of contracts; product positioning and portfolio management; level of consensus within and outside organisations; control level of projects launched with key assumptions (e.g. if key factors are not properly assessed, regardless of the tools deployed, failure is almost guaranteed); co-ordination of tasks and lack of vision testified by leaders.

SECTION 2 - ACADEMIC CONTRIBUTIONS ABOUT IORS STRATEGIC MANAGEMENT CONTROL DEVICES AND TOOLS

The previous review of the purposes, scope of activities and characteristics of IORs management control has provided the necessary keys to consider existing or possible control devices and tools in greater depth, and with sufficient legitimacy. This is all the more relevant as only little has been said about tools and devices that successfully help give life to ideal IORs management control types within firms. Moreover, this proves all the more relevant as this is a genuine concern within civil aerospace, as is demonstrated in particular by a large and comprehensive survey conducted between March and April 2010. This survey was conducted by a leading Aerospace consultancy firm, involving more than 100 top industry executives and representing a broad range of business segments and positions in the industry value chain. Particular focus was given to programme management methods and tools commonly accepted as being well understood, but currently facing real problems when it comes to implementation. Reported problems relate to complex organisations or complex interfaces with customers and suppliers particularly *in New Collaborative Models* (NCM) and *Risks Sharing Partnership* (RSP); limited investments made to develop long-term programme management know-how and competencies; limited cross-fertilisation of best practices between programme teams. Quite interestingly, the message that stands out from this survey is that this industry is suffering from limited structuring, too few methods or tools implemented, the lack of anticipation, of planning and of steering due to organisational complexities specific to civil aerospace with generic impact drivers as illustrated below:



(Source: Top Management Issues Radar 2010 survey, p. 21, *Roland Berger)*

Chart 3 - Generic Impact drivers in civil aerospace

Obviously, this situation is a real paradox for IORs management control in civil aerospace, within which most people agree that it is strategic to guarantee the conditions for establishing and securing successful and equitable exchanges between actors who are properly motivated within an open social system of activities. Of greater concern, this situation reinforces the view that the issue of performance induced by tools and mechanisms in place is still unresolved.

Consequently, and despite quite a consistent control of fundamentals like *planning*, *monitoring, motivating* and *correcting* invoked by practitioners, when it comes down to management control tools and mechanisms it is certainly paramount to acknowledge that there can be "*several forms of control mechanisms*" as underlined by Dekker (2004, p. 46). Those possible different forms of control mechanisms were actually put forward slightly differently more than 25 years ago by Daft and Macintosh (1984). The authors proposed that there were three types of control: *organisational control*, *accounting control and business policy control*. This is quite important as, obviously, depending on the fields being considered, the control tools and devices will necessarily be different. In particular, in the field of accounting research, Anthony *et al.*, (1984) underlined that control issues depend on the hierarchical levels at stake. According to the authors, Top Management is more inclined to advocate for institutional control through *strategic planning* which consists in processing goals of the decisions made, and the strategy selection that derive from the latter. Middle Management will focus more on *managerial control*, which consists in ensuring that the firms and their stakeholders carry out the strategy cascaded down by Top Management. And finally, lower-level management and operational supervisors are requested to focus on *operational control* which consists in ensuring that specific tasks are carried out effectively.

While it is generally accepted that those management control tools and mechanisms have to be structured around three phases -selection, contracting and execution[79]- it is also worth stressing that some authors propose categorisations, which justifies a strong consideration of both formal and informal control mechanisms and tools. This key assumption is actually

[79] The selection phase that takes place before the design of the control mechanisms is crucial, not only to guarantee access to critical and complementary resources, but also to limit future co-operation and appropriation problems. Contracts are a means to specify the product, the level of service expected, and the responsibilities and conflict resolution modalities. The execution phase corresponds to the period during which the exchanges take place (van der Meer-Kooistra et Vosselman, 2000).

remarkably expressed in the classification of control forms established by Smith *et al.* (1995). They emphasised a useful distinction between formal and informal control mechanisms, even if this dealt more directly with intra-organisational control than with inter-organisational control. Interestingly, in the framework of power and conflict theories, Emerson (1962) or Pfeffer and Salancik (1978) proposed that power differences between parties in a relationship increase over time and imply that formal rather than informal forms of co-operation may be required.

On the contrary, another position regarding buyer-seller relationship management suggests that highly dependent buyers should not try to impose strict contracts or to influence their suppliers with coercive manners, and the effective control that the buyer exerts on its supplier is viewed as a pre-requisite for success. This conception is somewhat related to what Asanuma (1985) or Gerlach (1992) had already developed in their comprehensive review of the automotive sector in Japan. These authors more or less highlighted key characteristics in terms of cost management and underlined that more than formal contracts, trust and personal links were key levers to better plan and optimise the management of costs and control. More broadly, this is also in line with Lord (1996)'s insistence on the importance of the IORs relational context within which tools and accounting techniques were mobilised. In fact, such a close relationship between formal and informal control can lead to considering the *Embededdedness theory* (Granovetter, 1985; Uzzi, 1997) as a possible complement for TCE[80], which in recent years has received many critiques, namely that it failed to prove satisfactory for understanding IORs governance (Larson, 1992).

In any case, within civil aerospace this position may be all the more relevant as relationships and network management are commonly viewed as key characteristics of the business, as reflected by the following verbatim:

> *"The interpersonal relationship is fundamental and this is a characteristic of our business, which in general is a business where everybody knows each other. People move around but you always meet the same people." (Mr H., MD major UK civil aerospace OEM)*

> *"In my experience, over the last years but also recently, I can see both situations occurring in the sense that, it is true, going back ten years, the relationships between OEM and the partner or supplier were more protective from the point of view of the OEM and in the interest of the supplier or partner. It was like a father with a child. The child had to be protected, supported, dressed and also the father (OEM) was more capable in terms of technology in all areas, to properly address or give the technological support and also the specific competence to his suppliers. It was also more flexible, and easier to accept compromises and offer help where it*

[80] Speklé (2001) provided an analysis of how TCE can be used to inform the study of Strategic management control

> *was difficult for the small partner to behave properly. The situation was easier to manage because the business was easier. Competitiveness was less extreme compared to today. Now the business has become so difficult for everybody involved, that the attention to profit is the priority for OEM and suppliers-partners. To the extent that without a doubt, the OEM decided to optimise the structure to manage the collaboration, whatever the type of collaboration is, and this is detrimental for the support that small parties can receive from the OEMs and for the awareness they have of their problems. Obviously the competition that sometimes takes place between partners is such that it optimises the result of one single company. This is a situation that is driven by the real digressiveness we always must have in this kind of business. And we reached the point in some cases where from one side you talk about long term relationship but in the other cases we also look at opportunistic situation." (Mr R., COO of a major Italian civil aerospace OEM)*

> *"… the supply chain (in the broad sense, not only procuring material but also from the engineering point of view) has become one of the key elements for the success of a program in a competitive environment and due to a situation where at least periodically there is an overload of all the entities: engine manufacturers but also castings suppliers. The supply chain became a key element for the success of the programme… In order to have an effective supply chain (design & engineering) you inevitably must consider more stable relationships, more structured ties in situations with certain partners. This is workable if you construct a team that is engaged for a certain period of time, for a certain number of programmes and the derivative of the programmes. It should be a real team aimed at making the best for the program from all the viewpoints. Sometimes the team can lose but sometimes it will gain. This is clearly the real change I see in today's business practices: you have the need to establish a stable and structured team to gain all the best from a flexible supply chain capable of overcoming all difficulties by taking the best from all the member of the team" (Mr S, VP Program of a major American civil aerospace OEM).*

Based on these positions, the combination of the TCE theory along with the *Embededness* theory seems relevant to deal with the broad scope of complex and multiple management control issues that characterise IORs. In this respect, we should acknowledge that Chabaud (2002) has already suggested that Williamson and Granovetter were two authors who could be considered quite complementary. Alternatively, assuming that firms establish IORs to achieve mutually beneficial outcomes through co-operatively performing and value-creating activities (Bory and Jemison, 1989; Dyer and Singh, 1998; Zajac and Olsen, 1993), Dekker (2004) underlined that the adoption of a "*value-creation perspective"* is different from the "*value-appropriation perspective"* supported by *Transaction Costs Economics* (TCE). The latter would thus prove to be a subset only of organisational issues necessary to consider when dealing with IORs. In other words, as we will develop at a later stage, this would suggest that Williamson (1985) and *Transaction Costs Economics* could realistically be supplemented when dealing with IORs management control, that cannot be limited to formal control[81] and what it entails.

[81] Ouchi (1979) had advocated two possible types of control:

- Formal Control which consists of contractual obligations and formal organisational mechanisms for co-operation. It can be subdivided into outcome and behaviour control mechanisms.
- Informal Control (or social control) which relates to informal cultures and systems influencing members and is essentially based on mechanisms including self-regulation.

Another interesting perspective was developed by Barnard (1938)[82] who offered the *concept of structure* and the *concept of dynamics*. In his appreciation, the concept of structure pertains to individuals, co-operation systems or formal organisations with the notion of effectiveness and efficiency. It is about the anatomy of organisations. The concept of dynamics on the other hand relates to intentionality, communication, authority, decision-making processes and leadership, i.e. what the author assimilated to the physiology of organisations and which can hardly be monitored through formal control.

In our opinion, further exploration in this direction is certainly of great interest for the subject under study. But in order to do so, it is first necessary to offer a deeper analysis of what both formal and informal control tools and devices entail. This task however is not simple because, albeit not exhaustive, most of the academic positions listed above may be quite representative but only illustrate that most often, they remain nice principles advocating both formal and informal control; however they remain quite vague with regards to concrete tools to put in place on the ground. This is a view shared by Dekker (2004, p. 46) who underlines that "*few empirical descriptions are available of specific control mechanisms used in inter-organisational relationships*".

Consequently, it is proposed to review what is available at present in academic literature regarding specifically both formal and informal control devices and tools. This should help better understand what tools can be considered most appropriate for IORs management control. Yet it is important to bear in mind that the following principles apply: management control is critical within the overall equation which consists in partners achieving mutually beneficial outcomes through co-operatively performing value adding activities, and in-house task control consists in crafting organisation motivation to achieve targeted outcome. Hence, the purpose of IORs control may primarily relate to creating and managing the "*conditions that motivate the partners in an IORs to achieve desirable or predetermined outcomes*" Dekker (2004, p. 30); reducing transaction costs might not be the only goal of organising transactions into specific governance forms. As advocated in both *Social Network* and *Embeddeness* theories, management control should thus not be limited to transaction and cost reduction management only.

[82] Barnard summarised the functions of the executive as follows: establishing and maintaining a system of communication; securing essential services from other members; formulating organisational purposes and objectives.

This framed understanding of what IORs management control should be, combined with an acceptable appreciation of what formal and informal management control entail, should provide sufficient grounds for credibility for a study of IORs management control on the ground. This justifies the following sub-sections, which focuses on formal and informal control mechanisms.

1. THE INSTRUMENTALIST PERSPECTIVE: FORMAL - OUTCOME AND BEHAVIOURAL - CONTROL TOOLS AND MECHANISMS

According to Velez *et al*. (2008), formal control devices deal with policies and procedures which help ensure that the behaviours and decisions of individuals are aligned with the strategic objective assigned in the IORs at stake. In practical terms, this deals with incentives (objectives, rewards, sanctions) or control dealing with contracts, rules and procedures in place.

The definition of formal control proposed by Dekker (2004) is based on observable mechanisms, with the assignment of formalised quantified objectives, and associated achievement rewards to control results, and mainly rules and procedures for controlling behaviours. Such mechanisms mainly consist in data gathering, planning, budgeting and financial incentive systems or transmission systems that provide management with information on related activities. They are used for both motivational and co-ordination purposes, which is in line with the position expressed by Galbraith (1977) or Gulati and Singh (1998). Audits, certifications and contracts also belong within the scope of formal control (Guibert and Dupuy, 1997). Competitive bidding and direct interventions whenever possible are praised by van der Meer-Kooistra and Vosselman (2000). In addition, these authors consider those hierarchical control mechanisms to be effective mechanisms for managing increasing information processing requirements. Consequently, these formal control devices and tools must be able to rely on information systems which can be used in different ways throughout the relationships (Tomkins, 2001). In particular, this author proposes that when interdependences between partners are rather low, information systems are very useful to check whether parties' key attributes (integrity, skills, values) are appropriate against the contribution (gains or losses) of inter-organisational co-operating arrangements at stake. After a certain period of time, assuming that the IORs at stake have reached maturity, the information systems needs would become less systematic.

There are many examples of the corresponding tools and they are quite easy to identify when going through firms' internal procedure libraries or department dashboards. In this respect, even though they focused on intra-organisational management control, Kaplan and Norton (1992, 1996) have heavily influenced this understanding of formal control epitomised by their Balance Scorecards depicted as a genuine panacea. For their part, Transactions Costs

Economics (TCE) and bureaucracy-based control patterns are traditionally associated with formal control. Obviously, the goal of this thesis is not to offer yet another definition of what TCE entails. However, it is worth restating that for some authors, the main advantage that TCE offers is that it helps predict the form of governance structure (i.e. market, hybrid, hierarchy, or 'the degree of hierarchical governance') as a function of transaction characteristics (Chiles and McMackin, 1996). It is also true that by paying special attention to asset specificity in his analysis, Williamson (1985) helped clarify the choice between appropriate transactions governance structures. In highly dependent buyer-seller configurations, TCE thus assumes that the buying firm's prime goal for establishing control consists in limiting its transactional risk. Therefore, given its highly dependent position, the buying firm should implement specific mechanisms to protect its assets from opportunistic behaviours likely to be initiated by the dominant selling firm. Dependence is seen as a foreseeable condition of exchanges (Williamson, 1993), and the associated problems it generates can be resolved through contractual safeguards. On the other hand, integration can be seen as a highly powerful protection mechanism because it enables the dominated party to exert total hierarchical control (Monteverde and Teece, 1982; Walker and Weber, 1984). In this context, Speklé (2001) provided an analysis of how TCE can be used which is pertinent in the study of strategic management control. But it is also legitimate to underline once more that such perspectives are sometimes heavily criticised because they are insufficient to adequately explain the management and control of IORs for a number of reasons. Focusing on notions such as opportunism and transactions costs minimisation, TCE is reproached with not correctly taking into account the variety in IORs forms and goals. With such a static nature, TCE neglects possible organisational mechanisms used traditionally in IORs governance. Because of its lack of dynamism, it does not take into account the social mechanisms of governance, whereas IORs are often embedded in a rich and influential social context as developed by Granovetter (1985), Uzzi (1997) and Dekker (2004) for instance.

Interestingly, drawing considerably on Ouchi's contribution[83] (1977, 1979 and 1980), Ezzamel deals with the role of accounting within the co-ordination forms of hierarchy, market and clan. Assuming that hierarchical co-ordination relies on rules and formal power,

[83] As reviewed in previous sections, a fundamental contribution is developed by Ouchi (1977, 1979, 1980) through a general framework for control and three co-ordination forms: hierarchy, market and clan. The author classifies Control and co-ordination forms along the two dimensions: ability to measure output and knowledge of the transformation process.

according to the author, accounting should be used to monitor and influence people's behaviour (Birnberg, 1998; Ouchi, 1980) by relying on accounting methods[84] developed to support decision making and performance evaluation within organisations (Ezzamel, 1992). This is not surprising given that accounting has long been used to focus mainly on financial aspects. Yet, over the two last decades, it has also gradually been incorporating other non-financial aspects as developed by Ittner *et al.* (1999). This is in line with a theoretical view that accounting measurements are fairly detailed and enable different objects such as organisational units, products, projects and activities to be described and analysed according to past, present and future states. Consequently, this scope of accounting could legitimately be viewed as an appropriate position to support managers through the provision of information for decision-making and performance evaluation in situations where the hierarchy-market dichotomy exists (Bromwich, 1990).

Another perspective dealing with the role of accounting and developed by Håkansson and Lind (2004) suggests that market co-ordination is dependent on market prices, and prices are the primary source of information supporting decision makers in companies (Ouchi, 1980). In this regard, Ezzamel also underlines that accounting must have a real role within market co-ordination insofar as it should ensure the "*normative requirement of reciprocity in exchange relationships*". This consists in collecting and summarising market prices, overseeing the implementation of contracts, estimating market opportunities and threats, and developing decision-making models based on market prices.

In more general terms, with regards to Management Control Systems, Vélez *et al.* (2008) underline that "*in an open-ended and evolving relationship, even when trust is well established, MCS can build it*". Their rationale is that "*high trust provides a platform where success encourages the partners to cooperate further, demanding, in turn, more MCS and greater levels of trust to support co-operation. By providing evidence with a greater appearance of objectivity than informal controls can yield, action and result controls improve partners' perception of each other's trustworthiness, and build competence and goodwill-based trust"* (p. 968).

[84] Accounting methods refer to direct cost, e.g., the direct costs of labour and materials, standard costs, break-even charts, allocation methods, ROI measures, responsibility accounting, reward structures, transfer prices and budgets.

Consequently, co-operating increasingly requests greater confidence and consequently demands more MCS and greater levels of trust to support co-operation. Obviously, on paper, it is hard to argue against this statement backed by the very well-constructed longitudinal study carried out by the same authors. However, no evidence is provided with regards to the feasibility of an effective implementation of the MCS tools they promote. In particular, an obvious problem might arise from the fact that parties involved in IORs might not be in a position to solve persistent information asymmetry problems. Also, assuming that the fundamental key obstacle regarding information asymmetry is resolved, in the long term a key question mark inevitably persists regarding the ability to handle, digest and fully benefit from "ideal" MCS as illustrated in the following figure:

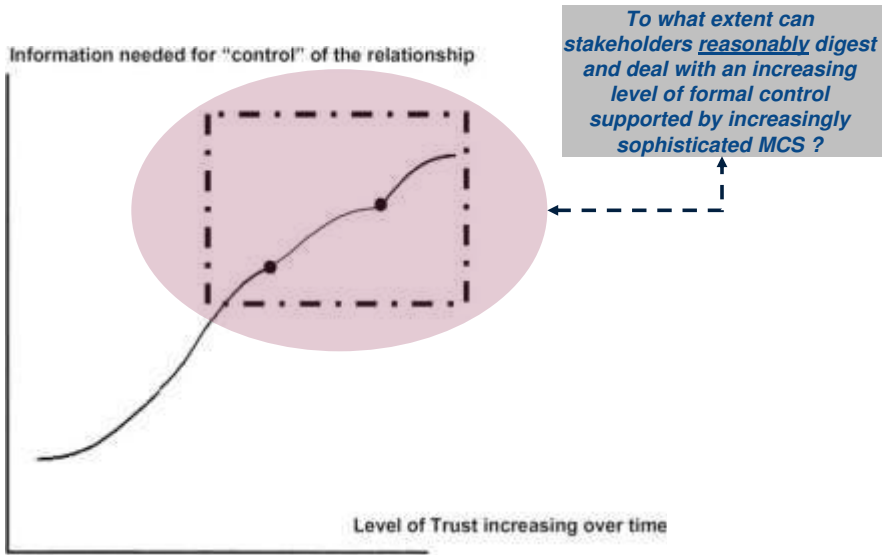


Figure 26 - Thresholds in digesting information needed for increasing trust over time

(adapted from Velez *et al.*, 2008, p. 991)

In fact, it makes sense to consider that formal control tools can be quite positively appreciated for building trust, managing increasing co-ordination requirements or even processing increasing information requirements for financial analysts. But on the other hand, would it not be realistic to recognise that all the MCS proposed also have limitations? Aggressively defended by consultants of all sorts, and presented as real panaceas, highly promoted scorecards, dashboards, and other reviews of best practices said to be necessary for defining and measuring key performance indicators (KPIs) or creating interfaces, require users to keep up with trends which also brings along with it steadily increasing amount of variables. Assuming that the growth of complexity is reflected in the goals pursued by businesses, this

gives rise to a growing problem reported by Morieux (2011, p. 81) "*today's companies, on average, set themselves six times as many performance requirements as they did in 1955, the year the Fortune 500 list was created.*" Interestingly, the author also refers to "*an index of complicatedness*" created by a major consultancy firm[85] and suggesting that "*the amount of procedures, vertical layers, interface structures, coordination bodies, and decision approvals needed in each of those firms has increased by anywhere from 50% to 350%*". In fact, even though these studies were not specifically related to formal control in IORs, there is no doubt that the complexity of the topic addressed herewith should be taken into consideration with "*managers spending 40% of their time writing reports and 30% to 60% of it in co-ordination meetings*"(Morieux, 2011, p. 80).

Vast managerial literature has already been produced on this subject, and this dilemma can be illustrated with the following note dated 2011 and sent to my attention by one of the world's most complete, open, and integrated business software providers:

> ***"Measure What Matters—and Take Action to Meet Business Goals***
>
> *Dear Stephane Nogatchewsky,*
>
> *With so many variables to consider, decision-makers scramble to keep up with day-to-day business fluctuations. Instead of just unleashing more and more data on them, your business intelligence (BI) solution should be focused on relevant trends and your most important business goals.*
>
> *Join us for "From Strategy to Execution: Scorecards and BI, an exclusive Company Or Webcast". We'll cover the basics of must-have tools in your BI portfolio, such as scorecards and dashboards, and review best practices for getting started. Then we'll dive into practical how-toes: defining and measuring key performance indicators (KPIs) and creating a BI interface that lets users keep up with current trends—and adjust business processes as they go.*
>
> *Join Company Or to learn how to:*
>
> - *Define strategy and monitor execution with a single business intelligence platform*
> - *Implement an integrated scorecard for tracking performance via real-time KPIs*
> - *Translate insight into action using Company Or's innovative action framework"*

Certainly, it is commonly claimed that "*without measuring, you can't control"* and a key attribute that formal MCS are expected to entail is this ability to provide managers with means for formulating choices and judgements that will be based on a respectful representation and description of the external phenomena at stake. As underlined by Berry

[85] This index is based on surveys of more than 100 U.S. and European listed company with results over 15 years.

(1983, p. 6) management control tools are thus expected to provide "*a response to the complexity of organizations in structuring the reality despite a level of complexity that goes beyond human analytical abilities*". For Norman (1991, p. 17) they are cognitive artefacts or "*artificial devices that maintain, display, or operate upon information in order to serve a representational function and that affect human cognitive performance"*. At least they contribute to the comforting feeling or perception that they can aid or enhance managers' cognitive abilities.

However, despite a high level of technicality related to the software and IT programs that have been developed and which can be extremely sophisticated, they do present serious limitations as most formal management tools principles and output are also characterised by an extremely high degree of simplicity.

More holistically, at least in the framework of intra-organisational management formal control, we should probably also refer to mechanisms close to those found in the hierarchy (Heide and John, 1988). Van der Meer-Kooistra and Vosselman (2000) have named these mechanisms the bureaucracy-based control pattern, which includes formal contracts (Joskow, 1988), partner verification (Heide and John, 1990), monitoring (Stump and Heide, 1996) or quasi integration (Subramani and Venkatraman, 2003).

In the context of buyer-seller relationships, this bureaucracy-based control pattern can be recommended at two key stages: the selection phase and the execution phase. In highly dependent configurations, the selection phase is characterised by a limited number of capable sources. The bureaucracy-based control pattern recommends performing a first selection based on very detailed and specific criteria including a control of suppliers' competencies. Consequently, it is recommended to submit personalised and comprehensive contracts to the short-listed suppliers in order "*to specify the best rules of engagement for the exchange*" (van der Meer-Kooistra and Vosselman, 2000). According to Jap and Ganesan (2000) an explicit contract would work as a protection mechanism because it would then set the basis for the rights and obligations of both parties. It would thus leave the parties with no choice but to acknowledge and consider the legal and economic consequences of breaching the contract. Thus, relying on these types of deterrents, buying firms would reduce the level of uncertainty with regards to dominant suppliers' behaviour and relationships outcomes. A notion that is key here deals with the idea of "*hostage arrangements and arbitration*" (Langfield-Smith and

Smith, 2003), which can be used in order to guarantee compliance to the contract and thus offer contractual dispute resolutions.

Yet, even assuming that these contractual arrangements are agreed upon by both parties, how can one make them work, day after day? This obviously remains the point of the story. Part of the answer can be searched by referring to the execution phase where the highly dependent buyer is "*unable to safeguard its vulnerable relationship-specific investments ex ante and seeks to craft mechanisms ex post through monitoring its suppliers*" (Donada and Nogatchewsky G., 2006: p. 13). These authors underline that under such circumstances, highly dependent buyers attempt to control their suppliers through performance comparisons against contract specifications and they should be able to rely on goal-setting devices and performance monitoring, along with structural specifications and behaviour monitoring as described by Dekker (2004). This type of device would thus make it possible to implement a system of rewards and sanctions which could influence suppliers and convince them to act as expected by the buyers. Based on Williamson (1993), this would spark off a kind of involvement by reaction as long as this kind of control does not have an impact on economic performance.

On the whole, these elements are quite appealing in theory, thanks to their robust articulation. But in reality, during almost 13 years of direct involvement in day-to-day business and operations management, I have never seen this work successfully, despite the huge amount of energy and money spent by major firms. Besides, I doubt this perception is isolated, as was confirmed by exchanges I had the opportunity to have during various "*think tank meetings*", like the one I attended in October 2010 upon an invitation from Oracle. This particular workshop was quite interesting for me as it was supposed to deal with management control and information systems in the framework of complex industrial project management. Representatives from major CAC 40 firms attended the meeting, and I was very eager to find a source of information for my thesis. Not surprisingly, the hosting party rapidly put the emphasis on the technological solutions they could provide and promoted their latest IT developments relevant to control complex industrial projects. However, after a rather long courtesy round of observation, invited stakeholders agreed that these demonstrations looked good on paper and on a case by case basis, but were not a true reflection of the situation. There was a general consensus that above all, it was necessary to reconcile instruments,

people and inter-firm interfaces when dealing with management control in complex industrial projects. Yet, none of us were able to recommend anything specific that was not too vague.

Most agree that IT technology providers and consultants were able to provide firms with tools which for example, helped them electronically formalise their contracts, performances comparisons; year on year cost reductions indices or dashboards of all sorts. A majority also agreed that very often, actors adapt the tools available in order to serve their own interests without necessarily reflecting factual and real aspects. Even more subtle, some individuals admitted that it was common and usual to see individuals adapt their behaviour in order to satisfy only the criteria against which they would be measured, even though this might not be positive for the group. In some cases, some argued that such practices contributed to the mechanisation of individuals' choices.

A common view also emerged that both formal control deployment and effective use of it require something fundamental: the possibility of direct intervention from one party on the other. As testified by previous sections, when dealing with IORs this can be legitimised through well-developed information and surveillance systems along with a genuine intent to collaborate. In this regard, the process established by Merchant (1982, p. 53) can be helpful in understanding that good intentions promoted by information system specialists or even most competent consultants may often require a more pragmatic appreciation before being launched.

The following process illustration suggests that systematising types of control is far from being a good way to succeed, as all types of controls are not necessarily feasible in all situations.

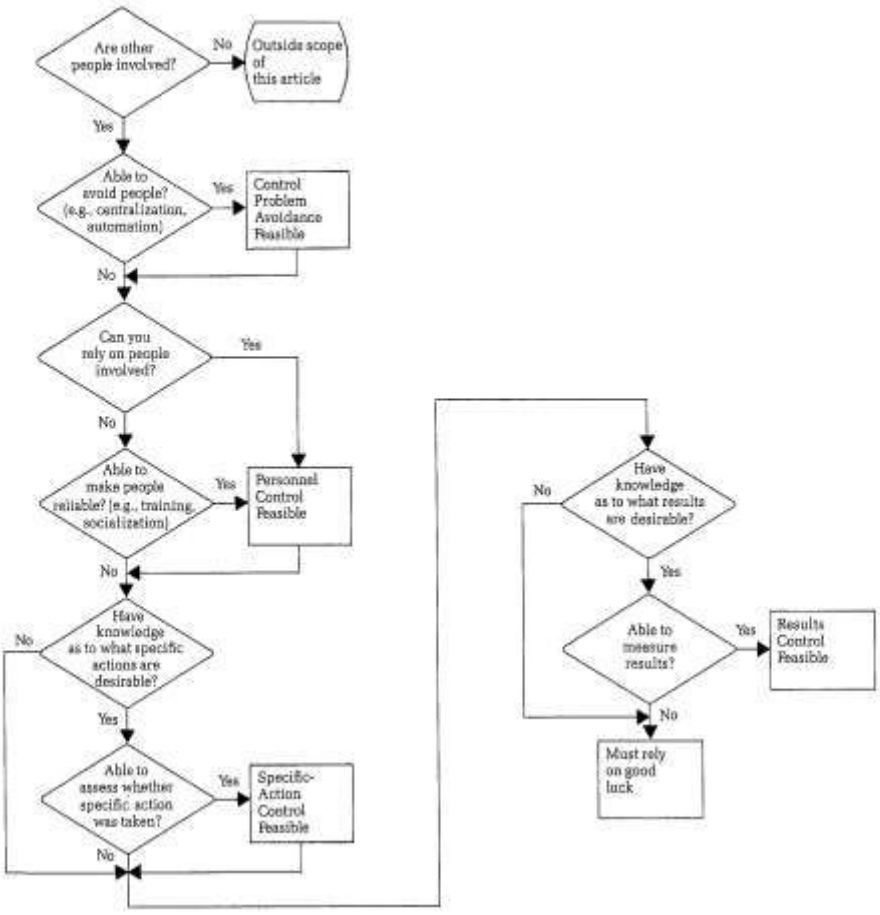


Figure 27 - Questions to Determine Feasibility of Control Types

(Merchant, 1982, p. 47)

According to the author, it seems that basic questions are not always raised and sometimes avoided, whereas it should be taken into account that "*management control is a behavioural problem and that the various control tools are only effective to the extent that they influence behaviour in desirable directions*" (Merchant, 1982, p. 54). This is why it is probably interesting to refer to Granovetter (1985, p. 483) who asserts that classical and neoclassical economics, through their theories and arguments, "*disallow by hypothesis any impact of social structures and social relations on production, distribution or consumption*".

Consequently, as an alternative which depends on a level of trust existing between the parties and possibly guaranteed by an appropriate initial selection and a process for reinforcing trust (Ouchi, 1979), it is now proposed to focus on *Informal Control* in the following section. It is generally recognised that informal control mechanisms are not necessarily as straightforward

to establish as formal control ones. This is in fact probably a key reason why, so far, people have been struggling so much to successfully implement informal control devices and tools.

2. THE INFORMAL CONTROL PERSPECTIVE

The previous sub-section suggests that TCE can be relevant as organisations form cooperating arrangements to minimise the economic impact of bounded rationality, uncertainty, information limits and risks of opportunism. From an internal management control viewpoint, and apart from practical constraints, it is realistic to consider auditing internal transactions, mediating internal disputes or punishing subversion of group goals and reducing the lack of information transparency. This type of formal control means and others can thus contribute to the concrete implementation of prevailing TCE principles driven by economic models.

However, the conditions are likely to be radically different in the context of inter-organisational relationships given an intrinsic complexity extensively developed in chapter 3, section 1, which suggests that in the framework of IORs "*many tasks are too complex and subtle to be done by the book and …* (particularly) *… require Tacit Knowledge appropriable only through interaction with knowledgeable others*" (Granovetter, 2005, p. 41). This straightforward message underlines that although they can provide meaning when the interaction of the economy with non-economic aspects of social life remains in a black box, in real life economic models certainly "*abstract from many social phenomena that strongly affect costs and available techniques for economic actions*". With, most often, the absence of any hierarchical ties, possible competition between stakeholders or the speed of changes facing actors which may justify a continuous reconfiguration of transactions and relational dimensions, the singularity of IORs should not be discarded. Dimensions of informal cultures and systems influencing members, based on mechanisms which prompt self-regulation should be considered with due interest.

In this respect, Mayo (1945) and the Hawthorne Experiments provide a valuable insight into the limit of formal approaches to manage individuals. In particular, the author insists that the root causes for problems at work are to be found in social disintegration, which itself is fed by stakeholders' adversarial relationships stemming from misunderstanding and distrust. Even though the Human Relation Management movement declined in the 1950s and has had limited impact on managerial practices so far, it is important to bear in mind the considerations expressed by Mayo (1945, p. 72), that under certain circumstances "*six individuals became a team and the team gave itself wholeheartedly and spontaneously to co-operation in the experiment. As a consequence, they felt they were participating freely and*

without giving it a second thought, and were happy in the knowledge that they were working without coercion from above or limitation from below". In the framework of IORs management particularly, this may actually suggest that new stakes could be imposed onto management control through co-operating forms. In concrete terms, the latter ought to enable reciprocal understanding and trust relying on knowledge based workers (Otley, 1994), especially knowledge shared and developed, whereas market conditions and others drivers hardly promote vertical integration options as is the case in civil aerospace (chapter 2, section 1). Consequently, and assuming that vertical integration occurs when firms lack a network of personal relationships, it would thus make sense to consider the embeddedness perspective and subsequently the importance of informal control.

This proposal also relies on the idea that the embeddedness perspective stipulates that "*economic action is embedded in structures of social relationships*' (Granovetter, 1985), that personal relationships and networks of relationships between and within firms are most likely to provide order in the market, to generate trust and to discourage malfeasance. Namely, "*cohesive groups*" as defined by Granovetter (1985), i.e. good at creating knowledge in a tacit form, would contribute to extending IORs into the social realm. This would thus help disseminate tacit knowledge through the network quite easily which in turn would benefit the innovation effort (Mattyssen and van den Bulte, 1994; Uzzi, 1997). This view is generally accepted by current industrial environments, because on one hand the complexity of tasks to be performed requires increasingly strong and effective co-operation from others. On the other hand, as suggested by Schumpeter much earlier, an industrial co-operation can be successful if it fosters the generation of "non-duplicable" innovation, like tacit knowledge, which is realistically possible providing that the social context at stake is favourable for the parties involved.

Importantly, through a relational approach to embeddedness, Grannovetter (2005) not only describes the vital need for successful interactions but also insists on "*core principles suited for social networks and economic outcomes*". The author heavily insists on the idea of a "*web of social relations*" that contributes to a social constructionism necessary to allow individuals not to follow scripts slavishly. The notions of *norms and network density*, the *strength of ties*, the *importance of "structural holes"* and the *interpenetration of economic and non-economic actions* are central for the author and must certainly be linked with the scope of informal control.

Uzzi (1997) developed a structural approach to embeddedness based on *organisational* theory combined with *Network* theory to explain that ties among firms shape economic actions by creating unique opportunities and access to them. In this logic the behaviour of people is affected and influenced by the quality and the structure of the network which itself depends on the quality of a socialising process viewed as an informal control device.

However, one single theoretical perspective is also unlikely to provide a thorough understanding of the complexities of IORs (Chiles and McMackin, 1996; Dekker, 2004; Smith *et al*., 1995). For this reason, it might also be interesting to further explore *relational norms* and *trust*, after assuming that the above considerations can actively help justify why a number of researchers advocate that different theoretical perspectives from TCE should be applied to the study of IORs.

Relational norms relate to values and expectations shared by the partners with regards to appropriate relational behaviour (Macneil, 1980). Particularly, Heide and John (1992, p. 34) underline "*the importance of the expectations of mutuality of interest upon which relational norms are based and designed to enhance the wellbeing of the relationship as a whole"*. Built over time, relational norms are multidimensional and relate to domains such as flexibility, reciprocity, expectation of continuity, information sharing, solidarity, assistance or conflict management, as proposed by Donada and Nogatchewsky G. (2006) and which makes obvious sense in the framework of civil aerospace activities, whose characteristics have been comprehensively detailed in chapter 2.

Trust can be defined as a set of expectations regarding the likelihood of having a desirable action performed by the trusted partner (Aulakh *et al.*, 1996). Interestingly, Sako (1992) proposes three dimensions related to trust and that are commonly taken into account in inter-firm management studies:

(1) *competence trust* associated to the expectation that a partner is able to perform at a set level;
(2) *goodwill trust* associated to the belief that the other party will be compliant to the interests of the relationship despite opportunities and interest in not doing so;
(3) *contractual trust* based on the assumption that written or verbal agreements will be respected.

In this logic aiming at distinguishing formal control perspectives and informal ones, it is certainly worth underlining that in the selection phase, informal control is suited when the selection of stakeholders is based on competence and goodwill trust, by relying on pedigrees as well as personal and organisational reputation (Langfield-Smith and Smith, 2003). Contrary to TCE, co-operating parties accept not to be locked in by any formal and heavy written contracts. Basically, if a contract exists, it should only be detailed at a later stage. Contractual arrangements are seen as on-going constructions, which result from co-operation and relational norms guidelines. This position is supported in existing academic literature on trust and relational norms, with the idea that when established between asymmetrically dependent partners, contracts both help to limit the risk of opportunism (Joshi and Arnold, 1997) and to discourage the less dependent partner from threatening the weaker one or switching production to other partners (Morgan and Hunt, 1994). Also, they enable one party to obtain precise and detailed information on the other party (Ford, 1998; van der Meer-Kooistra and Vosselman, 2000) and eventually they help create value in the exchange relationships (Dyer and Chu, 2003). Importantly, under this conceptual framework, long-term exchanges and co-operation are viewed as prime objectives for firms which aim at achieving mutual gains, rather than being purely and individually opportunistic i.e. purely short-term oriented.

Consequently, informal control through trust and relational norms would foster co-operation in the long term (Anderson and Narus, 1990; Anderson and Weitz, 1989) and improve the economic performance of the dependent party (Siguaw *et al*., 1998). This is more or less what Håkansson and Lind (2004, p. 55) describe in alliances using *clan-based control* in which companies have "*open discussions with each other, communicate their problems and share their knowledge and information*". According to Dekker (2004), in such circumstances, relational norms and trust appear as informal control mechanisms that can be found in social-based control as described by Larson (1992). For instance, this social-based control would thus enable a dominated buyer to reach its goal of initiating and strengthening co-operation over time, which must be secured in conditions that dominant suppliers could also find acceptable. This point is critical in the articulation of this thesis, as it intends to explore precisely this: the management control devices and tools necessary to enable a dependent party to manage IORs with a counter-part successfully. In other words, trust and relational norms are thus depicted as potentially capable of mitigating risks related to dependence. They

make it easier for one party to set its expectations, mutual obligations and can enhance early co-operation (Larson, 1992). They are the obvious choice as a critical management control device.

When referring to considerations regarding relational norms, it is interesting to refer to Ring and van de Ven (1992) or Kale *et al*. (2000) who suggest that the personalities of individuals who meet and have interpersonal interactions are also central in the inter-organisational co-operating arrangement process. A direct consequence is that while requiring some time to build up and develop, friendship, esteem and respect play a central role, which once more underlines the fundamental dimension of inter-personal skills in the context of IORs management. In particular, viewed as a critical dimension of the co-operative process in the long run, establishing appropriate interpersonal relationships would influence dominant suppliers to react positively (Frazier and Rody, 1991) and impose itself as a powerful informal control device. Moreover, Donada and Nogatchewsky G. (2006, p. 17) recall that particularly in the execution phase of co-operating arrangements and in addition to "*explicit rules - communication procedures, rules of information sharing (...), implicit rules - honesty, transparency, equity, and reciprocity"* are critical. The authors contend that those rules ought to be considered critical because in a climate of trust, relational norms make it possible to control and co-ordinate in a way that enhances exchanges, although outcomes or behaviours are not necessarily measurable.

Based on the same logic as positions held by Faulkner (1995) or Langfield-Smith and Smith (2003, p. 286) who insist that a "*critical concern in all inter-firm relationships is the attitudes and personal relationships between the two parties"*, the above arguments suggest that informal control focuses primarily on addressing the following "impactors":

Social, Relational Capital is key in the performance of IORs and enables the establishment of collaborative relationships (Kate *et al*., 2000)	YES
Reciprocal commitment enables accumulation of Relational Capital	YES
Close personal interaction at multiple levels, mutual respect, and trust are closely related to improved product design, process design, and product quality	YES
Formal impersonal linkages with IORs improve performance	NOT SURE
Managerial communication improves relationship performance outcomes. Within IORs, more personal communication between top management actors and frequent face-to-face interaction are critical	YES
Technical communication improves relationship outcomes	YES
Information processing, particularly by "Front Line Agents" (employees at lower levels of the organisation), helps address equivocality and ambiguous technical information among stakeholders	YES

Table 11 - An information processing perspective about Social Capital Effects on Relational Performance Improvement

For all the reasons and characteristics developed above, we therefore propose that even though rationality is not necessarily measurable economically speaking and certainly less tangible, informal control devices do not prove less rational than formal ones. Yet, this is also precisely what can make control through informal devices powerful and so fragile at the same time. Its power is such because it makes it possible for a given relationship to exist and progress without a systematic and concrete formalisation of its aspects. For instance, in the case of supplier selections, informal control devices make qualitative criteria available that are not necessarily measurable, but do prove necessary for the benefit of inter-organisational co-operating arrangements. On the other hand, informal control devices can also be quite fragile, because they mainly rely on the quality of inter-personal relationships. Consequently, informal control proves non-transferable and cannot easily provide any evidence of global performance. This element should not be underestimated, because someone suspicious regarding this type of informal control could thus quite easily deny its rationale and find ways to have it dismantled.

For instance, within civil aerospace, reputation can be considered a powerful informal control device. This device is outside the relation itself but is all the more credible and powerful as civil aerospace is a very specific environment within which most firms evolve in quite a restricted network and there are not many alternatives. Whatever the reasons, a negative reputation within this network can prove very detrimental. In the mid 80's, this is precisely what was experienced in the aircraft engine providers business with a total market reshaping as illustrated below:

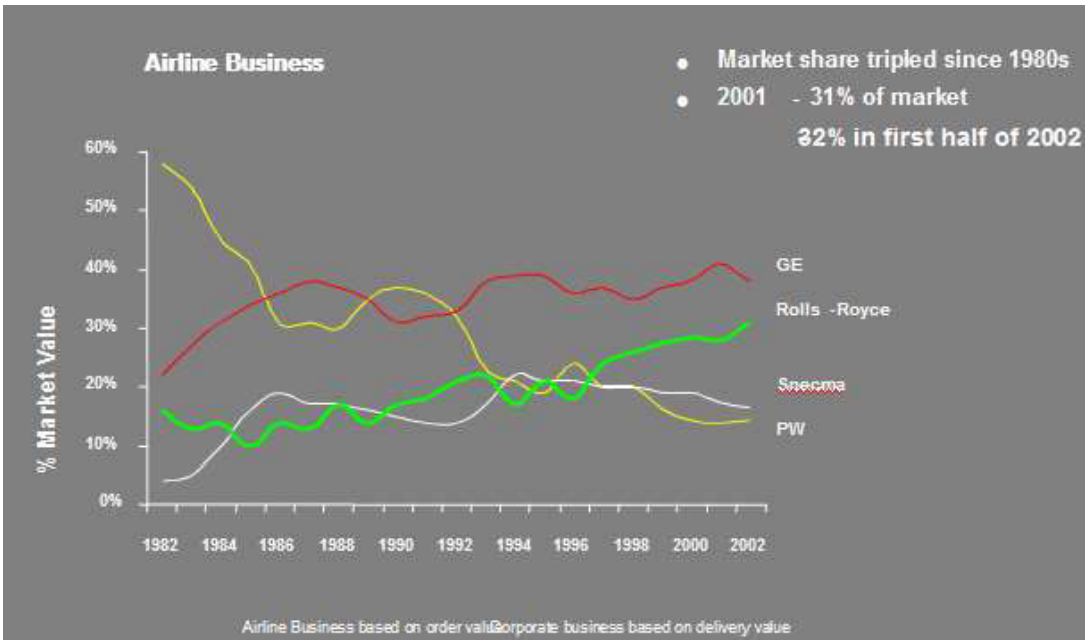


Chart 4 - Market value evolution of civil aerospace engines makers

On the contrary, a positive reputation can have a strong impact and it is reinforced all the more when it is takes the form of a business award. These principles developed by van der Meer-Kooistra and Vosselman (2009) are not only valid at the organisational level. At the level of individuals representing the organisation they are working for, reputation has to be carefully handled to be respected in their professional environment or to be appreciated in a private environment.

Finally, as informal control devices are heterogeneous by nature, it is probably also possible to associate them with values, habits and what is related to past experiences, stakeholders' shared experiences which can force individuals to get to know each other and to develop ways of successfully working together. As developed by van der Meer-Kooistra and Vosselman

(2000), assessing the quality of past experiences would enhance the ability to anticipate stakeholders' competences, involvement and motivations from the very beginning of the selection phase. In addition, through repetitive exchanges, individuals involved in inter-organisational activities would learn how to manage conflicts or share both representations and respective interests. Interestingly, this would be all the more intensified as transactions are complex, strategic and require both joint action and frequent communication between parties. In other words, informal control devices can be associated with relational governance (Poppo and Zenger, 2002) and come down to social control Larson (1992). Specifically, in the framework of internal management control, Langevin and Naro (2003) provide an interesting insight into the meaning of social control. In their view, it is built around key complementary processes: (1) processes of selection and training applied to members of organisations; (2) processes dealing with management styles to enhance communication amongst organisations members along with their involvement; (3) factors determining cultural variables of organisations like myths, symbols and rituals that can be appropriated by individuals; (4) mechanisms for "socialising outside" such as *ex ante* assessments and training from communities of professionals.

With the above extrapolated to IORs, social control devices could thus prove legitimate and offer a practical solution to help set a direction and establish a relationship based on trust and compliance with appropriate relational norms in order to reduce transaction risks and uncertainty, but also to better involve and co-ordinate inter-organisational stakeholders that are necessarily determined by information attributes. This is precisely why the contribution from Tomkins (2001) is particularly valuable.

The author explores trust and information in personal relationships in order to better understand the information needs of IORs which can help design associated information and accounting systems. Assuming that inter-organisational co-operating arrangements have to deal with complex issues regarding cost management, budgeting, cost of capital, which all raise potential cross-organisational problems, Tomkins (2001) points out a genuine need for cross-organisational design of management accounting systems (not for new techniques) along with greater emphasis on negotiations to set the basis for the development of long-standing and deep alliances. This implies appropriate information sharing, defining a collaborative future and reviewing the risk and return position of each party affected by different actions (Tomkins, 2001, p. 163). As a result, accounting input is considered critical

as it should be a reflexive product of stakeholders' negotiations and contribute to the fulfilment of increasing needs for simulation of investment decisions, for instance.

However, this should not hide complex issues that need to be addressed. From an instrumental approach, there are practical problems with intensified negotiations and interactions between actors. From a social context approach, it requires close relationships at a personal level which is heavily dependent on the establishment of trust - defined as an "*ubiquitous and a fundamental building block of social life*" (Tomkins, 2001, p. 164-165) - because it makes it possible to act as if the uncertainty potential is reduced, and thus helps in adopting a belief without being fully informed. Consequently, Tomkins (2001, p. 165) underlines that "*the notion of trust and the designs of information requirements are inextricably linked*" because the "*notion of trust is an alternative uncertainty absorption mechanism leading to increased information*". In the framework of IORs, and while associated costs are barely taken into account, developing reliable forms of trust proves paramount. This may imply that control devices should be correctly designed so as to take into account aspects relating to trust, and thus avoid falling into a sort of trap which would consist in considering that information needs for inter-organisational co-operating arrangements can be systematised and that adopting a belief without full information is nonsense. In this regard, Tomkins (2001, p. 165) suggests that information should be gathered on only *"those matters that it has been decided not to take on trust*" while Wicks *et al.* (1999) propose an inverse relationship between trust and information needs. This consists in considering an optimal degree of trust in IORs. This degree should actually be matched with the levels economic interdependence of stakeholders assuming that the greater the economic interdependence, the more one should build a closer (i.e. trusting) relationship.

This comes as no surprise, when taking into account that "*the more interdependence, the heavier the cost of collapse and the higher the risks faced"* as noticed by Tomkins (2001, p. 167). However the same author also insists that the relationship between trust and information needs is not that simple. In particular, assuming an inverse relationship between trust and need of information may lead to ignoring the complex and dynamic process of building trust and the role that information has in it. Consequently, this complex relationship between trust and information forces us to distinguish two main types of information worth controlling: *Type 1 information*, which relates to stakeholder's competence, integrity and "*willingness to trust; that is what is needed to create trust and check on the state of the relationships*"

(Tomkins, 2001, p. 171); and *Type 2 information* which relates to the mastery of events to be experienced between stakeholders and consists in what is needed to make economic judgements on strategies, investments and on-going operations. Yet, it should not be assimilated with Williamson's Transactions Costs Economics, which would result in spiralling distrust (Goshal and Moran, 1996) due to protection mechanisms against opportunism which are erected at the wrong point in time when considering different stages of business relationship developments (Dwyer et *al*., 1987; Tomkins, 2001). This is in line with the view developed by Child and Faulkner (1998, p. 208) who insist that on the one hand *"control is a critical issue for the successful management and performance of cooperative ventures"* while one the other *"it can also become an extremely sensitive matter"*. Their reasoning is that excessive control exerted by one party without receiving the appropriate approval, can put IORs in jeopardy or prevent them from maximising complementarities or from learning from one another. This serves as a reminder that IORs management control must necessarily achieve a subtle balance between the level or granularity of control deployed and the maintenance of harmonious and rewarding links among stakeholders.

Importantly, Tomkins (2001, p. 178) also underlines that while "*... the need to recognize timing is fundamental (...) designers of business information systems should not be seeking a given time invariant optimal system, but have responsibility for perpetually adapting and modifying the system to meet changing relationships needs*". This reinforces the necessity to be able to cope with dynamic and changing processes that are not likely to be effectively formally controlled given the complexity of this task. In addition, it suggests that the structure within which individuals evolve may deserve particular attention. In this regard, the structure perspective is addressed in the next following pages.

3. THE STRUCTURE PERSPECTIVE

Limited research is available regarding possible structures of control in the framework of inter-organisational governance. However, assuming that *"the effectiveness of a given tool depends on the organization's situation*" (Christensen *et al*., 2006), it is also contended that most of the formal and informal control considerations reviewed above need to be linked to elements of organisational structure. Otherwise, they may simply limit themselves to theoretical considerations, disconnected from implementation requirements with the risk of losing credibility. Consequently, it is probably useful to first define what the notion of organisational structure can entail. Based on organisational theory, Desreumaux (1992, p. 50) describes 'structure' as a relatively stable allocation of tasks and roles that create a pattern of interrelated activities and allow the company to lead and co-ordinate its activities. Consequently, the notion of control structure is twofold: the form, which deals with the definition and the mapping of accountabilities; and the nature of interrelated links existing between stakeholders, which make it possible to manage and co-ordinate activities. In this context, it is interesting to contemplate different considerations given by academic authors: van der Meer-Kooistra and Vosselman (2000) insist on the influence of internal structures, which is worthy of special attention. Håkansson and Lind (2004) suggest that "*business relationships*" rely on social control and should not be centrally orchestrated. Going one step further Donada and Nogatchewsky G. (2008) refer to the notion of stakeholders' strong interdependence in the context of buyer-seller relationships. In my opinion, this presents a degree of interest in a specific organisational architecture for managing suppliers. In these cases of strong mutual dependence, a certain type of organisational structure may make it possible to fully benefit from scale effects. For example, given their necessary proximity, it could also accentuate the operational dimension of collaborating firms' R&D teams. Moreover, support functions (quality or finance experts) could reinforce this structure by assessing it periodically and helping individuals in their joint improvement activities.

Overall, this suggests that despite the existence of tools, which are well known by managers, the latter may struggle to use them pragmatically or successfully when they cannot turn to an appropriate organisational structure to manage programs. Reflecting back on the outcome of the vast survey conducted by a major aerospace consulting firm as mentioned in chapter 2, this is precisely one of the conclusions drawn regarding major roadblocks encountered by civil aerospace firms: program management is a top priority, and all sorts of existing

processes or tools are available, but the success rates of IORs initiatives are far too low. In this respect, it can be interesting to refer to Christensen *et al.* (2006) who insist on the fact that an organisation's situation is what determines the effectiveness of tools. In their view, the organisation's situation should be such that it enables a shared understanding, necessary for agreeing which co-operating process to adopt. In this logic, they propose the "*Agreement Matrix*" which consists in assessing the level of agreement between stakeholders through the extent to which people agree on what they want (values, priorities, possible trade-offs) and the extent to which people agree on cause and effect (which situation will lead to the desired outcome). However, what is apparently not contemplated, are the steps prior to the agreement, namely how stakeholders are orchestrated (or not) to end up with a level of agreement and the extent to which people agree on cause and effect. In this logic, assuming that its structure will inevitably determine an organisation's situation and that management control must lead people to co-operate, it is proposed that based on both formal and informal control management devices, a suitable organisational control structure could play a key role in the success of the co-operation, by getting people to co-operate and collaborate in a systematic way, which is a pre-requisite for the effectiveness of optimal tools. Particularly, this position is very much aligned with the views presented by Bower (1970), Chandler (1962) or Cyert and March (1963), who studied models of organisations that should be considered when trying to understand alliances. These authors confirm that making alliances work is a genuine challenge with regards to motivations, but also in terms of the form that can be chosen. These studies underline the importance of identifying relevant factors as well as the appropriate interfacing architecture, all of which should lead to a successful partnership based on trust and co-operation. In this respect, Doig *et al.* (2001, p. 28) insist on the importance of recognising that "*the ability of outsourcing to play a strategic role depends on the form chosen*" along with the importance of reconciling business systems, people, culture and structures within a strategic alliance.

Consequently, this justifies a focus on a possibly necessary organisational architecture for managing IORs along with some key enablers such as *Modelling and Analysis*, *Information Systems Management* and *Leadership.* They are behavioural and organisational factors which affect the likelihood of these IORs succeeding as they can have a significant impact on the constructive, effective and efficient development of inter-organisational relationships and co-operations.

KEY TRANSITION

So far, arguments have been developed to admit that people set up IORs through alliances and partnerships because outsiders can bring a fresh and often valuable perspective to the table, since one of the primary values of alliances and effective working relationships is the access it provides to different experiences, perspectives and knowledge. In particular, Hagel and Brown (2005) suggest that companies should take advantage of their different technical backgrounds which address different segments. By doing so, those companies would be more creative through accelerated learning. Consequently, inter-organisational co-operating arrangements within the industry are meant to add value by improving product quality, productivity lead time and cost reductions (Ansari and Modarress, 1990; Frazier *et al*., 1989; Lamming, 1993). Managing IORs should aim at developing co-operative partnerships, for example with suppliers (Langfield-Smith and Greenwood, 1998) that are at the root of strong competitive advantages. This is reinforced by the view of Aaker (2005, p. 207) who insists that by leveraging strengths "*strategic alliances play an important role in global strategies because it is common for a firm to lack a key success factor for a market*" like manufacturing capability whereas to remedy this deficiency internally might require excessive time and money. Providing that strategic alliances can be defined as a *"collaboration leveraging the strengths of two or more organizations to achieve strategic goals"* (Aacker, 2005, p. 206) it implies long-term commitments. It is not a tactical device to provide a short-term fix for a problem, but rather something which requires a shared contribution and respective adaptations of needed assets or competencies. Obviously, this is at odds with the views that consider outsourcing as an end in itself rather than a strategic tool for enhancing overall performance. Also, this suggests that organisational business relationships must be sought in the long-term.

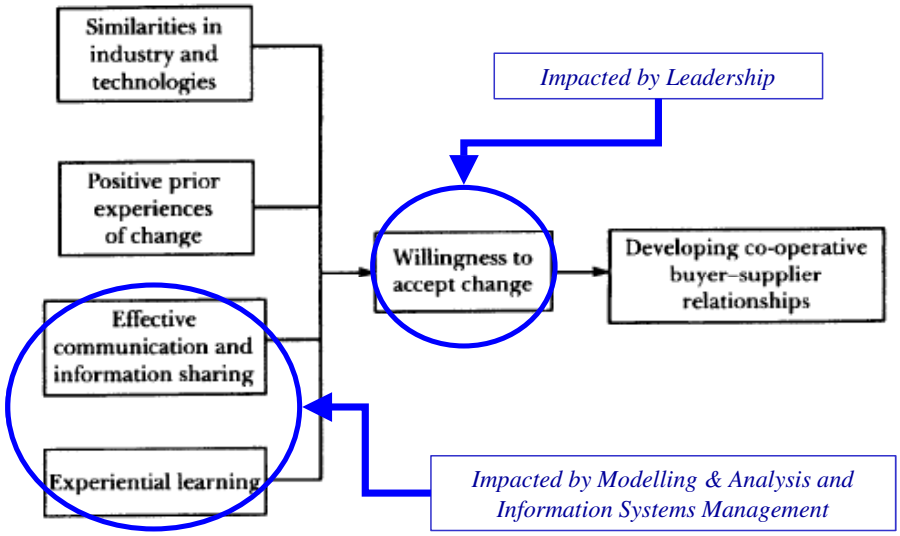
With his studies on possible types of *Inter-Organisational business relationships,* Cox (2004) testifies that implementing strategic alliances and effective business relationships between buyers and sellers is not an easy task, as differences cannot only lead to innovation but also to disagreements. For example, the author underlines that conflict is inevitable when different cultures and practices are brought together. Consequently, due consideration given to personal deployment proves important as the people who will be interacting most frequently with the partner should be flexible, curious and open to new ideas. However, Cox (2004) suggests that in any case, tensions should not be perceived negatively as not all frictions are detrimental. But instead of tightening and smoothing the relationships to make frictions more predictable,

the author recommends addressing the challenge of taking that friction and converting it into something productive. This is certainly a valid argument for underlining that one key and primary element of IORs, should be to fully understand the IORs configurations beforehand, and then check any track record from previous partnerships and alliances. Clearly this should be done before moving forward with negotiations that hammer out details such as clear-cut vision of ultimate goals, the milestones that will measure progress and mechanisms for resolving conflicts and disagreements along the way.

Importantly, Caglio and Ditillo (2008, p. 867) also remind us that control mechanisms cannot avoid contradictions and especially limitations from the existing management accounting literature. In this particular case, the authors underline some "*ambiguity in the accounting literature related to how inter-organisational relationships have been studied*". They explain this by the fact that some authors have sometimes positioned themselves as "*contributors on networks while in reality, they have focused on dyadic inter-organisational relationships. This has led them to neglect that inter-firm relationships are often nested within a wider network of relationships and to underestimate the influence of the network's architecture on cost and accounting controls"*. Again, this reinforces the need for thinking of the logic behind IORs ventures beforehand, and the rules that will govern them as they move forward. In particular, Aaker (2005, p. 212) insists on the understanding that "*key to the long-term success of strategic alliances is that each partner contributes assets and competencies over time and obtains strategic advantages"*. Consequently, motivations for co-operating arrangements and alliances - like economies of scale, access to strategic markets – should compensate for the absence of a needed asset or competency, a difficulty to access a needed technology and ensure that there is no unbalanced relative contribution between partners. This is more or less in line with the point raised by Hamel *et al.* (1989, p. 134): alliances cannot be successful when the "*motivation is to avoid investments and achieve attractive short-term returns instead of to develop assets and competencies"*.

Thus, amongst several factors that can possibly be identified, effective communication and experiential shared learning in the acceptance of changes prove critical in developing relationships characterised by high levels of trust; two-way information sharing - both technical and financial - with a degree of "comfort", dependent on the degree of trust between both parties, and direct mutual assistance in improving production performance overall or long-term contracts including formal evaluations of respective performances. This is

supported by Langfield-Smith and Greenwood (1998, p. 332) in their analysis of the buyer-seller relationships within the Toyota context as illustrated with the following figure:



Adapted from Langfield-Smith, K., Greenwood, M., (1998), "Developing co-operative buyer-seller relationships: a case study of Toyota", Table III, p. 347, Journal of Management Studies, pp. 331-354.

Figure 28 - Factors influencing the development of supplier-buyer relationships

Finally, Larson (1992) is probably a key author recapping what is stake when dealing with IORs management control. Through an inductive approach, the author focused on the formation process of IORs and highlighted the importance of *reputation*, *trust, reciprocity* and *mutual dependence* but also the key role of *Active Players*. Importantly, he concludes that through trust and reciprocity, *Social Control* emerges and proves paramount in IORs because exchanges cannot be limited to aspects of financial control. This complementarity between formal and informal control was also raised in Chapter 2, section 2 through the duality evoked between *TCE* (Coase, 1937; Williamson, as of 1975) and *Embeddedness* theories (Granovetter, as of 1985; Uzzi, 1997) while assuming that the critical transactions on which buying firms depend most are embedded in networks of social relationships that produce positive and unique outcomes difficult to imitate through other means (Granovetter, 1985).

Given this context, and based on an extensive analysis of the relevant academic literature, the following table is proposed to summarise three key dimensions related to IORs management control:

Control Constituents	**Concretized through:**
Means or devices = the HOW	*Formal Control devices:* - competition - contract - information systems, performance measurement - incentives systems (planning, targets, sanctions, rewards) - rules and procedures, qualification and certification processes - reciprocal involvement (on-field presence, open book policies) *Informal Control devices:* - reputation - capitalisation on past experiences and lessons leant - socialising processes and working together iterative approaches
Object = the WHAT	- results - way of doing and actions completions - relational or behavioural attitudes (flexibility, team working, informati sharing) - resources and competences - systems of values, integrity
Phasing = the WHEN	- selection phase - contracting phase - execution phase

Table 12 - The IORs control constituents

(translated from Donada *et al.*, 2012, p. 19)

This table suggests that going beyond functionalist approaches is logical in order to study the influence of social practices (*i.e. interpersonal relationships*) on the performances of inter-organisational practices. Using formal instruments (such as formal contracts or asset ownership) cannot realistically be the panacea in the framework of IORs (Dekker, 2003). In particular, relational contracts are an option to offer important advantages over formal contracts, even though they are also vulnerable to people reneging on them. Consequently, the relationships of the parties involved are the central issue. Any integration decision should be made at the service of those relationships after recognising that implementing satisfactory relational contracts requires optimising the boundaries of the firms with regards to asset ownership, but also with regards to the way inter-organisational relationships are managed.

SECTION 3 - CAPITALISING ON ACADEMIC CONTRIBUTIONS

The two previous sections were produced to ground or legitimise our targeted contribution. They provide strong arguments to contend that hierarchy is a valid element to consider for mitigating stakeholders opportunism and poor co-ordination of activities. However, when things are difficult to measure, as is the case with most IORs within civil aerospace, control is not realistically possible through the market or the hierarchy. Reciprocity is likely to effectively take place through *socialisation,* which requires a necessary *sharing of culture* and *appropriation of concerns* between stakeholders. As strongly advocated within existing academic literature, it is also legitimate to consider *congruence.* The latter can rely on shared congruent objectives and refer to the concept of *organic solidarity* (Durkheim, 1933). Consequently, using formal instruments (such as formal contract or asset ownership) cannot realistically be the panacea in the framework of IORs. Alternatively, relational contracts are an option which offers important advantages over formal contracts, but are also vulnerable to reneging. Consequently, as the relationships between the parties involved proves central, it is assumed that any integration decision should be made at the service of those relationships, and after recognising that implementing satisfying relational contracts also requires optimising the boundaries of the firms with regards of ownership of assets but also of the way inter-organisational relationships are managed. Dealing with IORs strategic management control, this position aligns with the *structure concept* and the *dynamics concept* proposed by Barnard (1938) through a behavioural theory derived from moral and legal doctrines emphasising personal responsibility for actions. For those authors, the *structure concept* relates to individuals, co-operation systems, formal organisation, informal organisations, efficiency and effectiveness, i.e. the anatomy of organisations. And the *Dynamic concept* relates to free will, communication, authority, decision making process, leadership and dynamic equilibrium, i.e. the physiology of organisations.

Based on these considerations, a successful inter-organisational co-operation seems to depend heavily on the key managerial functions of executives along with three main conditions which should be controlled: the ability to communicate amongst individuals, the willingness to co-operate and work jointly from enough individuals belonging to the stakeholders involved, and awareness and willingness to achieve a common purpose. Those conditions seem to constitute the basis for building *Core Competences* respectful of the *Key Levers* proposed and detailed in the following section.

1. KEY LEVERS FOR SPECIFIC TYPES OF IORS AND ASSOCIATED MANAGEMENT CONTROL DEVICES

Offering a full definition of *Key Levers* is not an easy task. Firstly, it is generally accepted that within an industry, there are factors which affect its members' or stakeholders' ability to prosper in the marketplace. This particular notion is partly related to what was defined as a successful co-operation in chapter 2. Those factors are thus considered so important by their very nature, that the future success of the organisation requires being competent at performing or achieving them. In this respect, it can be interesting to refer to Thompson *et al.* (2005) who provide an explanation of what key success factors for a business unit entail: "*When a strategic management control system is designed to ensure achievement of the business unit's strategic objectives, key success factors may suggest either strategic objectives themselves or measures for strategic objectives for that business unit - or both*".

Accordingly, but also after considering both the academic perspectives reviewed in the previous sections along with the on-the-ground perspectives accumulated through a long on-field observation, and the proposed case study from chapter 2 - section 3, it is now possible to establish a top ten list of *Key Levers*, understood as elements necessary for an organization or project to achieve its mission. They are critical factors or activities required for ensuring the success of a company or an organization.

In the context of inter-organisational co-operating agreements, these *Key Levers* aim at creating value for stakeholders. They are understood as critical factors or activities that must run smoothly to ensure success for a manager or an organisation. As such, they need to be given special and continuous attention through appropriate management control.

Consequently, we put forward that research in co-operations complexity and types of control (formal & informal) suggests the following **"CCKLF Matrix"**, a matrix of "*Co-operation Complexity and Key Levers Fit*":

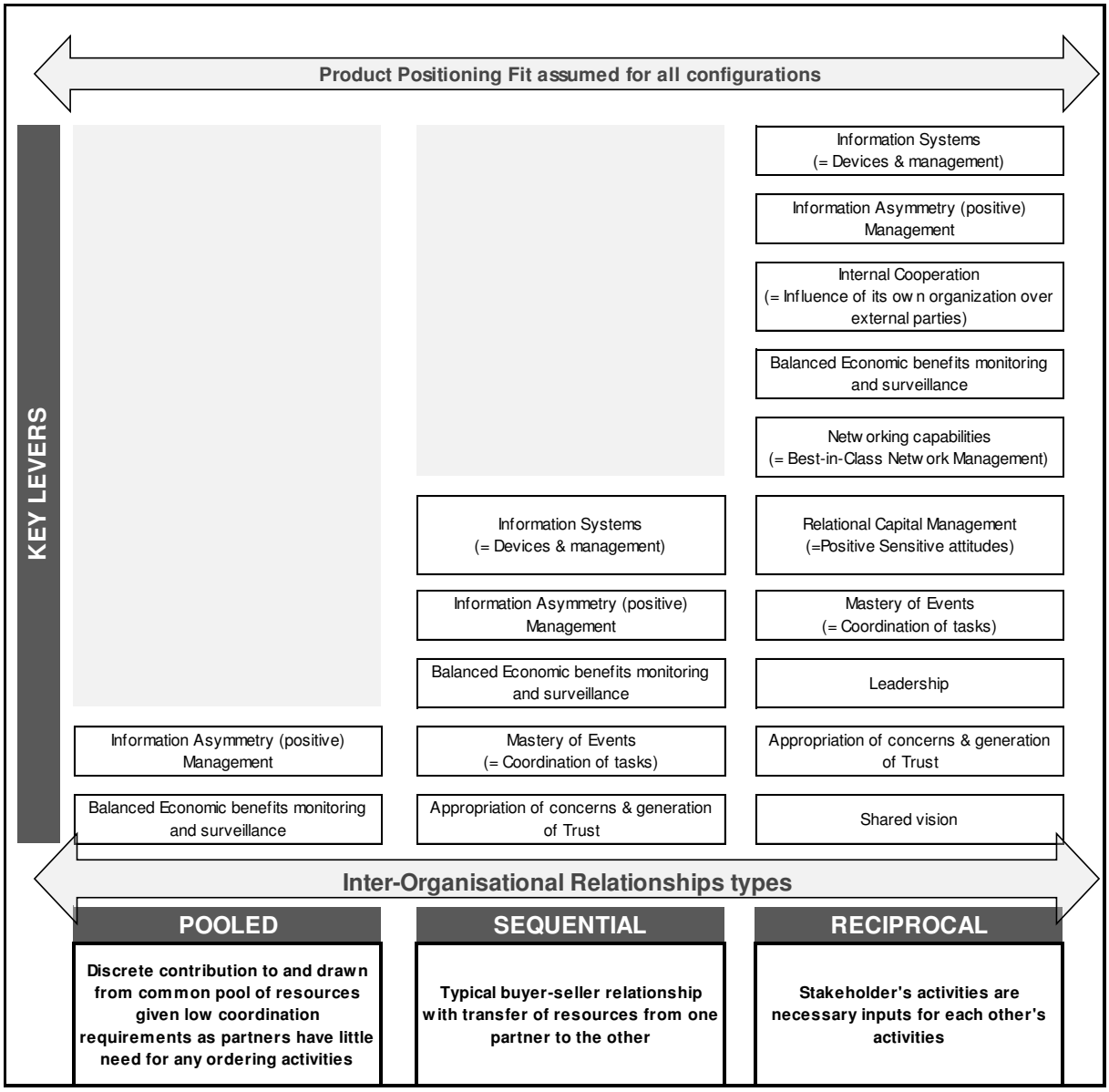


Figure 29 - The Co-operation Complexity and Key Levers Fit (CCKLF) Matrix

This matrix formalises generic situation types[86] of IORs and their associated attributes from an IORs viewpoint, against their respective *Key Levers* which should be considered for management control purposes. Depending on the IORs types, it formalises what needs to be put under management control in order to maximise chances of success.

As shown in the matrix, the more complex the type of IORs at stake, the higher the number of *Key Levers.* Importantly, the ranking of *Key Levers* by order of importance proposed in the **"CCKLF Matrix"** was established after running a vast survey across both an academic and a practitioner population. This population was approached because it is able to make a critical judgement on IORs within civil aerospace either due to a long professional history within this sector or due to a comprehensive academic understanding conveying a strong expertise in this field. Approximately one hundred individuals were approached and asked to rank the *Key Levers* proposed within the **"CCKLF Matrix"** for the *Reciprocal* type of inter-organisational relationships in civil aerospace. The process put in place to run this survey started with the following message:

Dear Madam, Dear Sir,

In the framework of a PhD in Management Control at Paris Dauphine University (France), I have undertaken a research project investigating the "Key Levers"[87] at stake in inter-organisational relationships.

It is assumed that Management Control deals primarily with safeguarding the devices deployed for reaching firms' strategic objectives. Defined as a system of organisational information seeking and gathering, accountability and feedback, Management Control is about identifying if plans are used and goals achieved through consistent evaluation and monitoring of organisational behaviours and performances. This system is designed and managed to sensibly assess, enable or even force relevant joint activities that will participate in the development and the delivery of goals and strategies targeted by the stakeholders involved. Consequently, Management Control will ensure that the firm adapts to changes in its substantive environment and that the work behaviour of stakeholders is measured by reference to a set of operational and non-operational sub-goals (which conform to overall objectives) so that discrepancies can be reconciled and corrected where appropriate.

[86] Terminology used by Thompson (1967): pooled, sequential, reciprocal.

Given the above definitions, the proposed survey takes about 10 minutes to complete. It aims at ranking the following "Key Levers" by order of importance (1= highest / 10 = lowest):

- *Appropriation of concerns and generation of trust*
- *Balanced economic benefits monitoring and surveillance*
- *Networking capabilities (i.e. best in class network management)*
- *Information asymmetry positive management*
- *Mastery of events (i.e. effective tasks co-ordination)*
- *Relational capital management (i.e. positive sensitive attitudes)*
- *Shared vision*
- *Internal co-operation (i.e. influence from own organisation over external parties)*
- *Leadership*
- *Information systems (devices and management)*

Your responses will remain anonymous and will not be identified in the research results. The results of the research may be published in part with no explicit mention to you. By completing the survey you are giving your consent to your data being used as described above.

If you have any queries about the survey, please contact me at nogastephane@yahoo.fr

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After collecting replies over three months, with a 15% response rate, the following survey results were consolidated by applying a simple average calculation of all the answers provided.

[87] Is the term for an element that is necessary for an organization or project to achieve its mission. It is a critical factor or activity required for ensuring the success of a company or an organization.

Assuming they are paramount in the success of inter-organisational relationships management, ranking of the following Key Levers by order of importance (1= highest / 10 = lowest):												
KEY LEVERS	1	2	3	4	5	6	7	8	9	10	Rating Average	Ranking
Appropriation of concerns & generation of Trust	16.7%	16.7%	**33.3%**	16.7%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	3.50	2
Balanced Economic benefits monitoring and surveillance	0.0%	0.0%	0.0%	**33.3%**	16.7%	16.7%	0.0%	0.0%	**33.3%**	0.0%	6.17	7
Networking capabilities (= Best-in-Class Network Management)	0.0%	0.0%	0.0%	16.7%	16.7%	**33.3%**	**33.3%**	0.0%	0.0%	0.0%	5.83	6
Information Asymmetry (positive) Management	0.0%	0.0%	0.0%	0.0%	**33.3%**	0.0%	16.7%	**33.3%**	0.0%	16.7%	7.17	9
Mastery of Events (= Coordination of tasks)	0.0%	0.0%	**33.3%**	16.7%	0.0%	0.0%	**33.3%**	16.7%	0.0%	0.0%	5.33	4
Relational Capital Management (=Positive Sensitive attitudes)	0.0%	0.0%	**33.3%**	16.7%	0.0%	16.7%	0.0%	0.0%	**33.3%**	0.0%	5.67	5
Shared vision	**66.7%**	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.33	1
Internal Cooperation (= Influence of its own organization over external parties)	0.0%	16.7%	0.0%	0.0%	**33.3%**	0.0%	0.0%	**33.3%**	16.7%	0.0%	6.17	8
Leadership	16.7%	**33.3%**	0.0%	0.0%	0.0%	16.7%	16.7%	0.0%	16.7%	0.0%	4.50	3
Information Systems (= Devices & management)	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	**83.3%**	9.33	10

Table 13 - Survey Results on the ranking of Key Levers in IOR

Overall, although the generic situation types and their associated attributes are not deemed to be really innovative, the formalised association of *Key Levers* per IORs type proposed above can constitute a concrete contribution from an inter-organisational management control viewpoint only after deducing *Enablers,* the legitimacy of which is constructed in reference to existing and generally admitted academic positions. In this light, it is understood that *Reciprocal* IORs types can be characterised by an overall purpose that entrenches the following value-creation targeted inductors: joint development and sharing of complementary technology; joint reduction of innovation time and operating costs (lower cost for IORs relative to market or hierarchy alternatives); increased market power and entry barriers; control over access to resources; increased economies of scale; synergies as in information sharing, exchange of stakeholders (clients, staff, etc.); risk sharing in entering new markets or in new programmes; enhancement of industry capabilities profile, establishment of co-operation norms (Oliver, 1990) or intensified knowledge management to increase agility through the ability to learn (Argyris, 1994).

Also, we would like to stress that mutual dependence is a key aspect of *Reciprocal* IORs, within which all stakeholders' activities are necessary inputs for the activities of the other. In this regard, the Resource & Dependence Theory (Pfeffer and Salancik, 1978) is very helpful in highlighting characteristics of *Reciprocal* IORs which suffer from high failure rates, attributed to the difficulty of managing them (Ireland *et al.*, 2002). In fact, the co-operating parties must face increasing dependence and increasing uncertainty which requires an increasing need for co-ordination and joint decision making (Dyer *et al.* 2001; Galbraith, 1977; Gulati and Singh, 1998).

Subsequently, it is relevant to point out associated concerns regarding *"anticipated coordination costs that are particularly salient in alliances which can entail significant coordination of activities between partners and yet have to be managed without the benefit of the structure and systems available in traditional hierarchies"* (Gulati and Singh, 1998, p. 784). This implies that the structure chosen to govern an IORs is critical to its success (Ittner *et al.*, 1999; Osborn and Baughn, 1990).

Consequently, for this type of *Reciprocal* IOR, which will be at the heart of the research proposed in this thesis, the following "**IOR *Key Levers & Enablers* tables"** capture the *Key Levers* proposed in the "**CCKLF Matrix"** along with their respective expected impact but

also their associated *Enablers* articulated through specific attributes. As indicated in the following tables, this is based on well-respected theories and referenced authors who were comprehensively discussed, reviewed and appreciated through the previous chapters and sections of this thesis. Also it is substantiated by the on-ground perspective accumulated through a long on-field observation.

Table 14 - IORs *Key Levers* & *Enablers* Tables

KEY LEVERS	KEY LEVERS' Impact	ENABLERS *(= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)*	MEANING & MAIN ATTRIBUTES (=*possible objects of control*)	INDICATIVE LIST OF ACADEMIC REFERENCES
Appropriation of concerns & generation of Trust	Trust establishment: "ubiquitous and fondamental building block of social life" (Tomkins, 2001 ; p.165) But does not reduce the potential of uncertainty! The best example of this being fraud for example. Understanding of sensitivity to interdependence of production and exchange relations Reduce Uncertainty Co-operation is less volatile when ties are costly	**Cohesive groups, clan coordination (organic solidarity)**	Groups are in place. They are good at creating knowledge in Tacit forms, at contributing to the establishment of common values and beliefs These Cohesive groups spread information but also generate normative, symbolic and cultural structures, which conveys "*meaning*" (Granovetter, 1992)	Williamson (1985, 1995); Dekker (2004); Grannovetter (2005); Ouchi (1980); Ezzamel (1992); Häkanson et al. (2004); Durkheim (1933); Marx, Bourguignon A. (2006); Tomkins (2001, 2004); Narasimhan and Kim (2002); Frances and Garnsey (1996); Aiken & Hage (1968); Levine & White (1961); Litwak & Hylton (1962); Molnar (1979); Pfeffer & Salancik, (1978); Thompson (1967); Van de Ven & Walker (1984); Heide and John (1990); Feltham (1968), Feltham & Demski (1969); Van der Meer-Moistra and Vosselman (2000); Uzzi (1997); Dwyer, R; Schurr, P.; Oh, S. (1987); Dyer and Singh (1998); Ireland et al. (2002); Grandori et al. (1997); Ittner, Nagar and Rajan (1999); Osborn and Baughn (1990) With a particular reference to Organisational theory, Human Relation Movement, Relational and Structural embededdness theory, Exchange Theories (Blau, 1964); and Attraction Theories (Hollinghead, 1950; Kennedy, 1944) Also, a view that trust is an alternative to uncertainty absorption mechanism to increased information but the cost of developping reliable forms of trust and the cost of doing it are rarely considered in the costs-benefits analysis.
		Social Context consideration	This deals with the consideration and respect of the fact that *individuals* do not slavishly follow a script. They are embedded in on-going systems of relations - a "***web of social relations***" - with a direct effect on economic actions. Ultimately, this is a matter of "**Reification**", namely a mix of control management tools, various social actors and associated practices.	
		Contractualisation	When properly implemented, contractualisation will or can deter from opportunism and thus reduce uncertainty which is a potential huge cost and threat for appropriation of concerns between actors. However, contractualisation is a device to define goals and methods in order to enable effective joint planning (but it is not primarely an ex-post control device!)	
		Buyer committment	This will determine the level of strategic partnership with a supplier i.e. its participation in design, in the process of procurement and production. It will also help optimise resource scarcity management The more committed a buying firm is to its relationship with key suppliers, the more the relational capital between the former and the latter will build up, which proves a key factor to improve performance. It is unlikely that key suppliers will fully engage in sets of changes requested by the buying firm unless there is tangible evidence that the purchasing organisation will support supplier investments with matched resource	
		Seller committment	This will determine the extent to which a supplier is flexible in response to a request from a buyer, its willingness to help during emergencies, its reliability to fulfil requirements (at least when there is an agreement). It will also help optimise resource scarcity management The more committed a buying firm is to its relationship with key suppliers, the more the relational capital between the former and the latter will build up, which proves a key factor to improve performance	
		Trust establishment & management	This enables close relationships at a personal level ... to act as if uncertainty potential is reduced ... to adopt a belief without being fully informed It will or can reduce the need for formal co-ordination or improve co-ordination ... while even the world's most cutting-edge knowledge can be rendered useless without trust in the network, as sharing and implementation of knowledge becomes difficult. This is a component of embedded relations that requires characterisitics of a particular structure of relationships	
		Understanding of sensitivity to interdependence of production and exchange relations	May help avoid falling into the trap that transaction costs reduction has a higher impact than productivity - enhancing factors tied to superior skills and knowledge.	
		Governance structure well in place	Often based on contractual or formalised arrangements, this is about enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain *mutual dependence*	

KEY LEVERS	KEY LEVERS' Impact	ENABLERS *(= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)*	MEANING & MAIN ATTRIBUTES (=*possible objects of control*)	INDICATIVE LIST OF ACADEMIC REFERENCES
Balanced Economic benefits monitoring and surveillance	Develop and sustain long-standing and deep WIN-WIN alliances with notions of effectiveness and efficiency	**KPIs / Assessments**	This deals with the management by objectives through: measurement of production, acquisition and structural costs based on a comparison between in-house and supplier costs. It is about Continuous Operations *(Quality, Delivery & Responsiveness)* performance management.	Dekker (2004); Tomkins (2001); Faulkner (1998); Barnard C. (1938) Contractor and Lorange (1988); Buckley and Casson (1988); Kaplan, Norton (1992)
		Cross organisational designed management accounting systems	This element deals with the mastery of Total Cost of Acquisition & Ownership (NB: such an accurate mastery of costs across an organisation is most often difficult to achieve given the complexity of data gathering & crunching).	
		Deeper involvement of accountants in the negotiation of actions and profit sharing	This will or can reinforce the use of simulations for investment decisions, new product development, along with greater emphasis on negotiation to better determine the terms of co-operations	
		Review of how the risk/return position of each party is affected by different actions	This corresponds to standard economical objectives management.	
Networking capabilities ***(= Best-in-Class Network Management)***	"The extended network of ties has a profound effect on a firm's performance, even though the extended network may be unknown or beyond the firm's control" (Uzzi, 1996) through TRUST / FINE GRAINED INFORMATION / JOINT PROBLEM SOLVING ARRANGEMENTS which have a strong impact on: - Tacit knowledge: dissiminate more easily which in turn benefits innovation efforts - Active stakeholders' support in co-ordination of requirements - co-operation: less volatile when ties are costly "The key to achieving coordinated action does not so much depend on those 'higher-up' collecting more and more knowledge as on those 'lower-down' finding more and more ways of getting connected and interrelating the knowledge each one has" (Tsoukas, 1996)	**Formal impersonal communication**	This is explores the level of information exchange between co-operating actors through information technology, the establishment of quick ordering systems and stable procurement through network.	Granovetter (1992, 2005); Uzzi (1987, 1996, 1997); Liker & Choi (2004); Hansen, (1999); Mayo (1945); Carr & Pearson, (1999); Bresnen et al. (2004); Kotabe, Martin and Domoto (2003); Nonaka & Takeuchi (1995); Tsoukas (1996); Johanessen (2001); Maskell (1998); Grabber (1993); Cooke (2002); Schumpeter (1926); M. Polanyi (1962); Nonaka and Gulati (1997); Burns and Stalker (1961) With a particular reference to Relational and Structural embededdness theory; Social Exchange Theory, Organisational therory combined with Social Network theory and Embeddedness (structural) theory. A view that: = the structure of relations explains actors' behaviours because actors are affected and influenced by the quality of a network and its structure (Uzzi, 1996) = Information theory understood as the information processing arguments developped by Grant (1996); Hamel (1994), Hult et al. (2004) This suggests that inter-organisational interfacing activities can require information exchange to adress various issues. According to Daft et al. (1993), Daft & Lengel (1986) and Daft & Weick (1984) this type of information can be transmitted more impersonal channels when dealing with uncertainty and more personal channels when dealing with equivocality. = positivist account of science failed to recognise the part that personal committment and tacit knowledge play in science - "Absolute objectivity is a delusion and a false idea"
		Ties among firms **- Structural** **- Relational**	The structure and quality of social ties among firms shape economic activities by creating unique opportunities and access to them. They determine and explain the behaviour of people because actors are affected/influenced by the quality & structure of their network (= "*the structure of social ties determines actors behaviours*" and "*the mere fact of attachment to others may modify economic actions*", Granovetter, 1992: 35). Social capital theory associated with structural ties serves as the foundation for the view that explicit types of information are more efficiently transferred via weak relationships as opposed to strong ties that may be necessary for the transfer of complex, tacit types of knowledge or information.	
		Social recognition management	Important role as activities are greatly affected by the social context within which they take place. "***Social relations penetrate irregularly and in different degrees in different sectors of economic life***" (Granovetter, 1985:491)	
		Managerial communication to further improve relational performance	This will determine or enable loyalty to the relationship in addition to mutual understanding as long as it is structured, but more persona; information sharing will help address the equivocality inherent to IORs.	
		Technical communication to further improve relational performance	It will determine quality, timing, level and type of technical communication between development engineers of co-operating firms. It will ease fast decision making which thus becomes beneficial for the network partners. It will or can reduce product development risks linked to product & process.	
		TACIT knowledge management ***(= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)***	Assuming that **productivity** enhancement is close to superior skills & knowledge because people know more than what they can clearly articulate, this enables co-operations to rely on knowledge shared and developed. Accordingly, it becomes possible to capitalise on knowledge viewed as the most important means of production in today's knowledge-based economy.	
		EXPLICIT knowledge management	This will enhance Productivity through the articulation of comprehensive knowledge. It will enable co-operations to rely on knowledge shared and developed but also to capitalise on knowledge viewed as the most important means of production in today's knowledge-based economy.	

KEY LEVERS	KEY LEVERS' Impact	ENABLERS *(= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)*	MEANING & MAIN ATTRIBUTES (=*possible objects of control*)	INDICATIVE LIST OF ACADEMIC REFERENCES
Information Asymmetry (positive) Management	Enable and reinforce the development of long-standing & deep alliances Reduce Uncertainty and maximise both effectiveness & efficiency	**Understanding and adjusting information needs depending on alliances types & business networks** ***(= proper balance between level of trust and information needed)***	This will optimise Trust management and joint collaboration without scarifying visibility. This is assuming that information and trust needs must be appreciated depending on the different stages of developing a relationship.	Tomkins (2001); Wicks et al. (1999); Feltham (1968); Feltham and Demski (1969); Sun Tzu; Uzzi (1997) In particular, concept of U-shape inverted association (not monotonic inverse association) developped by Tomkins (2001) and the view that a high level of confidence between partners is not given because both control level and level of trust are high. It is more complex.
		Know who you are dealing with	Quite obviously, this is about understanding as soon as possible what and who can or cannot be trusted because the cost of developping reliable forms of trust and the cost of doing it are rarely considered in cost benefits analysis.	
		Information management control relating to the willingness to trust given recognised competence and integrity	The management of this type of information provides what is needed to create trust and verify the state of the relationship.	
		Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. **Fine grained information transfer**	The management of this type of information provides means to make economic judgements on strategies, investments and on-going operations. A component of embedded relations that requires characteristics of a particular structure of relationships.	
Mastery of Events ***(= Coordination of tasks)***	Reduce uncertainty & maximise both efficiency and effectiveness Achieve/Ability to fit between a wide range of operations and complex co-ordination mechanisms for communication and on-going adjustments to each other's situation	**Cohesive groups, clan coordination (organic solidarity)**	Groups are in place. They are good at creating knowledge in Tacit form, at contributing to the establishment of common values and beliefs These Cohesive groups spread information but also generate normative, symbolic and cultural structures which conveys MEANING (Granovetter, 1992).	Dekker (2004); Tomkins (2001); Borys and Jemison (1989); Dyer and Singh (1998); Zajac and Olsen (1993); Jones, Hesterley and Borgatti (1997); Grandori et al. (1997); Fayol, (1949); Beer, Eisenstat and Spector (1990); Grannovetter (2005); Ouchi (1980), Ezzamel (1992); Häkanson et al. (2004); Durkheim (1933); Faulkner, D., (1995); Lawrence and Lorsch (1969); Dwyer, R; Schurr, P.; Oh, S. (1987); Ireland et al. (2002); Ittner, Nagar and Rajan (1999); Osborn and Baughn (1990) In particular, Organizational theory, Human Relation Movement, Relational and Structural embededdness theory; Contigency Therory : differentiation and integration .
		Clear Organisation and adequate escalation process	This will provide better visibility for stakeholders and ease the "learning & working well together" processes.	
		Constant evolution	When properly managed, this will make it possible to learn & work well together	
		Bonding	This will enable the "learning & working well together" processes between co-operating actors.	
		Learning Philosophy	Enables "learning & working well together".	
		Contractualisation	Viewed here as a device to define goals and methods in order to enable effective joint planning (but not primarily an ex-post control device!)	
		Co-ordination mechanisms like escalation pyramid or executive reviews	The more complex an environment is and the more differentiated the units are for satisfying their environment, the higher is the need for integration mechanisms to co-ordinate activities.	
		Defining goals and methods	This helps in effective joint planning instead of ex-post control.	
		Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.	This avoids having excessive expectations from the relationship too early on. It refrains from seeking a given time invariant optimal system. This helps to perpetually adapt and modify the system to meet changing relationship needs.	
		Governance structure targeted with determination	Often based on contractual or formalised arrangements, this is about enabling exchanges and escalations mechanisms or shared value systems and vision in order to sustain *mutual dependence*	

KEY LEVERS	KEY LEVERS' Impact	ENABLERS *(= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)*	MEANING & MAIN ATTRIBUTES (=*possible objects of control*)	INDICATIVE LIST OF ACADEMIC REFERENCES
Relational Capital Management ***(=Positive Sensitive attitudes)***	Individuals do not slavishly follow a script. They are embedded in on-going systems of relations - "web of social relations" - with a direct effect on economic actions. The higher the relational capital within IORs the greater the relational performance improvement buying firms will report	**Social Capital management including sensitivity to culture**	This is a generally accepted acknowledgement that features of social organisations such as network, norms and trust facilitate co-ordination and co-operation for mutual benefits (Lin, 2001)	Faulkner (1998);Tomkins (2001); Dyer & Chu (2000); Wathne & Heide (2004); Handfield & Bechtel (2002); Johnston et al. (2004); Lawrence and Lorsch (1969); Putnam in Morgan, (1997); Cooke (2002); Maskell and Mahnseberg (1999); Lin (2001); Kale et al. (2000); Grannovetter (1985); Blau (1964); Thibault and Kelley (1959); Burns and Stalker (1961); Di Maggio and Powell (1983); Lengnick-Hall et al. (2004); Uzzi (1997); Cole (1989); Perrone (1993); Erez and Earley (1993); Emerson (1962); Pfeffer and Salancik (1978); Grannovetter (1985) In particular, Social capital theory applied to strategic alliances; Relational and Structural Embededdness theory; Social Exchange Theory; Modeling theories; Power and Conflict theory
		Level of mutual trust, respect and interaction between actors at multiple levels	*"Close relationships at personal level are heavily dependent on the establishment of Trust (…) an ubiquitous and a fundamental building block of social life"* (Tomkins, 2001: 164-165)	
		Social recognition management	Refers to innovation viewed as a social phenomenon, a human activity which can only be fulfilled when certain conditions are obtained (Burns and Stalker). Important role as activities are greatly affected by the social context within they take place. "***Social relations penetrate irregularly and in different degrees in different sectors of economic life***" (Granovetter, 1985:491). For example, having ERP systems result in social capital requests that information exchanges should be used as a platform to develop direct human contacts rather than a substitute for face-to-face interaction (Lengnick-Hall et al. , 2004)	
		Relationship management type establishment about: **= management of interacting people** **= Joint problem-solving arrangements**	This will generate relationship performance improvements: = degree to which the IORs have over the past two to three years resulted in improved product, design, process design and product quality for the benefit of co-operating firms It is a component of embedded relations that requires characteristics of a particular structure of relationships	
		Culture Management	To be further explored	
		Power management	By reference to Hardy (1985, 2011), it can be viewed as the management of the potential of one social unit to influence the behaviour of another in order to achieve preferred situations or outcomes. Power is thus assimilated to resources; Influence is understood as the application of resources used in situations of conflict	
Shared vision	Develop long-standing & deep alliances because when clearly assimilated, a shared vision constitutes per se a system of control which is much more powerful than a system of control that is based on awards, coercision or strength.	**Defining convergent goals and collaborative futures**	This will increase the degree to which the needs, demands, goals, objectives or structures of one "component" are consistent with those of the others. Inevitably, it will have an impact on the culture, work, people and the formal organisation	Faulkner, D (1995); Barnard C. (1938); Scott (1987); Wilson (1973); Peters & Waterman (1982); Ouchi (1980); Deal & Kennedy (1985); Selznick (1957); Beamish (1987); Nadler & Tushman (1997); Ouchi (1980); Di Maggio and Powell (1983); Tomkins (2001); Dwyer, R; Schurr, P.; Oh, S. (1987); Dyer and Singh (1998); Ireland et al. (2002); Grandori et al. (1997); Ittner, Nagar and Rajan (1999); Osborn and Baughn (1990)
		Governance structure targeted determination	This is a matter of enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence which is paramount. Particularly, it is key to check that the counterpart can take advantage of the contribution made by the other one.	

KEY LEVERS	KEY LEVERS' Impact	ENABLERS *(= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)*	MEANING & MAIN ATTRIBUTES (=*possible objects of control*)	INDICATIVE LIST OF ACADEMIC REFERENCES
Internal Cooperation ***(= Influence of its own organization over external parties)***	Address or fully appreciate the **intra**-organisational complexity within buyer-seller co-operations	**Consensus between internal stakeholders**	The greater the degree of consensus among or between stakeholders, the higher the probability that these organisations will or can establish constructive relationships. Accordingly, each individual (or group of individuals) involved in the IOR has to manage two types of relationships: internal ones with colleagues from his/her firm; and external ones with members from the co-operating firm. This implies embeddedness of **inter**-individuals **intra- and inter-organisational** types.	IMP Group studies (late 70's); Aldrich (1971); Benson (1975); Gillespie & Perry (1975); Levine & White (1961); Litwarks & Hylton (1962); Marret (1971); Molnar & Rogers (1979); Paulson (1976); Schermerhorn (1975); Thompson (1967); Van de Ven (1976); Warren (1967); Dwyer, R; Schurr, P.; Oh, S. (1987); Dyer and Singh (1998); Ireland et al. (2002); Grandori et al. (1997); Ittner, Nagar and Rajan (1999); Osborn and Baughn (1990)
		Internal governance structure targeted determination	This is a matter of enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence	
Leadership	Influencing the activities of an organised group in its efforts toward goal setting and goal achievement Influencing others to understand and agree about what needs to be done and how it can be done effectively, and the process of facilitating individual and collective efforts to accomplish the shared objectives	**Lead change and provide a meaning to rally individuals** **Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations**	It requires an understanding that you do not own people, that you cannot control them. They must want to and choose to be in the company of others, oriented towards a particular mission. It enables to set a direction (develop vision, devise strategies for change to achieve goals) ... to align people (communicate vision, form teams, influence goals). ... to motivate and inspire (energise people to overcome obstacles, satisfy human needs) The most generic strategic factor of human co-operation is the managerial ability (Barnard, 1938), namely leaders' ability to talk team members into pushing the frontiers.	Zaleznik (1979); Bryman (1996); Schein (1985); Moorehead, G. & Griffin, R. (1992); Burke, S. and Collins, K. M., (2001); Chemers M. M., Watson C. B., May, S. T., (2000); Herb, E., Leslie K. and Price, C., (2001); Higgs, M. (2003); Khaleelee, O. and Woolf. R., (1996); Mawhinney, T. C. and Ford, J. D. (1977); Miles, R. H. and Petty, M. M. (1977); Palmer, W. J., (1974); Steckler, N. and Fondas, N., (1995). Also, Barnard (1938) by opposition to Weber (1922) who praised the merits of bureaucracy by opposition to the charismatic authority considered more subjective and aleatory. In particular, aspects listed so far (appropriation of concerns, uncertainty about the co-operation results, difficulty to get a clear understanding shared about the finality of the co-operation, the fragility of communication systems, mandatory individual consentment necessary for establishing fiat and authority, complexity and instability of individuals motivations) make leadership mandatory for
Information Systems ***(= Devices & management)***	Information systems should help partners share information to address uncertainty and equivocality	**Objectivising and materialising technical, business and involvement aspects of IOR**	This enables the flow information between parties regarding specifications, incidents, improvements etc. Information flows regarding commercial and planning aspects of the relationship; measures lead times and changes, costs and market information etc. Information flows that allow a greater involvement and participation in improvement activities; measures performance feedback, etc. The development of a strong information technology infrastructure is critical to create value in a supply chain and the applications and communication architecture must be carefully planned to provide a strong foundation for the growth of interorganisational systems and to increase productivity, leverage data already held and enable electronic relationships.	Premkumar (2000); Lin et al. (2002); Song et al. (2005); Macbeth, DK, (2002), Willcocks, L. (2004); Kraemer, K., Dedrick, J., Yamashiro, S. (2000); Hindle, J. (2004) ; Magretta, J., (1998); Mendelson, H., Pillai, R.R., (1998)

These "**IOR *Key Levers* & *Enablers* tables"** provide the basis for establishing a "**Maturity Level Grid Analysis of IORs Management Control"**. The latter is explained in detail in the next page. It is meant to be used for proceeding with the practical study of IORs strategic management control devices and tools within civil aerospace given the IORs control dimensions typology previously discussed and represented below:

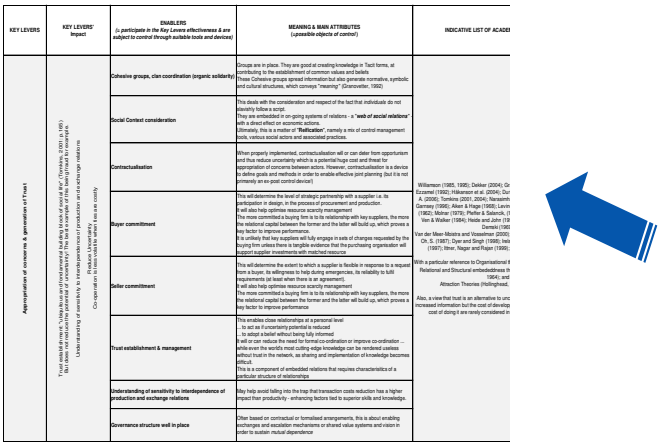
TYPES		MECHANISMS / DEVICES		SCOPE OF APPLICATION	TIMING
FORMAL CONTROL	consists of contractual obligations and formal organisational mechanisms for co-operations. It can be subdivided into outcome and behaviour control mechanisms	**Outcome Control** - clarifies mutual expectations and increases goal congruence (Das & Teng, 1998)	*Ex-ante mechanisms based on:* - goal setting - competition - incentive systems and reward structures - contracts *Ex-post mechanisms based on:* - appropriate information systems - performance measurement, monitoring and rewarding - goal revision	Results Actions completions	Selection phase Contractualisation phase Execution phase
		Behaviour Control - specifies expected behaviours and monitor against expectations	*Ex-ante mechanisms based on:* - structural specifications * planning / procedures (operating) / rules & regulations principles (qualification and certification processes) *Ex-post mechanisms based on:* - direct supervision through presence on the ground, reciprocal involvement and open book policies - behaviour monitoring & rewarding (escalation process)	Methodologies and processes Relational or behavioural attitudes (flexibility, team working, information sharing) Resources and competences	Selection phase Contractualisation phase Execution phase
INFORMAL CONTROL	relates to informal cultures and systems influencing members and is essentially based on mechanisms including self-regulation	**Social Control** - refers to elements of trust as argued by Adler (2001); Ring & Van de Ven (1992)	*Ex-ante mechanisms based on:* - reputation - partner selection process * goodwill trust - capability trust assessment - socialisation process * interactions and social network assessment - identification of leadership - appreciation of a clearly formulated vision *Ex-post mechanisms based on:* - interactions, joint iterative approaches and social network management - trust building through joint risk taking and decision making; problem solving and development of the counterpart - capitalisation on past experiences and lessons learnt	Way of doing Systems of values, integrity	Selection phase Contractualisation phase Execution phase

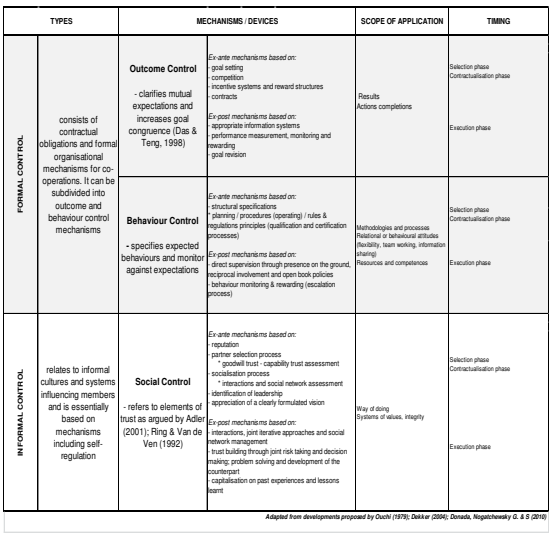
Table 15 - IORs control dimensions typology

(adapted from Donada *et al.*, 2012, p. 19)

2. A MATURITY LEVEL GRID ANALYSIS TO PROCEED WITH ON-FIELD OBSERVATIONS ABOUT IORS STRATEGIC MANAGEMENT CONTROL DEVICES AND TOOLS

Based on the understanding built so far of both the intrinsic characteristics of IORs and the specificity of formal and informal control, it is proposed to cross-merge the "**IOR *Key Levers* & *Enablers* tables**" and the **"IOR control dimensions typology":**





TYPES		MECHANISMS / DEVICES		SCOPE OF APPLICATION	TIMING
FORMAL CONTROL	consists of contractual obligations and formal organisational mechanisms for co-operations. It can be subdivided into outcome and behaviour control mechanisms	**Outcome Control** - clarifies mutual expectations and increases goal congruence (Das & Teng, 1998)	*Ex-ante mechanisms based on:* · goal setting · competition · incentive systems and reward structures · contracts *Ex-post mechanisms based on:* · appropriate information systems · performance measurement, monitoring and rewarding · goal revision	Results Actions completions	Selection phase Contractualisation phase Execution phase
		Behaviour Control - specifies expected behaviours and monitor against expectations	*Ex-ante mechanisms based on:* · structural specifications · planning / procedures (operating) / rules & regulations principles (qualification and certification processes) *Ex-post mechanisms based on:* · direct supervision through presence on the ground, reciprocal involvement and open book policies · behaviour monitoring & rewarding (escalation process)	Methodologies and processes Relational or behavioural attitudes (flexibility , team working, information sharing) Resources and competences	Selection phase Contractualisation phase Execution phase
INFORMAL CONTROL	relates to informal cultures and systems influencing members and is essentially based on mechanisms including self-regulation	**Social Control** - refers to elements of trust as argued by Adler (2001); Ring & Van de Ven (1992)	*Ex-ante mechanisms based on:* · reputation · partner selection process * goodwill trust - capability trust assessment · socialisation process * interactions and social network assessment · identification of leadership · appreciation of a clearly formulated vision *Ex-post mechanisms based on:* · interactions, joint iterative approaches and social network management · trust building through joint risk taking and decision making; problem solving and development of the counterpart · capitalisation on past experiences and lessons learnt	Way of doing Systems of values, integrity	Selection phase Contractualisation phase Execution phase

Adapted from developments proposed by Ouchi (1979); Dekker (2004); Donada, Nogatchewsky G. & S (2010)

Crossing results in this manner provides another typology which organises control devices and mechanism types, namely formal or informal, against IORs *Key Levers* & *Enablers* suited for *Reciprocal* IORs types.

For instance, given the "**IOR control dimensions typology"**, for *Enablers* referring to contractual devices or certain types of measurements, the formal control box is ticked; with *Enablers* referring to trust establishment iterative approaches, the informal control box is ticked, and so on and so forth. Merged in this way, relevant control devices are allocated to *Key Levers* and their respective *Enablers* suitable for *Reciprocal* IORs types as represented with the following "**Maturity Level Grid Analysis of IORs Management Control":**

		Relevant Types of Control (resting on Ouchi, 1979)		Associated Control Mechanisms Types (resting on Dekker, 2004; Björn, 1997)		
KEY LEVERS	**ENABLERS** *(= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)*	**Formal**	**Informal**	**Outcome Control**	**Behaviour Control**	**Social Control**
Appropriation of concerns & generation of Trust	Cohesive groups, clan coordination (organic solidarity)	X	X		X	X
	Social Context consideration		X			X
	Contractualisation	X		X	X	
	Buyer committment	X	X	X	X	X
	Seller committment	X	X	X	X	X
	Trust establishment & management	X	X		X	X
	Understanding of sensitivity to interdependence of production and exchange relations		X			X
	Governance structure well in place	X	X	X	X	X
Balanced Economic benefits monitoring and surveillance	KPIs / Assessments	X		X	X	
	Cross organisational designed management accounting systems	X		X		
	Deeper involvement of accountants in the negotiation of actions and profit sharing	X	X	X	X	X
	Review of how the risk/return position of each party is affected by different actions	X		X		
Networking capabilities *(= Best-in-Class Network Management)*	Formal impersonal communication	X		X		
	Ties among firms - Structural - Relational		X			X
	Social recognition management		X			X
	Managerial communication to further improve relational performance	X	X	X	X	X
	Technical communication to further improve relational performance	X	X	X		X
	TACIT knowledge management *(= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)*		X			X
	EXPLICIT knowledge management	X			X	
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks *(= proper balance between level of trust and information needed)*	X	X	X	X	X
	Know who you are dealing with	X	X	X	X	X
	Information management control relating to the willingness to trust given recognised competence and integrity	X	X	X	X	X
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer	X		X		

Table 16 - Maturity Level Grid Analysis of IORs Management Control (1/2)

		Relevant Types of Control (resting on Ouchi, 1979)		Associated Control Mechanisms Types (resting on Dekker, 2004; Björn, 1997)		
KEY LEVERS	**ENABLERS** *(= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)*	**Formal**	**Informal**	**Outcome Control**	**Behaviour Control**	**Social Control**
Mastery of Events *(= Coordination of tasks)*	Cohesive groups, clan coordination (organic solidarity)	X	X		X	X
	Clear Organisation and adequate escalation process	X		X	X	
	Constant evolution	X		X	X	
	Bonding	X	X	X		X
	Learning Philosophy		X			
	Contractualisation	X		X	X	
	Co-ordination mechanisms like escalation pyramid or executive reviews	X	X	X	X	
	Defining goals and methods	X		X		
	Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.		X			X
	Governance structure targeted with determination	X	X	X	X	X
Relational Capital Management *(=Positive Sensitive attitudes)*	Social Capital management including sensitivity to culture	X	X		X	X
	Level of mutual trust, respect and interaction between actors at multiple levels		X			X
	Social recognition management		X			X
	Relationship management type establishment about: = management of interacting people = Joint problem-solving arrangements	X			X	
	Culture Management		X			X
	Power management		X			X
Shared vision	Defining convergent goals and collaborative futures	X	X	X	X	X
	Governance structure targeted determination	X	X	X	X	X
Internal Cooperation *(= Influence of its own organization over external parties)*	Consensus between internal stakeholders	X	X	X		X
	Internal governance structure targeted determination	X		X	X	
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	X	X	X	X	X
Information Systems *(= Devices & management)*	Objectivising and materialising technical, business and involvement aspects of IOR	X		X		

Table 17 - Maturity Level Grid Analysis of IORs Management Control (2/2)

For each *Enabler* and subsequently for each *Key Lever*, the **Maturity Level Grid Analysis of IORs Management Control** indicates a suitable control type: formal or informal. Such a mapping frames control types scoring tables. Concretely, the logic applies as following: a first step will consist in assessing each *Enabler* by taking into account their "**Meaning and Major Attributes**" before attributing them assessment scores (Poor, Average, Good).

Importantly in this thesis, such a scoring is possible by resting on a systematic analysis and qualitative judgement of exchanges transcriptions detailed in chapter 4. Subsequently, it becomes possible to deduce a scoring for *Key Levers* by simply averaging the scores obtained for their respective *Enablers*.

The following "***Key Levers* & *Enablers* Scoring tables"** lay out the methodology applied for those assessments:

Table 18 - Key Levers & Enablers Scoring tables

EXAMPLE	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= *participate in the Key Levers effectiveness & are subject to control through suitable tools and devices*)	Meaning & Main Attributes (=*possible objects of control*)	Poor	Average	Good	
Appropriation of concerns & generation of Trust	**Cohesive groups, clan coordination (organic solidarity)**	Groups are in place. They are good at creating knowledge in Tacit forms, at contributing to the establishment of common values and beliefs These Cohesive groups spread information but also generate normative, symbolic and cultural structures, which conveys "meaning" (Granovetter, 1992)		Average		Average -
	Social Context consideration	This deals with the consideration and respect of the fact that individuals do not slavishly follow a script. They are embedded in on-going systems of relations - a "web of social relations" - with a direct effect on economic actions. Ultimately, this is a matter of "Reification", namely a mix of control management tools, various social actors and associated practices.	Poor			
	Contractualisation	When properly implemented, contractualisation will or can deter from opportunism and thus reduce uncertainty which is a potential huge cost and threat for appropriation of concerns between actors. However, contractualisation is a device to define goals and methods in order to enable effective joint planning (but it is not primarely an ex-post control device!)		Average		
	Buyer committment	This will determine the level of strategic partnership with a supplier i.e. its participation in design, in the process of procurement and production. It will also help optimise resource scarcity management The more committed a buying firm is to its relationship with key suppliers, the more the relational capital between the former and the latter will build up, which proves a key factor to improve performance. It is unlikely that key suppliers will fully engage in sets of changes requested by the buying firm unless there is tangible evidence that the purchasing organisation will support supplier investments with matched resource		Average		
	Seller committment	This will determine the extent to which a supplier is flexible in response to a request from a buyer, its willingness to help during emergencies, its reliability to fulfil requirements (at least when there is an agreement). It will also help optimise resource scarcity management The more committed a buying firm is to its relationship with key suppliers, the more the relational capital between the former and the latter will build up, which proves a key factor to improve performance		Average		
	Trust establishment & management	This enables close relationships at a personal level ... to act as if uncertainty potential is reduced ... to adopt a belief without being fully informed It will or can reduce the need for formal co-ordination or improve co-ordination ... while even the world's most cutting-edge knowledge can be rendered useless without trust in the network, as sharing and implementation of knowledge becomes difficult. This is a component of embedded relations that requires characterisitics of a particular structure of relationships	Poor			
	Understanding of sensitivity to interdependence of production and exchange relations	May help avoid falling into the trap that transaction costs reduction has a higher impact than productivity - enhancing factors tied to superior skills and knowledge.		Average		
	Governance structure well in place	Often based on contractual or formalised arrangements, this is about enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence	Poor			

EXAMPLE	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= *participate in the Key Levers effectiveness & are subject to control through suitable tools and devices*)	Meaning & Main Attributes (=*possible objects of control*)	Poor	Average	Good	
Balanced Economic benefits monitoring and surveillance	**KPIs / Assessments**	This deals with the management by objectives through: measurement of production, acquisition and structural costs based on a comparison between in-house and supplier costs. It is about Continuous Operations (Quality, Delivery & Responsiveness) performance management.	Poor			Poor +
	Cross organisational designed management accounting systems	This element deals with the mastery of Total Cost of Acquisition & Ownership (NB: such an accurate mastery of costs across an organisation is most often difficult to achieve given the complexity of data gathering & crunching).	Poor			
	Deeper involvement of accountants in the negotiation of actions and profit sharing	This will or can reinforce the use of simulations for investment decisions, new product development, along with greater emphasis on negotiation to better determine the terms of co-operations	Poor			
	Review of how the risk/return position of each party is affected by different actions	This corresponds to standard economical objectives management.		Average		
Networking capabilities (= Best-in-Class Network Management)	**Formal impersonal communication**	This is explores the level of information exchange between co-operating actors through information technology, the establishment of quick ordering systems and stable procurement through network.		Average		Poor +
	Ties among firms **- Structural** **- Relational**	The structure and quality of social ties among firms shape economic activities by creating unique opportunities and access to them. They determine and explain the behaviour of people because actors are affected/influenced by the quality & structure of their network (= "the structure of social ties determines actors behaviours" and "the mere fact of attachment to others may modify economic actions", Granovetter, 1992: 35). Social capital theory associated with structural ties serves as the foundation for the view that explicit types of information are more efficiently transferred via weak relationships as opposed to strong ties that may be necessary for the transfer of complex, tacit types of knowledge or information.	Poor			
	Social recognition management	Important role as activities are greatly affected by the social context within which they take place. "Social relations penetrate irregularly and in different degrees in different sectors of economic life" (Granovetter, 1985:491)	Poor			
	Managerial communication to further improve relational performance	This will determine or enable loyalty to the relationship in addition to mutual understanding as long as it is structured, but more persona; information sharing will help address the equivocality inherent to IORs.	Poor		Good	
	Technical communication to further improve relational performance	It will determine quality, timing, level and type of technical communication between development engineers of co-operating firms. It will ease fast decision making which thus becomes beneficial for the network partners. It will or can reduce product development risks linked to product & process.	Poor		Good	
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)	Assuming that productivity enhancement is close to superior skills & knowledge because people know more than what they can clearly articulate, this enables co-operations to rely on knowledge shared and developed. Accordingly, it becomes possible to capitalise on knowledge viewed as the most important means of production in today's knowledge-based economy.	Poor			
	EXPLICIT knowledge management	This will enhance Productivity through the articulation of comprehensive knowledge. It will enable co-operations to rely on knowledge shared and developed but also to capitalise on knowledge viewed as the most important means of production in today's knowledge-based economy.		Average	Good	

EXAMPLE	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= *participate in the Key Levers effectiveness & are subject to control through suitable tools and devices*)	Meaning & Main Attributes (=*possible objects of control*)	Poor	Average	Good	
Information Asymmetry (positive) Management	**Understanding and adjusting information needs depending on alliances types & business networks (= proper balance between level of trust and information needed)**	This will optimise Trust management and joint collaboration without scarifying visibility. This is assuming that information and trust needs must be appreciated depending on the different stages of developing a relationship.	Poor	Average		AVERAGE
	Know who you are dealing with	Quite obviously, this is about understanding as soon as possible what and who can or cannot be trusted because the cost of developping reliable forms of trust and the cost of doing it are rarely considered in cost benefits analysis.	Poor			
	Information management control relating to the willingness to trust given recognised competence and integrity	The management of this type of information provides what is needed to create trust and verify the state of the relationship.	Poor			
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer	The management of this type of information provides means to make economic judgements on strategies, investments and on-going operations. A component of embedded relations that requires characteristics of a particular structure of relationships.	Poor			
Mastery of Events (= Coordination of tasks)	**Cohesive groups, clan coordination (organic solidarity)**	Groups are in place. They are good at creating knowledge in Tacit form, at contributing to the establishment of common values and beliefs These Cohesive groups spread information but also generate normative, symbolic and cultural structures which conveys MEANING (Granovetter, 1992).		Average		Average
	Clear Organisation and adequate escalation process	This will provide better visibility for stakeholders and ease the "learning & working well together" processes.		Average		
	Constant evolution	When properly managed, this will make it possible to learn & work well together		Average		
	Bonding	This will enable the "learning & working well together" processes between co-operating actors.		Average		
	Learning Philosophy	Enables "learning & working well together".	Poor			
	Contractualisation	Viewed here as a device to define goals and methods in order to enable effective joint planning (but not primarily an ex-post control device!)			Good	
	Co-ordination mechanisms like escalation pyramid or executive reviews	The more complex an environment is and the more differentiated the units are for satisfying their environment, the higher is the need for integration mechanisms to co-ordinate activities.	Poor			
	Defining goals and methods	This helps in effective joint planning instead of ex-post control.		Average		
	Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.	This avoids having excessive expectations from the relationship too early on. It refrains from seeking a given time invariant optimal system. This helps to perpetually adapt and modify the system to meet changing relationship needs.		Average		
	Governance structure targeted with determination	Often based on contractual or formalised arrangements, this is about enabling exchanges and escalations mechanisms or shared value systems and vision in order to sustain mutual dependence	Poor			

EXAMPLE	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= *participate in the Key Levers effectiveness & are subject to control through suitable tools and devices*)	Meaning & Main Attributes (=*possible objects of control*)	Poor	Average	Good	
Relational Capital Management (=Positive Sensitive attitudes)	**Social Capital management including sensitivity to culture**	This is a generally accepted acknowledgement that features of social organisations such as network, norms and trust facilitate co-ordination and co-operation for mutual benefits (Lin, 2001)		Average		Average
	Level of mutual trust, respect and interaction between actors at multiple levels	"Close relationships at personal level are heavily dependent on the establishment of Trust (…) an ubiquitous and a fundamental building block of social life" (Tomkins, 2001: 164-165)	Poor	Average		
	Social recognition management	Refers to innovation viewed as a social phenomenon, a human activity which can only be fulfilled when certain conditions are obtained (Burns and Stalker). Important role as activities are greatly affected by the social context within they take place. "Social relations penetrate irregularly and in different degrees in different sectors of economic life" (Granovetter, 1985:491). For example, having ERP systems result in social capital requests that information exchanges should be used as a platform to develop direct human contacts rather than a substitute for face-to-face interaction (Lengnick-Hall et al. , 2004)		Average		
	Relationship management type establishment about: **= management of interacting people** **= Joint problem-solving arrangements**	This will generate relationship performance improvements: = degree to which the IORs have over the past two to three years resulted in improved product, design, process design and product quality for the benefit of co-operating firms It is a component of embedded relations that requires characteristics of a particular structure of relationships	Poor			
	Culture Management	To be further explored	Poor			
	Power management	By reference to Hardy (1985, 2011), it can be viewed as the management of the potential of one social unit to influence the behaviour of another in order to achieve preferred situations or outcomes. Power is thus assimilated to resources; Influence is understood as the application of resources used in situations of conflict	Poor			
Shared vision	**Defining convergent goals and collaborative futures**	This will increase the degree to which the needs, demands, goals, objectives or structures of one "component" are consistent with those of the others. Inevitably, it will have an impact on the culture, work, people and the formal organisation	Poor			Average
	Governance structure targeted determination	This is a matter of enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence which is paramount. Particularly, it is key to check that the counterpart can take advantage of the contribution made by the other one.	Poor			
Internal Cooperation (= Influence of its own organization over external parties)	**Consensus between internal stakeholders**	The greater the degree of consensus among or between stakeholders, the higher the probability that these organisations will or can establish constructive relationships. Accordingly, each individual (or group of individuals) involved in the IOR has to manage two types of relationships: internal ones with colleagues from his/her firm; and external ones with members from the co-operating firm. This implies embeddedness of inter-individuals intra- and inter-organisational types.	Poor			Poor
	Internal governance structure targeted determination	This is a matter of enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence	Poor			
Leadership	**Lead change and provide a meaning to rally individuals** **Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations**	It requires an understanding that you do not own people, that you cannot control them. They must want to and choose to be in the company of others, oriented towards a particular mission. It enables to set a direction (develop vision, devise strategies for change to achieve goals)	Poor			Poor
Information Systems (= Devices & management)	**Objectivising and materialising technical, business and involvement aspects of IOR**	This enables the flow information between parties regarding specifications, incidents, improvements etc. Information flows regarding commercial and planning aspects of the relationship; measures lead times and changes, costs and market information etc. Information flows that allow a greater involvement and participation in improvement activities; measures performance feedback, etc. The development of a strong information technology infrastructure is critical to create value in a supply chain and the applications and communication architecture must be carefully planned to provide a strong foundation for the growth of interorganisational systems and to increase productivity, leverage data already held and enable electronic relationships.		Average		Average

A second step will consist in scoring control types – formal or informal – applied to each *Enabler* with a strict respect of definitions provided with the "**IOR control dimensions typology".** Where appropriate (i.e. a relevant control type needs be assessed as indicated by a cross in the "**Maturity Level Grid Analysis of IORs Management Control"**) it is consisting in attributing assessment scores (Poor, Average, Good) that can rest on evidences gathered though the proposed participating observations, case studies and interviews but also the previous assessment made on both *Key Levers* and *Enablers*.

For each specific type of control (Outcome control, Behaviour control and Social control) a cumulative sum is calculated which is taking into account the following weighting:

POOR	**3**
AVERAGE	**6**
GOOD	**9**

These sums are then compared to the following scale table:

		Score Outcome Control	Score Behaviour Control	Score Social Control
Thresholds table	**POOR**	**102**	**102**	**90**
	AVERAGE	**204**	**204**	**180**
	GOOD	**306**	**306**	**270**

Depending on the scores obtained, each specific control mechanisms type can thus be ranked with the following rules:

- Outcome and Behaviour control types:
  - POOR when comprised between 102 and 170
  - AVERAGE when comprised between 171 and 250
  - GOOD when comprised between 251 and 306

- Social control type:

- POOR when comprised between 90 and 150
- AVERAGE when comprised between 151 and 200
- GOOD when comprised between 201 and 270

Illustrated on the following page, such an appreciation, combined with the ones on *Key Levers*, is recommended in anticipation of a search for correlations between measures taken to implement *Enablers* and maturity of associated control types applied (chapter 5, section 1).

EXAMPLE			Relevant Types of Control (Ouchi, 1979)		Associated Control Mechanisms Types (Dekker, 2004; Björn, 1997)		
KEY LEVERS	**ENABLERS AT STAKE (=participate in the Key Levers effectiveness)**	**APPRECIATION OF KEY LEVERS**	***Formal***	***Informal***	**Score Outcome Control**	**Score Behaviour Control**	**Score Social Control**
Appropriation of concerns & generation of Trust	Cohesive groups, clan coordination (organic solidarity)	Poor +	x	x	POOR	GOOD	GOOD
	Social Context consideration		NA	x	NA	NA	GOOD
	Contractualisation		x	NA	AVERAGE	AVERAGE	NA
	Buyer committment		x	x	AVERAGE	AVERAGE	GOOD
	Seller committment		x	x	POOR	AVERAGE	GOOD
	Trust establishment & management		x	x	POOR	POOR	GOOD
	Understanding of sensitivity to interdependence of production and exchange relations		NA	x	NA	NA	NA
	Governance structure well in place		x	x	AVERAGE	GOOD	GOOD
Balanced Economic benefits monitoring and surveillance	KPIs / Assessments	Average -	x	NA	POOR	AVERAGE	NA
	Cross organisational designed management accounting systems		x	NA	POOR	GOOD	NA
	Deeper involvement of accountants in the negotiation of actions and profit sharing		x	x	POOR	GOOD	GOOD
	Review of how the risk/return position of each party is affected by different actions		x	NA	AVERAGE	POOR	NA
Networking capabilities (= Best-in-Class Network Management)	Formal impersonal communication	Poor -	x	NA	POOR	AVERAGE	NA
	Ties among firms - Structural - Relational		NA	x	NA	NA	GOOD
	Social recognition management		NA	x	NA	NA	GOOD
	Managerial communication to further improve relational performance		x	x	AVERAGE	POOR	GOOD
	Technical communication to further improve relational performance		x	x	AVERAGE	POOR	GOOD
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)		NA	x	NA	NA	GOOD
	EXPLICIT knowledge management		x		AVERAGE	AVERAGE	NA
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks (= proper balance between level of trust and information needed)	Poor -	x	x	POOR	POOR	GOOD
	Know who you are dealing with		x	x	AVERAGE	POOR	GOOD
	Information management control relating to the willingness to trust given recognised competence and integrity		x	x	AVERAGE	POOR	GOOD
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer		x	NA	AVERAGE	POOR	NA
Mastery of Events (= Coordination of tasks)	Cohesive groups, clan coordination (organic solidarity)	Poor -	x	x	POOR	GOOD	GOOD
	Clear Organisation and adequate escalation process		x		AVERAGE	POOR	NA
	Constant evolution		x	NA	AVERAGE	POOR	NA
	Bonding		x	x	AVERAGE	AVERAGE	GOOD
	Learning Philosophy		NA	x	NA	NA	GOOD
	Contractualisation		x	NA	AVERAGE	POOR	NA
	Co-ordination mechanisms like escalation pyramid or executive reviews		x	x	AVERAGE	AVERAGE	NA
	Defining goals and methods		x	NA	AVERAGE	POOR	NA
	Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.		NA	x	NA	NA	AVERAGE
	Governance structure targeted with determination		x	x	AVERAGE	POOR	GOOD
Relational Capital Management (=Positive Sensitive attitudes)	Social Capital management including sensitivity to culture	Poor -	x	x	POOR	POOR	GOOD
	Level of mutual trust, respect and interaction between actors at multiple levels		NA	x	NA	NA	GOOD
	Social recognition management		NA	x	NA	NA	GOOD
	Relationship management type establishment about: = management of interacting people		x	NA	POOR	AVERAGE	NA
	Culture Management		NA	x	NA	NA	GOOD
	Power management		NA	x	NA	NA	GOOD
Shared vision	Defining convergent goals and collaborative futures	Poor -	x	x	POOR	GOOD	GOOD
	Governance structure targeted determination		x	x	AVERAGE	AVERAGE	GOOD
Internal Cooperation (= Influence of its own organization over external parties)	Consensus between internal stakeholders	Average -	x	x	POOR	AVERAGE	NA
	Internal governance structure targeted determination		x		AVERAGE	AVERAGE	GOOD
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	Poor -	x	x	AVERAGE	AVERAGE	GOOD
Information Systems (= Devices & management)	Objectivising and materialising technical, business and involvement aspects of IOR	Poor +	x	NA	AVERAGE	POOR	NA
	OVERALL AVERAGE CONTROL PRACTICES SCORE				165	177	258
	THRESHOLDS TABLES RESULTS				POOR	AVERAGE	GOOD

Table 19 - Control Types Scoring table

KEY TRANSITION

At this stage, we consider that chapter 3 section 1 offered a comprehensive and effective outline of the key characteristics of IORs which justifies the need for particular attention to be paid to both formal and informal control devices along with structures of control.

Subsequently, chapter 3 section 2 laid emphasis on what is concretely at stake for strategic management control tools and devices when dealing with IORs. By doing so, it was possible to establish a synthesis of the existing academic contributions which was capitalised through specific processes and assessment, namely the CCKLF Matrix, the Maturity Level Grid Analysis of IORs Management Control and both the *Key Levers* & *Enablers* and the Control types scoring tables.

Consequently, by making good use of the analysis process and associated typologies proposed, this thesis sets out to further study and assess in practice and in reality how control can be exerted in the framework of IORs. Through on the ground experiences proposed in chapter 4, our goal is to highlight specific issues and effects linked to incompatibility, poor appreciation or even non-recourse to management control with regards to the *Key Levers* as advocated within chapter 3.

Finally, assessing formal and informal control practices or devices used where appropriate for each *Enabler* of each *Key Lever*, will enable to underline key limits, in particular with formal control devices. This may afford the opportunity to provide additional insights in research dealing with alternative modes of control and their real influence on most traditional management control approaches. In particular, this approach may substantiate the view that despite the fact that they prevail within most corporations, hierarchical and formal modes of control do not necessarily prove relevant or sufficient to deliver tangible successful achievements.

CHAPTER 4 - IORS STRATEGIC MANAGEMENT CONTROL STRATEGY, DEVICES AND TOOLS IN PRACTICE WITHIN CIVIL AEROSPACE

So far this thesis has offered a review of the intrinsic characteristics, purposes and types of possible IORs in order to better understand their potential *raison d'être* within the specific context of the civil aerospace environment. Based mainly on theoretical considerations, we considered the possible constituents of inter-organisational interfaces management practices with a strong focus on management control. Consequently, we set the necessary theoretical foundations to fully assess the criticality but also the causes for failures of IORs in the framework of inter-organisational co-operating arrangements within the aerospace industry. This approach provided the necessary insight and hopefully a valuable input before establishing a grid of analysis detailed in chapter 3, section 3.

The next step of this research must therefore be to confront those theoretical considerations with on-field observations and case studies**.** Based on this exercise, it is intended to complement theoretical viewpoints. An approach is developed in this chapter to report the current practices deployed in real business life and categorise them with regards to the *Key Levers* proposed in the CCKLF Matrix and the Maturity Level Grid Analysis of IORs Management Control.

This will make it possible to exert a critical judgment on facts reported through the use of the Maturity Level Grid Analysis of IORs Management Control and both the *Key Levers* & *Enablers* and the Control types scoring tables. In doing so, we intend to develop an assessment conducted in a structured manner based on logically and consistently established scorings. Such an approach will help draw conclusions in terms of IORs success and Control type correlations.

In the following sections, three IORs will be considered as they are representative of the reality of the civil aerospace industry. As we will discuss throughout this chapter, one of them is praised and meant to be the greatest success story the whole industry dreams of (YANKEES & BBR), the second failed badly (TZUFU & ATERO), while the last IORs is

somewhere in between (AEROMOTOR & GEARB). In each of these cases, the context and the specific characteristics of the IORs at stake will be emphasised before the restitution of on-field observations gained either through a ten-month journal or both formal and informal interviews. The restitution itself is organised so as to reflect the outcomes observed by reference to the *Key Levers* previously identified.

SECTION 1 - YANKEES & BBR

The following case study was considered relevant as it deals with the long-term inter-organisational relationship existing between companies from two different countries and radically different cultures. This co-operation is also one of the most praised within the industrial world and more specifically in civil aerospace. This success was reinforced by the recent renewal, for at least the next two decades, of the inter-organisational co-operating arrangements between these two firms.

Importantly, for confidentiality reasons, I decided not to be too explicit and precise, especially when referring to figures and individuals approached.

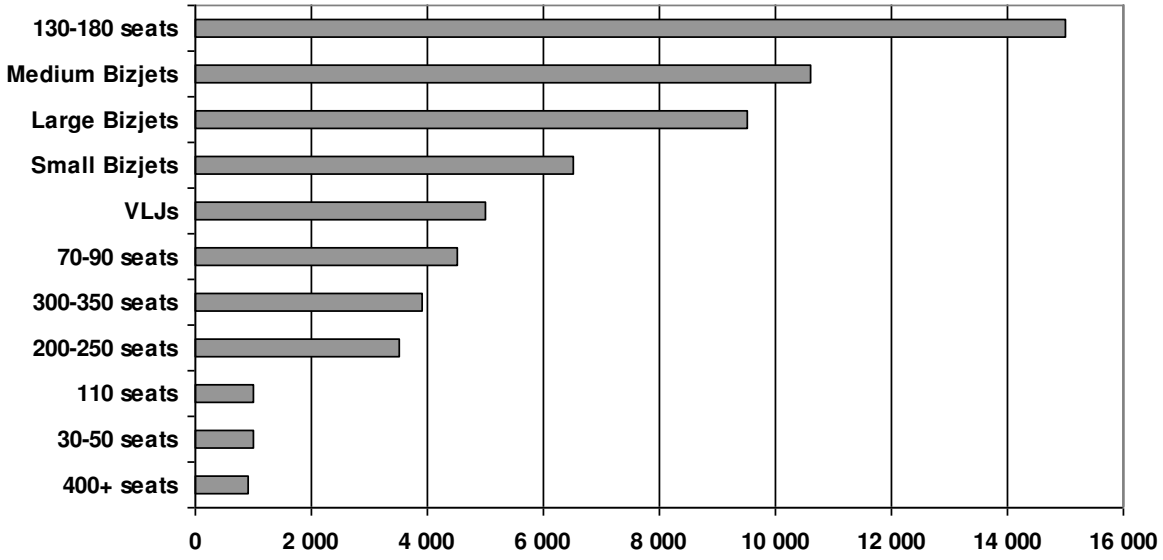
1. CONTEXT AND CHARACTERISTICS

In civil aerospace, success stories are numerous but technically, commercially and financially speaking one of these stories certainly stands out from the others. For example, viewed in terms of product sales, the particular IORs under study is one of the international relationships which are most praised worldwide. This relationship was born from the decision by two major companies to collaborate technologically in the mid 70's, with the support of their highest political authorities. In the specific context of the aerospace industry, this collaboration aimed at involving two major corporations in something that would go beyond traditional buyer-seller relationships, and was designed to successfully combine the resources, engineering expertise and the product support of both companies.

The result of these co-operating arrangements that I named the "YANKEES*/BBR IOR*", has played an important part in aircraft take-offs every two seconds, with the highest level of reliability, a unanimously praised cost of ownership and more than 20,000 products delivered to equip more than 8,000 aircrafts for a cumulated number of flying hours exceeding 395 million hours for about 25 years.

Generating a very significant share of the total revenues of both companies, said co-operating arrangements translate into more than 80% of global market shares on 130-180 seat aircrafts,

which enables the prediction of an impressive increase in future order intake when considering projected aircraft deliveries as illustrated in the following chart:



Source: confidential – dated 2011

Chart 5 - Number of aircraft deliveries projected from 2010 to 2029

Given that the two companies recently renewed their long-term inter-organisational co-operating arrangements for another 30 years at least, the above projection chart suggests that the next decades will be just as flourishing.

Not surprisingly in the field of civil aerospace, as in many other industrial fields, the product key characteristics significantly contributed to what a Strategy Senior VP from one of the two companies named an *"inherent success"*. According to him, after decades of existence, on-going product success imposed itself as the one driving cause for such state-of-the-art co-operations. The product and the market have been matching - from the beginning, which in itself is a prime constituent of the success acknowledged by most observers today. However, orchestrating such a colossal amount of activities and so many individuals from different cultural and technical backgrounds did not happen by happenstance. The analysis of the specificities of the inter-organisational management control devices and mechanisms at play within this IORs offered in the following section may offer relevant insight into this success story.

2. FROM A KEY LEVERS PERSPECTIVE, CASE STUDY AND INTERVIEWS OUTPUT

This case study was conducted with one main question in mind: in addition to the product dimension itself, what could the concrete root causes for this success between two companies possibly be? These companies have obviously been suffering neither from being two distinctive entities nor from subsequent evils such as financial asymmetry or a lack of direct authority on various stakeholders- so we must wonder where their key success factors lie.

Along with a detailed study of official communications and informal discussions, semi-formal interviews (x12) were conducted with key actors directly involved in this co-operation and from distinct cultural backgrounds (French and American). Given the level of seniority of some of the individuals interviewed (CEO, Program Vice-Presidents, Group Strategy Vice-President, VP Programs for example), decision was made to summarise all their input together so as in order to ensure a strict respect of confidentiality by avoiding mentioning names or other specific details. The only elements that were preserved were their titles and positions. The following notes may unveil or confirm key aspects that should be taken into consideration, in order to gain an in-depth understanding of both the kind of magic formulae at play in the management control of this remarkable IORs and of what has been making a difference for several decades.

As mentioned previously, the product characteristics of the object of these co-operating arrangements certainly had a strong influence on their success. The product in question was adapted for an equal distribution of work between both parties which probably helped reduce possible frustrations from the stakeholders involved. Also, something which is quite unique in the civil aerospace industry had a critical impact: the common certification authorisation made possible by the agreement of the highest governmental authorities of both countries that an FAA[88] certification was acceptable for the DGAC[89] and *vice versa*. This made it possible to improve the overall product validation process and dramatically reduce the associated certification and development costs.

[88] FAA (Federal Airworthiness Authorities):
[89] DGAC (Direction Générale de l'Aviation Civile):

But interestingly, a vast majority of the individuals approached and who were also quite familiar with the key mechanisms in place, also insisted heavily on the fact that information asymmetry had never been an issue between the stakeholders involved in this IORs because:

> *"No financial transparency was necessary to make things work well between the two companies" (CEO from a major division of BBR)*
>
> *"The only thing that was openly and in full transparency debated within those IORs was solutions to be developed to resolve customers' issues" (former VP Program in Yankee)*

Generally speaking, according to a former CEO who was involved in the YANKEES/BBR IORs for many years, it was based on *"a very light contractual arrangement compared to the business generated and eventually the very long lasting relation: three times less than a standard contract within civil aerospace. Actually, it was established in those days by relying on two men who met and had some chemistry while they were not necessarily easy characters within their respective companies. However, they were very much experienced, with strong leadership and shared mutual trust. From that, it was possible to set the basis of relations relatively light, based on trust and a good balance, both from power and financial viewpoints. This is really outstanding".*

When considering the YANKEES/BBR IOR, the first person I felt appropriate to discuss with was a Global Vice-President Production with whom I had a close relationship. In his late fifties, this very experienced industrialist was heavily involved within this inter-organisational co-operation 15 years ago. According to him the root causes for its success are to be found in one prime fact: since the beginning, YANKEES and BBR's respective CEOs had agreed they had no choice but to urge their respective subordinates to work well with their counter parts. "*Had someone in charge in BBR or in Yankee been a roadblock in the relationship, he would have been penalised*" i.e. fired or removed. Consequently, actors from both organisations had no choice but to split hairs to manage to work together despite interests that were not necessarily always compatible. "*This set a cultural established fact that was indeed critical for success as it left no room for unresolved dispute. On the contrary, this was forcing actors to learn from each other and do their utmost in finding win-win solutions with no possible or tolerated stalemate".*

In other words, the above illustrates a deliberate approach adopted by two companies to address subjects like technical competences, personal inter-skills or language and cultural

constraints. On one hand – at the very beginning – a shared vision was imposed by the bosses of the time. On the other hand, the teams were given autonomy to work in one way or another as long as eventually both YANKEES and BBR could be satisfied. Determination, simplicity and trust through demonstrated delegation proved to be key enablers from the outset. With a specific management culture approach, and a clear industrial determination, this resulted in limited boundaries between the two organisations while full transparency was not required or even intended.

The following parts aim at providing a more detailed assessment of the fit between the practices implemented within the YANKEES/BRR inter-organisational co-operating arrangements and the IORs *Key Levers* proposed in Chapter 3, section 3. As it was interesting from a practical point of view to retrieve the output obtained from on-field exchanges through the analysis grids established and described in chapter 3, section 3, the following sub-sections provide arguments for an interpretation of the YANKEES/BBR IORs management control practices, *Key Lever* by *Key Lever*.

2.1. Shared vision and leadership

Notwithstanding a specific external environment that certainly had a strong impact on the outcome of the YANKEES/BBR inter-organisational co-operating arrangements, from the outset, these firms took advantage from the complementarity of their clear shared visions. According to the current Group Strategy Executive VP from one of the two companies, at the very beginning "*it was essential to diversify the French actor's activities in civil aerospace. The military segment was quite profitable. To some extent, it was a great cash cow but in the long term it was not likely to remain a sustainable business. If it had done nothing to diversify its activities, BBR would certainly have ended up as an appealing M&A target*[90] *for some more advanced manufacturers like Aeromotor. For its part, in those days (60's), Yankee only existed through the military segment and enjoyed public funding of a key product (developed for a large cargo aircraft) which would enable It to develop competence more easily. Still, the financial surface of this company was limited and not comparable with what it is today. Besides, funding for new developments was critical in those days, all the more so as for Yankee, a diversification was necessary to exist on a market dominated that had been dominated so far by the company "United House", while at the same time return of investment made in the product mentioned above had not been reached yet*".

Consequently, the context was such that not much room was left for others to enter the civil market within which the *United House* (a major American company) accounted for more than 85% of the world market shares. On the other hand, some key events and poor management practices in Europe determined the future European aircraft makers: first, as early as in the 60's there was a strong political motivation between European states to build an industrial

[90] A Merger and Acquisition target

champion capable of counterbalancing the domination of already well-established Anglo-Saxon aircraft makers. Secondly, as reminded by a VP program still involved within the YANKEES/BBR IOR, "*initial attempts at industrial co-operation between the French and the English on two previous aircraft types had already failed either due to a poor business model construction or an undermined collaboration with long lasting resentment carried*" due to such an arrogance from one party that "*working together had become extremely complicated*".

In addition, and what turned out to become a game-changing decision, was the decision of the English to pass up the opportunity to be the sole *Product* provider of a European aircraft maker – at an embryonic stage – in order to bet instead on a US alternative development. Yet, particularly because of an inappropriate technical option based on composite for core components, this game was ultimately lost.

Such circumstances played a fundamental role in the joint future of YANKEES and BBR who were initially mainly positioned on the military business, but also intended at the same time to gain a share of the short-to-medium range aircraft market. In other words, the key ingredients and a favourable context for building a co-operation (which turned out to be more of an alliance than a JV as we will see later) were present. This set the foundations of an obvious congruence of goals between YANKEES and BBR, while in practical terms they had no other alternative than to work together in order to develop business within the field of civil aerospace.

According to most individuals interviewed, a mandatory requirement that was fulfilled was that "*First, the big bosses have to want it. If, for whatever reason, they do not… especially when the whole thing is quite fragile from the beginning, it just will not work".*

More concretely, another key aspect lies in the fact that the two companies decided to build the "*co-operation by breaking down the world into regions and sharing them out. It is a technical detail, but a fundamental one*" as a retired French VP Program explained it to me: "*co-operations in which the partner is minor are another story. Because you are not on equal footing, one party dominates the other. It becomes a* rapport de force*, between the company which brings the program, and the one that contributes to it. In our case, both parties were*

equal. It is more interesting, because you have to reach a consensus, agree. We cannot put each other down".

In the case of the YANKEES/BBR IOR, from the outset both parties insisted on clarifying if *"we objectively have the same motivations for being together. If I am in a 50% co-operation, do we really share common goals?"* As evoked by an American Senior VP industrial I spent some time with during a seminar abroad, "*If, from the beginning, economic goals are not aligned, it will not work. This is the first point that should be addressed. Companies can be great friends, but if there is no economic agreement, it's over*". In the case of the YANKEES/BBR co-operating arrangements, the organisations "*managed to share… obviously making sure you solve that issue is crucial. There are so many co-operations where parties just shoot at each other, and are in permanent conflict*".

In this logic, the two companies also shared the view that when a sale was made, it was necessary to agree on the selling price before sharing 50/50 the associated revenues. Consequently, the two companies insisted that it was necessary to get their respective accountants heavily involved in the construction and the driving of these IORs co-operating arrangements. Their respective finance accounting departments thus co-operated to run detailed analyses of all the required tasks during the construction phase of the co-operating mechanisms. This was done to allocate cost of sales homogeneously without valuing anything thereby making it possible to avoid any discussions about money *per se*. Moreover, *"Once we had nailed it down, it was over, there were no more discussions. After that, the worst possible things could happen, on the module of one of the partners, it was not the other partner's problem since once they had signed the agreement, and they had to make it work, regardless of the price."*

As well as their shared vision and key support mechanisms that were implemented, leadership was also consistently mentioned if not praised by most individuals I had the opportunity to discuss with as illustrated by such statements as "*leadership is rather important. The influence of top executives and the messages they send out are important".*

Especially in the field of management, this type of statement is quite trivial and allusions made earlier to the two founders of these inter-organisational co-operating arrangements may illustrate the extent to which elements of leadership seem to have had a significant impact on

the essence and the existence of the YANKEES/BBR IOR. A Program Manager from YANKEES who had never met them confessed they were: "…*Two emblematic men with strong characters and personal experiences. They were extremely experienced, with strong leadership and shared mutual trust".* Consequently, I am not convinced that it is necessarily useful to insist heavily on the characteristic dimensions of the notion of leadership, at least at this stage. But something slightly more subtle is interesting to mention regarding what I would name an *organisational leadership maturation process* suggested by the following considerations expressed by a Senior VP Strategy still acting within a major Civil Aerospace company:

> *"Leadership is another key ingredient to be underlined: from the beginning, with one party having the power to make the final decision and pilot the venture, it is clear that it was easier to make this type of co-operation perform well. During the first 20 years of the co-operation, the American party was driving the co-operation, but this situation has slowly changed. Through the maturity and credibility the French actor gained through great reliability, it has been playing an increasing decision-making role for some years now".*

This statement suggests that leadership is critical but, most importantly it also highlights that one major specificity in the YANKEES/BBR IORs might be the fact that the two parties made it possible to establish and preserve the reality and the effectiveness of leadership, with the blessing of the stakeholders from both sides from the beginning of their working relationship. Thanks to this, the collaboration could rely on strong leadership along with a well-accepted Top Management set up as a reliable reference.

With strong leadership in place, sharing common customer-focused goals and participating equally in all operational activities were fundamental principles fully endorsed by both YANKEES and BBR. With this shared and implemented vision, the two parties could thus build on diversification needs, political drive and orientations, limited financial surface and non-existing credible alternatives which set the foundations for the future successful co-operation which is praised unanimously today.

2.2. Appropriation of concerns and generation of trust

> *"When management control is implemented, it is primarily implemented through regular management meetings… Probably about three a year, and they involve the CEOs of each company". (SVP Industrial from BBR).*

The above statement illustrates that from the beginning, both parties accepted that exemplarity must come from the top. This posture from the Top Management supported and helped maintain a strong sense of determination from all stakeholders in addition to the presence of "*remarkable people at the origin of the YANKEES/BBR agreement. It all started with CEOs who got on very well, that is undeniable*" as underlined by a French agent still involved. As we will see later, this was all the more critical as a specificity of the YANKEES/BBR IORs is the absence of any formal hierarchy to drive joint activities. In this respect, the necessary ingredients to foster the appropriation of concerns were available in this case. When interviewed, most individuals approached insisted that a key characteristic which had strongly helped make things work was a genuine willingness to work together.

> *"At the beginning, you need people who actually want to work together, and this was the case between YANKEES and BBR." (VP Industrial, BBR)*

Importantly, the profiles involved for this joint journey were carefully selected on both sides to suit a specific frame of mind characterised by a strong determination to make things work and split hairs in order to "*achieve technical objectives and to both be able to produce whatever rates requested by customers".*

This willingness was reinforced by the fact that neither of the parties could objectively be said to be biased. A fair balance was carefully established and maintained between the two parties which possibly was a great help in avoiding or resolving issues and concerns as reported by a Program Manager from BBR:

> *"If the product breaks at a client's location, and it is guaranteed, if it costs us 1 million dollars, we each have to pay 500,000. There is a sound motivation, because we share all the costs. The other partner is also interested in seeing the problem solved promptly. Normally, partners live apart from one another, and we don't interfere, but if it is difficult, we will help each other out. Since we don't talk about money, the only thing that is discussed is how to solve the customer issues. We trust each other. We are both equally competent. We have to be able to follow our partner when a particular commercial concession is made. Besides, when there is equality, and if you really want to make things work, you are more inclined to make concessions*

> *The actors in this collaboration had mutual trust in each other. Once we had nailed it down, it was over, there were no more discussions. After that, the worst possible things could happen, on the module of one of the partners, it was not the other partner's problem since once they had signed the agreement, they had to make it work regardless of the price."*

Simple, straightforward rules leaving no room for opportunism but forcing stakeholders to help one another without clouding debates with financial issues is what is brought to light by most of exchanges I had, as illustrated by the previous testimony. In addition, it is interesting to underline the notion of complementarity between stakeholders but also a necessary potential *"substitution ability"* as suggested by the following statement:

> *"For something like this to work, both must be able to create the entire product, and both must be able to quantify it. Both have to have to really understand the product." (VP Industrial, BBR)*

This seems to have been critical in establishing a sort of power and competence equilibrium between YANKEES and BBR, as mentioned by a Program manager from BBR:

> *"If one partner is weaker than the other, it can never work. If the production costs of one party are double that of the other and the latter can't follow them, it's over. When we were determining the sales price, we never went to the other and said 'no we're not going to do that because we don't know how to'. No, from the beginning, we accepted to go for it because we knew we could".*

Interestingly, another element that seems to have greatly contributed to the processes of appropriation of concerns and generation of trust lies in the allocation of accountabilities between YANKEES and BBR. By establishing a certain geographical partition - one party had to have dealings with the biggest fleet and the other with the highest number of airlines the two firms made themselves share and transfer both tacit and explicit knowledge successfully. As a former VP Program from YANKEES actively involved in the process explained to me: *"a major characteristic of the Yankee/BBR inter-organisational co-operating arrangements is that concretely, in its attributed geographical zone, the French party has no choice but to be fully briefed by its counterpart as long as it is selling or maintaining elements of the Product whose responsibility lies in the American party's hand, and vice versa".* In this regard, it was therefore necessary for both parties to rely on an effective interface network from the beginning. Obviously, one can imagine how important this was, as suggested above by the need for each party to fully master its counterpart's product dimensions when managing its regional selling, maintenance and overhaul issues.

Also, according to the Group Strategy Executive VP from one of the two companies, "*this network has always been very powerful because it was clearly defined and successfully renewed while maintaining a mutual dependence between Yankee and BBR*". This remark gives me the opportunity to introduce the topic of networking capabilities and relational capital management.

2.3. Networking capabilities, information systems and relational capital management

Interestingly, from a networking capabilities viewpoint it is interesting to underline that in the context of this agreement, no exchange of engineering people was formally organised. Each party was expected to be fully autonomous. For example, there has never been any joint design or industrialisation office within the YANKEES/BBR inter-organisational co-operation. In reality, mutual technical and engineering support was made possible through tacit knowledge exchanges in line with some principles enunciated by Nonaka (1994).

Firstly, *"the CEOs of both companies met regularly. It was very constructive on both sides; so many issues were discussed regarding strategy, developments, what should be done in terms of aggressivity or not on the market for sales, and sales prices. Common goals were set for the sales teams on either side"* (Program Manager, BBR). On the other hand, *"avoiding a bureaucratic, long- and heavy management of issues is paramount*" (VP Program Manager, YANKEES). Consequently, all actors from different functions have always been put in such conditions that they can devote a significant part of their time to exchanging and sharing ideas with their counterparts from the other firm to address and resolve issues. From the beginning of the venture, this has clearly been seen as a key activity expected to be fully endorsed by stakeholders. In this respect, it would have been interesting to further explore the information devices available to support this. Unfortunately, the individuals I was given to interview were not necessarily very familiar with those aspects. The main feedback I got on this topic is the following:

> *"Information systems is only a box of tools, it does not mean anything. Ok, without it, the company is no good, it just isn't any good".*
>
> *"It is important to differentiate between what is essential to what is just an accessory. Accessories are tools, and we need to have them, but they are not enough by themselves".*

In fact, one of the most striking issues relating to this ability to make relationships work so well is its relational capital management as illustrated herewith:

> *"The human factor was critical too. Relationships between stakeholders from both parties were always good, courtesy and respect always granted."*
>
> *"Once we had nailed it down, it was over, there were no more discussions".*
>
> *"It was a transcontinental friendship …"*

The above statements provide an idea as to the kind of attitudes and behaviours that prevailed within the YANKEES/BBR co-operation. Also, they reflect the view that building on social capital is crucial to the success of this type of industrial co-operations, as underlined by a very experienced former CEO with whom I had the opportunity to discuss.

This view is reinforced by the feedback I received on that specific topic from various stakeholders I approached:

> *"At the beginning, you need people that want to work together, and from the outset, personal relationships are very important".*
>
> *"We talked a lot. When I was in charge of the Yankee/BBR programs, I went to see my counterpart once a month at Yankee, and he came to see me. We saw each other in person roughly twice a month".*
>
> *"He could have been a friend. I know that when he retires, I will go to the states, definitely".*

This proves that positive sensitive attitudes prevailed between the individuals involved in the YANKEES/BBR IOR. With individuals who were willing, but also allowed and even encouraged to spend time together and get to know each other, relational capital management was clearly promoted by both firms:

> *"I do not think of them as my friends, but it is true that we get on very very well. We share information that goes beyond cronyism… My counterpart told me things about Yankee that he did not have to. It just made it all easier. »*
>
> *"… he himself said that there were people within Yankee who were not great fans of the co-operation, and who would have wanted to see Yankee benefit more from it, cheat with the co-operation. He was extra cautious."*
>
> *"We had established a very professional relationship at all times, but also a very friendly one with my Yankee counterpart… My wife received an award two years ago. She knows him well, and likes him. So much so that she invited him to the ceremony, and he crossed the Atlantic to attend the event".*

In this logic, it is quite natural to underline the specific recruitment process in place within the YANKEES/BBR inter-organisational co-operating arrangements and consistently maintained, as suggested by the following:

> *"we want people who can work together, not antagonistic people. I was head of the Yankee/BBR programs. I was chosen because they thought I was not one to create havoc with Yankee. And it was the same on the Yankee side".*
>
> *"Any time someone new was recruited, we always looked for someone who could nurture this relationship."*
>
> *"The problem is not the culture or the country, but the attitude of the people who are involved."*

> *"I mean, obviously, when people come from a culture that is opportunistic, or not suited for co-operation, it will be difficult… We don't always agree on everything. You always need to make an effort, and there is a genuine, on-going willingness to make this co-operation successful".*
>
> *" …there are things that could be done, but it is forbidden because of the co-operation with BBR and you have to be careful, a co-operation is something you must take great care of".*

Yet, we must also acknowledge that in addition to these personal characteristics and beyond their respective attitudes, stringent social norms were implemented, as underlined by a former YANKEES/BBR Programs Manager:

> *"… if we hadn't established a basic grid that meant that we did not have to discuss sensitive subjects, then we would have ended up fighting. No point deluding ourselves. That is why I believe the environment is very important".*
>
> *"You can take the same guys, and put them in a rotten setup. It will lead to an epic failure".*

Consequently, it is interesting to underline that the current Group Strategy Executive VP from one of the two companies insisted heavily on the existing mutual respect between the two parties, which certainly made it easier to develop trust and relational norms. In his view, "*respect was implemented and integrity prevailed among stakeholders while more or less consciously, cultural identity and social capital management were considered critical. In addition, it is important to notice that the Mid-West traditional*[91] *culture has always prevailed within the Yankee teams".*

These testimonies and their subsequent analysis bring to light what was required from both companies to foster the appropriation of concerns and generate trust among stakeholders. This environment was maintained through best-in-class networking capabilities that were made possible through the shared deliberate decision to put the emphasis on relational capital management aspects at all operational levels.

[91] he also added, "in this part of the country, you can leave your wallet on a public bench and find it again several hours later".

2.4. Information asymmetry management, balanced economic benefits monitoring and surveillance

The context described above proves that, for a number of reasons, the YANKEES/BBR co-operation was not plagued by potential information asymmetry problems. However, it is important to underline that, in addition to this, a key characteristic of the YANKEES/BBR IORs is that *"cost performance discrepancy have always been managed based on a percentage sharing approach between the positioning of the two parties",* as admitted by all the interviewees privy to that knowledge. This was made possible through the following mechanisms, which were implemented from the beginning:

> *"With the involvement of accounting departments from both sides… so when we make a sale, everybody must agree upon the sale price. And as soon as there is an agreement, everything is split 50/50 by accountants. It's all very honorable".*
>
> *"When we sell a product, we sell it at a certain price, and each party receives only half of the revenue. When we sell a product with a discount, since this is the established norm, both parties must use the same model. If one gives in too often because it cannot survive, because the price is not high enough, the alliance will end up imploding. The other will consider them to be an unsuitable partner. In order to get out of these dead-ends, accountants and management control play an important role. Together they quantify the positions to enable necessary arbitration".*

The subtlety of this system lies in the fact that people never discuss costs *per se*, as explained by a former CEO from BBR: "*The beauty of the YANKEES/BBR co-operation is that we never talk about money".* ».

> *"Of course, we openly discuss how we can resolve problems, as well as some very sensitive issues. We can support each other; challenge each other to get out of the hole as fast as possible. But what is interesting, is that in these serious discussions, we never talk about money".*
>
> *"We wanted to avoid exchanging money at any cost. There were some situations in which specific developments were being carried out. It affected one partner and not the other. So we discussed money in general. But we tried to sort it all out, to make up for it with something else, and to ensure we remained equals, so that we never had to exchange money"*

In fact, the current system is such that "*both parties have the same bricks to build their business model, without any one party having to reveal itself completely to know how things work. This was probably one of the cornerstones of this success"* as explained a former YANKEES/BBR VP Program.

> *"No transparency was needed. I do not know how the consistency of the other party's business model is verified. The facts demonstrated that … but otherwise, from the outset, there were no guaranties that the business models were identical".*

Concretely, this is illustrated by the following explanation given by one major actor interviewed: *"Yankee/BBR do not share development and production costs. They each had their own business plan. To share the development costs, we agreed on a list of all the tasks that needed to be performed. It was pages and pages… Then, each party calculated 100% of what each task cost them. That was actually not the main concern. We then finished with a certain sum of money. We used this amount as a basis and decided that 'now, this line, this task, is worth x of the total amount, which represented x%. Then we just had to split the Product and the cost percentages per module".*

The method used was also well described by another person interviewed: *"for example, over the total production costs, we quantified all the parts, and calculated the percentage that that represented. Then we looked at production costs, and our department, represented 30%, another 56%. So then the other party said 'Well for us, that actually represents 60%'. For development, we divided the development of modules plus the non-modular activities and system tasks. We calculated it all, and we each ended up with our own result. What is interesting it that we compared global percentages on tasks, but we never discussed actual costs. After, we discussed it and shared out the parts, and at one point, we decided that we both had 50%".*

As a result, each party's autonomy has been preserved from the beginning and information asymmetry has never been a major concern neither for YANKEES nor for BBR. This is actually not surprising when remembering the fundamental primary purpose of this co-operation i.e., becoming a civil Product maker, which implied delivering Products directly from its own FAL (final assembling line) while a coherent financial model needs be in place on both sides.

The financial benefits were not jointly piloted which makes some people say that the issue of profits was never debated within this very particular co-operation. The system in place was determined by the revenue volumes that were managed according to a world partition between the two parties: at the beginning, one party sold in the European, African and the Middle East regions. The other party was in charge of the remaining regions, namely the United States, South-East Asia and India.

The principle of a balanced share of work (50-50 counted in work units) is said to be a fundamental element in the success of the co-operation. This principle makes it possible to share revenues equitably as they are driven by the percentage of work accomplished respectively by the two parties, though it must also be underlined here that from the beginning of this venture, the most sensitive (core) Product dimension has been in the hands of the American party with regards to development and production in particular.

2.5. Mastery of events and coordination of tasks

Obviously, given the complexity of the product considered, the organisations and the market at stake, mastery of events is a critical dimension worth exploring in the YANKEES/BBR IOR.

When questioned regarding the successful ingredients of this co-operation to co-ordinate all activities and tasks, most individuals approached insisted that "*the programme managers from both Yankee and BBR were responsible for proposing options between themselves before formal validation through a formal escalation process*". This suggests that stakeholders from various functions were not handicapped by a very bureaucratic or hierarchical structure. Quite the contrary, from the beginning of the co-operation, operational stakeholders were expected to adopt entrepreneurial processes and ways of working. Yet, this is easy to say but more difficult to put into practice, as testified by most issues encountered in most organisations nowadays, and which are self-explanatory when dealing with the empowerment and autonomy of managers.

In fact, from the outset, the YANKEES/BBR inter-organisational co-operating arrangements have been based on *"extremely simple mechanisms"* as reported by a person interviewed:

> *"both organisations work like a mirror. The only place where we are not together is sales and post-sales. We shared out the world. Each of us has our geographic area. At least that way we do not step on each other's toes. It is also a good idea: if the sales teams are placed on the same geographic region, I think that would be hell".*

Day to day activities does not necessarily involve individuals from both parties working together.

> *"… in everyday life, they only work together relatively little. Each has its own module. Thereafter, the Product integration tasks were shared".*
>
> *"For example, the Product performances were the responsibility of Yankee. Operability, i.e. the fact that the Products worked, was Yankee. The installation at the aircraft manufacturers was BBR, and so and so forth. Acoustics was us, as was polluting emissions. So everything was shared out. There were modular tasks, that were physically separated, and then integration and system tasks, that were split".*

Assuming there have always been enough activities to share, the mastery of events was much localised.

> *"Then, when you go into detail, the teams on each side could meet up. I saw my Yankee counterpart twice a month. We spoke often".*

2.6. Internal cooperation

Understood as the influence of the organisation of the client on the control of suppliers, this particular Key Lever has not been sufficiently explored and researched in the framework of the YANKEES/BBR IOR. Decision was thus made to neutralise that dimension in the overall assessment run for the YANKEES/BBR IOR.

3. SCORING AND INTERPRETATIONS

YANKEES / BBR	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)	Meaning & Main Attributes (=possible objects of control)	Poor	Average	Good	
Appropriation of concerns & generation of Trust	**Cohesive groups, clan coordination (organic solidarity)**	Groups are in place. They are good at creating knowledge in Tacit forms, at contributing to the establishment of common values and beliefs These Cohesive groups spread information but also generate normative, symbolic and cultural structures, which conveys "meaning" (Granovetter, 1992)			Good	GOOD+
	Social Context consideration	This deals with the consideration and respect of the fact that individuals do not slavishly follow a script. They are embedded in on-going systems of relations - a "web of social relations" - with a direct effect on economic actions. Ultimately, this is a matter of "Reification", namely a mix of control management tools, various social actors and associated practices.			Good	
	Contractualisation	When properly implemented, contractualisation will or can deter from opportunism and thus reduce uncertainty which is a potential huge cost and threat for appropriation of concerns between actors. However, contractualisation is a device to define goals and methods in order to enable effective joint planning (but it is not primarely an ex-post control device!)		Average		
	Buyer committment	This will determine the level of strategic partnership with a supplier i.e. its participation in design, in the process of procurement and production. It will also help optimise resource scarcity management The more committed a buying firm is to its relationship with key suppliers, the more the relational capital between the former and the latter will build up, which proves a key factor to improve performance. It is unlikely that key suppliers will fully engage in sets of changes requested by the buying firm unless there is tangible evidence that the purchasing organisation will support supplier investments with matched resource			Good	
	Seller committment	This will determine the extent to which a supplier is flexible in response to a request from a buyer, its willingness to help during emergencies, its reliability to fulfil requirements (at least when there is an agreement). It will also help optimise resource scarcity management The more committed a buying firm is to its relationship with key suppliers, the more the relational capital between the former and the latter will build up, which proves a key factor to improve performance			Good	
	Trust establishment & management	This enables close relationships at a personal level ... to act as if uncertainty potential is reduced ... to adopt a belief without being fully informed It will or can reduce the need for formal co-ordination or improve co-ordination ... while even the world's most cutting-edge knowledge can be rendered useless without trust in the network, as sharing and implementation of knowledge becomes difficult. This is a component of embedded relations that requires characterisitics of a particular structure of relationships			Good	
	Understanding of sensitivity to interdependence of production and exchange relations	May help avoid falling into the trap that transaction costs reduction has a higher impact than productivity - enhancing factors tied to superior skills and knowledge.			Good	
	Governance structure well in place	Often based on contractual or formalised arrangements, this is about enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence			Good	

YANKEES / BBR	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	**ENABLERS** (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)	**Meaning & Main Attributes** (=possible objects of control)	**Poor**	**Average**	**Good**	
Balanced Economic benefits monitoring and surveillance	**KPIs / Assessments**	This deals with the management by objectives through: measurement of production, acquisition and structural costs based on a comparison between in-house and supplier costs. It is about Continuous Operations (Quality, Delivery & Responsiveness) performance management.	Poor			AVERAGE-
	Cross organisational designed management accounting systems	This element deals with the mastery of Total Cost of Acquisition & Ownership (NB: such an accurate mastery of costs across an organisation is most often difficult to achieve given the complexity of data gathering & crunching).	Poor			
	Deeper involvement of accountants in the negotiation of actions and profit sharing	This will or can reinforce the use of simulations for investment decisions, new product development, along with greater emphasis on negotiation to better determine the terms of co-operations			Good	
	Review of how the risk/return position of each party is affected by different actions	This corresponds to standard economical objectives management.		Average		
Networking capabilities (= Best-in-Class Network Management)	**Formal impersonal communication**	This is explores the level of information exchange between co-operating actors through information technology, the establishment of quick ordering systems and stable procurement through network.			Good	GOOD+
	Ties among firms **- Structural** **- Relational**	The structure and quality of social ties among firms shape economic activities by creating unique opportunities and access to them. They determine and explain the behaviour of people because actors are affected/influenced by the quality & structure of their network (= "the structure of social ties determines actors behaviours" and "the mere fact of attachment to others may modify economic actions", Granovetter, 1992: 35). Social capital theory associated with structural ties serves as the foundation for the view that explicit types of information are more efficiently transferred via weak relationships as opposed to strong ties that may be necessary for the transfer of complex, tacit types of knowledge or information.			Good	
	Social recognition management	Important role as activities are greatly affected by the social context within which they take place. "Social relations penetrate irregularly and in different degrees in different sectors of economic life" (Granovetter, 1985:491)			Good	
	Managerial communication to further improve relational performance	This will determine or enable loyalty to the relationship in addition to mutual understanding as long as it is structured, but more persona; information sharing will help address the equivocality inherent to IORs.			Good	
	Technical communication to further improve relational performance	It will determine quality, timing, level and type of technical communication between development engineers of co-operating firms. It will ease fast decision making which thus becomes beneficial for the network partners. It will or can reduce product development risks linked to product & process.			Good	
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)	Assuming that productivity enhancement is close to superior skills & knowledge because people know more than what they can clearly articulate, this enables co-operations to rely on knowledge shared and developed. Accordingly, it becomes possible to capitalise on knowledge viewed as the most important means of production in today's knowledge-based economy.			Good	
	EXPLICIT knowledge management	This will enhance Productivity through the articulation of comprehensive knowledge. It will enable co-operations to rely on knowledge shared and developed but also to capitalise on knowledge viewed as the most important means of production in today's knowledge-based economy.			Good	

YANKEES / BBR	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)	Meaning & Main Attributes (=possible objects of control)	Poor	Average	Good	
Information Asymmetry (positive) Management	**Understanding and adjusting information needs depending on alliances types & business networks (= proper balance between level of trust and information needed)**	This will optimise Trust management and joint collaboration without scarifying visibility. This is assuming that information and trust needs must be appreciated depending on the different stages of developing a relationship.			Good	GOOD
	Know who you are dealing with	Quite obviously, this is about understanding as soon as possible what and who can or cannot be trusted because the cost of developping reliable forms of trust and the cost of doing it are rarely considered in cost benefits analysis.			Good	
	Information management control relating to the willingness to trust given recognised competence and integrity	The management of this type of information provides what is needed to create trust and verify the state of the relationship.		Average		
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer	The management of this type of information provides means to make economic judgements on strategies, investments and on-going operations. A component of embedded relations that requires characteristics of a particular structure of relationships.			Good	
Mastery of Events (= Coordination of tasks)	**Cohesive groups, clan coordination (organic solidarity)**	Groups are in place. They are good at creating knowledge in Tacit form, at contributing to the establishment of common values and beliefs These Cohesive groups spread information but also generate normative, symbolic and cultural structures which conveys MEANING (Granovetter, 1992).			Good	GOOD
	Clear Organisation and adequate escalation process	This will provide better visibility for stakeholders and ease the "learning & working well together" processes.			Good	
	Constant evolution	When properly managed, this will make it possible to learn & work well together			Good	
	Bonding	This will enable the "learning & working well together" processes between co-operating actors.		Average		
	Learning Philosophy	Enables "learning & working well together".			Good	
	Contractualisation	Viewed here as a device to define goals and methods in order to enable effective joint planning (but not primarily an ex-post control device!)		Average		
	Co-ordination mechanisms like escalation pyramid or executive reviews	The more complex an environment is and the more differentiated the units are for satisfying their environment, the higher is the need for integration mechanisms to co-ordinate activities.			Good	
	Defining goals and methods	This helps in effective joint planning instead of ex-post control.			Good	
	Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.	This avoids having excessive expectations from the relationship too early on. It refrains from seeking a given time invariant optimal system. This helps to perpetually adapt and modify the system to meet changing relationship needs.		Average		
	Governance structure targeted with determination	Often based on contractual or formalised arrangements, this is about enabling exchanges and escalations mechanisms or shared value systems and vision in order to sustain mutual dependence			Good	

YANKEES / BBR	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)	Meaning & Main Attributes (=possible objects of control)	Poor	Average	Good	
Relational Capital Management (=Positive Sensitive attitudes)	**Social Capital management including sensitivity to culture**	This is a generally accepted acknowledgement that features of social organisations such as network, norms and trust facilitate co-ordination and co-operation for mutual benefits (Lin, 2001)			Good	GOOD+
	Level of mutual trust, respect and interaction between actors at multiple levels	"Close relationships at personal level are heavily dependent on the establishment of Trust (…) an ubiquitous and a fundamental building block of social life" (Tomkins, 2001: 164-165)			Good	
	Social recognition management	Refers to innovation viewed as a social phenomenon, a human activity which can only be fulfilled when certain conditions are obtained (Burns and Stalker). Important role as activities are greatly affected by the social context within they take place. "Social relations penetrate irregularly and in different degrees in different sectors of economic life" (Granovetter, 1985:491). For example, having ERP systems result in social capital requests that information exchanges should be used as a platform to develop direct human contacts rather than a substitute for face-to-face interaction (Lengnick-Hall et al. , 2004)			Good	
	Relationship management type establishment about: **= management of interacting people** **= Joint problem-solving arrangements**	This will generate relationship performance improvements: = degree to which the IORs have over the past two to three years resulted in improved product, design, process design and product quality for the benefit of co-operating firms It is a component of embedded relations that requires characteristics of a particular structure of relationships			Good	
	Culture Management	To be further explored			Good	
	Power management	By reference to Hardy (1985, 2011), it can be viewed as the management of the potential of one social unit to influence the behaviour of another in order to achieve preferred situations or outcomes. Power is thus assimilated to resources; Influence is understood as the application of resources used in situations of conflict			Good	
Shared vision	**Defining convergent goals and collaborative futures**	This will increase the degree to which the needs, demands, goals, objectives or structures of one "component" are consistent with those of the others. Inevitably, it will have an impact on the culture, work, people and the formal organisation			Good	GOOD+
	Governance structure targeted determination	This is a matter of enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence which is paramount. Particularly, it is key to check that the counterpart can take advantage of the contribution made by the other one.			Good	

YANKEES / BBR	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)	Meaning & Main Attributes (=possible objects of control)	Poor	Average	Good	
Internal Cooperation (= Influence of its own organization over external parties)	**Consensus between internal stakeholders**	The greater the degree of consensus among or between stakeholders, the higher the probability that these organisations will or can establish constructive relationships. Accordingly, each individual (or group of individuals) involved in the IOR has to manage two types of relationships: internal ones with colleagues from his/her firm; and external ones with members from the co-operating firm. This implies embeddedness of inter-individuals intra- and inter-organisational types.		Average		AVERAGE+
	Internal governance structure targeted determination	This is a matter of enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence		Average		
Leadership	**Lead change and provide a meaning to rally individuals** **Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations**	It requires an understanding that you do not own people, that you cannot control them. They must want to and choose to be in the company of others, oriented towards a particular mission. It enables to set a direction (develop vision, devise strategies for change to achieve goals)			Good	GOOD
Information Systems (= Devices & management)	**Objectivising and materialising technical, business and involvement aspects of IOR**	This enables the flow information between parties regarding specifications, incidents, improvements etc. Information flows regarding commercial and planning aspects of the relationship; measures lead times and changes, costs and market information etc. Information flows that allow a greater involvement and participation in improvement activities; measures performance feedback, etc. The development of a strong information technology infrastructure is critical to create value in a supply chain and the applications and communication architecture must be carefully planned to provide a strong foundation for the growth of interorganisational systems and to increase productivity, leverage data already held and enable electronic relationships.		average		AVERAGE

Table 20 - YANKEES & BBR - Key Levers & Enablers Scoring tables

YANKEES / BBR			Relevant Types of Control		Associated Control Mechanisms Types		
KEY LEVERS	**ENABLERS AT STAKE (=participate in the Key Levers effectiveness)**	**APPRECIATION OF KEY LEVERS**	***Formal***	***Informal***	**Score Outcome Control**	**Score Behaviour Control**	**Score Social Control**
Appropriation of concerns & generation of Trust	Cohesive groups, clan coordination (organic solidarity)	**GOOD+**	x	x	POOR	GOOD	GOOD
	Social Context consideration		NA	x	NA	NA	GOOD
	Contractualisation		x	NA	POOR	AVERAGE	NA
	Buyer committment		x	x	POOR	AVERAGE	GOOD
	Seller committment		x	x	POOR	AVERAGE	GOOD
	Trust establishment & management		x	x	POOR	POOR	GOOD
	Understanding of sensitivity to interdependence of production and exchange relations		NA	x	NA	NA	NA
	Governance structure well in place		x	x	GOOD	GOOD	GOOD
Balanced Economic benefits monitoring and surveillance	KPIs / Assessments	**AVERAGE-**	x	NA	AVERAGE	AVERAGE	NA
	Cross organisational designed management accounting systems		x	NA	GOOD	GOOD	NA
	Deeper involvement of accountants in the negotiation of actions and profit sharing		x	x	GOOD	GOOD	GOOD
	Review of how the risk/return position of each party is affected by different actions		x	NA	POOR	POOR	NA
Networking capabilities (= Best-in-Class Network Management)	Formal impersonal communication	**GOOD+**	x	NA	AVERAGE	AVERAGE	NA
	Ties among firms - Structural - Relational		NA	x	NA	NA	GOOD
	Social recognition management		NA	x	NA	NA	GOOD
	Managerial communication to further improve relational performance		x	x	POOR	POOR	GOOD
	Technical communication to further improve relational performance		x	x	POOR	POOR	GOOD
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)		NA	x	NA	NA	GOOD
	EXPLICIT knowledge management		x		AVERAGE	AVERAGE	NA
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks (= proper balance between level of trust and information needed)	**GOOD+**	x	x	POOR	POOR	GOOD
	Know who you are dealing with		x	x	AVERAGE	POOR	GOOD
	Information management control relating to the willingness to trust given recognised competence and integrity		x	x	POOR	POOR	GOOD
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer		x	NA	AVERAGE	POOR	NA
Mastery of Events (= Coordination of tasks)	Cohesive groups, clan coordination (organic solidarity)	**GOOD+**	x	x	POOR	GOOD	GOOD
	Clear Organisation and adequate escalation process		x		GOOD	POOR	NA
	Constant evolution		x	NA	POOR	POOR	NA
	Bonding		x	x	POOR	AVERAGE	GOOD
	Learning Philosophy		NA	x	NA	NA	GOOD
	Contractualisation		x	NA	POOR	POOR	NA
	Co-ordination mechanisms like escalation pyramid or executive reviews		x	x	AVERAGE	AVERAGE	NA
	Defining goals and methods		x	NA	POOR	POOR	NA
	Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.		NA	x	NA	NA	AVERAGE
	Governance structure targeted with determination		x	x	POOR	POOR	GOOD
Relational Capital Management (=Positive Sensitive attitudes)	Social Capital management including sensitivity to culture	**GOOD+**	x	x	POOR	POOR	GOOD
	Level of mutual trust, respect and interaction between actors at multiple levels		NA	x	NA	NA	GOOD
	Social recognition management		NA	x	NA	NA	GOOD
	Relationship management type establishment about: = management of interacting people = Joint problem-solving arrangements		x	NA	AVERAGE	AVERAGE	NA
	Culture Management		NA	x	NA	NA	GOOD
	Power management		NA	x	NA	NA	GOOD
Shared vision	Defining convergent goals and collaborative futures	**GOOD+**	x	x	AVERAGE	GOOD	GOOD
	Governance structure targeted determination		x	x	POOR	AVERAGE	GOOD
Internal Cooperation (= Influence of its own organization over external parties)	Consensus between internal stakeholders	**AVERAGE**	x	x	AVERAGE	AVERAGE	NA
	Internal governance structure targeted determination		x		AVERAGE	AVERAGE	GOOD
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	**GOOD+**	x	x	POOR	AVERAGE	GOOD
Information Systems (= Devices & management)	Objectivising and materialising technical, business and involvement aspects of IOR	**POOR**	x	NA	POOR	POOR	NA
	OVERALL AVERAGE CONTROL PRACTICES SCORE				156	177	258
	THRESHOLDS TABLES RESULTS				AVERAGE	AVERAGE	GOOD

Table 21 – YANKEES & BBR Control Types Scoring table

SECTION 2 - ATERO & TZUFU

The following case study was considered relevant as it deals with an attempt to develop strategic inter-organisational relationships between civil aerospace companies from two different countries and radically different cultures. This co-operation was critical for both parties but for different purposes. After months of exchanges at different organisational levels, it failed despite an attempt to rebuild something together after a first break.

Importantly, for confidentiality reasons, I decided not to be too explicit and precise, especially when referring to figures and individuals approached.

1. CONTEXT AND CHARACTERISTICS

ATERO is the global leader on some aircraft critical functions. From design to manufacturing and assembling, maintenance, repair and overhaul, ATERO is a key partner of major aircraft makers in civil, regional and business markets. More than 22,000 aircraft are supported by ATERO which has more than 6,500 workers in Europe, America and Asia.

TZUFU is a division of a Chinese consortium. It produces components and sub-components for future single aisle aircraft. It aims at playing an increasing role within the global civil aerospace arena. In 2010, the company was planning to invest more than 4billion Yuan's to increase its industrial asset and address the global demand as represented below:



Source: internal note from TZUFU

Figure 30 – TZUFU strategic vision

The primary objective of a co-operation between ATERO and TZUFU was to create new opportunities generated by pulling together previously unconnected resources for a new economic purpose. More specifically, increasing the ability to innovate is the intrinsic reason why the Chinese need this co-operation with ATERO. However, orchestrating such a vast project with all the activities it entails and so many individuals from different cultural and technical backgrounds will never be straightforward, as detailed in the next section. Obviously, it is fair to question whether ATERO is able to move beyond its conservatism while the readiness and willingness of the Chinese firm remains unclear or even risky. Besides, is it reasonably realistic to consider that both parties could really learn something from each other when approaching the co-operation under the angle of embeddedness and social structure? Their respective networks, their cultural background and understanding of each other are so far removed from each other that it is important not to neglect those aspects. Social structure affects many important economic outcomes. Typically, this is what has happened several times already. For example, after a three-day industrial mission in September of 2010, a TZUFU team refused to sign a one-page copy of minutes because of their social and hierarchical network. This can suggest that ATERO's ability to succeed in managing its inter-organisational interfaces with TZUFU would certainly determine the success of both companies in their intended inter-organisational co-operating arrangements.

Furthermore, is a simple *Memorandum of Understanding* (MoU) sufficient to ensure compliance with a common objective? Is it sufficient to generate the necessary trust? Will it enable them, as recommended by sociological literature, to grow as a result of the lack of little hierarchical control? Is there any common objective? Are relations between ATERO and TZUFU sufficiently open for that? Are all the necessary ingredients present to foster the necessary trust for stakeholders to find mutual interests? Has ATERO identified enough aspects of mutual interest with TZUFU?

Each of these questions will be addressed from a *"Key Levers"* perspective in the next section, which aims at showing how TZUFU and ATERO struggled -and failed- to interact in this strategic project.

2. FROM A KEY LEVERS PERSPECTIVE, PARTICIPATING OBSERVATION OUTPUT

The following parts are based on the restitution of on-field observations gained through a ten-month journal. They aim at providing a detailed assessment of the fit between the practices implemented within the ATERO/TZUFU inter-organisational co-operating arrangements and the IORs *Key Levers* proposed in chapter 3, section 3. As it was interesting from a practical point of view to retrieve the output obtained from on-field exchanges through the analysis grids established and described in chapter 3, section 3, the following sub-sections provide arguments for an interpretation of the ATERO/TZUFU IORs management control practices, *Key Lever* by *Key Lever*.

2.1. Shared vision

After initial talks, both ATERO and TZUFU acknowledged the need to have a shared vision. This is hardly surprising, as most would agree that this is a pre-requisite for successfully moving forward together. This explains why almost immediately, both parties agreed to set up a Steering Committee composed of TZUFU and ATERO representatives, chaired by ATERO, with a vice-chairman from TZUFU. As defined within a signed a Letter of Intent (LOI), the purpose of this Steering Committee was primarily to manage a common response to DRAGON their final end customer.

However, very quickly it turned out to be quite different. After the signature of a LOI in Q22009 and despite on-going discussions between the parties' employees, the formalisation of the Steering Committee never took place. This was all the more detrimental as the teams from both parties had to work together to successfully design a joint solution. Without really understanding reciprocal expectations, stakeholders were probably trying to guess things, but no clear formalised messages with clear mandates were available.

I often wonder how this could be possible. Was it a deliberate strategy from ATERO? From TZUFU? Obviously it is hard to say, but what I came across one day within ATERO might offer an insight into why it was not possible to reach this shared vision. While working on various duties at my desk, the ATERO marketing manager called. She had been sent to me by our Chief Operating Officer (COO) after discussing the topic of the ATERO production strategy and the make or buy strategy with him, as he was unclear on what plans to draft. She

also needed information regarding production and products, but the ATERO Production big boss was not on site that week, and hoped that alternatively, I might be the one capable of providing her with some input… This is a revealing example of the blatant lack of visibility in ATERO's strategy, but also of the fact that Top Management were ill equipped and not entitled to provide visibility. It seems that within ATERO no formal consensus regarding strategic plans had been clearly stated and formalised. It is therefore no surprise that one had no choice but to regret the absence of any unified and formalised vision by the two inter-organisational interfaces, namely ATERO and TZUFU.

Beyond organisational and individual imperfections that can be inherent to all companies, I must admit that the absence of a shared vision between TZUFU and ATERO was certainly driven by circumstances and real life. In the framework of this co-operation, ATERO was willing – from the beginning – to remain the customer, while TZUFU did not want to be perceived as a simple supplier. Besides, ATERO was quite adamant about the fact that it should remain the unique interface with DRAGON. These purposes were contradictory, but also difficult to admit to each other.

This situation proved crystal clear during the visit of a TZUFU delegation in September 2009. This delegation – 11 people – expressed views and positions only through two individuals interested in further clarifications on the different subjects addressed. Only the last day, when it came to dealing with and formalising the definition of the foundations of the co-operation, the two Chinese individuals tried to make ATERO managers accept that some final assembling activities had to be the responsibility of TZUFU. This was in total contradiction with the fact that ATERO wanted to preserve its final integrator attributes in order to maintain control over the direct relationship with DRAGON, the end customer. Interestingly, in this particular turn of events, the Chinese team strongly insisted on the absence of a Steering Committee that could arbitrate such matters, and that should be in place as dictated by the original co-operation terms defined in the LOI signed earlier that year.

In parallel, within ATERO the positions of different functions throughout the company on that matter testified the lack of a unified and generally accepted vision. The following is an abstract from a formal senior review held at ATERO:

Option 1

- *Legal form & content of industrial cooperation with TZUFU:*

Having a strong cooperation through a manufacturing JV between ATERO & TZUFU covering D2R2 & other programs, is considered as an entry point to be well positioned on the D2R2.
The D2R2 industrial work-share between TZUFU & ATERO has to be established with the objective to minimize ATERO investments in China & nevertheless produce a "D2R2 Chinese gear". A need for a dedicated facility for big steel parts was evaluated at ~45M$ (from scratch) under TZUFU investment. Global evaluation of fixed costs (investment + NRC) induced by D2R2 would then amount around 75M$.

- *Principle of a 50/50 JV between ATERO and TZUFU total share capital estimated between 50 & 100 M$:*

ATERO share contributed in kind with ATERO Zhou Chinese plant shares or ATERO Zhou assets (machines…). TZUFU share contributed partly in cash and partly in kind.

- *Activity: D2R2; other programs & products - perimeter not yet defined but foreseen as being TZUFU & ATERO Zhou manufacturing activities related to the assets contributed.*
- *Control: All significant decisions to be made jointly (pricing to customers, investment, profit sharing, Management split between ATERO and TZUFU).*
- *Impacts on current scheme regarding responsibility & control:*

ATERO loses control over its current ATERO Zhou activity & partially controls the D2R2 manufacturing activity. Additionally, ATERO will be held responsible for TZUFU inefficiency while not (or less) able to charge TZUFU for technical support. There must be an increased deployment of senior high skills managers to be able to maintain ATERO control & responsibility.

Option 2

- *Legal form & content of industrial cooperation with TZUFU :*

Having a final assembly JV between ATERO & TZUFU for D2R2 is considered as an entry point to be well positioned on D2R2.

- *Principle of a 50/50 JV between ATERO and TZUFU:*

Total share capital estimated between 3 & 10 M$. ATERO & TZUFU share contribution shall be partly in kind and partly in cash (Final assembly specific investments)

- *Activity: D2R2 final assembly*
- *Control: All significant decisions to be made jointly (D2R2 pricing to ATERO, investment, profit sharing, Management split between ATERO and TZUFU)*
- *Impacts on current scheme regarding responsibility & control:*

ATERO keeps control over its current Zhou activities. ATERO has control over its work-share of the D2R2 manufacturing activity
ATERO responsibility for TZUFU inefficiency limited to assembly and test
Possibility for ATERO to charge TZUFU for technical support on manufacturing

On the one hand, production teams in particular insisted on the importance of preserving ATERO's exclusivity on final integration (viewed as a core competence) while the commercial and marketing teams were less adamant, and ready to yield some final assembling work share. This consensual position was a means for them to minimise the risks of a clash between TZUFU and ATERO that could have had a negative impact on the final outcome of

the co-operation theoretically under construction. On the other hand, final assembly is given up by ATERO. Whatever the point of view, the reality was that within ATERO, the steering committee was not giving clear directions.

Personally, I was surprised by ATERO's position: why not clearly draw the lines between the two parties, namely ATERO is the teacher and TZUFU is the student. That power balance was not well accepted – certainly rejected by the Chinese team and probably not well endorsed by the French partner, as I presume they lacked confidence in themselves.

Interestingly, one day ATERO's Mrs Marketing shared an e-mail with me from a different division of ATERO involved in the overall package quoting exercise. It was the complete opposite of what had been agreed and developed by another division team. The confusion regarding the foundations of a successful co-operation was steadily growing. A common denominator observed at this stage within ATERO was that internal discussions focused on internal politics, which means that the proper conditions for thinking about industrial co-operation or inter-organisational interface management were probably not being established. This translated into quite amazing situations during a mission organised in September 2009: Seb, an Estimating Manager, was not aware of the possible strategies that had already been discussed at the ATERO executive level. Jim and Jo, respectively Engineering Director and General Manager of ATERO's Chinese plant, had no choice but to accept the rumours that their own site might be taken over through a JV construction process which had not been defined yet. This situation was summed up by a colleague from the legal department: "*What do we want exactly? What framework? Those questions are not very clear in the mind of ATERO's executive committee. The tragedy is that it does not seem to be a surprise for any of us. If it is a common state of affairs, can we expect to have the same kind of lack of clarity on the Chinese side? Will a drafted MoU solve these issues? I doubt it*".

This feeling of going nowhere was reinforced by a long discussion I had with ATERO's Mrs Marketing, who was feeling depressed by the lack of cohesion and coherence within ATERO, which she shared with me during an open discussion. That morning we could not believe that a consensus from the board still had not been reached regarding the type of work-share to be set up between ATERO and TZUFU. At that stage, discussions had already been going on for six months and for her, this confirmed a painful lack of vision due to a lack of exchanges and internal buy off amongst ATERO stakeholders.

On the TZUFU side, there seemed to be a more mature and generally accepted view that for TZUFU, the one critical part they had to be in charge of was final assembly. They were therefore asking for the whole assembling activities that ATERO – for technical and positioning reasons - could reasonably not give up. Not surprisingly, this disagreement soon became a source of major discrepancies between the two candidates for a co-operation. The problem is that the two parties involved never managed to address that question clearly, without ambiguity, probably due to the fact that, contrary to TZUFU, ATERO decision makers had not or even could not agree internally on a given vision. From the very beginning, there were fundamentally contradicting views between TZUFU and ATERO with the former wanting to be in charge of all assembling activities, which was one of the main things that was out of the question for the latter.

Another problem was that TZUFU was also resistant to the idea of duplicating some critical parts in development. However, duplication was strongly advisable and is quite a common practice for developments with new sources from emerging countries, as it mitigates the risks of delays with regards to the EIS (entry into service). Surprisingly, despite being on the front line in case of any delays *vis-à-vis* the final customer, ATERO seemed satisfied with a loose and smooth consensus, in which facts were not clearly mentioned, despite the criticality of the matter. This was epitomised during a meeting held at the ATERO headquarters with a Chinese delegation from TZUFU. Once more, discussions were blocked, on the industrial scheme options: while what could be given up to TZUFU still remained unclear, I repeatedly insisted on the fact that TZUFU was reluctant to back up development parts through parallel investments in ATERO's western facilities. However, that position was not given due consideration by ATERO's programme and sales teams, which demonstrated no sign of major concern.

In fact, according to ATERO's VP Production, this was not surprising. According to him, programs and sales people generally consider co-operations merely from a viewpoint of arguing in favour of their deal. "*This is a bit of a problem as they do not provide us with the means to put the company in a good position for making things happen once the decision to go is made"*.

Another good example of poor co-ordination occurred at Shanghai Airport, in Q4 2009. That day, my colleagues and I came across a press release from the *China Daily Business* newspaper. On the one hand this article discussed the officially communicated intention of establishing a co-operation between DRAGON-O (a TZUFU parent company) and ATERO. Paradoxically, at the end of this article, an entire paragraph discussed an already established JV between another DRAGON subsidiary and ATERO's primary competitor on same applications. This generated real confusion, especially after spending several days with our TZUFU counterparts to discuss the industrial schemes that could be established between our two companies. For us, this position undermined our belief in TZUFU's real intention to develop win-win relationships with ATERO.

An example of internal distorted views within ATERO relates to the pricing strategy discussions. In Q3 2009, as I had to align Costs of Goods Sold (COGS) with potential industrial schemes, I needed to get a clear understanding of why the President of ATERO's parent company preferred to submit a high price in the initial RFP. ATERO's business VP explained that according to its top President, DRAGON would inevitably need us. As they were expected to be a tough negotiator, he considered it was therefore in ATERO's interest to preserve a certain negotiation margin from the beginning. ATERO's Programme Director, a clever manipulator capable of imagining subtle tactics to preserve a dominant position when faced with the customer, offered a different analysis. For him, the high cost positioning of TZUFU/ATERO on some parts was actually a key lever in front of DRAGON, the final customer. Of course it made ATERO's final offer more expensive than competitors', but it also provided arguments for telling DRAGON: "*look, you imposed working with a Chinese partner on us, and this is what we are doing, as best as we can. However, this prevents us from being the most competitive, as testified by the cost induced by this partnership"*. Unfortunately, this position was diametrically opposed to TZUFU's, who was eager to offer the most competitive price! Neither the Programme Director nor the Business VP seemed nervous about the fact that DRAGON could decide not to select ATERO if the prices offered by their competitors were much lower. They seemed convinced that for DRAGON, the price would not be the key decision maker. This vision was clearly not shared by all ATERO stakeholders, me included.

Incredibly, a few weeks later I received the following message from ATERO's Mrs Marketing, addressed to all ATERO Vice-Presidents:

> *"... Please find attached the document that was used as a basis to establish the business model of our partnership after consideration of the different quotes. Two actions have already been identified in the assessment, and reiterated in these internal documents: for sales, what are the possibilities of developing a Chinese supply chain? Assess the support required and the development costs of this type of supply chain. For production, identify the place of this JV in the global ATERO industrial strategy (all programs) – assessment of the input of both parties – assessment of the CAPEX specific to the projects. We will meet in November to discuss our future industrial co-operation with TZUFU through the JV scheme detailed herewith. We need a better visibility on these elements by the beginning of November. Thank you in advance for your assistance. Moreover, ATERO Parent Company's CEO has asked us to find possible ways of improving our commercial offer, which is too high – outside of the market. We will therefore get back in touch with you after the presentation of the offer."*

Regardless of the relevance of the positions detailed above, had ATERO strived for a clear, shared vision from the outset, its positions would probably not have changed so radically six months after the launch of the campaign.

Another element that reflects the blatant lack of a unified vision in this venture was ATERO's Chinese facility. In August 2009, a number of ATERO actors agreed that in the JV construction, it would be interesting from a strategic point of view to include ATERO's Chinese facility in the co-operation, and that this was something that should be secured urgently because its market value would certainly drop as soon as TZUFU would be operational. Interestingly, this option, which I presented, was not discarded by my CEO, who seemed to find it quite cunning. However, as pointed out by ATERO's Manufacturing Director, the company's decision makers focused on engineering aspects and were not commercial experts. This was detrimental to the type of levers that ATERO could have used in developing its industrial co-operation with TZUFU. As most ATERO decision makers were rather risk adverse, with a poor sensitivity to commercially astute techniques, it was more important for them to secure the deal rather than gamble with their Chinese counterparts. "*We have to fold before them*" he said to me, quite upset by the lack of ambition demonstrated by ATERO's decisions makers. They were incapable of running the risk of taking advantage of their own know-how to force TZUFU to follow ATERO's rules of the game.

Given such fragmented views amongst ATERO's key "influence makers", one could imagine that quantified and factual elements could have been a source of guidance for to make decisions. Yet, nothing is as obvious as it seems. For example, the scenarios were all made under the assumption that TZUFU's cost information was not reliable enough to be taken into account seriously. Therefore all the Business Plans (BP) that were drafted were not a

reflection of reality, and had more to do with a commercial strategy dictated only by internal considerations, e.g. presenting pseudo facts in order to write a story that would satisfy the hierarchy.

This led, in the course of Q3 2009, to radically different positions being put on the table by ATERO's CEO. During an operations committee chaired by ATERO's COO with key operation VPs and managers, he described ATERO's offer positioning as "*not competitive enough and too conservative. Succession of margins at all levels artificially increases the final figure*", which he said standing up and quite angry.

In fact there were fundamental misalignments contrary to basic principles necessary for establishing the rules of a successful relationship between ATERO and TZUFU. As reported by ATERO's Mrs Legal regarding prices, ATERO stakeholders had only discussed the co-operation in terms of the total envelope of the solution, and not specifically for respective work shares. I commented that this could be a serious issue. While she agreed with me, she also told me that it was a deliberate tactic by ATERO's Programme VP who wanted to maintain vagueness and avoid firm and clear decisions.

Another interesting example of the total absence of a unified and shared vision is also the question of the extent to which ATERO could reasonably let TZUFU be in charge of assembling and certifying parts of the product sold. This had been a point of divergence for months between the Chinese teams, who wanted to be granted as much as possible – which was supported by the ATERO program team who did not want to make the Chinese unhappy as it could endanger the outcome of the campaign – and the ATERO production team - who pragmatically considered that the Chinese were not capable of doing it. Agreeing to this would have meant that ATERO was put in a position in which certification and release papers would be issued without verification, during all assembling phases and through standard means, the integrity of at least the most critical individual parts.

I remember a lunch I had with my direct line manager (Group Vice President Production), during which he let me know that he had just been informed of the decision made by the programme and probably ATERO's CEO to give up the principle of a double industrialisation on critical development parts. While I was not surprised by this decision, I must admit that I was surprised not to have been kept informed by Mrs Sales & Programmes. In fact, there were

many examples throughout the program of a total lack of unified approaches and of very poor communication, as testified by the dilemma between limiting the risks of a possible industrialisation failure versus the risks of selling nothing. In practice, this was done through a presentation made by the programme team to the CEO regarding the critical aspects of a double industrialisation. A demonstration was made without involving manufacturing experts to develop the logic behind it. This came as no surprise given what I was told by programme but also engineering people *"if we continue to cumulate risks in the BP, we will continue to sell nothing*". Eventually, I sent the following note to ATERO's Mrs Marketing:

> "*…I have just been informed that the principle of a double industrialisation TZUFU/ATERO western for Big steel parts had been abandoned. As you know, this is against the recommendations I have been expressing since the end of August, but our managers have spoken. However, could you tell me a bit more about the logic that led to this decision?*

In no time at all, I received a reply that revealed some embarrassment:

> *" … These discussions move very quickly, and I have not had time to finish my debriefing with you (which is still a draft). The logic behind the production – double industrialisation decision is detailed below. Unless its impossibility can be demonstrated, we are setting ourselves an ambitious goal, taking into account the associated risks… We have not rejected double industrialisation, but we have dealt with it differently in the financial terms of the BP.*
>
> *Today, neither DRAGON nor ATERO has clearly demonstrated the impossibility or the possibility of doing it directly in China. We have never seen any detailed planning with the related constraints that could lead us to a conclusion. Our specialists have not discussed this point in detail with DRAGON.*
>
> *We acknowledge the experience and expertise of ATERO's production. We know this double industrialisation comes with very high risks. However, we offer the following approach:*
>
> *Perform a detailed analysis of the planning and its constraints that will enable us to evaluate the risk in greater detail, to share it with DRAGON. If it is shown to be at all possible, we will devote all our efforts to directly proceeding to industrialisation in China (especially considering that the schedule may slip). This would be a win-win approach with our partner. In any case, we will have to identify, within the terms of the JV, a planning with precise implementation milestones for the tool in order to "monitor" and deal with any faults from TZUFU by implementing the appropriate production and sales actions.*
>
> *if we continue to cumulate risks in the BP, we will continue to sell nothing*

This answer also came as a response to a memo from my direct line manager on that specific subject:

> "*… I see that you have decided to rule out industrialisation. We have had no exchanges whatsoever on this matter before this decision, and I was not consulted. Please let me know how you are going to proceed…"*

Almost one year after the project launch, there was still no internal shared understanding of how ATERO was to establish the principles of its JV and manage the associated industrial co-operation with TZUFU.

But even before that, some confusing situations had also been experienced, as for example the one that Mrs Marketing shared with me:

> *"What happened is that on Wednesday last week the Parent ATERO Shanghai office sent the message that ATERO's Best and Final Offer (BAFO) was clearly too high and consequently it would most probably be down-selected. It took a day for people at HQ to react. On the Thursday, the sales/program team clarified things internally and decision was made to manipulate the business model (BM) input in order to reduce provision for risks (hence recurring costs) by requesting cash payment earlier, as originally required. Importantly, the assumption made was that DRAGON was only interested in its recurring costs while the non-recurring costs were supposed to be financed by the Chinese government".*

This adjustment to the business plans made it possible for ATERO's programmes team to reduce the BAFO's (Best and Final Offer) recurring costs by approximately $100K, which was a very positive sign sent to DRAGON, who did not confirm any down-selection. However, regardless of whether this decision was good or bad, it proves that this key decision was made without any general consensus, while most actors also admitted that they had no idea what type of co-operation was to be established, although they had signed something regarding the intention and commitment of both ATERO and TZUFU with regards to an industrial co-operation.

All the way long, ATERO consistently suffered from a total lack of heuristic mind-set across decision makers from the Executive Committee, but also across all management lines within the organisation. Within ATERO, conflicting local logics were juxtaposed, the co-existence of which was possible only because of vagueness of information, excessive means at play and the opacity it maintained in its dealings. In fact, an unacknowledged lack of control made this situation possible. Generally, original hypotheses were reviewed for reasons of clarity. However, no unambiguous and straightforward clarity was given with regards to the rules to be applied by the company for positioning the offer, for instance. This was clearly illustrated by Mrs Legal, or Mrs GVP, who considered that not winning the DRAGON contract could

actually be good news for ATERO. This was also illustrated by the following paradoxical situation: at the beginning of the project, in June 2009, the decision to establish a co-operation with TZUFU was praised and viewed by ATERO and its parent company as the key lever to win the business. In December 2009, while there was still no clear idea on how this co-operation could concretely take shape and what is worse, at the end of the bidding process for ATERO, the Group decided to revisit the BAFO and to give the mandate to reduce recurring costs (35% less than the original RFP). This decision was reinforced by the fact that internally this BAFO was considered to be the reasonable minimum price that could be made. Yet, had ATERO and its parent company been convinced they had no choice but to win this contract, would they have allowed themselves to be rational? Would they have ended in this stalemate? In reality, most agreed that the company strategy was not clear about wining or not. Had they been determined to win, given ATERO's well acknowledged technological advances, they could have killed the beast much earlier thereby leaving no chance to the competition.

What is worse is that this situation led to people to think that they were not informed about key aspects that could drive decisions of this type relating to the construction of the JV. These practices fostered the absence of any clear mandates across the teams, generated confusion and a lack of trust, both internally and with external partners. Interestingly, my direct line manager – GVP Production - shared with me that he was not surprised by all this. According to him, programs & sales people were contemplating this co-operation only from the viewpoint of arguing in favour of their deal. This is slightly problematic as they did not provide the means necessary to put the company in a good position for implementing decisions once they had been made. On this particular aspect, we should note that both Mr and Mrs Legal admitted that there was a real problem of visibility on what was initiated by the sales & programmes teams. Actually, ATERO's commercial positioning proved quite amazing especially considering that five months later, the recurring costs offer was lowered drastically. And what is more, when news was received that ATERO had been down selected, the Group's CEO even asked to consider a further reduction in millions of the overall non-recurring costs envelop.

Generally, people in the company admitted that the level of confidence in the plan defined by the programme & sales troops was actually very poor, and people did not think it would be efficient. Probably explained by a loose consensus, this lack of determination and a poorly defined vision between TZUFU and ATERO rapidly proved to be detrimental.

Interestingly, when Mrs Legal asked me my remarks regarding the content of the MoU signed with TZUFU mid-October that year, she shared her own views with me. For her, ATERO had not sufficiently protected its interests both legally and commercially. The lack of clarity with regards of a demand from a cash and investment viewpoint was clearly detrimental to ATERO. The lack of accuracy (also within ATERO) regarding the key constituents of the JV and the Steering committee invoked within the MoU was clearly unreasonable. It was a mistake for ATERO not to position itself as the leader in its relationships with TZUFU.

Importantly, she mentioned the fact that in the past, the marketing teams in charge of securing a business were also the ones in charge of launching and implementing all the contractual terms arranged with a given partner. This was no longer the case, which generated problems, because this meant that the interests between the sales and other functions were not aligned. As summarised by my direct line Manager there could actually be good lessons to learn from the "*absence, until too late, of a consensus achieved amongst the VPs themselves and also the Parent company combined with the lack of vision and clear directions on what needs to be attained in terms of forms and structure of the targeted co-operation*".

Lastly, but amazingly, five months after announcing they were not selecting ATERO, and despite this lack of shared vision and co-ordination TZUFU came back. In fact they were quite obliged as the first selected candidate had eventually given up. The Chinese team wanted to know if ATERO was still keen to work with them. At this point in time, it was clear for ATERO that a co-operation with TZUFU was necessary for winning that bid. Thus for the very first time, a clear and concrete formalisation of what this co-operation could be actually occurred (not only in terms of type of manufacturing shares but also in terms of structure and forms). This was one year after the beginning of the bid, and also after failing a first time.

2.2. Leadership

In many circumstances, mainly during operational working sessions, it was interesting to notice how the Chinese teams were more comfortable, more talkative and co-operative when dealing with charismatic counterparts. More specifically, they seemed to appreciate straightforward and honest people.

In a meeting involving a significant number of stakeholders, I did a test. We were clearly in stalemate and no progress seemed to be possible with our Chinese counterparts if there was no change in our attitudes and mind-set. I therefore decided to radically change my attitude by adopting a style comparable to a sort of ship's captain. I stood up and told everybody what the agenda should be:

> *"first, recap regarding missing information from the previous day of discussions; secondly, a detailed review of the remaining information type ATERO was looking for i.e. assembling costs and scope. And then, detailed discussions on other topics".*

My colleagues were surprised and speechless. They were not used to this style, yet it gave a real direction to the debates and clearly had an impact. It sparked a similar reaction with the Chinese delegation, who quickly admitted that I was right, and all came to see that we had spent almost three hours arguing for nothing. The day before, we had told them they had to reconsider the type of machine they were planning on using in order to reduce the cost of their proposal. One key argument for that was the limited difficulty they would have for raising additional funds to finance non-recurring costs, as the Chinese government was ready to provide subsidiaries as part of the country's effort to gain access to aerospace industrial capabilities. After going over it several times, some standing, shouting and laughing, they gave up, and provided us with a reduced estimate based on the use of the machine we recommended. Until then, in an attempt to avoid the subject, they had reconsidered to reduce some other costs.

This experience reveals the extent to which one individual, with his/her personal style, can make a difference, which proves quite critical when it comes to working together and agreeing on the way forward.

Although this is generally accepted, this is something that I have found is surprising for some time now- even before joining ATERO. For example, when I was working within an English corporation dealing with French suppliers, I was astonished by the lack of determination and persuasion from my French counterparts when it came to defending – reactively or proactively - certain positions in front of foreigners. In the ATERO/TZUFU case, in many meetings, either internal or involving both parties, I personally saw how ATERO's Top Management was not capable of clearly stating what it was aiming for. To me, this demonstrated a lack of leadership, perhaps because individuals do not know how to, or simply do not dare, defend a given position openly and with determination in order to bring the teams together.

For example, in some cases certain people within ATERO seemed so afraid of not securing the DRAGON business that they were ready to accept most of things in order to preserve the commercial relationship with their Chinese counterparts.

According to ATERO's Manufacturing Director, and I must admit that I agreed with him, in this story, key decision makers did not have the courage to play poker with the Chinese. They were too afraid of disappointing them, as their top senior had clearly stated that this campaign was a must win, which explains this fairly risk-adverse position. Consequently, ATERO's actions were driven by exercises in semantics but with no real willingness to address what had to be done to make things happen.

Unfortunately, politics and theoretical views prevailed throughout this process, while the real concern and motivation to make things happen seemed to be missing. This mind-set hindered effective working relationships with the TZUFU and certainly undermined ATERO's position due to its lack of determination and leadership, as suggested by a comment by Mrs Legal, "*are people telling us nice stories to satisfy short-term interests? Is this the reason why long-term social phenomena considerations are wiped away?"*

According to ATERO's Manufacturing Director:

> *"The VP Programmes is afraid of not winning the DRAGON project - a "must win" his big bosses said – hence, he does not want to take any risks that could adversely affect relationships between ATERO and the Chinese (in particular TZUFU). Consequently, ATERO is not really demanding from a financial point of view, while ATERO could make TZUFU pay a significant amount of money for ensuring the support it needs to be able to produce its parts."*

An interesting point was offered by Mrs Legal on several occasions:

> *"Those VP people come for 2 years and then leave the company without being held responsible for any problems experienced afterwards. This is typically what happened on the US super bid – a must win programme - where crazy commercial clauses were accepted which today are endangering ATERO's financial long-term stability".*

In fact, for the duration of this campaign, a number of ATERO individuals admitted that leadership was cruelly missing and decisions were never taken. For some, "*ATERO was not acting as a worldwide company, it was afraid of disappointing its customer and subsequently not requesting legitimate things from its Chinese stakeholders. This situation was made possible because there were no real leaders within ATERO".*

According to Mr Production, this major leadership weakness gave rise to a situation where "*the customer seems to have only rights and ATERO is ready to pull its trousers down".* During a visit of one of ATERO's plants, the VP Plant informed me that *"ATERO's Programme Director had just been informed that ATERO was no longer shortlisted. Consequently, to counter this decision from the Chinese, ATERO was about to lower its Best and final offer (BAFO)*". In fact, he meant that the Chinese had won insofar as at the very first negative sign displayed by them, ATERO – not self-confident enough and with no strong leadership –immediately gave up something to please them.

But paradoxically, when concessions were to be made, no decision maker seemed to emerge. Typically this is what happened when ATERO's Programme Director concluded that the third offer made was not acceptable by DRAGON. Consequently, he informed the CEOs of ATERO and ATERO Parent. However both CEOs – despite their hierarchical level – decided not to modify the offer. According to the Programme Director this proved to be a major failure in the end.

Interestingly, in the course of March 2010, in a meeting with Mrs Marketing to discuss programmes forecast, I took the opportunity to discuss the DRAGON venture again. I encouraged her to talk about what she thought could explain ATERO's failure. In her view:

> *"We were not so far off from winning, but the management style of both our parent company and ATERO spoiled our chances of being selected (...) From the beginning of the project, our CEOs were not clear about their respective intentions about winning the deal or not. In June 2009, ATERO's CEO said that the mandatory campaign was the Single Aisle renewal but not*

> *this Chinese one. Three months later, he was insisting that the DRAGON campaign was a must win. For his part, ATERO Parent's CEO always insisted that ATERO's commercial proposal should not be cheap even though it was a risky tactic in front of competitors".*

She also shared her feeling that ATERO teams were not fully aligned and supportive because some actors believed it was not a good thing to win that project.

For her, this experience as a whole was yet another example of a blatant lack of leadership within ATERO. Although this was the responsibility of ATERO's Top Management, as is typically the case in engineering companies, most actors prefer complicated debates and all sorts of analyses as if this justified their role and actions.

2.3. Internal cooperation

During the first months of the campaign, from May to September 2009, it was impossible to gauge internal co-operation understood as influence of the organisation of the client on the control of suppliers. Apart from sterile internal meetings during which certain functions could position themselves more or less clearly, yet during which no challenging debate actually took place, I must admit that not much happened.

Things started speeding up in early September 2009, when a Chinese delegation came to visit ATERO's headquarters. The ATERO team consisted of the programme team, co-ordinated by ATERO's Mrs Marketing. She had a very limited knowledge of the products but was much organised and was in the perfect position to liaise with her hierarchy. The ATERO team was also made of experts that were fully aware of all manufacturing-related elements, willing to avoid any non-pragmatic positions that the sales teams might want to defend. Lastly, there were the purchasing people, who had limited credibility within the organisation and definitely had no control over their relationship with TZUFU.

At this stage, it proved crystal clear that the top priority of the ATERO Program stakeholders was to set up some sort of protection *vis-à-vis* their hierarchy and ATERO Parent in particular. In practical terms, ATERO Program stakeholders needed to produce some tangible output that could demonstrate a real effort to concretise the co-operation with TZUFU, or at least some proof that the foundations for said co-operation were being laid. Also, the programme and commercial team (mixed together) split hairs in drafting some contractual approach for a way forward that would also be needed by their Chinese counterparts for their internal debrief. ATERO's Mrs Marketing was quite transparent with me - without admitting that she had no idea how to address her issue - she asked for some advice and I did my best to help her.

One day we had an internal review aimed at defining the most appropriate way forward. The estimating department manager and I did not agree on one specific point i.e. my recommendation to use TZUFU's costs for the module of which they wanted to be in charge. My position lay in promoting an option where ATERO would not push on ahead blindly or simply try to dress up the overall business case, at least for any parts that did not fall within its own scope. Mr Yoos, from estimating, strongly disagreed and insisted that we should not use

their costing input because it was not sound enough. Most attendees seemed to agree. Despite this disagreement, I must admit that generally speaking, people were quite transparent, attitudes were encouraging and revealed actual team work.

This apparent good internal co-operation was reinforced by messages such as one sent by ATERO's Program Director on October 15, 2009:

> *"… This morning, at 10.30 Shanghai time, we delivered our reply to ATEROs' RFP to DRAGON right on time. This joint offer was strengthened by a simultaneous mobilisation in China and in Europe until very late last night. First of all, naturally, I would like to thank those of you who stayed mobilised and available to answer all our last minute questions… After reaching this major milestone, I would like to thank you all for your collaboration in this collective response/work… This response to their RFP presents itself as a response from the ATERO family, and that is first and foremost the result of significant team work.*
> *Our next milestone: Tuesday 20th, in Shanghai, where we (ATERO) will be the first to defend our offer before DRAGON*
> *… A review meeting of the key messages and harmonisation between ATERO and TZUFU is scheduled on Monday afternoon, in Shanghai. Once more, presenting ourselves as united and motivated will be a determining factor. That is all for tonight, more news will come soon. I would like to thank all of those who worked on this RFP, and not only those in this distribution list. I tried to create to include everybody, but I am sure I have forgotten many. Please forward this message to anybody I might have forgotten in this list"*

Such internal cohesion may seem impressive to outsiders. In any case, it confirms my perception that within ATERO, some individuals were fully aware of these basic yet fundamental internal requirements to ensure the success of a co-operation with an external partner. The latter is in line with the view that inter-firm management is something that cannot be disconnected from intra-firm relationship management, because the dynamics and articulation between intra- and inter-organisational dimensions are critical.

Also, I can recall some other examples like this voice mail from ATERO's Programme Director:

> *"I am in Spot X with the Chinese. It would be very nice to use your competence and your capacity to summarize things. If it is ok for you, could you please contact me so that we can agree together on the correct messages to pass on to the Chinese …".*

He was very kind to me and at the end of our conversation he mentioned that it would be a good thing to show the Chinese team how close the links between the various ATERO teams were, to set a good example of what co-operating should look like, and to demonstrate our internal cohesion.

On one occasion, Mrs Legal agreed to follow my advice to approach my direct line manager and get a better understanding of what he felt was appropriate to contract with TZUFU with regards of assembly responsibilities. To me, this was a proof of our mutual trust, the fruit of the good relationship we had developed over time. This is just an example of the internal collaboration we had achieved with the legal teams, as suggested by Mrs Legal who once told me that "*although you may not be directly focused on those legal issues, I do believe that you should get involved in them as it would help a lot*". Even when internal co-operation was lacking, it was sought at least by some stakeholders, as testifies Mr Legal Director's self – explanatory note:

> *"I would very much like to hold a meeting soon on the organisation of the legal support for the DRAGON project. I understand that a trip to China has been scheduled for week 51 and maybe also week 52, with a legal presence. The Legal Department, with the resources at its disposal, is willing to bring all the support necessary for this project,* ***but I am surprised that we have not implemented an system to progress on "legal documents" via e-mails with our partners, and our future clients (if ATERO is selected, of course) so that we can focus on roadblocks in our negotiation meetings***
> *… at your disposal to discuss, at your earliest convenience, the possible need for support in China in week 51 and the organisation of the legal support for this project in 2010. Regarding week 51, is it true that DRAGON has not asked for a prior LOI before announcing its chosen supplier ? If we were to sign a LOI before announcement of the choice is made, I suggest we meet today or tomorrow to prepare a draft and send it to DRAGON"*

Another good example of internal co-operation is when, after multiple iterations, the Programme team eventually took into consideration a strong request from operations, as explained by the following memo from ATERO's Mrs Marketing: "*Regarding the dual industrialisation topic, Programme recognised that ATERO could launch a double industrialisation without contracting it with TZUFU but with the intention of having it reimbursed if necessary. The financing would then rely on some of the provision for risks budgeted by the programs. But the idea is to put a lot of pressure on the Chinese by letting them know that they are the only ones producing those big steel parts, which leaves no room for delays in view of the EIS targeted for 2014*."

However, the following paragraphs will reveal that many of these previous examples and perceptions were more of a smoke screen than anything else …

As mentioned previously, concrete evidence of ATERO's internal co-operation emerged by September 2009. On Friday, 19th Mrs Marketing showed me an email (of which she did not leave me a copy) from one division of ATERO involved in the overall package quoting exercise. The position of this division was the complete opposite of what had been agreed and developed by the same division's steering committee. Was this a confirmation that within a

company like ATERO it is almost impossible to draw a line, to define a strategy and see all stakeholders working in one sole direction? Was it a confirmation that personal networks, self-interest or politics were the unique determinants of any scenario construction? That people draft scenarios – good or bad – which most often end up being obsolete, simply because of parallel career interests and motives?

On Wednesday, September 16th, 2009 I was asked to attend an all divisions industrial program co-ordination internal meeting for this Chinese campaign. Attendants were Parent ATERO's Industrial Director, International Industrial Development Directors and the Industrial Directors of all ATERO divisions. I had never attended this type of meeting. Surprisingly, none of them felt it useful to tell me what their scope of work was, even though we were supposed to develop joint actions and strategies to enable successful co-operations with the Chinese. I personally found it quite puzzling …. Debates were purely informative at this stage but no decisions were made, no clear orientation was defined, apart from a joint intention to share information in a more systematised way. The assigned objective was to foster scale effects and/or the mutualisation of resources. At this stage, I could not know that the future was going to tell us that this objective would never be achieved.

In any campaign there is a formal exercise which consists in drafting a formal document describing all the technical, industrial and commercial aspects of the proposal. This request for proposal involves all departments and expertise, and requires a high level of co-ordination. Amazingly, by the end of September 2009, the programme team – theoretically responsible for this document – had not provided any formal request. Mrs Marketing had only forwarded the one official document issued by the customer to each department. Had this request been clear and well structured, one could have thought that the ATERO Program aimed at concentrating on adding value activities. But in fact, the request from the customer was not professional at all, and the ATERO Program teams had not even discussed it internally. Also, although we were talking about a production co-operation with TZUFU in the weeks leading up to this, there was no plan to involve them at any point in the drafting of the requested RFP.

This situation reflected a real lack of cohesion within ATERO and subsequently *vis-à-vis* TZUFU. However, nobody, except me, seemed to complain about it. As a consequence, very quickly, some stakeholders started to complain about my criticisms regarding the way things were managed internally. Paradoxically, though, when the same people needed my help, they

did not hesitate to come and see me. Mrs Marketing came to my office several times because she had to deal with quite complex scenario building activities, but she received little help from her superiors.

Generally speaking, it soon became apparent that the ATERO teams were not thinking together on how to control TZUFU in the future and how to build a successful co-operation with them. Most people in ATERO actually devoted most of their time to defending a certain position internally, without questioning themselves, or discussing it with others, and even worse, without sharing their views with TZUFU. Internally, the main concern focussed on selling, without analysing why interfaces with the Chinese were not properly managed. For example, one of the dilemmas resided in the fact that people from programme & sales wanted to make TZUFU as happy as possible but without ensuring (because they did not necessarily have the necessary knowledge to do so) that the industrial options they had in mind were relevant. On the other hand, the production and industrial team was willing to ensure some pragmatism and secure the program. A proposal was drafted that limited the scope of TZUFU's assembling activities, which was obviously not going satisfy them. On this particular topic, parties pretended they did not understand each other and avoided any direct conflict. But this game could not last. Internal discussions were initiated, but there were real difficulties in establishing one shared direction. Within my own department, my direct superior was not responding to my proposals for directions (probably by lack of time, but to date I am still not sure).

Of course, I trusted Mrs Marketing when she told she had tried to secure one single position together with my direct boss. However, despite many internal discussions, no consensus was reached on that specific dilemma. ATERO Program was interested in satisfying the Chinese requests first and thus securing a final deal. Personally, I could not rely on any recommendation from Headquarters or my supervisors. In fact, ATERO's Mrs Marketing naturally attempted to take the lead. She felt in charge of the project and her energy was honourable, despite her obvious lack of technical knowledge. But the issue of the scope of assembling could not be solved internally. I insisted on the fact that TZUFU was reluctant to back development parts through parallel investments within ATERO sites, which was a major industrial and financial risk. But the information was not properly considered by the programme & sales teams. The latter showed no sign of major concern that would justify a specific treatment. This had serious consequences as in the absence of anything other than a

vague consensus or unclear positions it was not possible to reach any joint decisions with our Chinese counterparts. In some cases this was all the more problematic as it could give the impression that we did not want to co-operate.

After a long discussion with Mrs Marketing one day, she admitted that she was feeling depressed by the lack of cohesion and coherence within ATERO. For her, the request for price (RFP) exercise had become a nightmare because nobody wanted to take the lead. Another day I went to her office. She was there, despite a very bad cold, and accepted to show me the slides debated with ATERO's CEO during the steering committee that had been held the day before. Although I had asked her to send me those slides, I never received them. Was this because she considered the information contained in those slides was not accurate enough or maybe too confidential? To date, I have no answer to this question.

On another occasion, while I was briefing Mr VP Program in his office, Mr Program Director joined us although he had not been invited. Then Mrs Marketing also joined us without having been invited, with a coffee in her hand. She sat on the chair opposite to us. She had her left foot on the corner of a chair and seemed to be there to check that I was not passing on different messages from what I had told her some days before. Interestingly, this gave the impression that she needed to be included in this type of discussions, which in turn gave the impression that she lacked in self-confidence.

Another day, Mrs Legal came into my office to ask whether I was part of the visit to China scheduled the following week. She is quite a commercially aggressive lady, with a certain turn of mind (some might say like a pit bull ready to bite to the death) once she has set her mind on something. She was surprised to hear that I was not involved, and I confirmed that I would have found it very interesting. Although I had tried to convince the programme team that I could offer some added value, the latter did not see it this way. I did not insist any further, especially since I was a bit reluctant to travel to China yet another time. Beyond the personal level, what was actually symptomatic of was that driven by a necessary win of the DRAGON project, but neglecting basic rules for transparent and trustful relationships with TZUFU, the ATERO program teams were defining the co-operation and negotiating with TZUFU as a partner, or even worse, as a supplier. Moreover, the purchasing teams were not involved, which confirmed that a very limited approach prevailed amongst the ATERO community, with no team spirit and ill-defined and implemented collaboration structures.

Interestingly, when I mentioned this to my direct line manager he was not surprised. One day, he even told me that he was not happy with how ATERO's COO was managing things. It was technocratic, time consuming and not sufficiently and openly debated with other Executive members.

This lack of internal cohesion was reported to me by Mrs Marketing who told me:

> *"…yesterday again during the Exec approval presentation, it was really obvious to me that the members do not co-operate with one another. I do have a lot of respect for your direct line manager but one must admit that other guys from the executive committee cannot stand him. He should try to improve his communication and political management in-house; otherwise he will always provide his opponents with leverage to argue against his pragmatic production view..."*

Many people agreed within ATERO, even within the executive committee, that there were clans which did not co-operate but quite the opposite, tried to undermine other positions. Lots of people within the organisation spent a lot of time on internal politics and put themselves in a sort of justification mode that left no room for trust and empowerment, despite nice official speeches. This unconstructive behaviour was reinforced by poor communication between functions, as testified by what was not happening after a so-called critical mission in Shanghai: within a day I had to travel to Shanghai in order to support the ATERO team in their final proposal process. As detailed previously, despite a blatant lack of planning, I accepted to play the game as best I could. Yet, after this meeting, I received no minutes from the ATERO Program Director, or anybody else for that matter.

My direct line manager was not surprised, and even added that the same people would certainly come back with more last minute urgent requests. He considered that we should no longer satisfy these requests at this stage. And most importantly, (I do not know why) he warned me that the programme and sales teams would most probably come to me to discuss their commercial offer again. He asked me, should that be the case, to not discuss anything with them and send them to him. He would welcome them warmly. At this stage, and under such circumstances, I honestly wondered how ATERO would ever be able to adequately manage any co-operation with TZUFU. Internally, discord was glaringly obvious, and ATERO stakeholders were obviously uncommitted.

This became more and more obvious when I realised that in memos issued by Mr Program Director, the involvement of the people from manufacturing was never explicitly mentioned, unlike other positions (engineering, programme/support and sales). A good example is the minutes related to the bidding formal document produced by the programme and commercial team, and the presentation of the ATERO team. There were photos and mentions made to the engineering, commercial, legal and even purchasing teams. But there was no mention of the involvement of the industrial team despite their crucial influence in terms of the strategic choices to be made and the type of industrial co-operation to be established. I cannot really understand why and whether this was driven by some reluctance to co-operate with industrial teams in general or with me, but this definitely called for further analysis.

There was obviously a problem of mutual trust between functions, as was exemplified by what happened when my direct line manager informed me that he had just received a document from Mr VP Programme with all the requests for clarification expressed by the customer DRAGON for all applications. My direct line manager then strongly suggested that I should immediately clarify all the requirements in order to avoid being asked to urgently do something before D-DAY. Consequently, I contacted Mr Programme Director to better understand the programme's needs. He called me back arguing that he had no time for me, and that in my capacity of person in charge of industrial activities, I should be able to answer the points dealing with manufacturing raised in DRAGON's requests myself. I must admit that, to some extent, this could have been acceptable, had the points requiring further clarification actually dealt with manufacturing, which was not the case… Of course, I did not appreciate this additional attack and immediately put an end to the conversation. A few days later other parties (Legal team) confirmed that Mr Programme was behaving the same way with others. This was yet more proof of the project's poor organisation and questionable management.
In fact, this illustrates the type of trust that existed at different levels within ATERO in terms or co-ordinating and synchronising the activities of several stakeholders.

The caricature of this was when Mr Legal Director realised that ATERO and Parent ATERO teams were working on specific legal issues without involving the legal team. The following e-mail is self-explanatory:

> *" ... I think a meeting needs to be organised ASAP (at the ATERO Parent level?) on these highly legal issues, and in particular to establish, before the 24th what we can position ourselves on and what is probably wise no to set in stone at this stage..*
> *Here is a non-comprehensive list of questions raised by said drafts: - I see that the plan proposed is justified by the fact that (necessarily) the JV that would receive the subsidy (and this subsidy is still not certain, and I am not sure how it will be dealt with in the offer?):* ***who provided the information according to which only a JV can receive a subsidy, and if this information is so reliable, do we know exactly what this implies in terms of the content of the JV (what should be included?), share percentages, etc.?*** *– regarding the JV, we do not even have the beginning of an agreement with our future partners regarding its structure, but do we have an agreement on the fundamental plan: do we want to transfer shares to Zhou to our future partner for x% (which implies that the partnership in the JV pertains to Zhou's activities as a whole, which will in turn have consequences on the other activities carried out by Zhou, namely in terms of price) or transfer relevant assets for the DRAGON project to a new entity created with the partnership? In general terms, our progress on the JV aspects (non-existent in terms of formalised agreements, and nearly non-existent in terms of understanding the constraints it entails) should make us cautious in our commitments to DRAGON... This memo does not offer a comprehensive list of the legal issues entailed: we would need months and lots of exchanges to finalize an agreement on the contractual aspects, but it seems important, as underlined previously, to decide quickly which elements we can commit to on November 24, and which elements ATERO/Parent ATERO cannot commit to. It is also important to organize our next steps,* ***with a much greater involvement of the legal teams for any structural decisions****".*

This note was so symptomatic that I decided to report it directly to my boss as follows:

> *"Mr Legal Director's memo came as a response to:*
> *• Tuesday 17/11: I went to see the legal team to see where things stood for the JV production with TZUFU. They had received no news since the signing of the MoU mid-October*
> *• Wednesday 18/11 evening, Mrs Legal received the e-mail exchanges below between ATERO Program Director and Parent ATERO Program Director. Although they are not always very clear, you can definitely see that things were going pear shaped and that decisions were made between them to answer DRAGON's "request for clarification"*
> *• Thursday 19/11 evening: meeting between Mr Legal Director / Mrs Legal 1 and Mrs Legal 2 and myself to see what we can do against this management mode that we consider defective and agree that:*
> *a/ at present we are failing to appropriately defend ATERO's interests*
> *b/ we have no clear idea of the plan proposed/DRAGON has understood that, regardless of the legal structure that is adopted, ultimately, Parent ATERO should bear the risks*
>
> *I await your instructions to know if I should continue to look into it as it is not necessarily a Production/industrial question, per se, but at the end of the day, we will be asked to build the plan that is adopted, and as such, I think it is legitimate that we are included in these discussions. Sn"*

His answer was almost immediate, and copied to ATERO's CEO:

> *"Unfortunately, such a complex issue, which implies so many people, is difficult to pull together at this stage, given the pace at which answers must be given, and given the hierarchical levels included, even outside of ATERO. Yes, more co-ordination and information are necessary, but it is not up to us. I think you should remain involved and continue to represent Production, even if it is not easy, for the reasons you mentioned. We have to continue building the co-operation plan (at least at the pre-project/project phases) so we are not caught off-guard if we actually win the contract, which is possible!"*

Based on this feedback, I felt it would be appropriate to have a chat with Mr Legal Director, and see whether he had received any response to his mail. He confirmed that those responsible had not even replied to him directly, but contacted his subordinates in order to get further precisions about the technical aspects they had foreseen without involving Legal expertise from the beginning. This was not a surprise to him. He also admitted that in a separate e-mail he had copied Parent ATERO's Legal director. He was convinced that following poorly managed contract signatures, as was the case with YANKEES 69 for example, the parent company was keeping an eye on what ATERO was doing because they did not think its decision and control management was robust enough.

So far, the above suggests that it was difficult to establish internal co-operation within ATERO. And what is funny is that Parent ATERO stakeholders soon started to request specific alignments or debriefs from their respective divisions, including ATERO. This is detailed in the following e-mail, which was sent by Mr Group Industrial Coordinator to all divisions involved in this campaign and Parent ATERO's industrial VPs.

> *"After submitting commercial offers and in hoping that they match the client's expectations, we have to pursue our reflections on the industrial organisation associated with this programme.*
> *Schematically, from the review of technical content for the product to be delivered: materials, key processes, geometric or process complexity… Full description of the industrial organisation that you had in mind for the Product and its Make or Buy constraints: recommended partners, protecting our know-how, capacity. Possible locations for production and assembly, relevance of the Supply Chain, availability (or not) of specialised competencies (with resp sourcing) >> opportunity for our historical or western suppliers*
> *>>Investments required from Parent ATERO, under what form… Including a list of the questions, missing information to study our projects, network activation, workshare, etc."*

This request is symptomatic of Parent ATERO's need for some sort of control over its divisions, with its attempt to consolidate and aggregate the efforts of all divisions. In this respect, I find a note from my direct line manager to ATERO CEO particularly interesting:

> *"FYI … In order to stay polite, Stephane is trying to agree on dates, and is preparing a summary which we have to go over with you before mentioning it to our interlocutor"*

This illustrates that the ideal and theoretical recommendations for successfully managing to work together praised in corporate books are very far from the truth. It is symptomatic of the poor communication between project members and the lack of transparency in decision-making processes. In our case, this was crystallised by that dilemma between limiting the risks of industrialisation failure versus the risk of selling nothing, as mentioned earlier.

My position on this subject was actually very much in line with that of my direct line manager, as testified by the note issued to his attention and to others:

> *" … to discard double industrialisation is contrary to the recommendations issued by Production since August 2009. It is a major industrial risk that goes against common practices. When a transfer is decided, don't we also ensure a transition period to limit risks?? So what can be said about a program where a new partner, Chinese of all things, is involved?? If they reject the principle of a double industrialisation, it is up to them to present their plan to us, then it will be up to us to scrutinize it.*
> *Problem: on this last point, the demands of the programme's demands are not consistent as it maintains that the Chinese teams will not be able to build an industrialisation plan by themselves, and that we will have to help them do so!!,*
> *1/ Unless this request actually aims at putting us up against a wall by considering that we (production/industrialisation) are not able to prepare said industralisation plan, I do not understand the logic behind the programme".*

This example raises the question of how realistic it is to try and set sound bases for developing a co-operation with an external organisation (inter-firm co-operation) when internally, different departments cannot work together because of the organisation, individuals or resource availability. This reality should not be underestimated, as testified by meetings organised as a sort of justification round during which, Mrs Marketing for example, often tried to sell her approach to the legal, engineering, manufacturing and purchasing departments. Obviously, this approach was the one accepted by the CEO one week before, and as such viewed as the bible by the program team despite quite opposite and different recommendations from field experts. I often wondered why Mrs Marketing felt attacked by me when I reiterated the fact that discarding the double industrialisation principle was a mistake. Indeed we all work for the same company, and there is no reason for us to compete among each other… Or at least that is what I thought … But in real life, within a company, some may try to impose their views on colleagues, instead of finding the best approach for the company. It was strange to see Mrs Marketing argue that the whole DRAGON story had nothing to do with the YANKEES 69 experience, while Mr Estimating Director (20 years of experience in ATERO and fully involved in the YANKEES 69) adamantly insisted that ATERO was repeating the same mistakes. I felt quite uncomfortable when Mrs Marketing ordered that I would be the person responsible for ensuring the proper and on-time industrialisation of the parts produced by TZUFU!! This was obviously some sort of threat in retaliation for my arguments, and it was irrelevant, as purchasing was in charge of TZUFU, not me.

Once, a meeting ended on an uncomfortable note as Mrs Marketing seemed exasperated by both Mr Legal Director's positions and my own. But not because other proposals were more relevant, because no-one else had offered any... Once more the ATERO team was fragmented, yet at that stage, everybody should have been in line with a clearly defined direction or orientation. The poor internal co-operation and co-ordination syndrome was flagrant; one of its many examples could be when Mrs Legal ran into my office:

> *"Have you heard the latest news? They want me to be ready to travel to China as of Monday, 14th if requested in order to establish all legal pre-arrangements for signing a contract with them if we are selected"*

She fully understood that her skills and knowledge could justify her presence in Shanghai. However, what distressed her is that Mr Programme Director's justification for her presence was other: it was important to show to the customer that ATERO is there and present…

My colleague described these practices as similar to a "*VRP going around to sell his washing machines! But those guys should understand that any decision that is taken today means a 25-year long commitment from ATERO. Consequently, we have to be well prepared before signing anything, which is absolutely not the case so far. Every time we report some legitimate roadblocks we are told that we are being negative and part of a losing machine. What can I do alone in China, with no support from technical advisors (ATERO will be closed during the next two weeks) and also no clear mandate about what I am entitled to propose for negotiations or not… It looks like they are driven by the need to occupy the field, even if it is in a disorganised manner, with no clear and shared objectives communicated across the team involved*".

Other colleagues also shared with me that in some cases they had been asked not to share information with other ATERO members, sometimes even their own bosses. This was symptomatic of a sort of conspiracy approach, which may seem surprising indeed, but I would agree with them, especially on those days when, during meetings, Mrs Marketing sat beside me and tried to read my personal notes…

All the above raises the question of the ability of a company to succeed in inter-firm relationship management and co-operation when it is clearly failing in its intra-organisational management. Objectives are not made clear to the teams involved, some team members are not respected (personally – because their personal constraints are put aside, and professionally

– because experts' positions are not taken into account if they are not in line with the type of answers expected by program and sales teams). ATERO's inability for internal co-operation was probably due to a lack of communication, as exemplified by two sheets of paper that were handed over to me, which were in fact an e-mail received on December 23rd as a recap of the on-going discussions in Shanghai. Interestingly, neither my direct line manager nor I were copied in that e-mail which was sent very officially by programme and commercial actors. While I still suspect that there were things about which I was not informed with regards to the JV co-operation establishment with TZUFU, I cannot deny that ATERO's dealings were much more focused on internal politics, rather than on winning the contract for the benefit of ATERO.

Under such circumstances, ATERO probably only had a very limited chance of successfully negotiating with determined Chinese business men. Most appalling however, was a campaign meeting called by Mr Program Director (at the last minute, again, and which was due to start at 9 a.m. while most people were late and could not start till 9.30 a.m.) and he said: "*I have a few slides that I would like to share with you, as I did a week ago with the rest of stakeholders in a similar review".* The atmosphere was quite positive and all of us were ready to take a step back and analyse what had gone well, and what hadn't without criticising each other, as suggested by Mr Programme Director in his note. According to him, we should not look back and point fingers, but be able to project ourselves constructively, in order to identify concrete and realistic actions that could be endorsed by the representatives of each function. In his view, this could be possible by empowering everybody…

Interestingly, an audit was conducted a few days after the announcement of the non-selection of ATERO. The outcome of this audit was that from a process viewpoint, no major weaknesses had been identified, but the key problems came from the ineffectiveness of interfaces within ATERO. Taken individually each entity seems fine, but the "interfacing" was inefficient, which was made worse by the way the top of the hierarchical pyramid had worked. The other concern raised dealt with how ATERO teams worked together. It was clearly pointed out that the construction of the commercial offer had been heavily handicapped by a myriad of divisions, synonyms with fragmentation. Amazingly, Mrs Marketing admitted that she had been placed in her role without knowing what the ATERO group was looking for, and considered that the different departments involved were "*behaving like insubordinate children*".

2.4. Positive sensitive attitudes and relational capital management

As mentioned several times in previous sections, the role of the Steering Committee implemented by TZUFU and ATERO was critical. From a relational capital management viewpoint, it was quite encouraging to see that both parties had agreed that within a deadline of two weeks of its creation, working rules and all the working plans to meet the customer's final request had to be formally specified jointly. This was no doubt a good approach for laying the foundations of an effective and fruitful collaboration. The relevance of this proactive approach was confirmed in several instances (e.g. the industrial mission mentioned in previous sections) where the definition and distribution of appropriate roles (leader, expert) amongst the two teams was of great help. Mutual respect could thus rapidly emerge, along with transparent, objective and careful debates.

Another key ingredient that is interesting to take into account relates to the industrial background of the members of both teams. Organising an assignment which involved team members from both TZUFU and ATOERO with similar industrial mind-sets probably fostered positive, sensitive attitudes. This was not necessarily done consciously by the two companies, but was definitely helpful. This assignment was a crystallisation of factual and objective exchanges between actors who had understood why they were meeting and what they were expected to deliver. Into the bargain, the context, in which trust and respect prevailed, encouraged fraternal exchanges. It is true that language barriers did not make things easy. However, motivated translators made it possible to communicate, and the time allocated for socialising in the evening significantly contributed to building a co-operative spirit. Even if cultural barriers remain, and should by no means be ignored, sharing meals and drinks transcends borders. Other basic considerations proved very useful. For example, being factual, determined but always respectful in our language, attitudes and body language is something that should be considered critical from cultural point of view. This consideration pleased our Chinese counterparts, who then felt that they could collaborate actively. For example, after breaking the ice, TZUFU members started to share some of their concerns and expectation with us *vis-à-vis* ATERO. This was more the result of chemistry between individuals, rather than a MoU signed by the two companies which stipulated that:

> *"… ATERO and TZUFU commit to working exclusively with each other on the Program and on the work described in the M.O.U. in order to encourage the open exchange of commercial and proprietary technical information and to avoid diluting either party's capabilities and efforts…"*

The importance of this cultural dimension came quite naturally to me - maybe inherited from my years working with Anglo-Saxon companies. With the Chinese community in particular, whenever a decision had to be made, and in order to make it clear for everybody (e.g. what workshare has to be considered for building a technical and commercial joint offer), I adopted a behaviour that was not the norm for my French colleagues but was clearly the type of relationship that our Chinese colleagues could understand. For their part, the Chinese teams never neglected ATERO members, and were very positive and welcoming. I remember once they hosted us in a meeting room which had the "mock up" of their future plant on display. Mr TZUFU's Director turned to me and said: "*dear Stephane, look at your nice future accommodation for when you next visit us* ".

Ensuring this type of relationship was maintained did not mean that both parties were always in agreement. For example, one morning we had an early start after a delightful dinner the night before, during which we did not discuss business. The Chinese tried to avoid critical discussions or even negotiation on the subject of specific investments. The drinks from the night before were still having their effect, but we did not have much time, and a decision had to be made. I felt at this stage that we should ensure that the Chinese did not lose face (well-known tips from a cultural awareness viewpoint):

> *"Sweeping traditional formalism, and deliberately avoiding the traditional 'good student' approach to animate debates, but also by caricaturing my attitude, and playing on the special relationship between Mr TZUFU Director and myself, we managed to get them to understand that we could be competitive only if TZUFU did not invest in another type of machine"*

This incident could have seriously endangered the positive atmosphere which had been established in the past few days between the two organisations. By chance, interpersonal elements and mutual respect made it possible to conclude the meeting without any major clashes, because both parties could position themselves frankly and openly. No doubt, had I not had such a close relationships with Mr TZUFU Director, it would not have been possible to reach any decision. The connection we shared, our mutual respect combined with well-articulated and rational arguments were the enablers for agreeing on various topics, such as the issue of the investment envelope. Interestingly, after this particular moment of tension, we all had lunch together, as well as with Mr ZONG, TZUFU's General Manager and Mr TZUFU Director's direct superior. It was a standard lunch, with reciprocal expressions of pleasure and satisfaction in working together, importance of having a successful partnership and the need for transparency. But a key moment of the lunch was when I deliberately asked

Mr TZUFU Director to summarise, in front of all of us, his perception of these few days of working together. The psychological dimension here was determinant determining factor, because after praising - in front of his boss - the hard and good work the teams had delivered, he did not express any concern, and underlined the cohesiveness of the collaboration between two teams willing to make a difference together. Mr TZUFU remained quite elusive about the frictions from the morning and gave me the opportunity to insist on the idea that our co-operation was necessary for both companies, while respective interests also had to be preserved. I felt at this moment that the relationship developed with Mr TZUFU Director, as well as having to openly recognise that we had to overcome some hurdles together, was going to prove instrumental in enabling a cohesion which was not distorted by politics. After many drinks, cigarettes and jokes along with good Chinese food we had to head to the airport. But Mr TZUFU Director had insisted that before we left, he should drive us down to the construction site of their new plant: a huge industrial facility capable of hosting around 5,000 people within the most advanced infrastructure, a real war machine. On the flight back to Europe, I could not help but think that these few days confirmed that inter-firm management is one thing that cannot be disconnected from intra-firm relationships management, a view that was fully shared by my colleagues. This experience had underlined the extent to which the dynamics or articulation between intra- and inter-organisational relationships can be critical.

In the same logic, it worth mentioning October 2009 when I was requested to represent ATERO in front of other Parent ATERO stakeholders at a lunch held in the headquarters to which a Chinese delegation had been invited. This "lunch" initiative had come from Mr Etienne (General Manager of an ATERO sister division manufacturing unit). Heavily involved and aware of what is at stake in the Chinese suppliers' network, Mr Etienne was one of those few people in France who understood that lobbying is crucial for developing business. Consequently, he had already established contacts with the President of the Zhou Industrial Park Administrative Committee, Mr Young. Though not directly involved in the DRAGON decision and selection process, this gentleman shared a genuine interest in the success of ATERO. For him, this was a great opportunity to increase the level of business within the economic zone of which he was in charge (and where ATERO Zhou is located). The lunch was chaired by Mrs Asia Parent ATERO, and she had decided on the seating around the table. Before that, a little incident occurred as Mr Etienne -quite a clumsy man- had spilt Mr Young's peanuts all over the floor. The situation was amusing, with everybody

pretending not to see the waiter cleaning up the floor… Conversations were mainly in English, with some in Chinese as Mrs Asia Parent ATERO - who had spent several years in China - was (almost) fluent. The initial conversations were quite trivial, we asked about their journey and plans. They explained they had come to France for some formal conference at Bercy and in the Netherlands. Their objective was to be part of a broader Chinese delegation including the General Manager of DRAGON (final end customer). Interestingly, Mr Young referred many times to schoolmates he had, and was happy to share some personal experiences of his time spent at the University in Nanjing, from which many Chinese actors in mechanical and aerospace graduated.

He also informed me that DRAGON's deputy GM – Mr GO – would attend the conference in Paris the following day, and that it could be a wonderful opportunity for ATERO/Parent ATERO to strengthen ties with him. Surprisingly, apart from Mrs Asia Parent ATERO, nobody from Parent ATERO (hence ATERO) had planned on attending this conference, which could obviously be seen as a lost opportunity to reinforce relationships with the Chinese.

Mr Etienne was listening carefully but did not participate in the conversation actively, and another gentleman from Parent ATERO answered a few questions but never took the lead. Actually I felt that, along with Mrs Asia Parent ATERO, we were the only people who were actually encouraging exchanges and passing on some key messages like: "*were ATERO selected, a great JV could be established and the business developed within the SIP would increase significantly*". My goal was to encourage Mr Young to personally lend a hand to see if he could influence DRAGON in their decision and help ATERO win. I equally emphasised that the ATERO/TZUFU solution would also make it possible to work together on the development of a local supplier's network, as it would make no sense to have Western parts sent to China for assembling. But I was the only one using this kind of argument. Mr Young also made several remarks about the fact that the military aerospace industry could no longer lead the way in this industry, as the civil end of the industry would inevitably skyrocket because at the time, only 2% of the Chinese used air travel. Interestingly, Mr Young also proudly told us that an additional Airport was to be built close to Zhou (in Wuxi). This was a sign of the key importance for him to develop industrial activities in his district. The rest of the discussion was about the history of the Chinese aerospace industry, of the presence of Parent ATERO in Asia, the challenges DRAGON was facing with its tight schedule for

developing its aircraft on time. But importantly, the Chinese seemed very much aware that the DRAGON selection decisions were expected by the end of the year.

As we were all shaking hands and saying good bye, Mr Young asked me if I was English. Mrs Asia Parent ATERO added that my English was excellent. Of course, I am not mentioning this to make me look good, as anyone who reads this would disagree. But it does demonstrate the importance of language in these situations. The cultural dimension and the linguistic element proved critical with regards to relational capital management. At the end of December 2009, a few days before it was made official that ATERO had not been selected, I received the following mail from the TZUFU team: "*Dear Stephane … Please accept TZUFU team's warm greetings in this warm season … Wishing you and your family a Merry Christmas and Happy New Year*". For obvious reasons, I suspect this was not only a courtesy but the translation of a genuine positive, sensitive attitude between actors. Unfortunately, the possibility to capitalise on it was not given, as DRAGON finally decided to select a competitor. Still, it is fair to admit that the attention paid to relational capital management was not one sided in these cases.

However, I must recall the position consistently maintained by ATERO's VP Programme, "*the main parameters that shall drive decisions are risks, investments, technical approved experience, costs, and added value in front of competition after a fair and substantiated analysis*". This was the mind-set within ATERO from the outset. Also, ATERO almost immediately positioned itself as the one entity capable of judging and adjusting the work to be produced by the Chinese, as suggested by the following mail from ATERO's Mrs Marketing sent to TZUFU:

> *"… Our understanding is that both TZUFU and ATERO will quote their part as identified in the minutes of meeting … ATERO will quote forgings and all buy parts based on overall experience, taking into account a high level of Chinese content as a basic hypothesis. We can discuss these buy parts quotes in the meeting next week in order to evaluate what we both can do. But, one point we all have to make sure of is that we will meet these cost figures later when we develop the program … It is important that you confirm your acceptance for having the meeting next week. At this meeting, we will build the product recurring cost together by adding both TZUFU and ATERO quotes. We also need to know the amount of NRC based on the work share described in the minutes of meeting. Recurring and non-recurring manufacturing cost will be discussed at the next meeting".*

Communications of this type are actually quite symptomatic of how the French players positioned themselves. They were to be the moralisers, but they had not earned the necessary trust or respect from the other side. In others words, ATERO's Mrs Marketing described in

detail what she needed to see secured, because she needed to protect herself vis-à-vis her hierarchy, in addition to getting some concrete input from the Chinese teams. Her concern regarding adequate relationships management with our TZUFU counterparts was fairly limited. This is a considerable paradox, and all the more worrying as internally within ATERO (and maybe within TZUFU also) it was difficult to see a clear consensus on how this co-operation should be established. This assessment was confirmed by the content of the following note issued by ATERO VP Programs who had already developed relationships with TZUFU in the past. His note regarded the recommended approach to develop ATERO's co-operation with TZUFU:

> *"The content is good, the message clear and the plan as well. I guess the evaluation of technical difficulty by package has been carried out and is in line with the plan. However, globally speaking, my comment would be that I do not see what has changed and will ensure the future is brighter than the past:*
> - *why did we fail (apart from the demand drop which is not a sufficient explanation),*
> - *what do we propose to change to succeed (technical support? resources? ...)*
> - *what do we need TZUFU to change to succeed (how will they be able to quote accurately first time?*
> - *how do we ensure competitiveness of their prices, etc ...*
> - *who commits to what in order to enable the situation to change.*
>
> *I am just afraid TZUFU will think they have already seen similar presentations last year, the year before*
> *and the previous years ... Unless the TZUFU team has changed.*
> *And that leads to the question: internally, what are we prepared to change to ensure success of this plan."*

Interestingly, one morning I had a fairly open discussion with ATERO's Manufacturing Engineering Director. According to him, "*ATERO is suffering from its stakeholders' tendency towards exacerbated self-interest*". As already mentioned, he took the example of ATERO's Programmes VP whose attitude was very detrimental:

> *"... our Programmes VP is afraid of not winning the DRAGON project - a" must win" says the big bosses - hence he does not want to take any risk that could deteriorate relationships between ATERO and the Chinese (in particular TZUFU). Consequently, ATERO is not really demanding from a financial viewpoint while ATERO could make TZUFU pay a significant amount of money for ensuring the support TZUFU needs to be able to produce parts for DRAGON aircraft".*

On the other hand, ATERO's attitude was not very pro-active either, as testified by my discussion with Mrs Asia Parent ATERO following our lunch with the Chinese delegation. She explained that she had informed Parent ATERO key decision makers, including Mr Programme VP, about the conference at Bercy - mentioned several times by Mr Young. Yet, nobody was prepared to go. She would be the only Parent ATERO representative and amazingly, she was used to it, and as she confessed, rather disappointed.

The problem of the involvement in the development of close relational ties was epitomised when, despite these several warnings, the ATERO Program team did not really take advantage of the presence in Paris of the Chinese and Parent ATERO people together to establish a close relationship and spend their week-end together. One day, Mrs Legal told me: "*This reluctance in investing time and money in the development of close ties with the Chinese is likely to cause failure. We don't know the Chinese market specificities, the legal and cultural aspects of it. We are an engineering company, we are not real businessmen*" she said. "*Something has failed in how the team has been managed from the beginning: no communication, no recourse to experts. A success does not only depend on nice excel tables or power point presentations. The social and subjective dimension is critical and probably what makes the difference in the end. Unfortunately, this is not the kind of standard intellectual representation of those involved in ATERO programs for winning a business*".

In fact this example shows a lack of inter-organisational relationship management capabilities which possibly stems from poor internal relationships. Some might call this the "*engineering syndrome*": especially in France, within aerospace firms populated by brilliant troops of leading engineers, an excessive amount of time is devoted to getting lost in menial analytical details. It is hard to come across a mentality that is genuinely business oriented and capable of offering a clear and straightforward strategy with a clear direction. Often, people spend time working out figures, although, to all intents and purposes, these are not really reliable without a crystal ball. They produce an array of possible outcomes which are debated internally at length, where everybody wants to have it their own way. As a result, quantitative analyses are requested and massive amounts of numbers must be produced, which is extremely time-consuming. Hence, not enough room is left to fully taking into consideration soft variables and influencing factors. This has a direct impact on social and informal control dimensions within IORs. It is the starting point of a vicious circle, as testified by what was experienced within ATERO. "*... Every time we report some legitimate roadblock, we are said to be negative and part of a losing machine*". Such comments were reported back to me in many instances by different actors within ATERO. When requested to carry out a mission on the battlefield, the same individuals often lament the lack of internal support along with the absence of clear mandate and objectives. With team members feeling they are not respected personally – because their personal constraints are put aside, and *professionally* – because experts' view are not taken into account if not in line with the type of answers expected by

other functions like programme or sales – it is fair to admit that social capital is neglected not only with regards to the IORs at play but also from an internal viewpoint.

Yet, this matter cannot come as a surprise when you consider that within one same team, people were not even aware of what their counterparts were doing. During a visit of the Chinese to one of ATERO's historic sites, a few minutes after I entered the meeting room with Mr UK VP Plant, ATERO's Mr Programme Director stood up to shake my colleague's hand. He did not acknowledge my presence, but I did not react and pretended to listen to the on-going presentation. However, I could hear ATERO's Mr Program Director asking my colleague from the UK to talk about ATERO's Canadian sites in order to add some marketing arguments in his discussion with the Chinese delegation … My English colleague simply replied that he could not satisfy this request as he was in charge of production for the UK site. To me, this revealed a dramatically poor understanding of each other at an internal level.

Neglecting relationships both internally and with external partners is a weakness that most actors within ATERO eventually came to recognise. ATERO's Mr Program said, regarding the months of the commercial campaign, "*there were plenty of Americans lobbying quite intensively, developing contacts with the Chinese stakeholders and certainly establishing close links, much more than we did*". Frankly speaking, one must admit that this is not a simple thing to do, especially in contexts such as the one that was given during a working session in Shanghai: we were sitting in a large meeting room, with no window and quite a cold atmosphere. No advertising of any sort. We were surrounded by more than 30 Chinese people. They were all rather young, and seemed to have a low level of seniority. The Parent ATERO team was represented by Mr Chief Engineer, two local assistants and I. There were also two other people from customer support. I did not even know their names, which gives an idea of the maturity of the relationship management within our own company. The DRAGON people looked as though they were ready to listen to a lecture from experienced Western teachers. I remember I said to ATERO's Mr Chief Engineer that it was a rather negative sign with respect to the final outcome of the selection process. Much later, ATERO Mr Programme Director admitted that "*the Chinese considered they were in a comfortable position to say that ATERO had no right to complain about the possible non-selection as it had already its piece of the cake through the selection of other products and solutions*". This view is something I had already suggested two months earlier, but nobody had considered it seriously. Consequently, when talking with the Chinese in the course of the negotiation, it is

highly likely that nobody had really tried to anticipate this as a reason for not winning. Had they considered it properly, they could have initiated different types of discussions with them; they could have put them in a corner and forced them either to select ATERO or let ATERO know that there was no chance of winning. On the other hand, this insight would have been possible providing that the right network and communication channels had been activated. As developed above, this was unfortunately not the case. But the most surprising thing is that in this case, once more, nobody within ATERO ever wondered why. Every time, people merely passively accept that competitors (most often Anglo-Saxon) deployed a successful lobbying and were much more present than we were on the battlefield, which eventually enabled them to build tight enough ties and thus helped them anticipate things better.

This deficit in effectively managing positive sensitive attitudes reached its climax when during the very last negotiation steps at the end of December 2009, the Chinese DRAGON seniors were probably expecting some brave decision from ATERO's top senior decision makers. Still, the Westerners gave up nothing. Not giving anything up probably led the Chinese to believe that either there was no room for improvement, or that ATERO's CEO was not a real decision maker. On top of that, ATERO Mr Programme Director mentioned that the final meeting had not been prepared in the best way possible culturally speaking, which left room for an obvious mismatch between both parties' perceptions.

Overall, the above illustrates that Parent ATERO had a real problem when dealing with business and social capital development with its interface. I can cite one last example to illustrate this well: an executive committee was held in March 2010 after DRAGON announced they had no choice but to put an end to their co-operation with our competitor. Upon request from the CEO, I was asked to present an update on the Joint Venture basis to consider. Yet, apparently forgetting the lessons learnt, the CEO was more concerned with justifying ATERO's pricing positioning *vis-à-vis* its Parent company rather than the requirements to fulfil to enable a successful working relationship with the Chinese. As described through the "*engineering syndrome*" discourse, nothing was debated regarding mutual culture awareness, possible types and forms of IORs and necessary control management tools that should be implemented to manage this dream of a successful industrial co-operation.

2.5. Best in class network management and networking capabilities

In the context of the DRAGON campaign, the first discussions between ATERO and TZUFU really started in May 2009. However, until July 2009 it was difficult to gauge the effectiveness and the richness of the exchanges that took place among stakeholders, as I was not personally involved.

My understanding is that concrete and necessary exchanges took place in the course of July 2009, during a strategic industrial audit within TZUFU's major plant. I personally led the ATERO team, made up of four manufacturing and purchasing experts. During this week-long mission, everybody got on very well and demonstrated that people who are focused on something other than politics could easily collaborate. Obviously, the Chinese team demonstrated genuine willingness to work with the ATERO team, which made it possible to deliver a tangible and helpful outcome which was fully approved by both teams. Two months later, I flew to China again. This time, the mission was more focused on a cost analysis exercise. The time I had spent with some members of the Chinese team during my previous visit in summer proved very helpful, as I had to work with the same people, and the chemistry worked again. People within ATERO were quite surprised that TZUFU had actually accepted to host a formal recurring cost review so easily. I suspect the way the previous mission had gone, the conviviality of our exchanges but also the few phone calls we had between the two missions had played a crucial role in bringing us closer.

In October 2009, communication and leading network management proved key, as testified by a last minute trip to support a two-day workshop with the final customer. On this occasion, both teams worked together and reciprocal communication was very successful. For instance, ATERO's Mrs Marketing had sent me an email to share what had been shared with TZUFU a week before (namely, before the October 20th DRAGON presentations). The communication plans stipulated that an ATERO/ TZUFU meeting should be held every month to agree on all communication elements with DRAGON - which was perceived by both parties as very positive and important; both parties should exchange e-mails on a weekly basis on new messages from DRAGON, on new data or new information for D2R2; both parties should help the DRAGON teams understand ATERO's proposals by formal presentations and regular contacts.

This way of working was very much in line with the view that the dynamics and articulation of intra- and inter-organisational dimensions is critical. In other words, it revealed that deliberately or not, ATERO was putting into practice what is viewed as a necessary approach i.e. establishing co-operation with a partner from outside to secure and maintain ties but also trying to do the same in-house. Clearly, this was also giving the impression that people within ATERO were asking themselves how an organization could aim at establishing cooperation with a partner from outside while it is not easy to maintain ties properly in-house.

Another occasion to emphasise this particular aspect in co-operations is when ATERO's Programme Director proudly explained that he had built a very close relationship with the key actors of the DRAGON engineering community, with many off-record conversations that, in his view, made it possible to better position ATERO's proposal within the race. According to him, everything possible had been done by the team to effectively lobby the customers' stakeholders. Besides, he had personally taken the initiative of contacting ATERO's boss to offer to have lunch with the DRAGON engineering boss. Impressively, the decision to attend was made by our CEO's boss within ten minutes. This, in ATERO's programme Director's view, was proof that the ATERO teams were doing an excellent lobbying job and were not neglecting the relationship dimension. Although the story was about to end, it is important to acknowledge that some specific attempts and behaviours were made or adopted which reflect some awareness of the importance of managing a network at this point of time.

On a different level, but providing additional reasons for managing networks, Mrs Legal came to me one day. She let me know that she had just spoken to ATERO's Programme Director. He had shared with her that according to latest information, gained through an "intelligence" action, both DRAGON and GR were working on a Letter of Intention. This was bad news for ATERO. This meant that ATERO had been down selected despite the X% recurring costs reduction it had accepted to give up. What could then be anticipated happened on December 31st: DRAGON (Mr Wu) instructed his teams to work on a LOI with a given company. On January, 1st: DRAGON contacted ATERO's Programme Director to make this decision official. Consequently, ATERO teams received the following sms:

> *"… We have just received confirmation that DRAGON voted for ATC. This decision is irrevocable.."*

The feedback provided in this section reveals the extent to which ATERO and TZUFU intended to manage interdependent networks successfully. Unfortunately, what is described hereafter provides some reasons for a disappointing outcome. Most failures were caused by a poor ability to manage networks socially and structurally within ATERO.

As was the case on other subject mentioned earlier, a critical expectation had not been fulfilled. Though the intention had been clearly specified, the establishment of a steering committee between the two actors never took place. This did not happen, despite what was requested in the LOI signed between the two parties at the very beginning of the journey, as can be seen in the following extract from an internal note:

> *"… ATERO and TZUFU shall develop a common response to DRAGON Request For Proposal ("RFP") to develop, design and manufacture and support the Project. This RFP response will be signed by all ATERO and TZUFU companies involved in the work share. TZUFU and ATERO will jointly act to define cost and associated performance targets to be achieved to answer to DRAGON's reasonable anticipation of price and technical requirements for the Project.*
> *To meet this above target, TZUFU and ATERO have to start exchanging all necessary information as early as possible, including but not limited to technical and commercial information. To protect the TZUFU and ATERO companies overall assets, all TZUFU and ATERO companies agree, for the duration of this L.O.I. and in relation with the Project and all its derivatives, not to enter into discussions with, and/or enter into negotiations with, and/or sign any agreement with, and/or seek for partnership with, and/or more generally contact any competitors of any of the TZUFU and/or ATERO companies.*
> *TZUFU and ATERO agree to set up a Steering Committee composed of TZUFU and ATERO representatives, chaired by ATERO with a vice-chairman from TZUFU, which shall manage the common response to DRAGON for the Project. The Steering Committee will identify and manage the various tasks required. This will take into account the work share allocation principle between TZUFU and ATERO that was pre-defined during the discussion held between the Parties on May 14th, 2009.*
> *This Steering Committee shall be composed of TZUFU and ATERO representatives with the appropriate authority level to be able to make decisions for the Project. The main parameters that shall drive decisions are risks, investments, technical approved experience, costs, and added value in front of competition after a fair and substantiated analysis. ATERO's decision shall be the final recommendation of the Steering Committee. Notwithstanding the above, in case of disagreement of TZUFU, TZUFU may require arbitration, TZUFU and ATERO will escalate to senior management i.e. chairmen and CEOs. Should TZUFU and ATERO fail to reach an agreement after such arbitration before submission of the RFP, this L.O.I shall be terminated.*
> *This Steering Committee shall agree within a timeframe of two weeks of its creation working rules and a work plan to meet the request for proposal response date currently anticipated for the fall of 2009. They will agree a schedule of meetings and reviews. In the event of selection by the Customer, the principle of this Steering Committee shall be retained as a principle governing the co-operation between TZUFU and ATERO for the duration of the Project."*

When questioned about the relationships experienced with TZUFU, ATERO's purchasing director admitted that:

> *"despite contracts in place with TZUFU for many years, we do not really know them and often struggle to get a proper understanding of what they are looking for and what they can offer us"*

Actually, this illustrates a blatant failure in managing networks. A reason for that can be found in the following e-mail exchange. In response to an e-mail sent by the TZUFU, Mrs Marketing wrote on September, 17th:

> *"… our understanding is that both TZUFU and ATERO will quote its part as identified in the minutes of meeting. ATERO will quote forgings and all buy parts based past experience taking into account a high level Chinese content as a basic hypothesis. We can discuss these buy parts quotes in the meeting next week in order to evaluate both what we can do. But, one point we have all to make sure is that we will meet these cost figures later when we develop the program. We have to dissociate the exercise of quotations for the RFP and future allocation of work between TZUFU or ATERO suppliers. We will develop the supply chain to respect and even lower the product cost we will use for the business model and agree in the MOU. It is important you confirm your acceptance for having the meeting next week. At this meeting, we will build together the Product recurring cost by adding both TZUFU and ATERO quotes. We also need to know the amount of NRC based on the work share described in the minutes of meeting. Recurring cost quotes as well as non-recurring manufacturing one will be discussed in the next meeting…."*

From: zhangxiny@s.com
Envoyé : mercredi 16 septembre 2009 06:06
À : Mrs Marketing
Cc : zhangyg
Objet : 回:TR:RFP - TZUFU quote & ATERO visit to TZUFU Importance : Haute

Dear Mrs Marketing,

Thanks for your warm regards. For a proper and competitive price to program, action is in process. In order to give a full proposal, please supply the related forging cost. Also, for these parts marked as BUY, please supply the price for review, maybe TZUFU can find suppliers with a more competitive price. TZUFU suggested discussing and reviewing both parties prices …"

In fact, this approach is quite symptomatic of the how the French players position themselves as lessons providers without respecting a necessary trust or respect from the other side. In others terms, ATERO Mrs Marketing is describing in details what she needs to secure because she needs to protect herself *vis-à-vis* her hierarchy in addition to getting some concrete input from the Chinese. A problem is that Chinese are not dupe and probably have a different agenda to satisfy them first. Even worst, as reported by ATERO Legal Director:

> *"No standard rule exists. This co-operation construction cannot rely on already experienced schemes that would have been clearly formalised. In fact it proves that the company is not used to capitalising on past experience".*

In reality, how a combined TZUFU/ATERO network could be built and managed differently from the past quickly became a real concern.

In other words, people design nice plans and approaches but do not systematically do what it takes to make it happen. Is it a problem of culture, organisational structure or communication skills? One thing is certain: networking management is considered crucial by most experts but in the specific ATERO context, taking into account the elements previously mentioned, the chances of developing tacit knowledge, learning, sharing of innovation and thus of making a difference are non-existent. In this context, the situation was all the more critical as this was not only a problem between ATERO and TZUFO. Even within ATERO, there were multiple examples of poor network management practices. For example, one day I took the decision to ask legal people whether they had any news about the JV construction because nobody had come back to me since my significant involvement a few months earlier. This was making me nervous, all the more so as a MoU was to be signed in October 2009 despite obvious gaps. Back then, ATERO's Mrs M&A was a very smart old fashioned lady, who was always kind to me and happy to discuss and solve potential issues. Like me, she was very surprised not to have been involved in those types of question. We agreed that a meeting with her boss would be helpful. A few days later, there was a meeting in Mr Legal Director's office – a large and quite impersonal room. To my right, Mrs Legal, in front of me ATERO's Mrs M&A and Mr Legal Director - a very professional lawyer, quite dynamic and talented. The situation had miraculously evolved slightly the day before. Mrs Legal had actually received an e- mail from ATERO's Mr Programme: *"Could you please give your feedback on what is mentioned in the document attached, specifically regarding the RRSP partnership?"* This note came after exchanges detailed below, in which nobody from the Legal department had ever been involved, despite their being critical from a legal viewpoint. ATERO's Mr Program comments were:

> "*…. I am discovering it, but it seems very satisfactory, and there seems to be no major difference with what we had imagined… Please refer to the framework that I have just finished and distributed internally (you are in copy, along with my colleagues from other departments). It is rather satisfying to see that we are thinking along the same lines without even discussing it with Mr CEO beforehand (a meeting has been scheduled for Thursday evening, after an internal review scheduled for Thursday morning). As an important example, I noted the following aligned positions*
> *Position on the 100% model> we do not answer. Position on the financing of C: can only apply to the JV; ATERO Contract (as opposed to JV)… please find attached the minutes of a brainstorming meeting we held last night with Mr CEO on the financing of NRC. This can be used as a starting point for*

tonight's discussion. The possibility of financing 50% of NRC through a Chinese entity, JV for example, raises the question of the transfer mechanism of part of these subsidies towards ATERO Parent entities which hold the contract. There are contradictory thoughts regarding ATERO's offers, and the partnership with DRAGON-O… To summarise, we kept the following points:

1 – ATERO must hold the contract vis-à-vis DRAGON (a point that must be confirmed)

2 – As the JV will receive the 'subsidy', we can imagine the following structure:

- The JV purchases ATERO's entry rights for the programme (or production licence), which corresponds to the gap between the JV's NRC and the subsidy received (50% of the total).

- *In exchange, the JV becomes ATERO's RRSP for the duration of the Programme, for a share equal to its percentage of 'series' elements*
- *RRSP means that the JV is remunerated on the basis of the percentage of its programme share, after deduction of the 'drags' in favour of ATERO, in order to finance the management of the Programme. The involvement of the JV in the service according to its programme involvement must be assessed, but could be a logical compensation for the RRSP status, and would enable us to have a local ally to avoid 'alternative' sources*

Actions to undertake

- Validate and precise the legal/contractual framework (ATEOR, deadline: end of November)

- Test and sell the solution to DRAGON, especially the principle of a JV RRSP, and the instalment mechanisms

- Test and sell the lot to DRAGON-O Aircraft (ATERO: mid-December) »

This blatant lack of internal communication and network management can be reinforced by the following: one day, DRAGON project stakeholders within ATERO received a request from Mr ATERO Program Director to attend a meeting with a view to briefing the team about the latest updates. I made a point of replying that I could not attend because requesting such a meeting less than 24hours beforehand was, in my view, not professional. What is even harder to believe but true, is that Mr Legal Director faced the same problem: he had heard about that meeting only thanks to a message from me.

In fact, it is fair to consider that apart from some ties developed between ATERO and TZUFU between production and purchasing fellows, network management was rather weak along the entire value chain. DRAGON (TZUFU's parent company and ATERO's targeted customer) had not been properly lobbied. This was certainly a major weakness by reference to strategies praised by Granovetter (2005) or Uzzi (1997) which were far from being adopted along this journey. Evidence of this is what happened when the Chinese delegation from the industrial zone of TZUFU had lunch with Parent ATERO. As already mentioned, they explained they were coming for some formal conference at Paris and in the Netherlands. Their objective was

to be part of a broader Chinese delegation including the General Manager of DRAGON expected to attend the conference in Bercy the day after. In their view, it could be a great occasion for ATERO to strengthen ties with him. Amazingly, apart from Mrs Asia from ATERO, nobody from ATERO had planned to attend the conference.

On top of that, though he was certainly aware that expenses for developing both intelligence and the network are legitimately recommended, ATERO's programme Director did not hesitate to write the following with regards of a lobbying initiative I had proposed:

From: ATERO Program Director
Sent: Tuesday March 16, 201 at 6.25 p.m.
To: VP Plant
Cc : Nogatchewsky, Stephane
Subject: Conference with Chinese actors

" ... It is a trip to position possible French Tier 2. It would be rude of us to join, or even a form of espionage on our competitors…. And I don't even think that ATC will be present…. Beyond that, we do not know DRAGON, DRAGON-o well enough (I was there last week)

But I must say, I have just seen the price, and it's not cheap."

This last sentence illustrates the typical mindset encountered within organisations reluctant to invest in networking development, socializing and intelligence development.

2.6. Information asymmetry management

From the very beginning, ATERO and TZUFU formally acknowledged they had to start exchanging all the necessary information as early as possible. This included, but was not limited to, technical and commercial information. A very positive sign was shown by TZUFU in July 2009, when for the very first time, and contrary to all previous missions, TZUFU had allowed access to its entire facility and its industrial assets for ATERO experts to conduct an audit of their industrial capabilities. For the Chinese industrialist, this was a spectacular change in their way of collaborating.

In September 2009, I travelled to China again. This time, the mission was a bit different from the industrial audit conducted previously, but in terms of positive management of information asymmetry it was almost comparable. I was with a colleague in charge of costing parts, a manufacturing engineer and the general manager of ATERO's site in China. Our mission consisted in assessing the content and credibility of TZUFU's scope of work agreed the week before. Amazingly, TZUFU had accepted to work with us in full transparency.

However, during the meeting, things happened slightly differently. Given the level of information they had provided us with, it was not really fair on our part to hide things as we were doing. On the other hand, preserving our leadership or some negotiation levers also required us not to be fully transparent. This position actually bears witness to the difficulty of being fully transparent, despite a genuine willingness to make things work with my Chinese counterparts. The same probably applied to the Chinese team. In fact, this ambivalence was certainly one of the reasons why despite ATERO's long-standing prior contracts with TZUFU, the latter were not easy to understand, and relationships were still quite poor. On the other hand, TZUFU might have had a similar view about ATERO, which refused to share anything when preparing the final request for price for example. Regardless of its justification, this attitude could not help build a positive process.

Under such circumstances, my gut feeling – shared with Mr Production, Mrs Legal, Mr Manufacturing Director, Mr Deputy General Manager, etc… - was right. From the beginning, it was all a lost cause, as obviously, most stakeholders were finding it difficult to share accurate and open information.

Consequently, the Chinese soon got tired of providing cost information. They rapidly decided to disclose nothing further until on our side we had provided visibility too. This ping pong game started fairly early-on at that two-day meeting which dealt with cost of sale joint construction. On this occasion, the Chinese teams were expecting ATERO to provide them with a level of visibility on certain components for which ATERO would be entirely responsible. However, they did not know that ahead of that meeting I had deliberately spent no time reviewing ATERO's costs elements together. TZUFU's expectations had no chance of being satisfied. This would not have been a real problem in the end, had we not tried to talk about transparency in the one element where we were not ready to be transparent. No wonder that the Chinese felt bitter. They understood we were holding back information. Obviously, had he known that we were not ready to correctly share information, Mr Cheng would not have accepted to host this two-day work session.

This situation was all the more concern as ATERO's Mrs Marketing had pointed out that the prices displayed by TZUFU were too high. According to ATERO, Western manufactured solutions were more competitive than the TZUFU/ATERO workshare that had been worked out so far. Mrs Marketing also pointed out key problematic cost drivers under TZUFU's responsibility. One day, she even explained to me that she was not telling the truth about what the overall cost target should be. In her view, this would force TZUFU to reduce their workshare. It would thus convince them that the "buy in China" value content had to be minimised drastically through an intensive support from ATERO.

Another example of poor *Information Asymmetry Management* relates to ATERO's Mr Programme Director. One day, he said to me that the prices discussed in October 2009, when the two companies were writing contractual arrangements, were only in terms of total envelope of the solution and not specifically for respective workshare. I commented this could be a serious issue. He agreed, but also informed me that it had been done deliberately in order to dilute transparency on possible margins ATERO wanted to preserve.

Another good example refers to Mrs Legal who came into my office and handed me two sheets paper corresponding to mails she had received on December 23rd. It was a recap of discussions at play in Shanghai at this point of time. Such documents cannot be produced in this thesis but it is worth noticing that neither ATERO VP Production nor I were copied in that mail sent by Program Director. This note put forward that relationships had been

managed wonderfully with the customer while ATERO's offer was clearly competitive on the recurring costs and that a decision was imminent. Nothing was said regarding the working relationships between TZUFU and ATERO. Nothing was said regarding ATERO being ill equipped to develop intelligence about its competition. On this particular point, I remember reading a press release about a JV between YIAN (a DRAGON subsidiary) and ATERO's Competitor (ATC). ATERO's program team argued that it was astonishing because ATC were brushed aside after the signature of the LOI between ATERO and TZUFU (part of DRAGON). Besides YIAN, which was initially unknown to everybody in ATERO, was then viewed as a military actor with not enough pedigree on civil applications, hence not dangerous for ATERO. It is quite interesting when you consider that in the end, ATC was going to be the option chosen by the Chinese…

2.7. Appropriation of concerns & generation of trust

From the beginning, internally, ATERO stakeholders had generally accepted that the Chinese aspired to be capable of producing aircraft similar to current Western single aisles by themselves. Consequently, it was necessary for the Chinese to acquire the technology from Western manufacturers. It was strategic for them to take advantage of the extraordinary potential of the Chinese market, a powerful negotiation lever. In our particular case, the Chinese – via their TZUFU division - were one of ATERO's historical suppliers with all the characteristics of suppliers from emerging sources. Through the DRAGON campaign, the Chinese were doing their upmost to produce components and sub-components for a future final product in the DRAGON aircraft. This explains why a co-operation with the number one worldwide –ATERO – was critical for the Chinese. In order to launch a successful co-operation, TZUFU and ATERO had thus agreed within an L.O.I. (Letter Of Intention) to start exchanging all the necessary information as early on in the co-operation as possible, including, but not limited to, technical and commercial information. Not surprisingly, in order to protect both companies' overall assets, they had also agreed, for the duration of this L.O.I. and in relation with the Project and all its derivatives, not to enter into discussions with, and/or enter into negotiations with, and/or sign any agreement with, and/or seek a partnership with, and/or more generally contact any competitors of any of the TZUFU and/or ATERO companies. In this regard, demonstrating –at least at first sight - a genuine intent to appropriate concerns, it was specified within the L.O.I. that a steering committee would be created, formed by TZUFU and ATERO representatives with the appropriate authority level to be able to make decisions for the Project. Notwithstanding the above, if TZUFU were to disagree with any point, it could demand arbitration. Hence, TZUFU and ATERO also agreed they should escalate to senior management i.e. chairmen and CEOs of the two companies. Interestingly, quite quickly, TZUFU provided the names of their employees who would represent the Chinese company within this Steering Committee. ATERO on the other hand, never formalised anything.

A particularly good sign of concrete and promising interest for appropriation of concerns and generation of trust was given by the way the industrial mission held in the course of 2009 was conducted. Both parties were clearly doing their upmost to find the best possible mutual ground during their various joint meetings. At this stage, contrary to past experience, TZUFU had granted us full access to their industrial plant and assets located in quite confidential

areas[92]. It was actually difficult to see any other reason for that than a genuine willingness to enable ATERO to assess the strengths and weaknesses of TZUFU's industrial capabilities. This obviously was a step towards setting solid foundations for trust between the two companies. From a behavioural point of view, it should be underlined that the respective leaders of the two teams had also promoted close relationships. They often had one to one meetings in order to try discussing the elements that could make this collaboration successful (competitiveness of the joint offer, threshold understandings, industrial capabilities gap filling, etc.). I remember one particular evening when we shared a meal with the Chinese, there were about a dozen of us, and they were inviting us to taste their favourite drinks. After a number of "*Cambé*", Mr Juang –TZUFU's leader- and myself stood up to have a private chat about the best way to position our two companies in front the end customer. We always had very open discussions, and our relationship was one of mutual respect. Without taboo, we admitted that our two companies probably had opposing long term objectives, but that it was in our respective interests to develop the right strategies that could be appealing to Top Management at our level. It is on this occasion that, for the first time really, the cultural dimension appeared crucial to me. Without a doubt, my ATERO colleagues must have been surprised by my direct yet respectfully familiar style. But I noticed that for the TZUFU team members, for once, having a manager saying things pragmatically, factually, and with a form of confidence was extremely positive. As from a cultural point of view, the Chinese culture gives a great deal of importance to both commitment and respect, my attitude suggested all the opposite of suspicion or lack of confidence. This was reflected in their attitude, when after very long debate on a particular subject, I changed my style according to the above, and at long last, we managed to reach an agreement. On the other hand, it is also fair to acknowledge that we had also demonstrated our willingness to work closely with them. Yet, as always, there is another side to the coin …

After reading Hanaki *et al*. (2007) who underline that "*co-operation is less volatile when ties are costly"*, I wondered whether both TZUFU and ATERO had maybe seriously endangered their likelihood of success as both were reluctant to invest significant amounts upfront. In other words, from the beginning TZUFU and ATERO never really appeared to be two agents in a position of investing massively for a declared joint purpose. Consequently, they could not be in a situation in which both did their utmost to achieve their declared purpose.

[92] TZUFU installations used to be fully dedicated to military applications in a recent past with strictly limited access. This is why the major plant was hidden in the middle of the mountains.

Nevertheless, the following reveals that the limited initial investment factor, albeit quite credible, may not have been the sole element preventing them from reaching success. As already stated, a fundamental mistake was definitely the non-establishment of a steering committee though praised by both parties and viewed as a cornerstone by ATERO's Mr VP sales. As mentioned in the previous sections, this steering committee never materialised, which bears witness to the general poor appropriation of concerns that surrounded the project, and definitely hindered the generation of trust. Whatever the alliance type at stake, the absence of a forum for debating and escalating issues either experienced or identified proves problematic in many cases.

In this TZUFU/ATERO case, this is all the more obvious as the two parties had fundamentally diverging interests. One the one hand, we have a Chinese final customer – DRAGON- which requested the setup of Chinese consortium capable of offering modern aircraft products on its own. However, before reaching that level, the Chinese had to rely on an inter-organisational agreement with Western players to acquire technology, and in the long run, become autonomous. On the other hand, we have ATERO, a European leading manufacturer, hoping to profit from the huge potential represented by the Chinese market. Their association with TZUFU would be a first step towards that goal, though most agree that it could also lead to the birth of a top competitor for ATERO, maybe even its most dangerous competitor.

In the past ATERO's purchasing department had tried to develop classic buyer-seller relationships with TZUFU, but unsuccessfully. One element, which was confirmed throughout this particular campaign, and that ATERO stakeholders had to accept, is that the reality of such inter-organisational projects was not a given. In this case, neither of the two parties involved felt confident that it had enough control over the other. It was a sort of biased game between two organisations, claiming their intention to co-operate, yet providing no clear evidence of trust and no concrete measures aligned with official declarations.

In fact, this gets to the very heart of inter-organisational interface control issues: ATERO positioned itself as the entity capable of judging and adjusting the work produced by the Chinese. The latter did not feel they should allow ATERO to encroach upon their organisation. Consequently, it is legitimate to ask whether this situation could ever work, when both parties hide behind pseudo contractual obligations, or worse, cannot even refer to

any formal contractual commitment, as was the case here. On top of that, something that made things even worse, TZUFU could talk to the Chinese Government on its own initiative, which was not a possibility for ATERO. Consequently, communication funnels and structural embededdness were distorted.

Under such circumstances, most would agree that the appropriation of concerns could only arise with difficulty, insofar as the necessary minimal respective trust did not seem to exist. For example, there was only little of the relative but necessary transparency to work together at solving potential roadblocks.

Increasingly present, mutual dependence could have helped. But on the contrary, each party had their own agenda, and only involved the other to get confirmation on some elements or to secure their own positions, as was the case for example during the cost analysis mission mentioned earlier. Instead of developing mutual trust, and as pointed out by ATERO's Chinese plant General Manager, the Chinese remained suspicious when dealing with the French. This suspicion actually reached its climax when in September, during this joint costing exercise, the Chinese team made it clear that they were no longer willing to provide their cost information. This is understandable since as we had no mandate to share anything with them. The day before this meeting, TZUFU's project director had explained that it was important within a proper partnership to trust each other and share all existing information. In the end, he must have been deeply disappointed.

However, we also had good reasons to suspect that our Chinese counterparts were not telling the truth, but were looking for additional knowledge their company had not already explored within civil aerospace. For example, they had no problem in sharing their plan to build a huge dedicated plant (5,000 people!) with us. This plant was most impressive, as it was a real war machine designed to enable TZUFU to become the world leader supplier of customers like Boeing and Airbus. More amazingly still, instead of seeing this as a sound motivation for quickly developing a very close relationship with them, stakeholders within ATERO simply admitted that one day the Chinese would take over ATERO. These positions were all the more worrying as they were on the lips of ATERO sales and marketing individuals, whose role – theoretically – was to set the framework of a "win-win" co-operation. I believe that, even before this co-operation, there was some reluctance within ATERO to develop co-operative relationships with the Chinese. The latter were often regarded with suspicion, and

most considered that they were only interested in stealing know-how and would not think twice before jumping ship or squeezing ATERO out once it was no longer a valuable source of key information. This situation could hardly be reversed as during the whole campaign, the focus was consistently put on detailed cost discussions without effectively addressing real blockers likely to prevent both parties from delivering their commitments *vis-à-vis* the final customer. Real debates did not, or could not take place.

In some cases, driven by its own internal agenda, ATERO even tried to squeeze out the value of TZUFU's content through an agreement that would force the Chinese to finance ATERO's support for developing a Chinese supplier network. For that reason, as reported by ATERO's Mrs Marketing, truth about what the overall cost target should be was not admitted, in order to force TZUFU to reduce their own costs by tens of K€. Mechanically, this in turn would increase ATERO's profit. At the same time, ATERO did not put on the table that TZUFU had no choice but to accept to finance ATERO's support to help them acquire the requested experience in supplier management, particularly.

More generally, after reading the MoU signed between the two parties in October that year, I felt it appropriate to question ATERO's Mrs Legal who had attended the discussions held in China two days before. Her first remark was that TZUFU were reluctant to comply with the MoU. She insisted on the elements of responsibility and liabilities: "… *the Chinese are not willing to mention anything specific to liabilities in the MoU despite ATERO's insistence. This is because in case of non-respect of engagement (schedule, quality, costs etc.) from ATERO vis-à-vis DRAGON, then ATERO would be the only one held responsible*". This of course, can be legitimate for issues which have to do with ATERO, but not for those related to TZUFU. According to ATERO's Mrs Legal, their position could be explained by a lack of know-how and experience rather than obscure unfair intentions. Whether or not she was right, under such circumstances, it was impossible for ATERO and TZUFU to discuss accurately and in full trust. ATERO's mind-set proved to be driven by a stylistic exercise with no genuine willingness to detail what needed to be done to make things happen. ATERO was guided by politics and theoretical views.

TZUFU was not ready to accept responsibilities *vis-à-vis* the end customer yet they were demanding leadership and autonomy on some work content. Were both parties fooling themselves to satisfy short-term unilateral interests? Apparently so, which might explain why factual, long-term social phenomena considerations were systematically swept aside.

Moreover, the joint efforts soon suffered from a lack of involvement of relevant levels of seniority within DRAGON (all the more so as the customer is Chinese with its very specific hierarchical system). To date, I still wonder whether this absence was deliberate.

For some people within ATERO, not winning DRAGON was actually seen as good news, because of its poor financial situation. This may explain that following DRAGON's decision not to select the TZUFU/ATERO proposal and during an ATERO information meeting, some attendants did not hesitate to comment:

> *"We did our best … If we didn't win, at least we will have been a pain in the ass of ATC… we don't have any regret, we could not have done more", "Positioning ourselves in China would completely remodel our industrial scheme etc. "*

In any case, the non-selection of ATERO also meant being out of the business in China for the next ten to fifteen. Could this result be compensated by the fact that ATERO's competitor had accepted almost everything from the Chinese? One thing is sure, Parent ATERO stakeholders did get heavily involved at the very end of the selection process to make things happen. Obviously, it was too late. But this is also very surprising, given that the company risks management matrix I had managed to get placed this Chinese campaign at the top right i.e. most sensitive with significant risks and stakes.

2.8. Mastery of events and coordination of tasks

As mentioned previously, the steering committee was expected to play an active and critical role within the co-operation between ATERO and TZUFU. Consequently, from the very beginning and through the L.O.I. signed between the two parties, it was clearly stated that the "*Steering Committee will identify and manage the various tasks required at the Product top level to win the Project. … In particular, this will take into account the work share allocation principles and industrial development plans and associated resource allocation…"*

This was reinforced through the signature of the MoU in October 2009 which stipulated that the steering committee was to be "*composed of TZUFU and ATERO representatives, chaired by ATERO with a vice-chairman from TZUFU… meetings of the Steering Committee shall be held, in principle, at least twice a year, but should circumstances so require, a meeting may be convened at any time at the request of any one of the Parties…*"

Importantly, we should bear in mind that from the outset, ATERO aimed at keeping ultimate control and mastery of events. This translated into a specific clause within the MoU: "*ATERO's decisions shall be the final recommendation of the Steering Committee. Notwithstanding the above, in case of a disagreement by TZUFU, TZUFU can demand arbitration, TZUFU and ATERO will escalate to senior management i.e. chairmen and CEOs.*"

Neither of the involved parties hesitated to agree that:

> *"The representatives of ATERO shall prepare minutes of each meeting of the Steering Committee and shall distribute copies of the same to each Party. Such minutes shall be deemed to have been accepted by the other Parties, unless comments are made in writing within fifteen days of the distribution of such minutes. Finalised minutes shall be a true and complete record of decisions taken by the Parties. Technical Committees composed of representatives of each Party may be convened to discuss specific questions of a technical nature. The decisions of such Technical Committees shall be adopted by a qualified majority. The Steering Committee shall examine all important matters relating to the tender of Customer contract like the negotiation of any supplement or modification to the terms of Customer contract concerning both Parties, any modification in the allocation of supplies and services among the Parties as provided in this M.O.U., any modification that impacts the work split between the Parties, all important questions raised by any of the Parties and the decisions to be made…".*

Consequently, the definition and allocation of roles was seen as a means to significantly help the collaboration of both parties. This suggests that ATERO and TZUFU had agreed upon

specific decision-making criteria in order to maintain control over the venture's progress. Therefore, in theory, mastery of events, viewed as a co-ordination of tasks and decisions, had been included in the co-operation process.

The reality of it, however, proved very different. The Steering Committee, as mentioned in previous sections, was never created. In fact, after the MoU was signed, it was discarded… Being able to rely on e-mails was of some assistance in providing the impression of some form of mastery of events, and lead to e-mails as the following one:

> *"… thanks again for the productive work we had this week with all of you. Thanks also for the very good interpersonal relations we are sharing, and are laying the foundations of the effective co-operation we need to succeed together. As agreed, yesterday, I am expecting from Rose the excel file containing the data we built together from Rose. Could you please have it sent to me as soon as possible? I will then be able to consolidate it with the rest of our input, and e-mail the whole lot to ATERO and TZUFU stakeholders as minutes of our discussions."*

Unfortunately, this was nothing else but a smoke screen while both parties had been struggling to working well together for many years. These difficulties had a negative impact on the mastery of events, and can be explained by a number of things, one of them being the high number of stakeholders involved (engineering design, sales and commercial, purchasing, legal or industrial). On plenty of occasions, I felt that the co-ordination of tasks (from travel arrangements to strategy deployment negotiations) and activities could not work well in the framework of this co-operation. On the one hand, within the same organisation – ATERO – actors were desperately trying to organise and plan activities from their respective points of view, which was most often driven by the interests of their own departments. On the other hand, both ATERO and TZUFU were eager to macro manage their counterpart and put in place all the necessary devices capable of encroaching upon the other's organisation.

One day, very interestingly, ATERO's Mrs Marketing even told me how important she felt it was to set out appropriate control of what TZUFU was doing through proper communication and interfacing mechanisms. However, she also admitted that it was probably a lost cause. I personally believe that this view is not entirely correct. However I must admit that along the whole bidding process I was never able to get any firm evidence that I was right.

Most would agree that ATERO was suffering from a lack of co-ordination in the planning and the execution of activities, which is just amazing considering that this company is prevailing in the field of aerospace, an environment known for its necessary project, phasing and co-

ordination management skills. Besides, there seemed to be no effective system for "closing the loop" system. A caricature of it is what happened in the course of October when ATERO's Mr Programme Director, at noon on a Friday, called me: "*Stephane, we are in China, and early next week we are going to present our solution to the customer. We need you to fly over and join us in order to present ATERO's industrial policy to them*". Without notice, he was asking me on the Friday to join them to support an overall presentation in front of the end customer, DRAGON, scheduled on the following Monday! Despite a blatant lack of planning, I accepted to play the game as best I could. I went to China as requested. Once the mission was completed, I expected to rapidly receive a debriefing about these days spent with the customer, as they had been presented to me as critical by the programme team… one year later I am still waiting for feedback.

In fact, when dealing with communication, co-ordination and mastery of events, there are often high and ambitious expectations. But in reality, they often fail, even at top levels. I realised this when over lunch one day with some colleagues and my direct line manager, the latter informed me that he had been reproached by ATERO's CEO for not briefing him with what was shared with Parent ATERO in the framework of the DRAGON project. My direct line manager was not blaming me - although this criticism was linked to an e-mail I myself had sent to headquarters. My direct line manager was simply recognising that he had failed in communicating with his CEO.

In fact, there were multiple attempts from several actors to establish the foundations to adequately exchange, co-ordinate and brief counterparts. As for example, this note I sent out after one of my trips to China, and for which I was expecting some feedback or remarks to further discussions:

> *"… As agreed during our first DRAGON industrial co-ordination meeting on September 16, 2009, please find attached my feedback from my most recent trip to TZUFU, to their plant in YONG YONG. The goal of this visit: perform a cost analysis with TZUFU for the manufacturing and assembly of the future BIJOUX. ATERO Attendees: J LAMING (General Manager – ATERO China); J Laws (Manufacturing Engineering Director – ATERO China) and myself. The exercise was conducted both on NRC and RC (no discussions on investments). We took advantage of being there to ask details regarding the planning of construction and industrial positioning for the future YONG YONG plant. As pictures speak more than words, here are some photos: model of the plan that will host approx. 5,000 employees, dedicated to the manufacturing and assembly of JEWELS, photos of the construction site from September 24, which give an idea of the progress of operations. Finally, at the exit of the airport, a very visible advertising panel that gives an idea of the role that DRAGON is looking for, TZUFU Parent.*

> *I have also attached a more formal presentation on the YONG YONG site. See slide 12 (vision), TZUFU wants to "establish a world class research and production base, to be the main supplier for aircraft JEWELS of Europe A/C as well as YANKEE A/C". The first machine transfers from JENGSHU (historic site lodged in the mountains and initially dedicated to military activities) to YONG YONG have taken place, there have been some delays, but the war machine has been set in motion"*

In the end, nobody came back to me to share views and concerns about this note. It could have been an interesting starting point to identify the activities that had to be launched for the benefit of ATERO, given the emergence of a future critical competitor. Unfortunately, despite nice official words about team work, discipline in co-ordinating things and empowerment, once more, I had confirmation that many people within ATERO devoted a vast amount of time to politics but did not act as a team.

This syndrome of poor internal co-operation and co-ordination was made clear to me in several occasions. People were not co-operating within ATERO. This was probably the result of a lack of communication – reinforced by limited resources – but also due to a lack of clear vision and direction, or even the tactic followed by ATERO. The climax of this poor internal communication and co-ordination happened mid-December 2010: Mrs Marketing popped in my office to inform me of the latest news. She had spoken to Mr Programme Director yesterday: "*Confirmation that Parent ATERO CEO and ATERO CEO travelled to Shanghai in order to meet the customer on the 15th*". A few days later, Mrs Legal told me that someone had told DRAGON that the CEO of ATERO needed to meet DRAGON as soon as possible but not until after a meeting with another customer. What a caricature but real example of poor customer relationships management and mastery of events! Still, a few days later Mr Programme Director shared some details with me regarding the orchestration of the meeting involving ATERO CEO and his boss when they went to China end of December. He admitted that the management of this meeting had been catastrophic, and had certainly influenced the final negative decision made by the Chinese very negatively. In particular, ahead of the two CEOs visit, Mr Programme Director ATERO had not had a chance to properly prepare the meeting and understand what the Chinese expectations were before this visit. On top of that, he had not had enough time to brief the two CEOs on the latest developments. So he had had no opportunity to brief the CEO on the fact that being commercially generous at this stage was critical. This was a major failure, as according to Mr Programme Director "*at this stage, had we given up half of what ATERO wanted to concede in the end, we would have won*".

2.9. Balanced economic benefits tracking

No doubt, this specific dimension of the targeted co-operation between ATERO and TZUFU was taken on board from the very beginning. Most people within ATERO agreed that the main parameters that should drive decisions were risks, investments, technical approved experience, costs and added value against competition as a result of a fair and well substantiated costs analysis. To be honest, nobody could reasonably undermine the sort of praiseworthy objective that both ATERO and TZUFU were almost aligned, as they both clearly intended to reciprocally optimise the non-recurring costs and recurring costs presented to DRAGON. Both parties shared the view that tracking financial and economic elements was critical. Sharing cost information was not always natural between the two parties, but there was occasional evidence of good will on both parts. One day, Mr TZUFU programme Director was reluctant to be the first one to share his input. Yet, after I had managed to leave him no room to escape, we were able to start working out numbers and reviewing their proposal in detail. As a result, ATERO was able to gain a certain visibility on what TZUFU could do: about 70% of what we were looking for. During some associated exercises, it proved that TZUFU was quite immature in costing non-recurring costs but not so bad for recurring costs. Also, this approach helped us discover that DRAGON was slow in finalising its policy regarding the payment of non-recurring costs. TZUFU also shared with ATERO that they thought that DRAGON would probably want us to pay for our own investment.

One thing that must be acknowledged is the amount of energy spent by ATERO stakeholders processing various financial inputs over and over again. This insistence on working out numbers reached its climax when ATERO's Mr Programme insisted on describing how ATERO had positioned its various offers during the entire RFP process. In meetings, he often tried to give a lecture on discounted financial flows, explaining that playing on both recurring costs and non-recurring costs was possible if DRAGON were to increase their non-recurring costs upfront payment contribution. Personally, I always saw this exercise as a sort of justification, and not very relevant. But the rest of the audience seemed to listen attentively, and some approved what was said. Each time, I could see a typical French, driven by analytical judgements. Discussions within ATERO very often focused on financial explanations with an intellectualisation of the parameters of both non-recurring costs and recurring costs. For me, this could not enable ATERO to win the campaign. Moreover, such lofty financial discussions did not prevent them from issuing commercial proposals with no

real coherence in the way they were sold to the Chinese. This assumption was shared by ATERO Mr Programme ATERO who once mentioned that ATERO's proposals were "*silly… TRI 15% and at 13% 830. Below that, ATERO was not a viable option without productivity action plans".*

In practice, ATERO was actually trying to establish a JV with people they could not easily understand culturally, and with no means of getting full transparency on their costing methods. This lack of accuracy regarding the costs of components was something that needed to be addressed. Hence, quite often during meetings with all departments, I had no choice but to make it clear to all attendees that the following non-recurring costs topics had to be seriously considered: specific TZUFU, specific supply chain development, ATERO for aluminium parts, ATERO for assembling line, ATERO for Western back-up development and limited number of serial big steel parts, etc.

Stakeholders always acquiesced, but every time, I could also see their total lack of certainty about what to think. Therefore, I was not surprised when ATERO's Mrs Marketing told me in December 2009:

> *"What happened is that on Wednesday last week the Parent ATERO Shanghai office sent the message that ATERO's Bafo was clearly too high and consequently it would most probably be down-selected. It took a day for people at people to react. On the Thursday, the sales/program team clarified things internally and decision was made to manipulate the BP input in order to reduce provision for risks (hence recurring costs) by requesting cash payment earlier, as originally required. Importantly, the assumption made is that DRAGON is only interested in the RC while the NRC are supposed to be financed by the Chinese government, thus DRAGON does not focus on the NRCs. With this type of adjustment to the BP, ATERO managed to reduce the BAFO RC by approx. $X00K which was a very positive sign sent to DRAGON, who then did not confirm any down-selection. At this stage, what is ahead is not really clear for ATERO stakeholders. Parent ATERO CEO is likely to fly to China next week but confirmation has not been provided. The teams are requested to be ready to fly as well".*

This way of managing things is rather surprising for people who had consistently promoted in-depth figures analysis and a sense of logic and accuracy… In reality, this suggests that there were no real effective and accurate balanced economic benefits tracking. On the other hand, this was not overly surprising due to the very limited reciprocal transparency but also the huge difficulty in analysing all the costs drivers at stake in detail. In any case, manipulating business plan figures to release a nice marketable story is not what will ensure a successful economic benefits tracking.

The previous notes are the result of a journal kept over a period of several months, which I subsequently categorised according to the *Key Levers* in IORs defined in chapter 3. In addition, the following summary of the notes I took during a specific one-day session in Shanghai aims at providing an insight which condenses most of the key characteristics of the relationships between ATERO and TZUFU with regards to IORs management control.

After landing in Shangai after an 11-hour flight, I headed straight to the Parent ATERO office. It was around 8 pm local time and the ATERO team was still working. They said they were working hard, just as if they were obliged to spend long hours at work. Most of them repeated several times that they had been working very late to be able to submit the offer, even some nights and Saturdays… The troops did look exhausted but had no problem in working another couple of hours just before the formal presentation to their customer the next day. Surprisingly, there was no real team spirit, and they had a sort of "fragmented" approach. Before leaving the office, I was told that I would not attend the commercial part of tomorrow's meetings but the engineering one. I was surprised, all the more so as I was probably one of few people in the company who actually had the best knowledge of TZUFU costs. Anyway, I noted the instructions from ATERO's VP programme and I went to bed.

The day after, we were sitting in a large meeting room with a very large table, a blue carpet, no window and quite a cold atmosphere. We were surrounded by more than 30 Chinese people. They were all rather young, in their late twenties, and seemed to have a low level of seniority

The ATERO team was represented by Mr Engineering, two local assistants, Mr Electronics and two other people from customer support. I did not even know their names, which gives an idea of the type of relationships maintained within ATERO. The two engineers from ATERO had worked very hard on their presentation, which actually made me wonder whether there was an appropriate balance between the energy put into their preparation and the concrete use of their final work. In all honesty, I doubt so, considering that most of the Chinese attendees (our final customer) were obviously there to suck in as much as they could. In fact, this whole was looking like a mascaraed.

After a while, three men came into the room - I knew none of them, one seemed to be the leader for DRAGON product- followed by two TZUFU representatives whom I had already met in previous meetings in France.

I soon came to realise that mot attendees did not have a good enough level of English to understand the content of the presentation proposed. For their part, the French team members had already demonstrated they were not accustomed to dealing with cultural differences. People were sitting back and listening carefully but without taking notes apart from a few people sitting at the back.

A young lady occasionally translated what ATERO's Mr Engineering was presenting into Chinese. After about an hour, ATERO's Mr Customer Support stood up in front of the screen to run his presentation, but his laptop broke down! A Chinese gentleman tried to help fix the laptop to be able to project things, but it did not work immediately. Following that, the projector no longer displayed the image correctly. Meanwhile, the audience was waiting, quietly. After a few minutes, things were able to start again. A detailed technical insight was offered by Mr Customer support, and translated. The Chinese teams were listening and paying attention to what was being said. Just in front of me, an older man was listening and reading with obvious concentration. He did not look like the others. What was his role? Nobody from ATERO could tell…

A young man who looked quite smart, sitting next to the apparent leader nodded from time to time. He kept on looking at his laptop as if he were comparing what was presented to something he had already written down. Overall, there was no interaction whatsoever. They were obviously listening, but it was almost impossible to know what they were thinking. Later, two more Chinese men joined us. One was quite old and seemed to be expected by the leader for DRAGON product.

A first question was raised by ATERO's Mr Engineering and answered by a TZUFU representative. Then later on, DRAGON engineers expressed a concern which, according to ATERO, was not relevant: they considered that this type of concern was not critical or substantial enough to dwell at length on it. All of a sudden, the Chinese audience started talking a lot. There was some commotion, people sharing views, standing up to drink tea, going outside the room to smoke a cigarette, etc. Then, the old man who had arrived a few

minutes earlier made some comments. He seemed quite respected by his Chinese colleagues. After three hours of presentations, the audience finally started taking some notes, but this was not going to last: it was lunchtime.

The ATERO team spent one hour without anyone from DRAGON, their host. No "one to one" discussion was possible, yet it would have been useful to get some information about competition and our positioning. Left to their own devices, the ATERO team came back to the meeting room, where there were already a dozen people from the Chinese team. Some were sleeping, others wandering about and a few of them were watching a film on a laptop. Still, nobody came to discuss anything with us or try to get any particular information.

After half an hour, TZUFU's chief engineer came back. I tried to start a conversation with him, but he was not very talkative. He was obviously not allowed to speak. He only confirmed that following today's ATERO presentations, there would be some internal reviews in order to analyse and discuss specific issues raised after the presentations. Only then would they be able to come back to us and ask for additional clarifications.

Decision was then made to split the ATERO team in order to have enough time for all the presentations. Mr Engineering and I went to another room: smaller but similar. One of the apparently two senior men from the morning came along. Again, the attendees were listening attentively. A first question came from a shy-looking man who had a spark of curiosity. Mr Engineering and I did not know him. According to Mr Engineering, this man's question was not relevant!

The Chinese had asked Mr Engineering not to spend too much time on things they already knew. The old man from the morning seemed bothered, the debate was exclusively technical, very complicated to follow, but those present seemed to understand. They were talking to each other in Chinese which was not systematically translated by our assistant. This was a real problem. The Chinese girl translating from English into Chinese and vice versa was not very competent. She was struggling to make things clear to the DRAGON troops while things presented by Mr Engineering were quite complicated and technical. I remember Mr Engineering's reaction: *"She is useless, it's crazy!*" In fact, this underlines the communication difficulties that existed between the Chinese and ATERO: a discrepancy between language, culture and level of experience.

This may be why Mr Engineering was explaining his slides in detail, but without encouraging interaction with the Chinese. There were 22 Chinese DRAGON people in the meeting room. Only three of them were participating, a few more were taking notes, especially the senior old man mentioned earlier. In the afternoon, our translator told me he was a consultant in hydraulics.

Time was running out and I was still struggling to understand the logic of this meeting. A significant amount of resources had been mobilised on the ATERO side: a program director; a marketing and contract manager; an industrial strategy director; a chief engineer; an expert engineering; two customer support specialists and two translators. Most of them had worked hard for that meeting, but I could see that it was much ado about nothing. In fact, it would probably not take a leap of the imagination to think that ATERO team members had given themselves confidence by working hard and spending hours on end in preparing sophisticated slides, which actually had limited added value towards customers and would not make a difference in the end. Clearly the added value of this operation was questionable, although I am sure that our presence on DRAGON premises was a positive sign to send out.

But there was also a lack of determination within the ATERO team. Was it because after working so hard on their presentation, they were simply missing the right target? Whatever the reason, DRAGON representatives were attending one meeting while in the other meeting, ATERO representatives did not even know who they were talking to. The presentations looked more like a self-justification of the hard work put in by the ATERO teams rather than a genuine attempt to win by convincing a customer.

Suddenly the older man started arguing aggressively. Apparently, he believed that the technical option proposed by ATERO was not reliable because it was too new. According to Mr Engineering, that was not a problem. When the older man made his comments, most of the rest of the audience (much younger) whispered loudly.

Mr Engineering came to me saying it was crazy, particularly the comment made by the older man, because they were now questioning something that in fact they themselves had requested. He also lamented the absence of the Chinese DRAGON chief engineer. Then, the older man started explaining something in private to a younger man who so far, had not said

anything. They did not look happy. It was as if something wrong had just happened, as if a real opportunity to be negative towards ATERO had appeared and could be seized upon. I chose to step outside for a moment and have a drink. Outside, I could see eight men looking at a hole and discussing it. These Chinese teams did not seem to know what efficiency meant. They were planning on doing things whatever the number of people required. Immediately, seeing this told me the power of numbers ruled…

I re-entered the room, which was extremely hot and stuffy. The audience was still sitting, lifeless. When somebody asked what ILS (integrated logistic services) stood for, it was yet another sign that they did not know much about our business. At this point, Mr Engineering looked at me in despair.

In fact, his presentation was not adapted to the audience. Not in terms of level of interest, but in terms of what ATERO was aiming at, i.e. talking the customer into selecting ATERO's proposal. The content of the presentations was too dense to be digested in a one-day session. So either these people would not make proper use of it, or they would spend countless hours analysing its content when left alone, which could be a major risk. Lastly, I had hoped that the Chinese attending the presentations could tell us a bit about our competition. But the language barrier, along with a reluctance to share things about the competition rendered that impossible.

Overall, one key problem was in fact the absence of key players (except the senior-looking guy man who operated as a critical expert rather than a decision maker). This led me to believe that they had no intention of selecting ATERO. Otherwise, I suspect they would have mobilised the appropriate competencies instead of throwing in a bunch of men who just sat there. After a few minutes in the corridors of the main building, I noticed that, in other rooms, the same kinds of presentation were being made: a few Western and an army of locals (most often young). These meeting rooms had been booked for that particular day to host presentations from various Western bidders.

All these elements lead to the conclusion that there was a tremendous gap between the ATERO and TZUFU/DRAGON companies: technically, culturally and socially. Under such circumstances, was it realistic to try and build ties, both technical and social, in the face of such a cultural and linguistic barrier?

3. SCORING AND INTERPRETATIONS

ATERO / TZUFU	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)		Poor	Average	Good	
Appropriation of concerns & generation of Trust	**Cohesive groups, clan coordination (organic solidarity)**	Groups are in place. They are good at creating knowledge in Tacit forms, at contributing to the establishment of common values and beliefs These Cohesive groups spread information but also generate normative, symbolic and cultural structures, which conveys "meaning" (Granovetter, 1992)	Poor			POOR +
	Social Context consideration	This deals with the consideration and respect of the fact that individuals do not slavishly follow a script. They are embedded in on-going systems of relations - a "web of social relations" - with a direct effect on economic actions. Ultimately, this is a matter of "Reification", namely a mix of control management tools, various social actors and associated practices.	Poor			
	Contractualisation	When properly implemented, contractualisation will or can deter from opportunism and thus reduce uncertainty which is a potential huge cost and threat for appropriation of concerns between actors. However, contractualisation is a device to define goals and methods in order to enable effective joint planning (but it is not primarely an ex-post control device!)		Average		
	Buyer committment	This will determine the level of strategic partnership with a supplier i.e. its participation in design, in the process of procurement and production. It will also help optimise resource scarcity management The more committed a buying firm is to its relationship with key suppliers, the more the relational capital between the former and the latter will build up, which proves a key factor to improve performance. It is unlikely that key suppliers will fully engage in sets of changes requested by the buying firm unless there is tangible evidence that the purchasing organisation will support supplier investments with matched resource		Average		
	Seller committment	This will determine the extent to which a supplier is flexible in response to a request from a buyer, its willingness to help during emergencies, its reliability to fulfil requirements (at least when there is an agreement). It will also help optimise resource scarcity management The more committed a buying firm is to its relationship with key suppliers, the more the relational capital between the former and the latter will build up, which proves a key factor to improve performance		Average		
	Trust establishment & management	This enables close relationships at a personal level ... to act as if uncertainty potential is reduced ... to adopt a belief without being fully informed It will or can reduce the need for formal co-ordination or improve co-ordination ... while even the world's most cutting-edge knowledge can be rendered useless without trust in the network, as sharing and implementation of knowledge becomes difficult. This is a component of embedded relations that requires characterisitics of a particular structure of relationships	Poor			
	Understanding of sensitivity to interdependence of production and exchange relations	May help avoid falling into the trap that transaction costs reduction has a higher impact than productivity - enhancing factors tied to superior skills and knowledge.	Poor			
	Governance structure well in place	Often based on contractual or formalised arrangements, this is about enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence	Poor			

ATERO / TZUFU	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)		Poor	Average	Good	
Balanced Economic benefits monitoring and surveillance	**KPIs / Assessments**	This deals with the management by objectives through: measurement of production, acquisition and structural costs based on a comparison between in-house and supplier costs. It is about Continuous Operations (Quality, Delivery & Responsiveness) performance management.		Average		AVERAGE
	Cross organisational designed management accounting systems	This element deals with the mastery of Total Cost of Acquisition & Ownership (NB: such an accurate mastery of costs across an organisation is most often difficult to achieve given the complexity of data gathering & crunching).	Poor			
	Deeper involvement of accountants in the negotiation of actions and profit sharing	This will or can reinforce the use of simulations for investment decisions, new product development, along with greater emphasis on negotiation to better determine the terms of co-operations		Average		
	Review of how the risk/return position of each party is affected by different actions	This corresponds to standard economical objectives management.		Average		
Networking capabilities (= Best-in-Class Network Management)	**Formal impersonal communication**	This is explores the level of information exchange between co-operating actors through information technology, the establishment of quick ordering systems and stable procurement through network.		Average		POOR -
	Ties among firms **- Structural** **- Relational**	The structure and quality of social ties among firms shape economic activities by creating unique opportunities and access to them. They determine and explain the behaviour of people because actors are affected/influenced by the quality & structure of their network (= "the structure of social ties determines actors behaviours" and "the mere fact of attachment to others may modify economic actions", Granovetter, 1992: 35). Social capital theory associated with structural ties serves as the foundation for the view that explicit types of information are more efficiently transferred via weak relationships as opposed to strong ties that may be necessary for the transfer of complex, tacit types of knowledge or information.	Poor			
	Social recognition management	Important role as activities are greatly affected by the social context within which they take place. "Social relations penetrate irregularly and in different degrees in different sectors of economic life" (Granovetter, 1985:491)	Poor			
	Managerial communication to further improve relational performance	This will determine or enable loyalty to the relationship in addition to mutual understanding as long as it is structured, but more persona; information sharing will help address the equivocality inherent to IORs.	Poor			
	Technical communication to further improve relational performance	It will determine quality, timing, level and type of technical communication between development engineers of co-operating firms. It will ease fast decision making which thus becomes beneficial for the network partners. It will or can reduce product development risks linked to product & process.	Poor			
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)	Assuming that productivity enhancement is close to superior skills & knowledge because people know more than what they can clearly articulate, this enables co-operations to rely on knowledge shared and developed. Accordingly, it becomes possible to capitalise on knowledge viewed as the most important means of production in today's knowledge-based economy.	Poor			
	EXPLICIT knowledge management	This will enhance Productivity through the articulation of comprehensive knowledge. It will enable co-operations to rely on knowledge shared and developed but also to capitalise on knowledge viewed as the most important means of production in today's knowledge-based economy.		Average		

ATERO / TZUFU	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)		Poor	Average	Good	
Information Asymmetry (positive) Management	**Understanding and adjusting information needs depending on alliances types & business networks (= proper balance between level of trust and information needed)**	This will optimise Trust management and joint collaboration without scarifying visibility. This is assuming that information and trust needs must be appreciated depending on the different stages of developing a relationship.	Poor			POOR -
	Know who you are dealing with	Quite obviously, this is about understanding as soon as possible what and who can or cannot be trusted because the cost of developping reliable forms of trust and the cost of doing it are rarely considered in cost benefits analysis.	Poor			
	Information management control relating to the willingness to trust given recognised competence and integrity	The management of this type of information provides what is needed to create trust and verify the state of the relationship.	Poor			
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer	The management of this type of information provides means to make economic judgements on strategies, investments and on-going operations. A component of embedded relations that requires characteristics of a particular structure of relationships.	Poor			
Mastery of Events (= Coordination of tasks)	**Cohesive groups, clan coordination (organic solidarity)**	Groups are in place. They are good at creating knowledge in Tacit form, at contributing to the establishment of common values and beliefs These Cohesive groups spread information but also generate normative, symbolic and cultural structures which conveys MEANING (Granovetter, 1992).	Poor			POOR -
	Clear Organisation and adequate escalation process	This will provide better visibility for stakeholders and ease the "learning & working well together" processes.	Poor			
	Constant evolution	When properly managed, this will make it possible to learn & work well together	Poor			
	Bonding	This will enable the "learning & working well together" processes between co-operating actors.	Poor			
	Learning Philosophy	Enables "learning & working well together".		Average		
	Contractualisation	Viewed here as a device to define goals and methods in order to enable effective joint planning (but not primarily an ex-post control device!)		Average		
	Co-ordination mechanisms like escalation pyramid or executive reviews	The more complex an environment is and the more differentiated the units are for satisfying their environment, the higher is the need for integration mechanisms to co-ordinate activities.	Poor			
	Defining goals and methods	This helps in effective joint planning instead of ex-post control.	Poor			
	Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.	This avoids having excessive expectations from the relationship too early on. It refrains from seeking a given time invariant optimal system. This helps to perpetually adapt and modify the system to meet changing relationship needs.		Average		
	Governance structure targeted with determination	Often based on contractual or formalised arrangements, this is about enabling exchanges and escalations mechanisms or shared value systems and vision in order to sustain mutual dependence	Poor			

ATERO / TZUFU	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)		Poor	Average	Good	
Relational Capital Management (=Positive Sensitive attitudes)	**Social Capital management including sensitivity to culture**	This is a generally accepted acknowledgement that features of social organisations such as network, norms and trust facilitate co-ordination and co-operation for mutual benefits (Lin, 2001)	Poor			POOR -
	Level of mutual trust, respect and interaction between actors at multiple levels	"Close relationships at personal level are heavily dependent on the establishment of Trust (…) an ubiquitous and a fundamental building block of social life" (Tomkins, 2001: 164-165)	Poor			
	Social recognition management	Refers to innovation viewed as a social phenomenon, a human activity which can only be fulfilled when certain conditions are obtained (Burns and Stalker). Important role as activities are greatly affected by the social context within they take place. "Social relations penetrate irregularly and in different degrees in different sectors of economic life" (Granovetter, 1985:491). For example, having ERP systems result in social capital requests that information exchanges should be used as a platform to develop direct human contacts rather than a substitute for face-to-face interaction (Lengnick-Hall et al. , 2004)	Poor			
	Relationship management type establishment about: **= management of interacting people** **= Joint problem-solving arrangements**	This will generate relationship performance improvements: = degree to which the IORs have over the past two to three years resulted in improved product, design, process design and product quality for the benefit of co-operating firms It is a component of embedded relations that requires characteristics of a particular structure of relationships	Poor			
	Culture Management	To be further explored	Poor			
	Power management	By reference to Hardy (1985, 2011), it can be viewed as the management of the potential of one social unit to influence the behaviour of another in order to achieve preferred situations or outcomes. Power is thus assimilated to resources; Influence is understood as the application of resources used in situations of conflict	Poor			
Shared vision	**Defining convergent goals and collaborative futures**	This will increase the degree to which the needs, demands, goals, objectives or structures of one "component" are consistent with those of the others. Inevitably, it will have an impact on the culture, work, people and the formal organisation	Poor			POOR -
	Governance structure targeted determination	This is a matter of enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence which is paramount. Particularly, it is key to check that the counterpart can take advantage of the contribution made by the other one.	Poor			

ATERO / TZUFU	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)		Poor	Average	Good	
Internal Cooperation (= Influence of its own organization over external parties)	**Consensus between internal stakeholders**	The greater the degree of consensus among or between stakeholders, the higher the probability that these organisations will or can establish constructive relationships. Accordingly, each individual (or group of individuals) involved in the IOR has to manage two types of relationships: internal ones with colleagues from his/her firm; and external ones with members from the co-operating firm. This implies embeddedness of inter-individuals intra- and inter-organisational types.		Average		AVERAGE -
	Internal governance structure targeted determination	This is a matter of enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence	Poor			
Leadership	**Lead change and provide a meaning to rally individuals** **Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations**	It requires an understanding that you do not own people, that you cannot control them. They must want to and choose to be in the company of others, oriented towards a particular mission. It enables to set a direction (develop vision, devise strategies for change to achieve goals)	Poor			POOR +
Information Systems (= Devices & management)	**Objectivising and materialising technical, business and involvement aspects of IOR**	This enables the flow information between parties regarding specifications, incidents, improvements etc. Information flows regarding commercial and planning aspects of the relationship; measures lead times and changes, costs and market information etc. Information flows that allow a greater involvement and participation in improvement activities; measures performance feedback, etc. The development of a strong information technology infrastructure is critical to create value in a supply chain and the applications and communication architecture must be carefully planned to provide a strong foundation for the growth of interorganisational systems and to increase productivity, leverage data already held and enable electronic relationships.		Average		AVERAGE +

Table 22 – ATERO & TZUFU - Key Levers & Enablers Scoring tables

ATERO / TZUFU			Relevant Types of Control		Associated Control Mechanisms Types		
KEY LEVERS	**ENABLERS AT STAKE (=participate in the Key Levers effectiveness)**	**APPRECIATION OF KEY LEVERS**	***Formal***	***Informal***	**Score Outcome Control**	**Score Behaviour Control**	**Score Social Control**
Appropriation of concerns & generation of Trust	Cohesive groups, clan coordination (organic solidarity)	**Poor +**	x	x	POOR	POOR	POOR
	Social Context consideration		NA	x	NA	NA	POOR
	Contractualisation		x	NA	AVERAGE	POOR	NA
	Buyer committment		x	x	AVERAGE	POOR	POOR
	Seller committment		x	x	POOR	AVERAGE	POOR
	Trust establishment & management		x	x	POOR	POOR	POOR
	Understanding of sensitivity to interdependence of production and exchange relations		NA	x	NA	NA	NA
	Governance structure well in place		x	x	AVERAGE	POOR	POOR
Balanced Economic benefits monitoring and surveillance	KPIs / Assessments	**Average -**	x	NA	POOR	POOR	NA
	Cross organisational designed management accounting systems		x	NA	POOR	POOR	NA
	Deeper involvement of accountants in the negotiation of actions and profit sharing		x	x	POOR	POOR	POOR
	Review of how the risk/return position of each party is affected by different actions		x	NA	AVERAGE	POOR	NA
Networking capabilities (= Best-in-Class Network Management)	Formal impersonal communication	**Poor -**	x	NA	AVERAGE	POOR	NA
	Ties among firms - Structural - Relational		NA	x	NA	NA	POOR
	Social recognition management		NA	x	NA	NA	POOR
	Managerial communication to further improve relational performance		x	x	AVERAGE	POOR	POOR
	Technical communication to further improve relational performance		x	x	AVERAGE	AVERAGE	AVERAGE
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)		NA	x	NA	NA	POOR
	EXPLICIT knowledge management		x		AVERAGE	AVERAGE	NA
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks (= proper balance between level of trust and information needed)	**Poor -**	x	x	POOR	POOR	POOR
	Know who you are dealing with		x	x	AVERAGE	POOR	AVERAGE
	Information management control relating to the willingness to trust given recognised competence and integrity		x	x	AVERAGE	POOR	POOR
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer		x	NA	AVERAGE	AVERAGE	NA
Mastery of Events (= Coordination of tasks)	Cohesive groups, clan coordination (organic solidarity)	**Poor -**	x	x	POOR	POOR	POOR
	Clear Organisation and adequate escalation process		x		AVERAGE	POOR	NA
	Constant evolution		x	NA	AVERAGE	POOR	NA
	Bonding		x	x	AVERAGE	POOR	POOR
	Learning Philosophy		NA	x	NA	NA	POOR
	Contractualisation		x	NA	AVERAGE	POOR	NA
	Co-ordination mechanisms like escalation pyramid or executive reviews		x	x	AVERAGE	POOR	NA
	Defining goals and methods		x	NA	AVERAGE	POOR	NA
	Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.		NA	x	NA	NA	POOR
	Governance structure targeted with determination		x	x	AVERAGE	POOR	POOR
Relational Capital Management (=Positive Sensitive attitudes)	Social Capital management including sensitivity to culture	**Poor -**	x	x	POOR	POOR	POOR
	Level of mutual trust, respect and interaction between actors at multiple levels		NA	x	NA	NA	POOR
	Social recognition management		NA	x	NA	NA	POOR
	Relationship management type establishment about: = management of interacting people = Joint problem-solving arrangements		x	NA	AVERAGE	POOR	NA
	Culture Management		NA	x	NA	NA	AVERAGE
	Power management		NA	x	NA	NA	POOR
Shared vision	Defining convergent goals and collaborative futures	**Poor -**	x	x	POOR	POOR	POOR
	Governance structure targeted determination		x	x	AVERAGE	POOR	POOR
Internal Cooperation (= Influence of its own organization over external parties)	Consensus between internal stakeholders	**Average -**	x	x	POOR	AVERAGE	NA
	Internal governance structure targeted determination		x		AVERAGE	POOR	POOR
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	**Poor -**	x	x	AVERAGE	POOR	POOR
Information Systems (= Devices & management)	Objectivising and materialising technical, business and involvement aspects of IOR	**Poor +**	x	NA	AVERAGE	POOR	NA
	OVERALL AVERAGE CONTROL PRACTICES SCORE				171	123	96
	THRESHOLDS TABLES RESULTS				AVERAGE	POOR	POOR

Table 23 – AEROMOTOR & TZUFU - Control Types Scoring table

Within ATERO, stakeholders clearly did not have sufficient understanding or awareness of the importance of social and cultural contexts in the context of inter-firm industrial co-operations. Individuals have their own agenda, and are often quite narrow minded, opportunistic and selfish, while at the same time, long-term strategy preparation is most often put aside. In reality, going into teams is not encouraged and as often as not, there is no time left for this.

Some more senior and experienced people may understand the necessary attributes that should be promoted and established when building inter-organisational co-operating arrangements. However, this is often limited to good intentions. "*ATERO and TZUFU have a unique position with their partnership!"* is what used to be claimed. This resonated more like a selling argument than a real strategy which stakeholders were firmly resolved to build on. Moreover, within ATERO, nobody was clearly identified as being the person in charge of creating strong ties between the two firms. This was all the more detrimental because the Chinese were "far away" (i.e. geographically, culturally and strategically), and therefore communication was poor (mainly due to language barriers) while internal co-operation was not perceived as critical.

Consequently, no room was left for any sort of *Embeddedness* approach. Formal control tools were debated but this was not realistic. In particular, this situation was clearly a missed opportunity for creating a competitive advantage through knowledge creation between two complementary firms. Indeed, there were no strong ties, yet they are considered necessary for any kind of successful transfer of complex and tacit type of knowledge information. Because of its lack of maturity in its staff and with no appropriate dedicated structures, ATERO could not adopt an appropriate inter-firms Strategic management control approach while the Chinese were not necessarily any further forward.

SECTION 3 - AEROMOTOR & GEARB

The following case study is considered relevant insofar as it deals with relationships between two market leaders desperately trying to work well together because neither of them can actually succeed without the other.

Despite an obvious mutual dependence, this particular type of inter-organisational collaborating arrangements is often quite chaotic. Many efforts and concessions were made by both parties, which sometimes translated into promising results, but never really took off because of unresolved issues regarding their respective relational strategy, internal organisation and management control practices (both internally and externally).

Importantly, for confidentiality reasons and as in our previous case studies, some precautions had to be applied so as not to reveal specific names and figures involved in the discussions.

1. CONTEXT AND CHARACTERISTICS

GEARB has teamed with AEROMOTOR for more than 20 years. Sharing almost 90 % of total market requirements with an alternative competitor, GEARB designs, develops and produces high-technology power transmission systems for the most recent aircraft. It comprises a number of modules designed to maximise AEROMOTOR's product performance. As a major player in the airbone applications of electrical power in particular, GEARB is also the world's leading supplier in its market, with a share of nearly 60% of all mainline jets (over 100 seats). It supplies an installed base of more than 20,000 single aisles aircraft products, along with over 4,000 products in the AEROMOTOR designed and developed product families.

AEROMOTOR is a world-leading firm providing systems and services for use on land, at sea and in the air. It has also established a strong position in global markets - civil aerospace, defence aerospace, marine and energy. As a result of this strategy, AEROMOTOR has a broad customer base consisting of more than 500 airlines, 4,000 corporate and utility aircraft and helicopter operators, 160 armed forces, more than 2,500 marine customers, including 70 navies, and energy customers in nearly 120 countries, with an installed base of 54,000 of its Products.

As for the relationships between the two companies, it is interesting to explore the internal memorandum issued by a former AEROMOTOR Managing Director and its Supply Chain Management executive a decade ago when I initially joined the company. It details the correct strategy advocated by AEROMOTOR to help improve the IORs management with GEARB. This provides an initial indication of the difficulties encountered by AEROMOTOR and GEARB in the framework of their inter-organisational relationships. Consequently, it provides the necessary justification to consider these IORs in the light of the *Key Levers* proposed in chapter 3, section 3.

From : Mr Engineering Director
Date : 30 May 20xx

to: Managing Director
Cc: Purchasing Director / VP Program T&S

Zizou & GEARB Cost reduction team

Introduction

…. Significant progress has been made in reducing the cost of all commodities with the exception of GEARB's products. Most of the value is sourced through two suppliers – Zizou and GEARB. A preliminary "should cost" analysis has been completed on those types of components. This shows that for some of our engines the components are too expensive.
Additionally there have been several other issues with both Zizou and GEARB in the past. Their delivery records have been poor and they are known to have been weak on supply chain management.
Several attempts have been made to get improved cost reduction from both these suppliers in the past which have yielded little in the way of progress. This paper proposes a way forward.

Issues

GEARB
(…) this supplier has started shop driven improvement initiatives on three occasions to date, each of which have failed. There appears to be a resistance to change at shop floor level. The unions in the factory are strong and only one leader in our opinion got close to making major change happen.

ZIZOU
(…) AEROMOTOR does not have a clear relationship with Zizou. It is not clear who owns the overall relationship at a senior level given the diversity of items that Zizou works on (…). Because of this, there appears to be no on-going systematic communication with Zizou – dealings appear to be on a day to day / project to project basis.
Zizou appear to have very poor supply chain management capability and also have some very outdated manufacturing methods (…). They are also seen to be weak on project management capability but are very strong technically.

General

The following points can be considered to be common to both Zizou and GEARB cultures. Both cultures appear not to fit well with the British approach. We tend to tell them what to do and how to do it, which does not achieve the desired result. We need to work with them, make it clear what needs to be achieved and then work with them on the "how".
Deliveries: both suppliers have had delivery problems and we regularly have to get involved to recover the situation. This involves sending people on short notice to install some discipline into project and task management.

Opportunities

(…) With GEARB a contract review should be conducted to decide whether a negotiation (…) would be beneficial. The manufacturing methods of GEARB are good. However, their shop floor management (flow and logistics) is poor and it could be beneficial to address this. Supply chain management is the other GEARB area of weakness where cost reduction could be generated. They are poor in this area. They do not control their suppliers well and make little use of suppliers anywhere other than in and around the capital.

With Zizou, sorting out the long term relationship has to be the first job to be tackled, building this on a systematic basis should go a long way to minimising any fears regarding our motives and sharing our longer-term strategic issues. (…) working together with Zizou on suppliers, machining offload, etc… should yield benefit.

Recommendation

We appoint a full-time Supplier Executive over Zizou and GEARB to cover cost reductions (…). This person needs to have strong interpersonal skills, good cultural awareness, project management capability and preferably speaks either (…).
The supplier exec needs to be backed up by some process improvement skills which can make it possible to grasp opportunities within the factories and then push it to happen.
Part time support then needs to be provided by commercial, engineering (…)
A steering group needs to be established to meet on a bi-monthly basis with clear terms of reference.

Issues

(…) we need to seek commitment for GEARB to supply people to "face off" to the AEROMOTOR team and support the business objectives (…)

2. FROM A KEY LEVERS PERSPECTIVE, CASE STUDY AND INTERVIEWS OUTPUT

A key confirmation obtained from various interviews conducted for this case study relates to the importance of the products and projects at stake within a co-operation. For stakeholders from both sides I had the opportunity to discuss with, opening new avenues, working on new projects and new product development seems to be quite important in the success of inter-organisational co-operating ventures:

> *"For me, the project is key, for example working on the new 787, or the XWB, working on something that is oriented towards the future. It is highly motivating in a co-operation, and for the team, because having a partnership in which both parties complement one another, to know that the other party will bring something to the table that we do not have, and vice-versa. All these are important motivations" (Program Manager in GEARB)*

However, the dimensions outlined by the *Key Levers* proposed chapter 3 section 3 also seemed important for the stakeholders approached in this case study. In particular, *Relational Capital Management* proved to be the cornerstone of the inter-organisational co-operating arrangements at stake between AEROMOTOR and GEARB, as illustrated by the following:

> *"… there is a whole human aspect to it. Whenever you have international co-operations, and especially in the aerospace sector, it is often the case. It is an approach to a different culture, which is also highly motivating. People like to meet each other and learn from one another". (Sales Manager in GEARB)*

With regards to the AEROMOTOR / GEARB inter-organisational co-operating arrangements, there was a definite awareness of and a consensus on the Key Levers proposed through the CCKLF Matrix©. However, some major roadblocks remain, and prevent stakeholders from translating what theoretical considerations would commonly advocate into practice, as illustrated in the following pages.

The following parts aim at providing a detailed assessment of the fit between the practices implemented within the AEROMOTOR/GEARB inter-organisational co-operating arrangements and the IORs Key Levers proposed in chapter 3, section 3. As it was interesting from a practical point of view to retrieve the output obtained from on-field exchanges through the analysis grids established and described in chapter 3, section 3, the following parts provide arguments for an interpretation of the AEROMOTOR/GEARB IORs management control practices, Key Lever by Key Lever.

2.1. Appropriation of concerns & generation of Trust

Most stakeholders from either AEROMOTOR or GEARB approached and questioned regarding the criticality of the appropriation of concerns and generation of trust admitted this *Key Lever* was paramount in IORs. Consequently, they often underlined that the necessary kind of mutual dependence between two co-operating organisations could not be realistically based on contractual elements only. Willingness to work together and common interests shared by the stakeholders involved were highlighted many times as suggested hereafter:

> *"A sort of mutual dependence that is not only based on contractual aspects, but rather on an appropriation by each stakeholder of a common interest (…) for a goal that is not company X's goal, or company Y's goal, but rather the conjunction of both". (Project Manager, GEARB)*
>
> *"The motivations that lead two companies to work on a principle of co-operation is having a common goal, and actually wanting to work together to reach this common goal". (Production Manager, GEARB)*
>
> *"A co-operation is people, a team, that share the same problems and that do their utmost to solve them by helping each other, never losing sight of the common goal to develop the project as is expected by all". (Former CEO, GEARB)*
>
> *"Our success with this external source will depend on our ability to establish teams which successfully work together." (Purchasing Executive, AEROMOTOR)*

This position is not very surprising considering the types of challenges firms accept to deal within civil aerospace. With a strong insistence on the notion of trust, this view is quite eloquently expressed by a former VP Program from GEARB, whom I interviewed regarding the role and the relevancy of contracts and formal agreements normally established between two firms in charge of delivering new programmes:

> *"The contract is the framework. The goal, and therefore the motivation, is to be able to produce over 200 planes in two years, when it is already difficult to produce six a year! This is a team motivator, a challenge that normally brings people together and is highly motivating for the individuals involved. Now, beyond motivation, industrial technique and quantitative motivation, I think it is also primarily a matter of human motivation to say: 'we have a group*

> *of five or six, we steer the project and each and every one of us will add another brick to the building. What Jack masters, I do not, or not as well, but I can do this…*
>
> *Yes, in day to day business, the contract quickly becomes secondary. The hundreds of lines that form the contract will always be a guide, with dates, amounts, agreements that need to be implemented, milestones, but by no means should it be the primary motivation. The primary motivation is to have a project that is exactly as everybody hopes it will be, i.e. without any bumps along the road, in compliance with the contract, and most importantly, that satisfies all the parties involved".*

Importantly, these positions were not only theoretical considerations reminiscent of project management courses. These testimonies were based on past experience, as described by a former Customer Support Manager from GEARB who had been involved in the joint activities with AEROMOTOR for a long time:

> *"Typically, with GEARB, in the first ten years, I was the 'fireman', and as such I was always welcome. When people contacted customer support, it meant that there was an emergency, and then, of course, we were always welcome, we always provided the required support, and therefore we were always thanked and congratulated".*

However, such positive dispositions were also hindered by obvious stumbling blocks. For instance, a real issue for this co-operation was individual priorities within GEARB, which started at the production line as suggested below:

> *"…there is one problem though, who makes the part in the machine ? Nobody ! This is symptomatic of what happens at GEARB: when you go to the plant, there is practically nobody on the machines". (Quality Manager, GEARB)*
>
> *"…. I have just visited an American supplier, and it's another world! People everywhere, on all the machines, round the clock. We went round the shop floor twice, and there were always people working on the machines, at any time of the day. Apparently, they don't spend their time in meetings". (Programme Manager, GEARB)*
>
> *"I was lucky enough to visit suppliers in the US, and it's so different. People are there, I pretended to have a question to go back to the shop floor and catch them off-guard, and they were still there! Obviously, the teams rotate. At GEARB, you can go round at 9, 11 or 2, you do not really get the impression of a busy room with people working on machines, or on quality control, … and I find that troubling" (Commodity Leader, AEROMOTOR)*

But what is worse, for example, is when one party commits to help its counterpart, and it does not actually happen or it is limited to *"coming, adding presence, adding tension, controlling, and right now, I just don't think it helps"* as underlined by a GEARB Program Manager. This type of situations can actually be quite frustrating for stakeholders as indicated by a Program manager from GEARB because it does not consist for example in *"preparing a war room where you sit down with all the engineers for example, if it is a quality problem, we bring engineers from both sides together in a room and we actually discuss, brainstorm, if there is a quality problem, what are the root cause, and the corrective measures to be implemented".*

In fact, most discussions held with both AEROMOTOR and GEARB stakeholders on the topic of appropriation of concerns revealed that intentions were often promising but there was little evidence of delivery. A GEARB Program Manager shared a testimony, almost a caricature, about the time spent by individuals on reporting tasks: "*People criticise PowerPoint, and I do think that it has been detrimental in one sense, because it has simplified reporting, enabling practically anybody to be able to prepare a power point slide. But can they still produce their piece by the book? Adjust his machine so there is no waste? I doubt it".*

More fundamentally, the question of shared information and the information available between stakeholders appeared to be a critical root cause for a lack of trust or appropriation of concerns as reported by a former Product manager from AEROMOTOR:

> *"Before the relationship deteriorated, the slightest technical decision was always made together. Then decisions were made by one side, and presented to the other, and discussed, when initially, both parties were in the same room: do you think that if we did this, and that? Ok, we will do that then… it was real-time training, and the decision was made (and accepted) by both. In real time, this saved a significant amount of time, both parties accepted and took the joint decision into account".*

This situation was made worse by disloyal and unfair behaviours outside control, revealing a lack of internal co-operation within one party, as is described by the following testimony from a VP Programme in GEARB which exemplifies a shared experience that forced GEARB to give up a two years project though carefully planned and worked out:

> *"In a way GEARB got done, because AEROMOTOR sold us stuff that they did not have. What I mean is that for example, they told us that for this, the 'production' cost, we're going to do this, so make us an offer, and we offered something quite significant. Ok… Very good, and we launched the whole thing. Our engineering office started doing overtime… and about 1/3rd into said process… we go to a meeting with the Customer Facing business unit, for the very first time, and who had just come on board. And I knew the guy very well, Jason Mc KING, and that day, it turned out that there was only one AEROMOTOR purchasing representative that had been involved in the development and launch of this project… There were some GEARB representatives (I was one of them) and the Customer Facing business unit, who had two representatives, including Jason Mc King. We talked about two items out of eight that had been planned within this larger project, and he tells us "ok for me for these two, I think I might be interested, but this year, we can only squeeze one in at the very best, and for the others, I don't think we can expect to push more than one or two a year through. Anyway, in terms of budget, nothing has been foreseen for this, so I don't have the budget for It". I was stun, because for us, it was a two-year plan to make all eight of them! So I said "but wait Jason, I don't understand, because for me, I saw a letter from Chris X…" so he literally exploded: "ho is Chris X?? I don't know him! He doesn't decide Program is in charge. We cannot do all that; we don't have the budget, and no way for the engine tests". I lost it, because the guy from purchasing had sold us a whole package and said there would be engine tests, because we're changing a lot of things… and we had started this huge project that had not been shared with*

> *AEROMOTOR's internal stakeholders. It was just the purchasing department that had sold us that to get cost reductions".*

Would this type of situation occur with individuals who felt they are really empowered to make things work between two firms? Apparently not, when comparing with past experiences and when things were decided jointly by both parties after sufficient time spent in working together. At least this is the perception shared by a Purchasing Executive from AEROMOTOR heavily involved in the AEROMOTOR/GEARB inter-organisational co-operating arrangements for about seven years:

> *"As soon as two people, two co-operating parties, have a strong bond over one topic, they cannot imagine keeping information that would have an impact on the other to themselves, so as soon as one member has information, he'll share it with the other, they will exchange ideas, put them together, and if there is a problem, it will be the same. If there is a problem, one will come to the rescue of the other and will try to help, so naturally in a team, if I have a problem that I cannot solve, I will ask the team to help me find solutions. Today, this is not written in any process. No processes can describe that, naturally. It is a natural human logic".*

So a problem might be that the "natural human logic" mentioned above is not easy to control as it is not based on explicit procedures. Besides, mind-sets have been evolving for many years and not necessarily for the benefit of active collaborative approaches as underlined below:

> *"… I see lots of young engineers, the general level of education has increased, but what I also see, is that at 6 p.m. people are done and out of here." (Production Manager, GEARB)*

> *"In a way, today, these employees are GEARB, tomorrow they will be Oelav … they do not really care about the company per se. It is all about 'I had my interview, I have to do this and that, good, I get my bonus, I get my whatnot… 'they don't really care about the rest! And it's natural, that's how they were trained, that is the way they are, so as for human relationships, they have many outside of the office, but practically none internally. It is very rare. Creating teams like that, internally, is very difficult". (Sales Manager, GEARB)*

Given the above consolidation of exchanges I could have through semi-formal interviews or informal discussions dealing with appropriation of concerns and trust in the framework of IORs, I must acknowledge the relevancy of what AEROMOTOR's formal Managing Director once shared with me:

> *"The way I see it, a co-operation really has to place the human being at the center. You have to be careful not to put procedures or indicators that are supposed to help the individuals working on the project in the center. Men should not have to bend over backwards for procedures, and I think that is how it should be seen".*

2.2. Information asymmetry management

In the framework of the AEROMOTOR/GEARB inter-organisational co-operating arrangements, most of the stakeholders interviewed believed that *"a co-operation is people, a team that share problems, and that try to resolve them by helping each other. Never losing sight of the common goal to develop the project the way everybody expects it to be",* as indicated by a commodity leader from AEROMOTOR.

This understanding was reinforced by a former VP Program from GEARB who explained that *"during the partnership, development, implementations, product development or improvement phases, yes, we absolutely needed a partnership, so interfaces were rapidly established. Be it in production, engineering, programme…. I remember a time where not a day went by without me hearing from my German or British counterpart, who told me what had happened that day… even if there was not a particular goal, there was always this connection. I could not imagine deciding something or doing something without letting them know, without sharing the information".*

In fact, the above was summed up by an AEROMOTOR Global Purchasing Director who insisted that *"You have to be able to reveal your weaknesses to your partner, so they can take it into account in their considerations".* More precisely, this position refers to a situation where, for example *"you cannot say 'don't worry, you'll have your 300 parts in two years, no problem, 300/year, no problem… out of the blue, without evidence, you have to be reasonable, and say '300 might be difficult, for this particular part, that is ok, but for that one, we are snowed under, we have to work it out together. What can we discuss, do you have any suggestions?"* This mindset was very well described by GEARBVP Industrial who was convinced that *"in a true collaboration, I will immediately interface my colleague, and say 'wait, here I have a problem that is going to affect us both, what can we do, do you have an idea…?' So the idea is that the co-operation team for me, takes precedence over my belonging to my company".*

Interestingly the same individual added that *"the involved parties will either play along, with transparency, as equals, or they will not play with others, and it might work, but it might also be a complete disaster"* which in turn suggests the existence of a sort of hypocrisy with regards to concrete practices at play in real life.

Generally speaking, actors approached from both firms seemed to be more or less aligned with each other. Most often, they agreed that the positive management of information asymmetry is paramount as it grants a level of transparency necessary for building trust, which is in turn mandatory for developing inter-organisational relationships as indicated below:

> *"… to work co-operatively is to be transparent, maybe I am too naive! But for me, it means being transparent, we work together to get to the same place, and everybody has to have the same level of information and the same level of communication". (Programme Manager, GEARB)*

> *"When you are together, day after day, you have to have a certain degree of transparency". (Customer Interfacing Manager, GEARB)*

But a paradox exists there: stakeholders from both firms aim at optimising the economic performance of their IORs in the long run, while they also claim to be aware of the critical dimension entailed in information asymmetry. Still, between AEROMOTOR and GEARB, economical aspects certainly hinder a more ambitious information asymmetry management as revealed by the following:

> *"If you look from the point of view of the company, transparency soon reveals its limitations: the confidentiality of the company. The company's confidentiality can depend on the status of the company on the market". (VP Programme, GEARB)*

> *"… there is something unethical about full transparency vis-à-vis other customers. It is unethical for others, because it also means showing them that for certain things, we have special recipes that come down to the know-how that explains the reliability of this other product, which is known worldwide".*

> *"… on an economic level, it is impossible to have full transparency on cost components, it is always very sensitive and sometimes frustrating when you enter a partnership, because there are moments in which we all get along fine, and you have to tell your partner that even with the best effort in the world, the best we can do is price X, which he considers absurd, and we cannot explain how we get to said price, and why it is not as absurd as it seems… Because if not, we would have to reveal things that are part of the confidentiality of the firm". (VP Sales, GEARB)*

This type of frustration arising from circumstances as mentioned by the VP Sales above is a real disadvantage. It definitely is detrimental for the co-operative relationship, especially when one party cannot understand another company's confidential constraints. Namely, the other party may see this as something deliberately hidden which is not good, and even something which should be regarded with suspicion. In this regard, it is interesting to underline that in the YANKEES/BBR inter-organisational relationships, these hurdles could be bypassed with the % mechanisms already described.

2.3. Best in class network management and networking capabilities

To my surprise, actors interviewed on networking and best-in-class network management often demonstrated an awareness of everything it entailed. People interviewed from both GEARB and AEROMOTOR offered quite relevant insight about networking practices and attributes in the context of IORs. This was not much of a surprise in the case of AEROMOTOR, as it is heavily influenced by Anglo-Saxon culture, which clearly stipulates that socialising is a fundamental practice in daily business life. Regarding GEARB, a French company heavily influenced by a hierarchical culture which puts forward "hard" skills and data, the following positions were more surprising, especially for aspects related to relational embeddedness:

> *"for me, embeddeddness has to be taken one level down, to the whole program teams in a group like ours, i.e. : you have functions on the one side, the program teams on the other, and if there is no embeddedness, it just won't work. If you have teams where it works, and some where it doesn't, it has to do with the people in the teams". (Programme Manager, GEARB)*

> *"Managements have to be embedded. Imagine, you have a concrete case in the group, feel free to use it or not, let's call them NAB and NOBB. If tomorrow we create a NABNOBB and that you only have former-NADI or ex-NOBBs to lead it, then it is most likely that it will not work. But if you merge them correctly, with the right people, it can work". (Sales Manager, GEARB)*

> *"There always has to be a monthly meeting to discuss this and that… People do not always want to spend time together, because they have to juggle with lots of different priorities for the development on both sides, but forcing them to see each other, I actually found it very efficient… I have started preparing a report, and I have written: formalisation of the relationship; when do we see each other, who should attend, and to say what?" (Commodity Leader, AEROMOTOR)*

It is also interesting to notice that according to the same individuals mentioned earlier, these networking capabilities should certainly not be limited only to the tracking of indicators measuring the number of meetings that are held for instance. Obviously, it is commonly taken for granted that success goes hand in hand with stakeholders' ability to "*sit down together to look for solutions and implement them together, and measuring their efficiency together. One should not measure the other and report it, it should be a team effort, and I think that is what is missing*" as underlined by a VP Programme from GEARB. He was not the only one to insist on the fact that *« KPI take time away from looking after the client. At the end of the day, that is what the client expects: for us to look after him, that does not mean mother him, it means we should do what we have to do for the relationship between a client and a supplier and that is described in the contract"..*

I remember this confession from a VP Sales at GEARB: *"sometimes, you suddenly realise that you have spent 3, 4 or 5 hours of your day looking at KPI or indicators, and then you realise you haven't had time to prepare the analysis that the customer had requested on an important element, or the next meeting, and most importantly, all the informal points you want to discuss, so it all gets put to the end of the list, and you have to stay on late to do it all…."*

Lastly, it should be noted that a current practice within AEROMOTOR consists in contractualising a sort of physical proximity[93] between inter-organisational co-operating firms through the establishment of a co-operation office or building. The idea is to offer a common location symbolising the co-operating union. As testified by the following comments that I could gather on this topic, a similar view prevails within GEARB as indicated below:

> *"If it is a huge international project, it can be a building, a common location, in which there will be a Senior 'director' from each end of the partnership; representatives of each Top Management with teams that will work together. And this physical proximity, sharing a physical space, sharing the same things, naturally creates bonds, and it generates a team spirit. It forces a sort of transparency".*
>
> *"…To have a reliable idea of who the other is, you have to have verbal, visual exchanges, look each other in the eye. All these feelings, getting to know what they are worth, it's just not something you can get through e-mails. And by worth, I mean in the human sense: honesty, righteousness, all those things!"*

However, after personally spending four years involved in this IOR, I believe that something particular was fundamentally missing. While, from AEROMOTOR's position, there had always been the clear intention of avoiding situations in which actors from both firms remain isolated and communicate practically only through e-mails, breaking the ice seems to take many months, requires huge efforts and some sacrifices which most often only lead to a fragile stability. Besides, provided it is achieved, this balance is constantly questioned as soon as individuals change positions. In fact, this element was considered very detrimental by certain actors, as reported by a VP Programme at GEARB: *"I have seen too many changes within AEROMOTOR, too many new faces, they keep on coming. Here, we do have some, but to a lesser extent, and I still think it is too much. I would tend to say that if you start a co-operation, teams should be designed on a long-term basis".*

[93] When I was hired as Supplier Business Executive at AEROMOTOR and in charge of the management of GEARB, I was located in an office within the GEARB facility. This was contractually demanded by AEROMOTOR.

Also, I recall a very acute and specific remark made by an AEROMOTOR Purchasing Executive regarding the coverage of the network at play in this particular IOR: *"what is important, is that this partnership also goes through the hierarchical strata. You also have to be careful that there isn't a partnership at a middle-management level that might not be shared by the senior level, or vice-versa".* In my view, this point is very relevant because it inevitably raises some questions or even concerns about the role of managers involved in IORs and along with the architecture of organisations in place, in particular when dealing with networking capabilities.

2.4. Mastery of events and coordination of tasks

The specificities of civil aerospace products at almost all levels of the value chain, from aircraft final assembling to individual components manufacturing, necessarily impose thorough and accurate task co-ordination. Consequently, it is not surprising to see that when dealing with IORs management practices, the notion of mastery of events is not only considered critical but also intensively promoted and very much implemented between AEROMOTOR and GEARB as indicated below:

> *"… this is what AEROMOTOR calls 'milestones'… It's a way of monitoring internally before having to do it externally, at either end, that everything is going according to schedule, before we even discuss it between each other. It's a matter of clearly identifying what we are going to do (…) it is a whole formalisation that is much stronger than what milestones are for us". (VP Programme, GEARB)*

> *"If you do not assess the maturity of your development or your programme as you go, you'll miss things out, which will have a negative impact". (Product Engineer Manager, AEROMOTOR)*

This concern regarding mastering events and co-ordinating tasks is shared by those two companies, so much so that some individuals even insist on the importance of running extremely detailed reviews internally, prior to sharing things with the other party as indicated below:

> *"Before going to PDR or CDR with your client, the fact that you haven't had anything internally beforehand is astonishing. I fought with GEARB internally, and said 'wait, we're going to tell AEROMOTOR, our client, that we are ready, that we have chosen this, this material, for mass we have decided to do this… when we haven't even validated it internally! That's just crazy! It's our Programme Director thing, and I do think it is important to work on it. But you also have to be careful not to go to the opposite extreme, but I think these are the sinews of war". (Programme Manager, GEARB)*

Interestingly, this tends to underline that best-in-class task co-ordination practices that are accepted by both firms' stakeholders might not always be realistic insofar as in some cases, it would be legitimate to ask oneself whether *"we don't run the risk of falling into an excessive formalisation of 'KPI'".*

Still, why then are chaos, disorder and mess, the terms often used to describe what prevails in the AEROMOTOR/GEARB business management? Is it a problem of preparation or internal co-operation? The following may help clarify this aspect.

2.5. Internal cooperation

When dealing with internal co-operation, the aspects that are most often related (e.g. quarrels between departments) should be taken into consideration in terms of their potential impact on the IORs and certainly, they can apply either to AEROMOTOR or to GEARB. Without putting these aside, it is however interesting to focus on three key dimensions observed at GEARB, which are considered critical for the Aeromotor/GEARB inter-organisational venture by the protagonists approached.

The first problem we should mention is that of contract renewals and turnover, particularly the change of department supervisors. As suggested below, this can have a real impact on the way people co-operate internally, which inevitably has an impact on the management of the IORs because of wrongly defined escalation processes for instance:

> *"… when the manager changes, when your direct line manager changes, you can go from a situation where you are not free to do anything, to a situation where you have more or less free rein, or the other way round! And the way you regard your relationship with your customer, because this is what we are talking about, the way you consider that relationship will be different, depending on your environment. But the general orientations of the company do not necessarily change, it is more one individual who acts differently, which entails and induces different behaviors" (Sales & Contract Manager, GEARB)*

> *"I saw it, over four years of development. I had two programme managers, a third one is coming, and I can see that it just is not working. The foundations of the company that employs them have changed in the meantime. I think that it really has something to do with the person, the way he or she sees the relationship, maybe also how comfortable he or she is in the company, whether he or she has free rein in the company or not" (Programme Manager, GEARB)*

> *"… For me, the success of a co-operation lies in the relationship that should be built between people, and that is why it is very detrimental when you have teams that are consistently changing, because it takes six months, one or two years to build a relationship, it depends, but if you spend so much time building the relationship, and that you keep on having to start all over, it is detrimental because you lose, maybe not all, but part of your initial investment 'internal cohesion within each stakeholder…. A strong role in the inter-organisational co-operation". (Purchasing Executive, Aeromotor)*

In fact, a high turnover and the lack of long-term projection in actions makes it difficult to establish or even maintain good collaborative practices between stakeholders, because past decisions can be questioned or might not receive sufficient support by new entrants.

This leads us to the second issue which should be considered: when past decisions are questioned or not fully supported due to poor internal co-operation within one party, which can be perceived as a sort of betrayal by the other party. Deliberately, we will refer to this

testimony already pointed out when addressing appropriation of concerns and generation of trust. In this particular case, GEARB felt betrayed because AEROMOTOR's purchasing teams had accepted contemplating something that could not be accepted by their company. Some may argue that this was deliberately done by the AEROMOTOR purchasing teams in the context of a commercial negotiation, even though such practices rely on a few lies. However, having been myself involved in a similar "imbroglio" a few years before, I feel confident in saying that there was probably no dishonest intention in Mr Chris X's mind. The problem was that in his company, stakeholders were not able to align themselves on such issues. Whatever the reasons, this misalignment was extremely detrimental for the AEROMOTOR/GEAR inter-organisational co-operating activities, as it provided justified reasons for mistrust.

Thirdly, the distribution of roles seems to be an important concern for many, which unveils a painful lack of effectiveness within GEARB as admitted by a former Program Manager:

> *"We have a structural problem that has been going on for years, I think that if you ask 80% of the people in the company, everybody knows it. How can we solve it? Unfortunately, I think our Top Management, either knows it and does not have the necessary resources to implement it or maybe has other constraints that we are not aware of, or they have not seen it.*
>
> *"… We have a staffing problem, in the manual positions, not in the offices or in the programme plans, because in the quart chart… they're all over the place… There is always somebody calibrating the high speed machine, but it is a union activist who works about 2/3 of the time maximum, there is another who is on a prolonged leave of absence and is rarely here… and one guy that we have just recruited to train, knowing that on this particular machine that is unique, we do not have enough capacity to answer our current demand, and we have to multiply our production by four in the next 18 months, and today, I'm sorry, but no structured answer has been provided".*

This is symptomatic of a structural change in the distribution of workers in civil aerospace. This is not unusual nowadays, but can certainly explain poor operational performance, such as late deliveries although they are very critical for customers' satisfaction and cash management efficiency. Without dwelling on the trade union dimension, which might be too simplistic, one must admit that the concern regarding the distribution and availability of workers along the entire "adding value process" is very concerning. In any case, it is legitimate to start thinking about remedies … How can an organisation accept to involve so many individuals in reporting activities, when fresh blood is cruelly missing from the battlefield?

2.6. Positive sensitive attitudes and relational capital management

This notion of relational capital management was not easy to address through semi-formal interviews and informal exchanges because it can entail many different things. Besides, this terminology can also sound too academic for professionals in a corporate setting. Consequently, I did my best to summarise the answers that offered a critical assessment of critical means at stake offered by the individuals I interviewed, for example this Quality Manager from GEARB:

> *"What are the necessary means to make this notion of embeddedness work (…) spending time with the client, seeing them outside of a professional setting? What is called team building… I am really into all that stuff, and I revolutionised GEARB when I organised a team building with my team… where no boss had been invited, and we absolutely did not work, it was a real revolution. 'But what are you going to do?' Something else!*
> *It is building a relationship with the team. As a result of that is that I am proud to have a very low turnover rate in four years, only two people in the team have changed".*

This acknowledgement suggests the importance of internal relational capital management which will inevitably impact positively on the way these same teams relate to external companies. But the awareness of the importance of relational capital management is also present when dealing directly with IORs:

> *"… I find this Anglo-Saxon approach is very positive. Here, in France, in our very hierarchical companies, where it's all 'work-work', it's very difficult to get people to understand that yes, we are going to lose three hours over dinner, and spend whatever amount of money, but it is a way to work better, to later reach agreements that will satisfy both parties". (VP Sales, GEARB)*

> *"… it is important to see the people with whom you work, internally or with your customers, suppliers, etc. It's sometimes hard to get that message across, that's why dinners or even a whole day out of the strict professional environment are good… because that is what they are made for. For me interpersonal relations are very important". (Project manager, GEARB)*

Paradoxically, the above was shared by someone from Middle Management while the following was put forward by the former CEO of GEARB:

> *"Trust, honesty cannot be ensured through a mere contract. They develop through special relationships between individuals on the field, and who, bit by bit, it comes down to this, can create a sort of mutual dependency that means they both want to actually do what it takes to move forward, to take this co-operation further. Without that, without this ability to take the social capital into consideration, its specificity, it is very difficult to generate the trust necessary for the co-operation to flourish".*

> *"…a team is more than people who simply manage numbers, products, materials, dates. It is also individuals, illnesses, children, people's day to day life, when you work in the same space, you have to, even if you do not necessarily want to and keep to yourself, you end up being a part of it. Sharing this type of information gives the relationship its humanity. It is the little sentence that says 'oh, by the way, how are you, how did it go' and that person is no longer*

> *just the guy who is going to press the button to choose this material or the other, he also becomes the guy who has just had a baby …"*
>
> *"to find some sort of common interest (…) by seeing each other outside of the formal professional setting… I think that is something that is missing in our professional relationships".*

After discussions with stakeholders, these views do not seem to be isolated or mere theoretical wishful thinking, as testified by the experience of a Project buyer at Aeromotor:

> *"The experience I had in my development is that I started off with one person at the supplier's that was very very good. And by very good, I mean with whom you could have a frank and direct relationship, which was not only contractual. From the moment this person changed, the quality of the relationship was divided by 2, 3 or even 4, and this does not mean that the results were also divided, but it does mean that the relationship was much more tedious, it took longer to obtain results. When you manage to build a relationship with somebody and that it is working well, you get the results that will satisfy both parties faster; we discuss the different negotiations that could happen.*
>
> *It will be easier to reach an agreement that will satisfy both parties. If you have a difficult relationship with the person in question, who refuses to budge for example, on a contractual aspect and who does not see what is beyond it, and does not try to understand the difficulties that might exist beyond the contract".*

Another interesting comment was made by a Programme Director from GEARB who mentioned the YANKEES/BBR venture:

> *"What had surprised me in the relationship between the people from BBR and Yankee, is that they were friends. They had an actual relationship, they knew about each other's' lives, they had dinner with one another, they were friends! So it was a genuine co-operation.*
>
> *They were two entities that had completely merged with one another, and they were not afraid, that is also what characterises friends, they were not afraid to tell each other what they thought, or to argue… I remember hearing and seeing an argument in the open plan in Cincinnati, and at lunchtime, everybody went to lunch together for a quick bite… they laughed, and talked about other stuff".*

In the same line of thought, a Program Manager of GEARB shared with me that he has *"an aunt who worked in an American firm, for years, every year the whole company, about 200 people, the whole company went for a week to Tunisia. A whole week, with 200 people, and during that week, they only had a two-hour conference on the Wednesday afternoon, and after that they were free! Holidays… Now, my aunt has retired, and all her best friends, the people that are part of her daily life, are people from that company. This means that the social network that was created is huge, and something that is fantastic, is that her husband, who works in a totally different sector, knows them all! And when my aunt said 'this week, I'll be home at 10 pm every day', it was something that everybody in her family understood. That*

proves that a team is more than a piece of paper that says that it is John, Jack and Jill…. It is also people, personalities, history, experiences…."

Yet, these initiatives are often hampered in practice. Is this due to a radically different cultural mindset? This reminds me of the following comment made by someone in GEARB:

> *"Work can be done outside of a meeting room. Many people in France have not understood that yet. I was lucky enough to work with Anglo-Saxon teams, they have understood this, and they try to put it in practice. The German however, are a bit like the French, i.e. very difficult to see outside of formal meetings, and you never really manage to get them to talk, or maybe only occasionally, about their family, their hobbies, but with the British or the American…. And it builds a much more pleasant relationship. I think it is much more efficient".*

Another example is on the occasion of the intended visit of a French aircraft maker in the framework of a selling campaign involving AEROMOTOR. The original agenda had been established by AEROMOTOR to welcome the French company to its US manufacturing site. This was a good opportunity to help the potential French partner have a better understanding of AEROMOTOR's production and development capabilities with the help of a very light formal presentation of activities. Then, to give the French visitors some time to recover from their jet lag, nothing had been planned for that evening, and the following days were meant to mix project teams with activities like car racing on a prestigious circuit all day. Clearly, the objective was to start building relationships and break the ice so that rapidly both parties could start working together efficiently. Surprisingly, at least for us at AEROMOTOR, the French stakeholders insisted on starting the formal program and project reviews as of day one. They insisted that milestones had to be reviewed in detail and that some financial data had to be discussed and projected. They also insisted that they were ready to work late if need be, so that the second day could be dedicated to running formal reviews. Naturally, AEROMOTOR amended the original agenda accordingly… Still, a few months later, and after initially awarding the bid to AEROMOTOR, I was informed that eventually the French company had no choice but to select another partner following AEROMOTOR's decision to withdraw.
Five years later, the French company's project aircraft has not been launched …

Generally speaking, both AEROMOTOR and GEARB wanted to capitalise on relational capital management because it is considered to be critical for the success of co-operating activities as indicated below:

> *"a co-operation is people, a team that share problems, and that try to resolve them by helping each other. Never losing sight of the common goal to develop the project the way everybody expects it to be"*
>
> *"I think that the social component, the social relationships between people, in the organisation that we have today, in which people have become isolated individuals in structures with a microphone, 90% is done by e-mail, we do not have a verbal relationship anymore, you no longer have the opportunity to feel the other person's 'vibe' IT, screens, that have given us significant advantages also have dehumanised us. We have to re-create a certain share of humanity. Humanising requires regular events, at least, meetings, that would not only involve the technical side of things, milestones, value… but that also take into account the relational component, with a psychologist, at a hotel or at the beach, where people could just have fun together".*
>
> *"… there has to be a good common motivation and cohesion between teams".*

However, there are many obstacles such as an obstacle imposed by a consultancy firm, which was reported to me:

> *"People, good-doers no doubt, dictated a golden rule: when you get to the office in the morning, leave your values at the doorstep! If you want them, you can take them back when you leave at the end of the day, but leave your values there!*
> *Considering that at that moment we were talking about righteousness, mutual respect, honesty, transparency… Fundamental values! This guy repeated this over and over. As far as I am concerned, he should hire robots. You cannot ask a team that has to work together to leave their human side at the doorstep".*

Another major roadblock encountered in many circumstances, and precisely in the AEROMOTOR/GEARB co-operation, joint activity has to do with individuals who may not consider that *"… teams should have a sense of duty"*. Thus, the current VP programme at GEARB was quite irritated when telling me about someone from AEROMOTOR used to go on about the fact that he was the customer: *"the person who has been there for two years, somebody who makes a lot of noise, who ignores technical problems, he is interested in one thing only: results, results, results …ok it's one way of managing… But the result here is that I have people who do not want to work with him anymore. I had somebody who had acted as a liaison every day at 8.30 for two years, how had enough, and kept on saying 'I have had enough, I want to do something else, the way this guy talks to me is just not acceptable'".*

2.7. Shared vision

> *"In the factors that will really have a strong impact on performance, the result of a co-operation, first there is a clear agreement between parties, on what is expected by both parties. Success lies in people's ability to work together to reach the same goal that is, in the end, the profitability of the programme, or other goals that can be the transfer or the acquisition of the other firm's know-how".*
>
> *"The relationships between GEARB and AEROMOTOR are contractual, which provides a clear framework. Even if it is a three-page MOU, you have to know where you are heading, and teams work faster that way. I think this is a very positive point".*

With those words, the present VP Program and a former CEO at GEARB clearly suggest the extent to which a shared vision is pivotal or paramount for inter-organisational co-operating arrangements. This position is all the more interesting as this is a belief that is also shared by AEROMOTOR.

As a matter of fact*, "GEARB very seldom initiated a project with AEROMOTOR without there being a contract. That is good, because if you have a whole load of projects and no contracts, or drafts, or MOU, and two years after the launch, people are still discussing paragraph B on page 47… but in the meantime, no real work has been done. That is definitely a positive element*".

This is possible because AEROMOTOR is a very experienced company in its field. Consequently, they are very much aware of what needs to be clearly indicated and shared in contracts. As reported by a VP Sales at GEARB, "*AEROMOTOR knows where it wants to go, and the clauses are generally very clear… so there are no surprises regarding where we are heading with this program. With another customer who was not as experienced, and even if he had a contract, it would be no use, we could throw it away. It was empty; everything was left open to interpretation, which leads nowhere".*

These positions advocate a proper contractual establishment, not to be able to sue the other in case of breach of agreements, but rather to make sure that the co-operating parties share the same objectives. This is viewed as essential to prevent any kind of ambiguity *"even though it is only a three-page MOU. it is actually very helpful as it formalises the way forward for both sides, which helps them work much quicker. It is a real strength",* as underlined by an AEROMOTOR Purchasing Executive.

> *"With a good contract, even if there will always be some degree of interpretation, that is only natural, until robots start performing the tasks in question, there will always be some interpretation, but with a good contract, you can still work well".*

AEROMOTOR's MD phrased it differently, and he insists that *"a key element, from the beginning of a co-operation, is that both parties do share one same vision, a same understanding. I do not have any examples of it, but that is my personal belief, there has to be a good common motivation and teams must get along well".*

These views underline the extent to which a co-operation really is a matter of a team which shares a common objective. This demonstrates that sharing a vision is not simply a marketing effect. Certainly, this lays the foundations for the successful development of inter-organisational relationships, about which an Italian COO involved in similar IORs as the one between AEROMOTOR and GEARB, once told me: "*ideally, you should have a common goal, that is well known, and this common goal should not be detrimental to either party… And I think that a priori, when you set out on that kind of co-operation project, every aspect has already been checked… in aerospace, there is always some contractual form, and from the moment there is a contract, all these aspects will already have been discussed"*. "All these aspects will already have been discussed" means that not only metrics or investment plans along with organisational structures should be formally considered. Formalising a common shared vision and implementing all the means necessary to enable the appropriation of it by all stakeholders proves necessary, but unfortunately is seldom achieved.

2.8. Leadership

As testified by what follows, it is interesting to notice that discussions on leadership I had with stakeholders from the AEROMOTOR/GEARB IORs focused primarily on the issue of metrics, reporting and Top Management's subsequent behaviours.

I remember a Program manager at GEARB once asked me: *"Do you think the power games that always happen at the top of the hierarchy could explain why leaders have no choice but to justify their choices with these metrics, not to cheat, but to give a general impression, to stay superficial contrary to what is expected in terms of quantifying problems, and therefore to sell a sort of smoke screen, instead of a sustained attack on the real problems?".* But I also recall a puzzling position from a Programme Manager at AEROMOTOR:

> *"I am going to sound a bit harsh, but I get the feeling that our management does not really use the reporting provided by Middle Management extensively. Do they do a detailed analysis? In day to day business life, I doubt it. If I ask somebody in my team for an indicator, and I receive it, and he had a goal of 100 and that he is only at 90, or much less, my first reaction would be: we have to see each other, how come you have not reached your goal, what can we do together to achieve it. Today, I do not think that there is a clear dialogue with our general management".*

I later came to realise that the above statement reflects a commonly shared perception that individuals have of their Top Management, and its tendency to concentrate on the wrong things, such as comprehensive reporting duties.

> *"For Top Management … Specifically, I think that they spend too much time adjusting indicators, receiving them and analysing them, commenting on them, and in the end, they no longer do their actual job as Top Management, which is to give orientations". (VP Production Manager, GEARB)*
>
> *"Today, we have directors here, and in other companies, I think it's probably the same, who know all the very particular specs of the "whatsitsname" part, that was not delivered, or the problematic derogation that has not been solved. When I hear that from a Director, I want to say 'wait a minute, I don't understand, you, you are no longer fulfilling your role. It is always the same, they hide behind all these elements of day to day business that are actually quite easy for them to deal with, because they receive indicators that say we delivered X% on time, x% of problems are solved, we have an increase of derogations of X%, so it is easy, and for me, they are no longer doing the actual job that is expected of them". (Programme Manager, AEROMOTOR)*
>
> *"… I consider myself part of our middle management. I still believe that we are too detail oriented, too focused on the operational side of things, and we do not receive directions any more, we do not have enough time to look after customers, teams, people in general, because we receive indicators, and we start all over again, and pass it on to others". (Commodity Leader, AEROMOTOR)*

Consequently, at least in the framework of the AEROMOTOR/GEARB IOR, Top Management was considered poorly engaged in most critical activities like coaching, advising and boosting people to get things done. Instead, Top Management seemed to dedicate too much time on reviewing and questioning data. This mindset was considered very negative amongst the GEARB population, as exemplified by the following testimony, which is a bit of a caricature, but true nonetheless:

> *"It is a disaster here! People got depressed, young guys. They are all running away! All they want is to find something else. They cannot take it anymore. This is a typical example of when there is no team. They are under duress, and go crazy during meetings. One month ago, I had a weekly co-ordination meeting with all the AEROMOTOR programmes, where everybody provides some feedback on the progress of their activities , indicators… And there was this relatively senior man, who represented the supply chain. The poor guy is completely snowed under, he has about 75 or 80% of the product, and he has to co-ordinate all this information, on a weekly basis, he is completely shattered, everybody knows it, but that is the status quo, nobody has decided to put somebody else with him… so… what happened? That day, the guy felt oppressed…We asked 'how much of these this week?'… and somebody said 'wow, that has really gone down since last week!' Well yeah, and what do you want me to do about it, I don't have time to deal with it, so the indicator cannot go back up… Yeah, but if you present this to AEROMOTOR… And the guy went crazy … he took his file, he exploded, and started yelling… So very well, this happened on site, there was a director with us, and that is when you see, I am sorry, but he was despicable! The PC was there, the poor guy threw it to the ground, and yelled… So the incident lasted about 10 or 15 seconds, which is a long time when there is a guy in front of you going crazy! He left, and the first thing the director said: so, on the next line, how much? How high is the KPI?' The human being just did not exist! A wonderful demonstration… and all the others that were there, there were a lot of us in the room, were stunned! How can you ignore what just happened?! It is insane".*

Despite a genuine nervous breakdown experienced by one of his subordinates, the Director did not stop focusing on KPIs and neglected everything else, which inevitably shocked the other participants. Such an attitude can actually be extremely detrimental because probably by fear, Middle Management in turn generally feels obliged to adopt the same kind of attitude.

> *"The ones below, do not want to seem at fault vis-à-vis their superiors, and will adopt the same attitude, the same bias, and such a bad atmosphere at a high level will no doubt have a negative impact on anything below it".*

This low opinion of its Top Management was reiterated several times during my discussions with various stakeholders at GEARB, who underlined that their Top Management considerably hindered and limited human relationships or consideration. As mentioned by a project manager: *"building a team like that, inside, is very difficult. Hence the importance of efficient leadership".* Furthermore, the real concern regarding Top Management's incapacity to transmit values through their organisation was apparently not tackled properly. This situation proves all the more critical as most individuals interviewed in both AEROMOTOR and GEARB agreed that:

> *« Top Management really are the ones who have to create the atmosphere, the feeling the impression of a real collaboration". (Quality Manager, AEROMOTOR)*
>
> *"a co-operation, must start from the Top (not some guy in an office in the corner who will give the go-ahead, a cheque… here you have x million for your project), no, it is someone who is in the middle of the room, who has the power to sign a cheque, he is in the middle of the room, and communicates to with the other team members around him, and he is the one who should find the way to go, should put people together so there is a match, and that together, they produce what 2,5 would, and by produce, I mean both intellectually and physically, there has to be some sort of a self-motivation" (Production Manager, AEROMOTOR)*
>
> *"There has to be a necessary vision, orchestrated efficiently by basic leadership, by getting everybody on board". (Programme Director, GEARB)*
>
> *"some decisions are not made, not because there is a vision, but because there is an obligation". (Mechanical Engineer, GEARB)*

Interestingly, one Program manager recalled, not without emotion and nostalgia, an occasion when a supplier business executive from AEROMOTOR at GEARB demonstrated leadership skills which significantly strengthened the links between the two companies as explained below:

> *"One day, there were 30 people from AEROMOTOR who all came to tell us off, from middle management to management… Like that! It was a last minute thing, and Mataru, who was with us full time, welcomed them in the morning before the meeting started. He saw them, and we were waiting outside the door. GEARB's senior executives were there… After about half an hour, someone knocked on the door. 'Can we come in?', 'No, we have not finished, Mataru has not finished his explanation… ' So our executives go back to their desk… two or three of us stay outside the door for about an hour, then we go to the shop floor, and we called Mataru on his mobile and he said 'no, not yet, not now, not right now, we haven't finished.' It went on till about 1 p.m.! At 1 p.m., they all came out like a flock of sparrows, and they all went for their plane! They all left, Mataru stayed! It was fantastic, that day, Mrs X and I must have walked about 1 km in the shop floor, we were going round in circles, we went from one office to another, we were waiting for this phone call, and in the end, what was it? In fact, AEROMOTOR were looking at things through the wrong end of the telescope and they did not have a proper understanding of the problem. Mataru, who had become a member of the co-operation team, explained all the problems to them… he spent the whole morning explaining things to them, and by the end of the evening, when they had understood, they also understood that their being there made no sense, Telling us off made no sense, Mataru was a co-operative guy, he came in at 7.30 a.m., went round the shop floor…people felt confident, because they knew that if Mataru saw things that weren't up to scratch he wouldn't sweat. He would only give a fair description of things. That was real co-operation".*

The above actually illustrates something fundamental in IORs and underlined by people at AEROMOTOR or at GEARB, as recognised by a VP Sales from GEARB:

> *"… today, in companies like ours, that belong to a large powerful group, you can see that the higher-up you get, the less courage people have to say no to us, so effectively, either for simple reasons, they are very career-minded and they want to continue being promoted, or they simply do not want any trouble, they don't want to cause a stir, they don't say no, they say 'yes, yes yes', we can do it, and very often, this is not the case!".*

2.9. Balanced economic benefits monitoring and surveillance

> *"The way I see it, a co-operation really has to place the human being at the center. You have to be careful not to put procedures or indicators that are supposed to help the individuals working on the project in the center. Men should not have to bend over backwards for procedures, and I think that is how it should be seen".*

I was not really surprised when a former AEROMOTOR MD insisted on the above. I was more surprised when a Production manager from GEARB confessed that nowadays *"operations, i.e., the guy, the know-how or even the worker behind his machine, when you count the time he actually spends on his machine, including the time to calibrate it properly, if you compare that with how things worked 20 years ago, I think that it is probably completely different. We had to divide it all a lot (you know!) and I think that this guy spends too much time on reporting, sometimes verbal, and lots of written reporting, lots of meetings, and he no longer does his actual job, which is to produce a part, or a document, or a process, or manage people, even that, he does not have enough time for that, and we all went beyond our normal duties to satisfy the bloody reporting indicators!"*

A slightly more moderate view, but reflecting the same kind of feeling was shared by a Purchasing director from AEROMOTOR: *"The real productivity of a worker now,, compared to 30 or 50 years ago, well you could measure it again every ten years, and I think it has probably hit a low, which are probably somewhat concealed because when we are told there is % productivity on a machine, for me it's not true, because other developments were taken into account and that is not reflected. The OEE (Overall Equipment Effectiveness) is rearranged to reflect something that is not reality, I am always on the shop floor, and when I look for people, they are nowhere to be found… Where are they? In a meeting, of course! I feel like productivity is now measured by the amount of indicators given, reporting, meetings, reports, and even for us, we are all controlled by that".*

These positions do not suggest that metrics and KPIs are useless or ineffective. However, the way they are administrated and co-ordinated reveals an issue, at least within both AEROMOTOR and GEARB. What happens on the battlefield is that *"There are too many KPI, or indicators, people do not even know what they reflect anymore! For fun, I often ask that question in meetings, and how do you calculate that? People stare at me with a blank*

expression, they are lost, they do not know", as underlined by a Programme Manager from GEARB.

> *"Even us. At programme management, we are drowning under indicators that we have to produce, and we wonder if it is us, and I mean both internal and external".*
>
> *"Today there are so many indicators, reporting at large, with the All Mighty Power Point, it has become a God! You spend hours doing that, and then some people end up not doing what is really important, or some people just think about doing it, it is too superficial, and very frustrating for me! It is my own point of view, and what is problematic is that the more important the company, the more reporting you have to cope with".*

As testified by a number of reports which I was able to see or consult, monitoring financial and operational facts has long been a resource- and time-consuming activity at GEARB and AEROMOTOR within which it is probably necessary for *"each company to really look into it, and review what is necessary and what is not, what has added value or not"* as indicated by a Production executive at AEROMOTOR. This seems all the more relevant as "*we are also expected to give increasing levels of reporting to our customers, and if you do a small survey, which I love doing, you realise that in fact, people don't even read them".* Does this actually mean that in fact "*everybody hides behind it so as not to show the rest*", as raised by a Purchasing Director at AEROMOTOR? In any case there is a real consensus on the view that "*I am not sure that the KPI analyses are done. But they are incredibly time-consuming and that prevents us from, and I have a very simple term for it, looking after the client*", as reinforced by a Program Manager.

An important concern raised in my conversations with both AEROMOTOR and GEARB is reflected in this comment, by a former AEROMOTOR MD: *"I think that today, everybody thinks that providing indicators is doing the job, but for me, it is just the beginning of it".* Subsequently, it is not surprising to hear the following comment made by a Programme Manager at GEARB:

> *"To improve our performance, we sometimes have meetings with a brainstorming session, which last about one hour. But then, for anything to do with indicators, it takes six months! It's all about 'give us the indicators', 'you have not done that yet', 'you forgot line 37', 'here you put it in green, we think it is orange' it is just not productive".*

Consequently, it is fair to admit that when addressing aspects dealing with the monitoring and surveillance of balanced economic benefits, stakeholders from AEROMOTOR or GEARB are not ready to give up on this activity. It is probably seen as a means to provide a visibility which makes them more confident. However, the real issue certainly is the excessive use of

all sorts of indicators and other KPIs, which has a negative impact on how people and activities are managed across the entire value chain. In civil aerospace, regardless of the type of project, one can find action logs with hundreds of items and metrics of all sorts, not always homogeneous, but most often, based on different calculation rules. These KPIs are generally submitted to counterparts for approval or for information purposes. Then, these metrics are not systematically referred to, which brings me back to the question: why much ado about nothing? … This position does not suggest that all formal aspects and quantification of facts should be discarded. However, it is interesting to refer to this comment made by a general manager at GEARB: *"the formal realm has its limits. It is necessary, but you should not give it too much importance. Then, the informal is something that is misunderstood and misused by most actors, and I think that it is very important. I think that sometimes, we refuse the fight so we do not have to discuss the subject because we're afraid to clear the air. But I think there is nothing better than clearing the air. If you do not talk openly, approach things informally and say: 'ok, we will discuss this, we all say what we have to say, and then together, we agree on a 'way forward'. But this is not in the culture of engineers, technicians; it is just not part of the culture of the aerospace world".*

Namely, in aerospace firms, populated by brilliant troops of leading engineers, an excessive amount of time is devoted to getting lost in menial analytical details. It is hard to come across a mentality that is genuinely business oriented and capable of offering a clear and straightforward strategy with a clear direction. Often, people spend time working out figures, although, to all intents and purposes, these are not really reliable without a crystal ball. They produce an array of possible outcomes which are debated internally at length, where everybody wants to have it their own way, either to exist or to play the political game, which so often takes place within major corporations.

2.10. Information systems

In my conversations with both AEROMOTOR and GEARB stakeholders, information systems *per se* were not debated much. However, it is interesting to mention that both companies decided to implement a well-known German information system across their entire organisation. Their decision was not taken at the same time, which excludes the possibility that it was made jointly to enhance their IOR. Besides, it seems that in each of the two organisations, expectations were heavily related to internal duties.

With regards to interfaces management with suppliers or customers, this system was commonly described as a good way of computerising on-time delivery results and systematic ordering or invoicing through a direct exchange with each other under the same format. Provided that the system is reliable, it is fair to admit it must have contributed to some extent to the enhancement of IORs management…

However, even if the IT system in question is correctly configured, it is hard to avoid different ways of measuring and interpreting things. For example, a Quality manager from GEARB explained this type of practical difficulty:

> *"The difference in performance measurements, I can see it, I changed the subject, but we sent our customer quality checkpoints and I am trying to implement the same checkpoints with our suppliers, with the same logic, and I realise that, this measurement is very clear, when we analyse it with the client every month, we agree, we know what we are talking about. When I try to apply the same logic with different departments, I realise that everybody has their own measures, so you have an indicator on the client side of things that says: these problems affect me, and the measures of the supplier, that say: well these problems are not my responsibility, even if it comes from my products, so I will not take them into account in my figures and I have a different one. So the problem is not seen the same way. For me, what is clear is that we do not share the same facts. Consequently, we cannot share the same solutions. We are just not telling the same story".*

Overall, most feedback I received was in line with the view expressed by ATERO's former Global Purchasing Director: *"Without IT, administration of exchanges may be complicated but this is not the one thing necessary to make things work in IORs management control. Good information systems are necessary, but by no means sufficient".*

3. SCORING AND INTERPRETATIONS

AEROMOTOR / GEAR B	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)	Meaning & Main Attributes (=possible objects of control)	Poor	Average	Good	
Appropriation of concerns & generation of Trust	**Cohesive groups, clan coordination (organic solidarity)**	Groups are in place. They are good at creating knowledge in Tacit forms, at contributing to the establishment of common values and beliefs These Cohesive groups spread information but also generate normative, symbolic and cultural structures, which conveys "meaning" (Granovetter, 1992)		Average		GOOD -
	Social Context consideration	This deals with the consideration and respect of the fact that individuals do not slavishly follow a script. They are embedded in on-going systems of relations - a "web of social relations" - with a direct effect on economic actions. Ultimately, this is a matter of "Reification", namely a mix of control management tools, various social actors and associated practices.		Average		
	Contractualisation	When properly implemented, contractualisation will or can deter from opportunism and thus reduce uncertainty which is a potential huge cost and threat for appropriation of concerns between actors. However, contractualisation is a device to define goals and methods in order to enable effective joint planning (but it is not primarely an ex-post control device!)			Good	
	Buyer committment	This will determine the level of strategic partnership with a supplier i.e. its participation in design, in the process of procurement and production. It will also help optimise resource scarcity management The more committed a buying firm is to its relationship with key suppliers, the more the relational capital between the former and the latter will build up, which proves a key factor to improve performance. It is unlikely that key suppliers will fully engage in sets of changes requested by the buying firm unless there is tangible evidence that the purchasing organisation will support supplier investments with matched resource		Average		
	Seller committment	This will determine the extent to which a supplier is flexible in response to a request from a buyer, its willingness to help during emergencies, its reliability to fulfil requirements (at least when there is an agreement). It will also help optimise resource scarcity management The more committed a buying firm is to its relationship with key suppliers, the more the relational capital between the former and the latter will build up, which proves a key factor to improve performance			Good	
	Trust establishment & management	This enables close relationships at a personal level ... to act as if uncertainty potential is reduced ... to adopt a belief without being fully informed It will or can reduce the need for formal co-ordination or improve co-ordination ... while even the world's most cutting-edge knowledge can be rendered useless without trust in the network, as sharing and implementation of knowledge becomes difficult. This is a component of embedded relations that requires characterisitics of a particular structure of relationships		Average		
	Understanding of sensitivity to interdependence of production and exchange relations	May help avoid falling into the trap that transaction costs reduction has a higher impact than productivity - enhancing factors tied to superior skills and knowledge.		Average		
	Governance structure well in place	Often based on contractual or formalised arrangements, this is about enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence			Good	

AEROMOTOR / GEAR B	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)	Meaning & Main Attributes (=possible objects of control)	Poor	Average	Good	
Balanced Economic benefits monitoring and surveillance	**KPIs / Assessments**	This deals with the management by objectives through: measurement of production, acquisition and structural costs based on a comparison between in-house and supplier costs. It is about Continuous Operations (Quality, Delivery & Responsiveness) performance management.			Good	POOR+
	Cross organisational designed management accounting systems	This element deals with the mastery of Total Cost of Acquisition & Ownership (NB: such an accurate mastery of costs across an organisation is most often difficult to achieve given the complexity of data gathering & crunching).	Poor			
	Deeper involvement of accountants in the negotiation of actions and profit sharing	This will or can reinforce the use of simulations for investment decisions, new product development, along with greater emphasis on negotiation to better determine the terms of co-operations		Average		
	Review of how the risk/return position of each party is affected by different actions	This corresponds to standard economical objectives management.	Poor			
Networking capabilities (= Best-in-Class Network Management)	**Formal impersonal communication**	This is explores the level of information exchange between co-operating actors through information technology, the establishment of quick ordering systems and stable procurement through network.			Good	AVERAGE +
	Ties among firms - Structural - Relational	The structure and quality of social ties among firms shape economic activities by creating unique opportunities and access to them. They determine and explain the behaviour of people because actors are affected/influenced by the quality & structure of their network (= "the structure of social ties determines actors behaviours" and "the mere fact of attachment to others may modify economic actions", Granovetter, 1992: 35). Social capital theory associated with structural ties serves as the foundation for the view that explicit types of information are more efficiently transferred via weak relationships as opposed to strong ties that may be necessary for the transfer of complex, tacit types of knowledge or information.		Average		
	Social recognition management	Important role as activities are greatly affected by the social context within which they take place. "Social relations penetrate irregularly and in different degrees in different sectors of economic life" (Granovetter, 1985:491)		Average		
	Managerial communication to further improve relational performance	This will determine or enable loyalty to the relationship in addition to mutual understanding as long as it is structured, but more persona; information sharing will help address the equivocality inherent to IORs.		Average		
	Technical communication to further improve relational performance	It will determine quality, timing, level and type of technical communication between development engineers of co-operating firms. It will ease fast decision making which thus becomes beneficial for the network partners. It will or can reduce product development risks linked to product & process.			Good	
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)	Assuming that productivity enhancement is close to superior skills & knowledge because people know more than what they can clearly articulate, this enables co-operations to rely on knowledge shared and developed. Accordingly, it becomes possible to capitalise on knowledge viewed as the most important means of production in today's knowledge-based economy.		Average		
	EXPLICIT knowledge management	This will enhance Productivity through the articulation of comprehensive knowledge. It will enable co-operations to rely on knowledge shared and developed but also to capitalise on knowledge viewed as the most important means of production in today's knowledge-based economy.			Good	

AEROMOTOR / GEAR B	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)	Meaning & Main Attributes (=possible objects of control)	Poor	Average	Good	
Information Asymmetry (positive) Management	**Understanding and adjusting information needs depending on alliances types & business networks (= proper balance between level of trust and information needed)**	This will optimise Trust management and joint collaboration without scarifying visibility. This is assuming that information and trust needs must be appreciated depending on the different stages of developing a relationship.		Average		AVERAGE +
	Know who you are dealing with	Quite obviously, this is about understanding as soon as possible what and who can or cannot be trusted because the cost of developping reliable forms of trust and the cost of doing it are rarely considered in cost benefits analysis.			Good	
	Information management control relating to the willingness to trust given recognised competence and integrity	The management of this type of information provides what is needed to create trust and verify the state of the relationship.			Good	
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer	The management of this type of information provides means to make economic judgements on strategies, investments and on-going operations. A component of embedded relations that requires characteristics of a particular structure of relationships.		Average		
Mastery of Events (= Coordination of tasks)	**Cohesive groups, clan coordination (organic solidarity)**	Groups are in place. They are good at creating knowledge in Tacit form, at contributing to the establishment of common values and beliefs These Cohesive groups spread information but also generate normative, symbolic and cultural structures which conveys MEANING (Granovetter, 1992).		Average		GOOD -
	Clear Organisation and adequate escalation process	This will provide better visibility for stakeholders and ease the "learning & working well together" processes.			Good	
	Constant evolution	When properly managed, this will make it possible to learn & work well together			Good	
	Bonding	This will enable the "learning & working well together" processes between co-operating actors.		Average		
	Learning Philosophy	Enables "learning & working well together".		Average		
	Contractualisation	Viewed here as a device to define goals and methods in order to enable effective joint planning (but not primarily an ex-post control device!)			Good	
	Co-ordination mechanisms like escalation pyramid or executive reviews	The more complex an environment is and the more differentiated the units are for satisfying their environment, the higher is the need for integration mechanisms to co-ordinate activities.			Good	
	Defining goals and methods	This helps in effective joint planning instead of ex-post control.			Good	
	Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.	This avoids having excessive expectations from the relationship too early on. It refrains from seeking a given time invariant optimal system. This helps to perpetually adapt and modify the system to meet changing relationship needs.		Average		
	Governance structure targeted with determination	Often based on contractual or formalised arrangements, this is about enabling exchanges and escalations mechanisms or shared value systems and vision in order to sustain mutual dependence			Good	

AEROMOTOR / GEAR B	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)	Meaning & Main Attributes (=*possible objects of control*)	Poor	Average	Good	
Relational Capital Management (=Positive Sensitive attitudes)	**Social Capital management including sensitivity to culture**	This is a generally accepted acknowledgement that features of social organisations such as network, norms and trust facilitate co-ordination and co-operation for mutual benefits (Lin, 2001)			Good	AVERAGE -
	Level of mutual trust, respect and interaction between actors at multiple levels	"Close relationships at personal level are heavily dependent on the establishment of Trust (…) an ubiquitous and a fundamental building block of social life" (Tomkins, 2001: 164-165)		Average		
	Social recognition management	Refers to innovation viewed as a social phenomenon, a human activity which can only be fulfilled when certain conditions are obtained (Burns and Stalker). Important role as activities are greatly affected by the social context within they take place. "Social relations penetrate irregularly and in different degrees in different sectors of economic life" (Granovetter, 1985:491). For example, having ERP systems result in social capital requests that information exchanges should be used as a platform to develop direct human contacts rather than a substitute for face-to-face interaction (Lengnick-Hall et al. , 2004)		Average		
	Relationship management type establishment about: **= management of interacting people** **= Joint problem-solving arrangements**	This will generate relationship performance improvements: = degree to which the IORs have over the past two to three years resulted in improved product, design, process design and product quality for the benefit of co-operating firms It is a component of embedded relations that requires characteristics of a particular structure of relationships		Average		
	Culture Management	To be further explored		Average		
	Power management	By reference to Hardy (1985, 2011), it can be viewed as the management of the potential of one social unit to influence the behaviour of another in order to achieve preferred situations or outcomes. Power is thus assimilated to resources; Influence is understood as the application of resources used in situations of conflict		Average		
Shared vision	**Defining convergent goals and collaborative futures**	This will increase the degree to which the needs, demands, goals, objectives or structures of one "component" are consistent with those of the others. Inevitably, it will have an impact on the culture, work, people and the formal organisation		Average		AVERAGE +
	Governance structure targeted determination	This is a matter of enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence which is paramount. Particularly, it is key to check that the counterpart can take advantage of the contribution made by the other one.			Good	

AEROMOTOR / GEAR B	Auditing the *Inter-organizational Interfaces* Management Pathway		Scoring ENABLERS			Average Scoring
KEY LEVERS	ENABLERS (= participate in the Key Levers effectiveness & are subject to control through suitable tools and devices)	Meaning & Main Attributes (=possible objects of control)	Poor	Average	Good	
Internal Cooperation (= Influence of its own organization over external parties)	**Consensus between internal stakeholders**	The greater the degree of consensus among or between stakeholders, the higher the probability that these organisations will or can establish constructive relationships. Accordingly, each individual (or group of individuals) involved in the IOR has to manage two types of relationships: internal ones with colleagues from his/her firm; and external ones with members from the co-operating firm. This implies embeddedness of inter-individuals intra- and inter-organisational types.		Average		AVERAGE
	Internal governance structure targeted determination	This is a matter of enabling exchanges and escalation mechanisms or shared value systems and vision in order to sustain mutual dependence		Average		
Leadership	**Lead change and provide a meaning to rally individuals** **Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations**	It requires an understanding that you do not own people, that you cannot control them. They must want to and choose to be in the company of others, oriented towards a particular mission. It enables to set a direction (develop vision, devise strategies for change to achieve goals)	Poor			POOR+
Information Systems (= Devices & management)	**Objectivising and materialising technical, business and involvement aspects of IOR**	This enables the flow information between parties regarding specifications, incidents, improvements etc. Information flows regarding commercial and planning aspects of the relationship; measures lead times and changes, costs and market information etc. Information flows that allow a greater involvement and participation in improvement activities; measures performance feedback, etc. The development of a strong information technology infrastructure is critical to create value in a supply chain and the applications and communication architecture must be carefully planned to provide a strong foundation for the growth of interorganisational systems and to increase productivity, leverage data already held and enable electronic relationships.			Good	Good

Table 24 – AEROMOTOR & GEARB - Key Levers & Enablers Scoring tables

AEROMOTOR / GEARB			Relevant Types of Control		Associated Control Mechanisms Types		
KEY LEVERS	**ENABLERS AT STAKE (=participate in the Key Levers effectiveness)**	**APPRECIATION OF KEY LEVERS**	***Formal***	***Informal***	**Score Outcome Control**	**Score Behaviour Control**	**Score Social Control**
Appropriation of concerns & generation of Trust	Cohesive groups, clan coordination (organic solidarity)	**GOOD -**	x	x	GOOD	AVERAGE	POOR
	Social Context consideration		NA	x	NA	NA	AVERAGE
	Contractualisation		x	NA	GOOD	GOOD	NA
	Buyer committment		x	x	GOOD	GOOD	AVERAGE
	Seller committment		x	x	GOOD	GOOD	AVERAGE
	Trust establishment & management		x	x	AVERAGE	AVERAGE	AVERAGE
	Understanding of sensitivity to interdependence of production and exchange relations		NA	x	NA	NA	NA
	Governance structure well in place		x	x	GOOD	GOOD	AVERAGE
Balanced Economic benefits monitoring and surveillance	KPIs / Assessments	**POOR+**	x	NA	AVERAGE	POOR	NA
	Cross organisational designed management accounting systems		x	NA	POOR	AVERAGE	NA
	Deeper involvement of accountants in the negotiation of actions and profit sharing		x	x	AVERAGE	POOR	POOR
	Review of how the risk/return position of each party is affected by different actions		x	NA	AVERAGE	GOOD	NA
Networking capabilities (= Best-in-Class Network Management)	Formal impersonal communication	**AVERAGE +**	x	NA	AVERAGE	AVERAGE	NA
	Ties among firms - Structural - Relational		NA	x	NA	NA	AVERAGE
	Social recognition management		NA	x	NA	NA	POOR
	Managerial communication to further improve relational performance		x	x	GOOD	AVERAGE	POOR
	Technical communication to further improve relational performance		x	x	GOOD	GOOD	AVERAGE
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)		NA	x	NA	NA	POOR
	EXPLICIT knowledge management		x		AVERAGE	GOOD	NA
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks (= proper balance between level of trust and information needed)	**AVERAGE +**	x	x	AVERAGE	POOR	AVERAGE
	Know who you are dealing with		x	x	GOOD	GOOD	AVERAGE
	Information management control relating to the willingness to trust given recognised competence and integrity		x	x	GOOD	GOOD	AVERAGE
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer		x	NA	GOOD	GOOD	NA
Mastery of Events (= Coordination of tasks)	Cohesive groups, clan coordination (organic solidarity)	**GOOD -**	x	x	GOOD	AVERAGE	POOR
	Clear Organisation and adequate escalation process		x		GOOD	GOOD	NA
	Constant evolution		x	NA	GOOD	GOOD	NA
	Bonding		x	x	GOOD	GOOD	AVERAGE
	Learning Philosophy		NA	x	NA	NA	AVERAGE
	Contractualisation		x	NA	GOOD	GOOD	NA
	Co-ordination mechanisms like escalation pyramid or executive reviews		x	x	GOOD	GOOD	NA
	Defining goals and methods		x	NA	GOOD	AVERAGE	NA
	Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.		NA	x	NA	NA	POOR
	Governance structure targeted with determination		x	x	GOOD	GOOD	AVERAGE
Relational Capital Management (=Positive Sensitive attitudes)	Social Capital management including sensitivity to culture	**AVERAGE -**	x	x	POOR	GOOD	AVERAGE
	Level of mutual trust, respect and interaction between actors at multiple levels		NA	x	NA	NA	AVERAGE
	Social recognition management		NA	x	NA	NA	AVERAGE
	Relationship management type establishment about: = management of interacting people = Joint problem-solving arrangements		x	NA	GOOD	GOOD	NA
	Culture Management		NA	x	NA	NA	POOR
	Power management		NA	x	NA	NA	POOR
Shared vision	Defining convergent goals and collaborative futures	**AVERAGE +**	x	x	GOOD	GOOD	AVERAGE
	Governance structure targeted determination		x	x	GOOD	GOOD	AVERAGE
Internal Cooperation (= Influence of its own organization over external parties)	Consensus between internal stakeholders	**AVERAGE -**	x	x	AVERAGE	AVERAGE	NA
	Internal governance structure targeted determination		x		POOR	AVERAGE	POOR
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	**POOR+**	x	x	POOR	AVERAGE	AVERAGE
Information Systems (= Devices & management)	Objectivising and materialising technical, business and involvement aspects of IOR	**GOOD -**	x	NA	GOOD	AVERAGE	NA
	OVERALL AVERAGE CONTROL PRACTICES SCORE				258	255	120
	THRESHOLDS TABLES RESULTS				GOOD	GOOD	AVERAGE

Table 25 – AEROMOTOR & GEARB Control Types Scoring table

KEY TRANSITION

These three IORs were chosen for the purpose of this study, because each of them is representative of different inter-organisational relationship management within civil aerospace that range from successful, to failed, to somewhat 'stuck in the middle'.

Although the methods of observation varied slightly for each case, they remained in line with the basic requirements for the proposed research proposed: pragmatic constructivist epistemological paradigms and relying on a qualitative approach along with ethnographic practices in order to grasp the observation possibilities that are offered by the circumstances (Girin, 1983).

The output obtained through these observations has made it possible to focus on the management control practices and behaviours encountered within the inter-organisational co-operating arrangements of major civil aerospace firms. Supported by the *Key Levers* identified in chapter 3, section 3 we aimed at providing meaningful insight into the control mechanisms and tools which fail, to one extent or another, for each of the IORs observed. Importantly, the arguments proposed are based on the use of specific assessment grids, comprehensively described in chapter 3.

CHAPTER 5 - CONTRIBUTION

This chapter consists in consolidating and interpreting results obtained from on-field observations gained either through a ten-month journal or both formal and informal interviews. Afterwards, it provides a sound academic contribution to the understanding of which management control mechanisms, tools and structures should be defined and implemented when dealing with IORs in civil aerospace.

SECTION 1 - SYNTHESIS OF SCORINGS AND INTERPRETATIONS

1. AGGREGATED SCORES AND CORRELATIONS IDENTIFIED

The next two parts provide a consolidation, formalized simply but rigorously, of the results obtained from the three IORs under study.

1.1. Scoring for the management of *Enablers*, *Key Levers* and for the deployment of control practices

The following scorings were rendered possible by the use of the Maturity Level Grid Analysis of IORs Management Control and both the *Key Levers* & *Enablers* and the Control types scoring tables detailed in chapter 3.

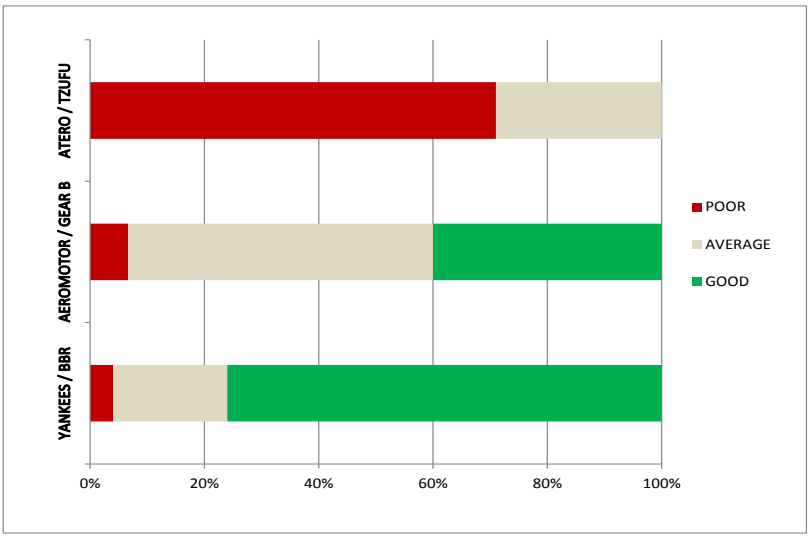


Chart 6 - Scoring for the Management of Key Levers' Enablers

Not surprisingly, when referring to the on-field observations and case studies proposed, there are significant differences between ATERO/TZUFU and YANKEES/BBR in the management of their Key Levers' Enablers. Regarding the outcome of their co-operating arrangements, this already provides instructive indications about where something is not going well.

The second table (next page), which scores the management of *Key Levers*, further details where discrepancy arises for each *Key Lever*. This may help better refine relevant root causes for explaining efficient IORs. In particular, elements like Shared Vision, Leadership, Appropriation of concerns & generation of Trust, Networking and Relational Capital management score poorly in the case of ATERO/TZUFU but come out on top for YANKEES/BBR.

Most importantly, the scores given to control practices show a high level for informal control (behaviour and social) for YANKEES/BBR as opposed to what can be observed for ATERO/TZUFU. Also, regarding aspects of formal control practices (outcome control) there is a more or less balanced situation between the two. Still, it is worth noticing the high scoring achieved by AEROMOTOR/GEARB on outcome control. At the same time, it is interesting to note that AEROMOTOR/GEARB is top scorer on both Information Systems and Mastery of Events.

Conversely, it is exceeded by both ATERO/TZUFU and YANKEES/BBR on balanced economic benefits and monitoring.

Overall, a number of interpretations can rise from those simple rankings which we will consider in the next part.

SCORING FOR MANAGEMENT OF KEY LEVERS = attention granted and apraisal level with regards to the management of IOR Key Levers	KEY LEVERS	IOR	- Poor +		- Average +		- Good +	
			0	1	2	3	4	5
	Appropriation of concerns & generation of Trust	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Balanced Economic benefits monitoring and surveillance	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Networking capabilities (= Best-in-Class Network Management)	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Information Asymmetry (positive) Management	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Mastery of Events (= Coordination of tasks)	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Relational Capital Management (=Positive Sensitive	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Shared vision	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Internal Cooperation (= Influence of its own organisation over external	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Leadership	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Information Systems (= Devices & management)	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						

Table 26 - Scoring for the Management the Key Levers observed

CONSOLIDATED Overall Score			- Poor +		- Average +		- Good +	
		IOR	0	1	2	3	4	5
SCORING CONTROL PRACTICES	Outcome Control	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Behaviour Control	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						
	Social Control	ATERO / TZUFU						
		AEROMOTOR / GEAR B						
		YANKEES / BBR						

Table 27 - Scoring for the Control Practices observed

1.2. Possible correlations identified

Such observations as detailed above are useful when considering the well-contended level of satisfaction or success associated with each of the three IORs studied.

From a *Key Levers* viewpoint, it can be represented by the following table:

		ATERO / TZUFU	AEROMOTOR / GEAR B	YANKEES / BBR
		COOPERATION SUCCESS LEVEL		
		Poor	Average	High
SCORING KEY LEVERS	Appropriation of concerns & generation of Trust	**Poor**	**Good**	**Good**
	Balanced Economic benefits monitoring and surveillance	**Average**	**Poor**	**Average**
	Networking capabilities (= Best-in-Class Network Management)	**Poor**	**Average**	**Good**
	Information Asymmetry (positive) Management	**Poor**	**Average**	**Average**
	Mastery of Events (= Coordination of tasks)	**Poor**	**Good**	**Good**
	Relational Capital Management (=Positive Sensitive attitudes)	**Poor**	**Average**	**Good**
	Shared vision	**Poor**	**Average**	**Good**
	Internal Cooperation (= Influence of its own organization over external parties)	**Average**	**Average**	**Good**
	Leadership	**Poor**	**Poor**	**Average**
	Information Systems (= Devices & management)	**Average**	**Good**	**Average**

Table 28 - Scoring *Key Levers* / Cooperation Success Level matrix

Obviously, there are *Key Levers* which seem critical to a successful inter-organisational management: appropriation of concerns and generation of trust, networking capabilities, relational capital management and shared vision or, to some extent, leadership. Interestingly, such *Key Levers* are not meant to be formally controlled. The appropriate management control

for the latter relies more on informal devices and mechanisms[94] because they deal with interaction, reputation and social-network management.

From a control practices viewpoint, an aggregated and consolidated view of the IORs at stake can be represented by the following table:

		ATERO / TZUFU	AEROMOTOR / GEAR B	YANKEES / BBR
		SCORING COOPERATION SUCCESS LEVEL		
		Poor	Average	High
SCORING CONTROL PARCTICES	Outcome Control	Average	Average	Low
	Behavioural Control	Low	Average	Average
	Social/Informal Control	Low	Average	High

Table 29 - Scoring Key Levers / Cooperation Success Level matrix

Accordingly, the IORs under consideration do not suggest that formal control practices are critical for succeeding in the management of inter-organizational cooperating arrangements. At the very least, outcome control which is a constituent of formal control approaches as per Ouchi's definition does not prove mandatory for success in the management of such inter-organizational arrangement. However, behaviour control mechanisms and tools will probably deserve special attention. In other words, it proves that if poorly conducted, as in the case of ATERO/TZUFU, they might eventually be found to be inadequate. Accordingly, *ex-ante* mechanisms, such as structural specifications, planning establishment procedures or rules and regulation frameworks seem to play an active role in the robustness of IORs management control. Obviously, *ex-post* mechanisms like behaviour monitoring and rewarding, not unlike what is implemented by AEROMOTOR/GEARB and YANKEES/BBR, also proves fitting in situations where people work together. But most importantly, these results confirm that the higher the score in social and informal control, the most satisfying the IOR.

[94] Informal Control (or social control) relates to informal cultures and systems influencing members and is essentially based on mechanisms including self-regulation (Ouchi, 1979).

2. INTERPRETATION OF RESULTS

The next two parts consist in interpreting the results consolidated as presented above. This is done through a conceptualization of what was observed, which is then reinforced through practical on-field observations.

2.1. The *Cooperation Snowball Effect* concept: rationale

More theoretically speaking, the correlations put forward above illustrate the interest in combining both *Transaction Costs Economics* and *Embeddedness theories* (formal, informal and social control) for the benefit of IORs management control. This is actually aligned with a position already taken by Chabaud (2002) which suggests that authors like Williamson (1975) and Granovetter (1985) are likely to be equally complementary when dealing with IORs management control. Individual opportunism should not be neglected, but is far from driving all constitutive mechanisms at play within inter-organisational cooperating arrangements. Individuals' own agenda may vary widely and might not only be determined by financial objectives but maybe also by aspects of recognition, power and socializing. Accordingly, as suggested by Granovetter (1985), it is worth appreciating individuals' behaviour by not considering only the notion of opportunism as suggested through the *Transaction Costs Economics* theory. This should thus have a serious impact on the types of control management tools to rely on.

Still, as demonstrated in many instances throughout this thesis, quantitative analysis and formal reports are being requested more and more often, which, amongst other things, is extremely time consuming. Little room is left for fully appreciating soft variables and influencing factors. In the field of civil aerospace, this is what I propose to name the "*engineering syndrome*", with the direct impact it has on social and informal control approaches. From personal experience, but also based on several informal discussions with a meaningful variety of individuals working in civil aerospace, this management mode translates concretely into the following types of meetings: a vast meeting room, occupied by a dozen executive committee members sitting around a table and listening to disciplined subordinates who present recommendations on a given subject. Since playing with numbers is certainly the easiest thing to do, none of the audience members give due credit to more *informal* considerations that could be made. Tables and numbers are displayed profusely on a

screen – all of which can actually be digested only by the very few brightest minds around the table while everyone else simply pretends they fully understand. All of a sudden, one of the members notices that some figures are going against his department's interests. Consequently he focuses on the input at stake and uses most of his energy trying to argue against it for the benefit of his own department or even his personal interests when he is not just showing off. But time is running out and decision makers must, by essence, give the impression they actually make decisions. Consequently, very often either the big boss imposes his view with limited opposition from his colleagues but without really devoting time and brainstorming as a group on the less quantitative constituents of the discussion. Even worse, in many cases, no decision is made apart from a request to revisit the set of data produced so far by invoking some pretext which will postpone decisions thereby preventing any moves that would be too risky for the personal careers of the members of the executive committee.

Such a description may seem startling to outsiders but there is a plethora of cases which exemplify this. They are representative of vast hypocrisy known offline only by subordinates who suffer from such frustration that resentment builds up. Unfortunately, most often they cannot express it openly, probably by fear of losing their jobs or undermining their careers. Decision makers from Top Management for their part, seem reluctant to recognize such things though they are aware of them, at least when they start out, and before their function distances them from others.

It is true that under such circumstances it is probably difficult to take note of concerns, relational capital management, internal cooperation, trust and truly shared vision along with showing strong leadership. This seems to be precisely the kind of major weakness shown so far in the case studies proposed.

Indeed, if we rely on the case studies proposed, consistency and predictability are the elements that can be put forward. Both prove necessary because IORs management control is about knowing one another, communicating openly and being honest. As underlined by a VP Purchasing from Aeromotor, "*you need to have a fairly good idea how the other party is going to react. In IORs what matters is the reaction that you expect from the other. Good or bad, regardless*". This is the reason why some sort of coalition is necessary even when organizations have competing interests. This requires a guiding force to maintain and defend the vision in which the company is headed. With such a wide variety and number of levels of

communication between engineers, buyers, sales managers, it is also critical to have senior managers and directors or even presidents working together across the inter-organizational interfaces.

Accordingly, leadership in terms of role models has to determine how organizations should best behave because having consistent standards of behaviours articulated sincerely is part and parcel of leadership. Also, consistent behaviours play an important part in relational norms. The latter proved very important as they contribute to the establishment of trust between parties. Importantly, this proved critical for most interviewees who consider that without trust nothing can be done. In this respect, contracts are also considered as uncertain. "*You can't depend on the contract. If your relationship is only contractual it is dangerous: too narrow a focus is dangerous for long term cooperation*" as indicated by a Managing Director from Aeromotor: "*When there is no on-going relationship, there is no problem. But in civil aerospace – relationships last a long time, sometimes decades - you can write as many contracts as you want, but in the end, you have to rely on trust*".

This can lead to further questioning on what is needed to secure trust. "*How do you make somebody trust you? The clever answer is you have to trust the other person. You cannot make others trust you. But if I trust you and empower you to do something, then you in turn, will behave the same way towards me at some point. It is a bit like respect. I can't force you to respect me. All I can do is show you respect. We have to respect to each other's objectives and purposes. Do what you said you would do, allowing people to do what they say they are going to do without checking every five minutes, that will establish trust"*. By these words, my former direct line manager once more underlined that appropriation of concerns and relational capital management are paramount to the management of IORs.

They can be considered particularly critical when dealing with mutual dependence in IORs orchestrated by strong leadership. For instance, in the case of AEROMOTOR/GEARB, leadership was aligned and professional between both parties during the good years (only!). There were two senior leaders who both started in that position at about the same time. They got to know each other and decided establish a coalition, a motivation for success. One focused on operational and financial objectives while the other focused on purchasing-costs objectives. Both were driven by a shared vision and convinced that respect and predictability were fundamental to manage their inter-organizational relationships. In comparison, it is interesting to see that for similar types of products but between AEROMOTOR and another

party, the lack of respect and shared vision between senior managers was very detrimental. "*There was no respect between Aeromotor and Zizou, and senior management had a huge negative impact on lower management with no commitment shared effectively …*", as indicated by former Risk and Revenue Share partnership Director from AEROMOTOR.

In fact, the above underlines that efficient IORs seem to rest mainly on consistent and predictable behaviours, strong relationships and commitments along with two-way communication i.e. soft skills[95] to negotiate, engender trust, have empathy and encourage communication. In this respect, it is worth noticing the potential impact of internal cooperation and subsequently internal behaviours which in turn probably have a positive and significant effect on external behaviours, as suggested by individuals interviewed in the case studies proposed. "*There's got to be good internal behaviours that translate into good external behaviours in terms of trust and relational norms. This applies inside as much as outside*", as indicated a VP Purchasing from Aeromotor.

Accordingly, management control devices and mechanisms find a concrete justification with regards to all this "soft stuff" when dealing with IORs management control. Yet, it does not mean one should put aside "hard stuff" such as formal objectives that are understood by parties (cost-profit targets, market-shares targets, level of technical performance). This is precisely where a concrete difficulty arises because both types of control (formal and informal) are reported useful but have to be evaluated differently in terms of sequence, frequency and metrics.

To advance this discussion, it is interesting to refer to Barnard (1938). The author emphasises that a formal organization cannot be understood without understanding its informal elements. Informal organization notably facilitates communication and maintains coherence of the formal organization by moderating both willingness to serve and objective authority stability. Also, it protects individuals' personality against some harmful effects of this formal organization or against the possible destabilising effect of new people arriving and moving too quickly to take action. Destabilizing influences can be very damaging and a successful corporation has to be able to survive regardless of the individuals of which it is made up. And this is also why the structure of IORs has to be carefully evaluated.

[95] *Soft Skills* relates to three primary categories: leadership, communications and relationship management (i.e. facilitation and cultural sensitivity).

Holistically, it is understood that this set up contributes in a large measure to the successful management of both formal and informal control. Appropriate management control devices and tools will thus have to be articulated within a specific framework. Also, they will have to be either numeric or non-numeric as there are things that cannot be measured. This is precisely why referring to the survey presented in Chapter 3, section 3 allows us to understand its full meaning. Indeed, when supporting the idea of a necessary symbiosis between formal and informal control, the proposed ranking provides insight regarding priorities that should be kept in mind when dealing with IORs management control. With priorities clearly dealing with informal aspects first, the consolidation of results obtained from the proposed fieldwork can be complemented by the weighting of the *Key Levers'* criticality. This helps better define the scope that IORs management control must cover in order to be successful.

This position is illustrated with the "**Co-operation Snowball effect**" model. This model suggests that a shared vision is the pivotal element in IORs management. Consequently, appropriation of concern and generation of trust are not likely to be effective in the absence of a shared vision. Also, it underlines that leadership can only barely have an impact on organisations without a shared vision which would leave room for the appropriation of concerns by the individuals that compose it.

Therefore, this suggests that mastery of events and coordination of tasks is mere wishful thinking, if not nonsense, without an effective leadership which will determine a necessary relational capital management. Such an awareness of the criticality of relational capital management will participate in the strengthening of networking capabilities, which are required for delivering tangible balanced economic benefits. Additionally, even though they come at a later stage, it is proposed that internal cooperation, information asymmetry positive management and information devices are worth keeping under control and running smoothly so as to reinforce further chances of success.

This snowball effect is represented on the following figure:

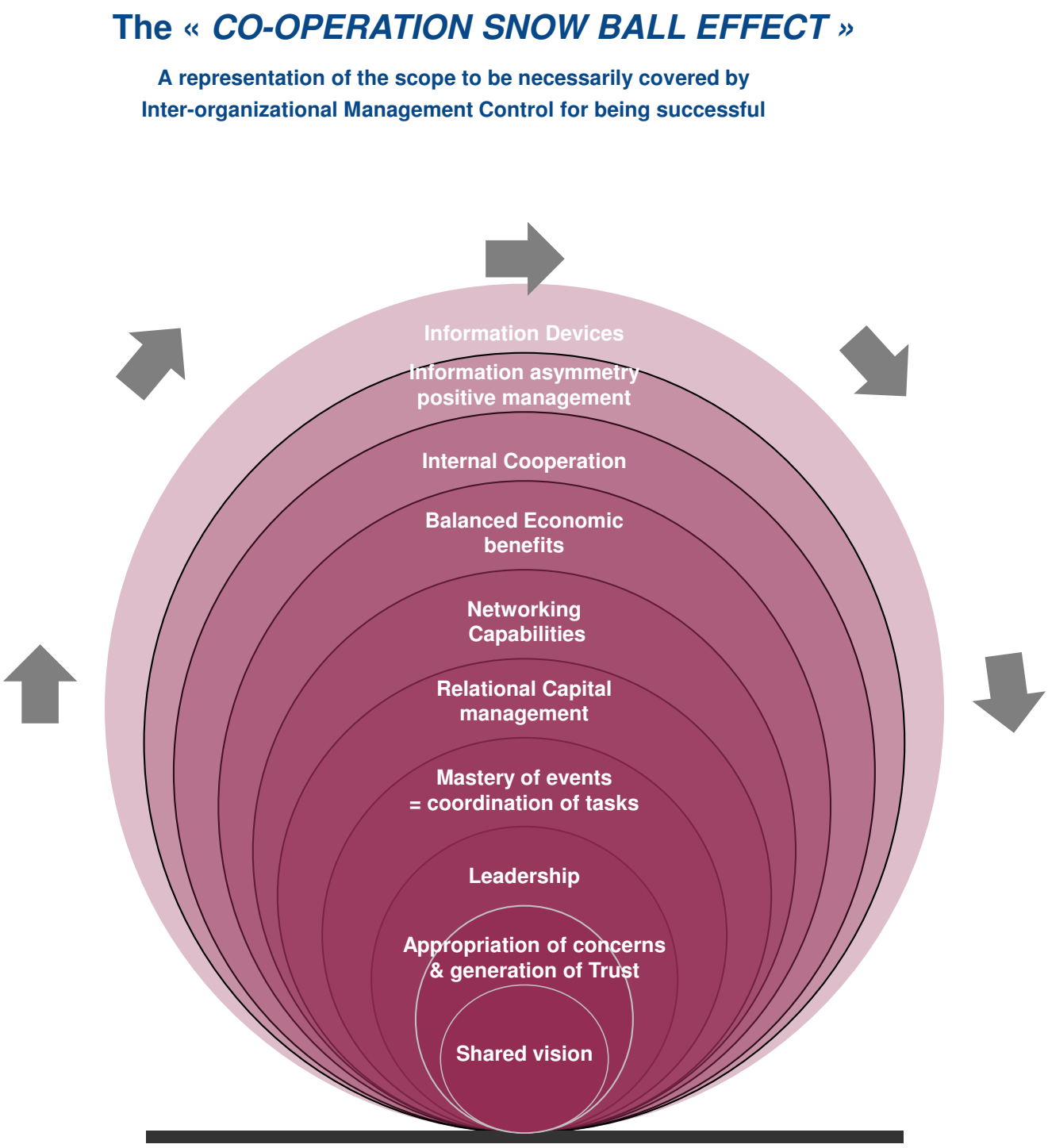


Figure 31 - The Co-operation Snowball Effect concept

By matter of principles regarding the *Cooperation Snowball Effect concept*, it is agreed that well working IORs request the successful sequencing of the ten *Key Levers* proposed earlier: shared vision, appropriation of concerns and generation of trust, leadership, mastering of events, management of relational capital and positive attitude, best in class networking, financial stability, internal cooperation, management of asymmetry information, and finally effectiveness of information systems.

The dynamic in time of this snowball effect is explained by the interdependence of the *Key Levers* as well as the principles of systems thinking put forward by Senge (1990), in particular. Rather than focusing on *Key Levers* separately, we look at a larger number of interactions in between them as a whole.

From this point of view, the emergence of a shared vision will affect the appropriation of concerns and generation of trust across the players. Therefore, leadership will find its justification, in particular by carrying the shared vision, managing the teams involved and setting in motion all the activities induced by this collective project. This will trigger the necessary management of relational capital and additional networks in the case of inter-organizational relationships.

The set will then be able to participate in the search for a balance of economic interests with implications internally that can justify some arbitrations and thus an effective internal cooperation.

The information asymmetry, which can then be found and put into perspective with the economic interests of stakeholders, will be all the less harmful when it is managed positively based on means and adapted information systems.

Overall, such a position is in any case confirmed by the observations and correlations during this research.

2.2. The *Cooperation Snowball Effect* concept: practical application

Worthwhile, the above conceptual input has proved transposable in day-to-day business as testified by on-the-ground considerations that were reported through informal interviews about the rules of the game when dealing with IORs management.

Consistently, pooling of support functions, refocusing on core activities, and working as a network are usual considerations that can be reported. For example, within BBR, a common philosophy was promoted through the intranet: "*individual interest needs to give way to the bigger picture, and our forces to be united towards a common objective. In short: we need a paradigm shift from competition to cooperation. Here are the rules of the game...*" indicated a managing director from BBR and willing to underline that success was heavily depending on transformations to be accompanied by healthy relations between stakeholders involved in industrial co-operations.

Questioned about necessary transformations, a treasurer from BBR talked about "*operating in the framework of a federation and not as an archipelago of companies ... with the aim of enabling all entities to cooperate harmoniously and more efficiently for the common good*".

Also, the idea emerged in several occasions of adopting a positive attitude and thereby forestalling any risk of conflict. In this regard, managers and teams involved in inter-organisational relationships would be expected to adopt new modes of behaviour towards more relational capital management.

Once at GEARB, an executive VP in continuous improvement underlined the importance of uniting teams and promoting joint trainings about cross-functional management which could be real eye-openers for those having trouble in creating a group dynamic. "*Thanks to such trainings, individuals will be able to understand that when you have no hierarchical link with the teams from whom you're expecting a result, you need to find other levers in order to instill within them the desire to act. Consequently, it is important to identify more unifying topics for the "Improve" and "Control" phases of projects. There are fundamental practices such as defining the rules of team operation, consulting with each of the members individually in order to better understand their needs, creating mini-events to mark the passage of*

milestones, providing more regular feedback and promoting the project in order to boost team spirit" .

Also, regarding appropriation of concerns and generation of trust, a meaningful remark was made to me: "*The manager will never go further than where his team wishes to take him. This is similar between customer and supplier. That hits the nail on the head: without supplier-buyer unity, it is impossible to attain objectives."*

Obviously, leadership thus appeared to be a central question for most individuals approached. In this respect it is worth mentioning a leadership development program on-going within BBR and resting on the main message that "*the leaders need to set the tone and manage by way of example ... this is a way of ensuring consistency between the construction, the communication and the execution of decisions. It is above all a philosophy of management that promotes plain speaking, respect and managerial courage*." In this regard, it is interesting to read Mr. Vx. from BBR, in charge of a management & leadership training program: *"What will be the profile of the manager of tomorrow? In the light of the economic crisis, managerial attitudes are evolving towards more "task - coordination" management, which consists in coordinating a set of tasks with respect to an objective. Management based on the challenges of cooperation dynamic needs to take over, with greater integration of the human dimension. The manager of tomorrow will have to be a pilot who is open-minded and flexible, with strong relational skills. He will have to unify his team around a vision and draw on his own stock of courage and levelheadedness. We should not overlook what cannot be measured but what is nonetheless essential; for example, the capacity to innovate, the climate within the team, the commitment, the psychological condition of people, the morality underlying decisions*."

Reflecting on the *Key Levers* entailed in the proposed Co-operation Snowball Effect model, this whole above reinforces the view that a consensus seems to well exist when dealing with IORs rules of the game. Still, practically, it is not necessarily always translated into real as testified by the following experience.

The scene took place at breakfast in a typical Bristish hotel. There, I met a manager from ATERO during one of my business trips. Quite informally, we started debating on the topic of supplier control and risks management. Newly appointed as supplier management director, and with extensive experience in managing suppliers especially in emerging sources, Mr L.

could explain me then he was aiming at developing a methodology about managing risks and better controlling suppliers' operations performance.

After a few seminars led with both internal and external stakeholders directly involved, he was surprised to see that those individuals were quite enthusiastic about the purpose of his approach just like if this had never been launched before. This was certainly not the case as risks related to product integrity, load and capacity management or on-time delivery have always been in the heart of aerospace operations concerns. However, this was inevitably confirming the lack of effectiveness from previous approaches deployed through the definition and imposition of tools and methodologies made to "*satisfy ourselves*" as quoted by Mr L. but not appropriated by stakeholders internally and externally.

Even worse, as admitted by Mr L. "*when asked how those tools were used and deployed across suppliers, our procurement teams used to recognize that in reality they were filling them but most of times didn't communicate outputs to their suppliers*". A reason put forward was that these tools were at least heavy to use and for most people difficult to understand. Besides, *"considering the same supplier, it was quite amazing to see very often that depending on the sites questioned the perception of the same supplier could be simply opposite*".

Mr L. was actually questioning huge efforts deployed for such poor results: "*Companies put in place control tools and systems – most often excessively complex – for monitoring suppliers and determining the level of control required as detailed with EN9134*[96]*. However, limits are blatant: the proposed means and devices deal with formal control essentially. Almost nothing is formalized to describe how stakeholders should or can make it happen concretely on the battlefield*".

At another occasion, I attended a conference organized by a global leading IT company. This "*Table Ronde*" was about industrial project management and took place at the Aero Club de France. The group of people attending was quite disparate. There were consultants, operational guys from different sectors like energy or aerospace and IT representatives.

[96] In the frame of aerospace, quality systems driving principles for supply chain risks management.

A majority insisted that processes had to be simple and not too sophisticated contrary to what was done very often. Two key words: language and simplicity were consistently referred to. All agreed that too often the multi-cultural dimension was neglected in projects, especially international ones. However, all attendants were focused on the instrument and tool dimension of the topic. While they were admitting that human dimension was something key to make good use of those tools, none of them seemed to understand me when I was insisting on subjective considerations. For instance, I told them that management tools were a representation of the world that was hiding subjectivity behind a mask of objectivity. Accordingly, it was necessary to reconcile tools, people and interfaces tools-people. The role of managers was also discussed as being the one element that determines the effective impact of tools that can provide transparency and visibility provided that the synthesis of their output is not biased.

That day, I also spoke with one VP Sales, his Manager for France and the CEO of a company specialized in the planification of operations activities. All admitted that the social dimension was not properly considered in the way how management control tools were developed and deployed. In particular, we discussed the paradox of having CEO accepting to spend millions in developing tools for planning, controlling etc…while none of these projects was delivering the expected result eventually. There was actually a consensus that CEOs were either incompetent, mainly short term oriented or too much politically driven. Also, a common belief was that people on the field seem to fall into the trap consisting in focusing on the "materializable" and not on the psychological aspects of what can impact the action of man. It is like if passively they were accepting to be told a nice story no matter if eventually all efforts energy spent could be or not be satisfying.

KEY TRANSITION

As often as not, the systematically and complexity of the design and implementation of firms' prevailing formal management control tools can render them practically inappropriate when dealing with IORs. Importantly, instrumental approaches prove to be only a limited part of the overall equation in successful IORs management control within civil aerospace. At any rate, this is testified by the case studies proposed in chapter 4. In particular, both formal and informal control mechanisms prove relevant in securing or helping drive the different levels of inter-organisational arrangements. Hence, in the frame of IORs management within civil aerospace, it is proposed that not necessarily widely spread and more appropriate management control devices and mechanisms have to be considered. Instead of focusing exclusively on contractual clauses (liabilities, obligations, breach conditions, etc.), measures and other financial or operational performance indicators, appropriate management control tools would benefit from being interpreted differently. They should not be exclusively formal but focus on the *Enablers* dealing with the *Key Levers* proposed in chapter 3, section 3.

Accordingly, they will have to play a role in putting under a necessary control the maturity level of teams (managers and subordinates), the level of culture shared, the management style and the leadership dynamic encountered within inter-organizational relationships. Also, they will have to preserve the relevancy of major actions along with risk-taking levels that can elevate commitment and emotional intensity across stakeholders. Finally, achieving all of this may be unlikely without controlling mutual trust, authentic communication and open-minded dynamics on which complicity between actors can be grounded.

Given the above position in the context of IORs within civil aerospace, it is also probably worth considering suitable structural conditions upon which an appropriate deployment of formal and informal management control tools and mechanisms allows us to align with the **Co-operation Snowball Effect concept**. Namely, through the analysis of the three cooperating arrangement types offered in this thesis, it has become quite clear that a major hurdle for building on the *Key Levers* proposed is highly likely to be linked to a problem of orchestration of the IORs as illustrated hereafter:

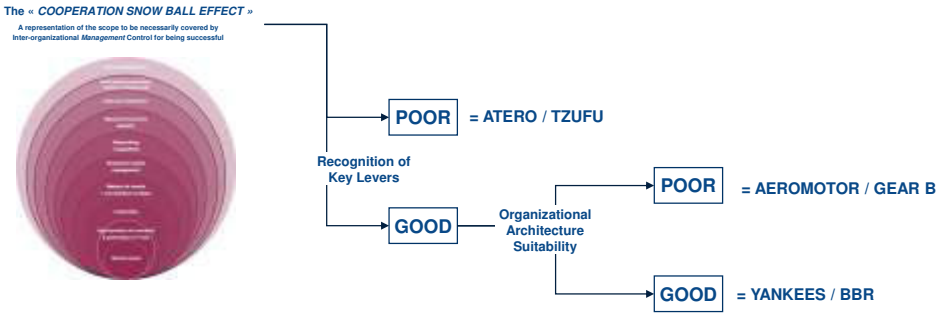


Figure 32 - Results of two different orchestrations of the Co-operation Snowball Effect

While the ATERO/TZUFU case highlights poor recourse to the *Key Levers* advocated in chapter 3 section 3, the situation between AEROMOTOR and GEARB is more subtle. In this case, there is a certain awareness of the criticality of the *Key Levers* mentioned above. But contrary to what can be observed in the YANKEES / BBR case, there is also an obvious problem of enactment and effective deployment. This raises the question of the need for an appropriate organizational structure to orchestrate the Co-operation Snowball Effect elements and, subsequently maintain their deployment under control in order to meet the IORs Management Control challenge. The stake here is a proper balance between a specific IORs organizational architecture and the scope of management control tools and devices that can support the process of interpenetration of cooperating parties and participate in the creation of "*an environment in which individuals cooperate to develop solutions on the ground*" (Morieux, 2011, p. 81). In line with Nadler and Tushman (1999, p. 53) who insist, that companies need to "*redesign their organisational architecture in ways that encourage the capacity to act",* we therefore propose to explore the aspects pertaining to structure or organisational architecture in the next section.

Obviously, by promoting a model of organisational architecture, it is fair to anticipate a risk of remaining entrenched in a managerial perspective. However, dealing with *Key Levers* in the success of IORs within civil aerospace may also legitimately justify accepting attempts to overcome the gap between management control theory and management control practice. In any case, focusing on aspects related to the IORs strategic management control structure should inevitably help further clarify which inter-organisational management control mechanisms and associated structural elements may deserve most attention, especially with the IORs studies proposed and within the importance of premising both knowledge and expertise as key strategic resources is reinforced.

SECTION 2 - IORS MANAGEMENT CONTROL STRATEGY, DEVICES AND MECHANISMS THROUGH A DYNAMIC ORGANISATIONAL ARCHITECTURE

As suggested above, using formal instrumental approaches in order to manage IORs proves insufficient, when not counterproductive. Obviously, relational contracts and informal controlling approaches offer important advantages over formal contracts or asset ownership, as demonstrated by the YANKEES/BBR case study. However, it is also fair to recognise that the non-quantifiable and much subjective characteristics of such informal remedies may entail a real vulnerability due to a lack of auto-sustainability.

In this respect, and based on our previous considerations, it is probably worth underlining again the importance of establishing and maintaining a system of communication, securing essential services from other members and formulating organisational purposes and objectives with network management likely to have a strong impact in making things happen and sustaining them. Certainly, this suggests a new perspective on integration which puts the management of the relationship between parties at the centre of the cooperative systems challenge, and within said relationship there must be binding optimized boundaries between the firms involved and committed to their inter-organisational arrangements.

Accordingly, in order to appreciate constituents of organisational architectures suited for the management control of IORs, it is proposed to refer to key authors who contributed significantly to the disciplinary foundations of prevailing economic and behavioural theories of the firm with a deliberate focus on structural organisational and control aspects. The approach offered in this thesis is pretty similar to the one adopted by Bartlett and Goshal (1993) or even Allison (1971) in his analysis of the Cuban missile crisis. Following in the footsteps of those authors, by resting on three different conceptual perspectives and taking into account our detailed understanding of the IORs studied in this thesis, we expect to identify key constituents of an IORs organisational architecture against which suitable management control tools and devices can legitimately be applied.
This section gives the opportunity to proceed accordingly.

1. THE IORS SCOPE OF MANAGEMENT CONTROL MATRIX: A MODEL OF ORGANISATIONAL ARCHITECTURE FOR EXECUTING IORS MANAGEMENT CONTROL

The following parts are critical keys of this thesis. They detail the ins and outs of a dynamic architecture constitutive of devices and tools suited for IORs management control.

1.1. Rationale and description

As pointed out earlier, several writers have described in detail the relationship of cooperation to a number of antecedent and subsequent outcome variables indicating to some extent what is worth controlling. For instance, Beer *et al.* (1990) pointed out that coordination is necessary for innovation and competitive success, while cooperation is a prerequisite of coordination, and that motivational factors are in turn prerequisites of cooperation. At the organisational level, research suggested that some cooperative organisational relationships, such as joint ventures, provide cost savings because they reduce expensive monitoring costs for companies. Thomas's (1992) review of the literature on conflict demonstrated that collaboration is related to high satisfaction for cooperating parties, high-quality working relationships, a large number of acceptable solutions, and elevated organisational performance.

Importantly, as also mentioned in previous sections, Dekker (2008) was instrumental in accepting that the selection phase is critical in IORs management control. Such a phase makes it possible to mitigate risks of impeding the deployment of co-operations like opportunism from one party, dependence issues (financial exposure and risks of failure, incompetence) or coordination issues linked with the inter-dependence of tasks. It is thus strongly recommended for strategic relationships to exercise sound judgement during the selection phase. In the automotive or the aerospace industry, major companies developed specific methods to perfect partner selection and rely on sophisticated control processes. They use specific selection criteria such as competitiveness (cost, quality, delivery), levels of competences (innovation, technological capacity, industrial assets), quality of the organisation (management teams and processes in place), financial health and size.

Nevertheless, as confirmed from the outset of this thesis, arguments also abound that a major concern remains: the **execution of cooperation** i.e. the ability to reconcile business systems, individuals, culture and structures in order to align and support initiatives, link and leverage

capabilities or create purpose and challenge. In this regard, Bartlett and Ghoshal (1993, p. 377) insist that "*an organization is fundamentally a social structure. Even though actions of and within organizations may be motivated by a variety of economic and other objectives, they emerge through processes of social interactions*". Clearly, such a position puts the emphasis on the network of roles and relationships along with associated execution capabilities within a suitable organisational architecture for IOR. In some respects, this aligns well with Senge (1999) who insists that change can be successfully achieved with "*local line leaders, network leaders and executive leaders*" whose orchestration will heavily determine the execution of inter-organisational cooperating arrangements. In this logic, it is also probably interesting to mention "*business relationships"* as defined by Håkansson and Lind (2004) as one of their three control archetypes based on socializing while the authors also insist that it should not be centrally orchestrated.

Based on the above and even though their work deals with intra-organisational aspects, we propose to refer to Bartlett and Ghoshal (1993) who suggest envisioning a different kind of organisational process when compared to those that dominated the operations of multidivisional organisations (M-form model) with the impulse from Bower (1970), Chandler (1962), Cyert and March (1963). Chandler extensively studied the adoption of the M-form model by some of the largest firms in the United States. In particular, he concluded that such a model was powerful thanks to a set of management roles and relationships resting on the "*decentralization of responsibility to operating divisions whose activities were planned, co-ordinated and controlled by a strong corporate management*" (Bartlett and Ghoshal, 1993, p. 353). However this was a conclusion drawn in a context significantly different from what became dominant with the globalisation of competition, markets and technology along with the related economic and social consequences. A similar remark can be applied to Cyert and March who studied how decisions were made in the framework of complex multidivisional organisations emerging in those days. This contributed to the consolidation of the behavioural theory of the firm. Last, Bower focused on strategic processes in multidivisional organisations which according to Bartlett and Ghoshal (1993, p. 350) created "*a bridge between the new corporate structure described by Chandler and the theory of the decision-making proposed by Cyert and March*".

Essentially, Bartlett and Ghoshal (1993, p. 375) highlight that the M-form model is no longer adapted when "*management time and attention has shifted towards the creation and the*

management of processes more directly related to adding value than on facilitating administrative activities". Contrary to the M-form model characterised by a control over most resources held at the corporate level, their proposal is based on an assumption that developing and managing a "*proliferation and subsequent aggregation of small entrepreneurial units from the bottom up*" (p. 375) will make a difference. Using this type of organisational model, the authors consider the *entrepreneurial process* which consists in aligning and supporting initiatives on the ground. Also, in contrast to dominant vertical information processing mechanisms, they highlight the *horizontal integration process* which consists in linking and leveraging capabilities within organisations. Finally, they contrast with the behavioural theory of the firm to explain through the *renewal process* the importance of its macro-level goal setting and learning mechanism as complements to the micro-level processes.

Along these lines, it is suggested that "*the three processes coexist because of the overall symbiosis"* within and across three core positions: *Front Line Agents* (FLA) who should be performance driven and act as real entrepreneurs to impact on initiatives and flexibility; *Middle Management* (MM) who should integrate strategies and capabilities jointly and horizontally to impact on coordination and reconciliation of systems or structures and *Top Management* (TM) who should jointly create the vision and challenge status quo to impact on both motivation and reconciliation of people, culture and structures.

Based on previous considerations, it is contended that the deployment of inter-organisational cooperating arrangements will be heavily determined by the motivation of partners, by a comprehensive coordination of alliance-related activities, and by the form or structure of the cooperation, which has to reconcile business systems, people, culture and structures. Accordingly, it is assumed that the basic principles of the model developed by Bartlett and Ghoshal (1993) may be suitable for dealing with the IORs intrinsic characteristics and associated management control tools and devices comprehensively developed in previous chapters.

The following table is an impact mapping. It suggests how the *Key Levers* proposed in chapter 3, section 3 could be enacted or impacted significantly by the three combined and coexisting processes proposed by Bartlett and Ghoshal (1993) (i.e. *entrepreneurial process, horizontal integration process* and *renewal process*).

		KEY LEVERS									
		Shared vision	Appropriation of concerns & generation of Trust	Leadership	Mastery of Events (= Coordination of tasks)	Relational Capital Management (=Positive Sensitive attitudes)	Networking capabilities (= Best-in-Class Network Management)	Balanced Economic benefits monitoring and surveillance	Internal Cooperation (= Influence of its own organization over external parties)	Information Asymmetry (positive) Management	Information Systems (= Devices & management)
Renewal Process	Managing the tensions between short-term performance and long-term ambition	X	X	X	X	X		X			
	Creating and maintaining organizational and co-operation trust	X	X	X	X	X	X			X	
	Shaping and embedding parties co-operation purpose	X	X	X		X	X		X	X	
Integration process	Managing operational interdependencies and personal networks		X	X	X	X	X		X	X	
	Linking skills knowledge and resources	X	X	X	X	X	X		X	X	X
	Developing and nurturing inter-organisational values	X	X	X		X	X		X	X	
Entrepreneurial Process	Creating and pursuing opportunities accross cooperating firms		X	X	X		X	X	X	X	
	Reviewing, developing and supporting initiatives across cooperating firms	X	X	X	X	X	X	X		X	X
	Establishing strategic mission and performance standards	X	X	X	X			X	X	X	

NB: a cross (x) means that attributes from the proposed processes impact significantly Key Levers

Table 30 - « Processes / Key Levers » impacts mapping in the management of IORs

Though it can vary slightly depending on an individual's perceptions and personal experiences, such an impact mapping is probably quite representative of the links between the *Key Levers* and the three processes evoked above.

For instance, for the benefit of the Shared Vision *Key Lever* activation, it would then come down to submitting possible initiatives and flexibility through the entrepreneurial process and horizontal information processing capacity along with linking and leveraging capabilities through the integration process. Also, managing and controlling the renewal process would impose a necessary "*dynamic tension into the co-operation"* as underlined by Bartlett and Ghoshal (1993, p. 376).

Importantly, it is also understood that such a system or organisational architecture would necessarily put "*Active Players"* in the limelight as defined by Larson (1992). Overall, the above conceptual considerations could thus translate into practice according to the following scenario[97]: once a top level orientation has been achieved and confirms the decision to set IORs between two firms, a selection process is initiated and orchestrated by the purchasing or business development function at the Middle Management level. However, this selection

[97] Interestingly, this scenario is well representative of what was described through the Yankee/BBR inter-organisational cooperating arrangements.

process also involves many other individuals across both organisations and gains consistency through information reported by Front Line Agents. A formal contractual framework can then be signed by the firms while objectives and deployment means and phases have to be specified explicitly.

Afterwards, three hierarchical and operating levels directly involved in the IORs have to be recognized: Front Line Agents, Middle Management and Top Management. Front Line Agents have to focus on operational results and initiatives. They look for an immediate impact on performance of the inter-organisational cooperating arrangements established. They work together for resolving quality, logistics and coordination issues. They look for a continuous optimization of products and processes. Active on the ground, they build their success from their shared experience.

Middle Management concentrates on the optimization and the effectiveness of means and devices to be deployed to support Front Line Agents. A prime concern for them is to help Front Line Agents deliver targeted results through a joint and horizontal integration of strategies and means (processes, resources, investments…). For the cooperating firms, the purpose is really to reconcile their respective systems and structures in order to impact the coordination of initiatives concretely. For this particular aspect, Middle Management is critical.

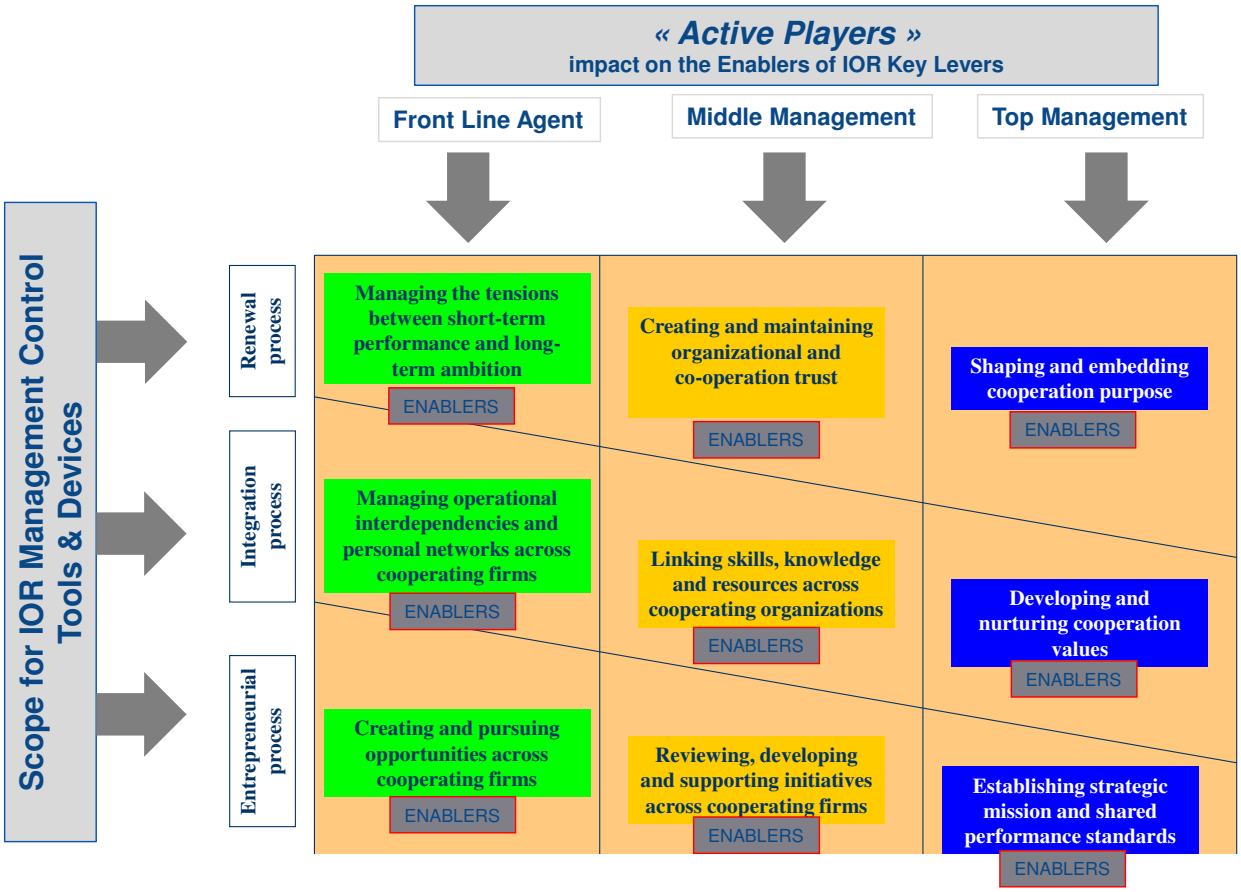
Together, Top Management teams from both cooperating firms are expected to build and formalize a shared vision with shared objectives. They should make every effort to challenge the *status quo* by securing actors' motivation. They have to decide on what orientations are necessary to ensure a reconciliation of the culture and structures of both firms.

The relationship between the cooperating firms will thus depend on an appropriate articulation between those three levels and the rest of stakeholders. This articulation will be driven by the *Active Players* (Larson, 1992), namely the Front Line Agents, Middle Management teams and Top Management teams. Such individuals would take on the role of initiator for change and cooperation. Their impact would consist in interrupting old patterns. They would thus restructure the behaviours of the other stakeholders during a trial period as observed previously by Axelrod (1984). Accordingly, reciprocity between stakeholders could become an unwritten rule relying on appropriation of concerns in particular.

Mainly informally, the Front Line Agents meet very frequently to resolve operational issues by defining and implementing their actions plans. Some of them are even co-located. Middle Management teams meet through formal reviews on a regular basis (bi-monthly or quarterly). Their objective is to review and understand projects conducted by Front Line Agents in order to remove potential roadblocks. Finally, Top Management teams also meet several times in the year which gives them opportunities to share their strategy and communicate on the IORs progress.

Importantly, there must be a certain form of interpenetration and complementarity across those three levels. This is necessary for cooperation on long-term converging interests and short-term diverging interests. Top Management is focused on the long term but can also be involved with respect to a clearly predetermined escalation process. However, it is expected that diverging or conflicting positions must be addressed within the same professional level. Automatically, actors from Middle Management are most concerned as they have to address price negotiations or operational issues. At this professional level, interests diverge the most and relationships can be very tense. Front Line Agents on the other hand get on well much more easily. They work together a lot with an obvious sense of cooperation, which reinforces their mutual trust and appropriation of concerns. In fact, each professional level satisfies the specific requirements or Key Levers of IORs as explained earlier. The management of such complexity and embeddedness enables arguments to be smoothed out as long as conflicts are managed at a professional level without negatively impacting good relationships elsewhere. This develops an inter-organisational trust critical for the success of IOR. Also, it reinforces practices of working together between cooperating firms within which actors are willing do their utmost for joint activities. A real relational advantage can thus emerge as a key differentiating factor which reinforces firms' competitive advantage. As suggested by Dyer and Singh (1998) or developed by Gummesson (2004) with his calculation of Return on Relationship (ROR), such principles in place improve stakeholders' performance as clearly illustrated through the YANKEES/BBR IOR or even AEROMOTOR/GEARB in the good years..

Based on the previous conclusions drawn regarding the *Key Levers* best suited for inter-organisational interface management and capitalizing on the model proposed by Bartlett and Ghoshal (1993), the scope for a refined management control of inter-organisational interfaces can thus emerge as represented hereafter:



Information Systems (= Devices & management)	Information Systems (= Devices & management)	Information Systems (= Devices & management)
Information Asymmetry positive Management	Information Asymmetry positive Management	Information Asymmetry positive Management
Internal Cooperation (= Influence of its own organization over external parties)	Internal Cooperation (= Influence of its own organization over external parties)	Internal Cooperation (= Influence of its own organization over external parties)
Balanced Economic benefits monitoring and surveillance	Balanced Economic benefits monitoring and surveillance	Balanced Economic benefits monitoring and surveillance
NETWORKING capabilities (= Best in Class Network Management)	NETWORKING capabilities (= Best in Class Network Management)	NETWORKING capabilities (= Best in Class Network Management)
Relational Capital Management (=Positive Sensitive attitudes)	Relational Capital Management (=Positive Sensitive attitudes)	Relational Capital Management (=Positive Sensitive attitudes)
Mastery of Events (= Coordination of tasks)	Mastery of Events (= Coordination of tasks)	Mastery of Events (= Coordination of tasks)
Leadership	Leadership	Leadership
Appropriation of concerns & generation of Trust	Appropriation of concerns & generation of Trust	Appropriation of concerns & generation of Trust
Shared vision	Shared vision	Shared vision

IOR Key Levers

Figure 33 - The IORs scope of Management Control Matrix: A model of organizational architecture for executing IORs management control

Such an inter-organisational architecture type is expected to encourage the capacity to act through integrated working relationships, close team-working with clearly defined roles and responsibilities respectful of the key business processes. The important idea here consists in structuring the three processes**:** *entrepreneurial, integration and renewal* around a set of inter-organisational relationships across core positions. Subsequently, for each core position – Front Line Agents (quality, improvement, logistics, engineers, transactional buyers and sellers agents), Middle Management (purchasing executives, sales directors, engineering directors, logistics directors and respective MDs) and Top Management (Procurement Directors, Programmes Directors, Financial directors, COO, CEO) - specific behaviours and actions are necessary in order to impact IORs Key Levers constructively. These can be assimilated to key missions. Consequently, within inter-organisational cooperating arrangements and with regards to the entrepreneurial process, we would suggest revising the situation of Front Line Agents who have "*evolved from their traditional role of implementers of top-down decisions to become the primary initiators of entrepreneurial action, creating and pursuing new opportunities"*. Middle Management should no longer be "*preoccupied with its historic control role, but instead (...) become a key resource to the Front Line Agents, coaching and supervising them in their activities*". Lastly, Top Management should decentralize the resources but also "*back them with strong delegated responsibility, focus much more on driving the entrepreneurial process by developing a broad set of objectives and by establishing stretched performance standards*" (p. 357) to be met by Front Line Agents. As demanded by Barnevik within AT&T in the case developed by Bartlett and Ghoshal (1993), putting an end to "*abstract management approach of controlling agglomerated units through sophisticated but remote systems*" (p. 359) is paramount. Instead, helping secure direct contact and interpersonal relationships to encourage initiatives or to offer help is strongly recommended in order to successfully enact a *"very different process for integrating the knowledge, resources and capabilities lodged in different parts of the cooperation.*" (p. 359).

From an integrating process viewpoint, controlling the implementation of "*decentralization under central conditions"* (p. 360) proves critical as it should ensure that Top Management provides a framework within which those lower in the organisation can operate and make decisions.

Controlling Middle Management so that it does not devote most of its time and effort on managing business planning and resource allocation will also require to checking that

conversely "*the demands placed on Middle Management by the intensive vertical information processing tasks and the complex politically driven decision-making process*" (p. 362) are reduced. This will be possible if conditions are put in place where *"system-wide information sharing resting on strict rules concerning definition, format and timing to ensure that managers cooperating receive the same information at the same time regardless of their hierarchical level"* (p. 362). In this respect, it proves justified to control the pairing of the above with organisational norms that put value on*" managing content and not just process to create a context in which Top Management continuously remains in touch with Front Line Agents thus reducing the need for Middle Management to constantly play its upward intermediating role"* (p. 362). Consequently, it will *"reduce the burden on Middle Management to ensure that corporate objectives and standards are properly transmitted down through the organisation*" (p. 363). Such an objective requires ensuring that vertical information processing tasks are so reduced that Middle Management is able to focus more on internal benchmarking, best practices identification, and technology transfers in order to link and leverage resources and capabilities spread over the cooperating firms.

Said differently, the purpose is about preserving the Middle Management "*pivotal horizontal linkage role"* by relying on "*a Top Management that creates a value based context to support and reward collaborative behaviour, and by a Front Line Management that exploit the personal networks*" (p. 364). In particular, this is a reason why it will be critical to control that Top Management is really focused on creating a sense of shared cooperation identity so that disparate efforts can be effectively binded along with inter-organizational norms that value collaboration. Such a system in place is expected to facilitate necessary linkages that intensive knowledge transfers require. Accordingly, it will be critical to control that "*regular horizontal contacts across formal organizational boundaries well create spontaneous transfer of knowledge and expertise*" (p. 364). In such a system, the *Active Players* have their own roles which should be controlled: Top Management sets the context, Front Line Agents' personal networks provide the enabling conditions for the vital horizontal process and Middle Management facilitates linkages between stakeholders. In particular, it will be important to continuously check that Middle Management is no longer mainly mobilized on the demands of managing the intensive vertical planning, control and resource allocation processes. Equipped with an intimate knowledge of most aspects of the cooperating firms, Middle Management is rather expected to leverage the knowledge and expertise arising from Front Line Agents' activities. This can only be possible through the creation of suitable

communication channels or decision-making forums across the entire organisation. On the battlefield, it is then recommended to establish types of functional councils which will encourage Front Line Agents to transfer best practices from the leading edge area. In reference to Bartlett and Ghoshal (1993, p. 366), this system as a whole is intended to establish a *"broad portfolio of task forces, teams and committees*". Correctly controlled through simple and straightforward audit checks, this is expected to *prevent isolationism and to break down parochialism* as they make it possible to address or negotiate differences between stakeholders but also resolve potential conflict inherent to IOR.

From a renewal process viewpoint, it proves necessary to ensure that a framework for goal setting and learning is successfully established. This requests active involvement from Top Management in charge of inspiring and energising this process. Conversely, it should not favour the politically negotiated means.

Holistically, for each Active Player type, control is thus expected to focus on the Enablers matching with Active Players' key missions. On the next three pages, this is detailed through the Enablers Impact mappings established for the key missions of Active Players. It is worth noticing that the ranking proposed is calculated by comparison between a theoretical maximum and real scores. The presence of "1" indicates that the Active Players' key mission is expected to impact on Enablers. The top four ranking scores are considered to reflect quite a distinctive impact of Active Players' missions on *Key Levers*. For instance, by shaping and embedding cooperation purposes, developing and nurturing organisational values, establishing strategic mission and shared performance standards, Top Management is thus expected to have a concrete impact on the Enablers matching with the *Key Levers* colored in blue in the IORs scope of Management Control Matrix, namely: appropriation of concerns and generation of trust; information asymmetry management; shared vision and leadership.

Top Management key missions are thus worth controlling by analysing the impact they have or not on the Enablers corresponding with *Key Levers* identified in blue. As suggested by ***the Maturity Level grid Analysis of IORs Management Control,*** such a control will obviously be of two fold, formal and informal. A same logic applies to Middle Management and Front Line Agents respectively on *Key Levers* colored in green and yellow in the IORs scope of Management Control Matrix.

			TOP MANAGEMENT KEY MISSIONS		
The ranking is calculated by comparison between theoritical maximum and real scores. The presence of "1" means the Active Players' key missions are expected to impact on Enablers. The top four ranking scores are considered to reflect a distinctive impact of Active Players' missions on Key Levers		JULY 2013	Renewal Process	Integration process	Entrepreneurial Process
KEY LEVERS	ENABLERS AT STAKE (=participate in the Key Levers effectiveness)	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Shaping and embedding parties co-operation purpose	Developing and nurturing inter-organisational values	Establishing strategic mission and performance standards
Appropriation of concerns & generation of Trust	Cohesive groups, clans coordination (organic solidarity)	83%	1	1	1
	Social Context consideration		1	1	
	Contractualization		1	1	1
	Buyers committment		1	1	1
	Seller committment		1	1	1
	Trust establishment & management		1	1	
	Understanding of sensitivity to interdependence of production and exchange relations		1	1	
	Governance structure well in place		1	1	
Balanced Economic benefits	KPIs / Assessments	42%			1
	Cross organizational designed management accounting systems				
	Deeper involvement of accountants in the negotiation of actions and profits sharing		1		1
	Review of how the risk/return position of each party is affected by different actions		1		1
Best in Class Network Management / NETWORKING capabilities	Formal impersonal communication	48%		1	
	Ties among firms - Structural - Relational		1	1	
	Social recognition management			1	
	Managerial communication to further improve relational performance		1	1	
	Technical communication to further improve relational performance		1	1	
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)		1	1	
	EXPLICIT knowledge management				
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks (= balance properly level of trust and information needed)	67%	1	1	1
	Know who you are dealing with		1	1	
	Information management control relating to the willingness to trust given competence and integrity well recognized			1	1
	Information management control relating to the mastery of events which enables to plan and make decisions on collaborative futures. Fine grained information transfer				1
Mastery of Events (= Coordination of tasks)	Cohesive groups, clans coordination (solidarité organique)	47%	1	1	1
	Clear Organisation and adequate escalation process		1		
	Constant evolution		1		
	Bonding		1	1	1
	Learning Philosophy				1
	Contractualization				1
	Coordination mechanisms like escalation pyramid or executive reviews		1		
	Setting down goals and methods				1
	Recognizing timing with none introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.				
	Governance structure targeted with determination		1		1
Positive Sensitive attitudes / Relational Capital	Social Capital management including sensitivity to culture	78%	1	1	
	Level of mutual trust, respect and interaction between actors at multiple levels		1	1	1
	Social recognition management		1	1	
	Relationship management type establishment about: = People interacting management = Joint problem solving arrangements		1	1	
	Culture Management		1	1	
	Power management		1	1	1
Shared vision	Congruent goals and collaborative futures worked out	100%	1	1	1
	Governance structure targeted determination		1	1	1
Internal Cooperation	Consencus between internal stakeholders	50%	1	1	1
	Internal governance structure targeted determination				
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	100%	1	1	1
Information Systems (= Devices & management)	Objectivizing and materializing technical, business and involvement aspects of IOR	33%			1

Table 31 - Enablers Impact mapping of Top Management

			MIDDLE MANAGEMENT KEY MISSIONS		
The ranking is calculated by comparison between theoritical maximum and real scores. The presence of "1" means the Active Players' key missions are expected to impact on Enablers. The top four ranking scores are considered to reflect a distinctive impact of Active Players' missions on Key Levers		***JULY 2013***	**Renewal Process**	**Integration process**	**Entrepreneurial Process**
KEY LEVERS	**ENABLERS AT STAKE (=participate in the Key Levers effectiveness)**	**RANKING OF EXPECTED IMPACT ON KEY LEVERS**	Creating and maintaining organizational and co-operation trust	Linking skills knowledge and resources	Reviewing, developing and supporting initiatives across cooperating firms
Appropriation of concerns & generation of Trust	Cohesive groups, clans coordination (organic solidarity)	**79%**	**1**	**1**	**1**
	Social Context consideration		**1**	**1**	**1**
	Contractualization				**1**
	Buyers committment		**1**		**1**
	Seller committment		**1**		**1**
	Trust establishment & management		**1**	**1**	**1**
	Understanding of sensitivity to interdependence of production and exchange relations		**1**	**1**	**1**
	Governance structure well in place		**1**		**1**
Balanced Economic benefits	KPIs / Assessments	**42%**			**1**
	Cross organizational designed management accounting systems				
	Deeper involvement of accountants in the negotiation of actions and profits sharing		**1**		**1**
	Review of how the risk/return position of each party is affected by different actions		**1**		**1**
Best in Class Network Management / NETWORKING capabilities	Formal impersonal communication	**81%**	**1**	**1**	**1**
	Ties among firms - Structural - Relational		**1**	**1**	**1**
	Social recognition management		**1**		**1**
	Managerial communication to further improve relational performance		**1**		**1**
	Technical communication to further improve relational performance		**1**		**1**
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)		**1**	**1**	**1**
	EXPLICIT knowledge management			**1**	**1**
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks (= balance properly level of trust and information needed)	**92%**	**1**	**1**	**1**
	Know who you are dealing with		**1**	**1**	**1**
	Information management control relating to the willingness to trust given competence and integrity well recognized		**1**		**1**
	Information management control relating to the mastery of events which enables to plan and make decisions on collaborative futures. Fine grained information transfer		**1**	**1**	**1**
Mastery of Events (= Coordination of tasks)	Cohesive groups, clans coordination (solidarité organique)	**70%**	**1**	**1**	**1**
	Clear Organisation and adequate escalation process				**1**
	Constant evolution		**1**		**1**
	Bonding		**1**	**1**	**1**
	Learning Philosophy		**1**	**1**	**1**
	Contractualization				**1**
	Coordination mechanisms like escalation pyramid or executive reviews				**1**
	Setting down goals and methods		**1**		**1**
	Recognizing timing with none introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.		**1**	**1**	**1**
	Governance structure targeted with determination		**1**		**1**
Positive Sensitive attitudes / Relational Capital	Social Capital management including sensitivity to culture	**100%**	**1**	**1**	**1**
	Level of mutual trust, respect and interaction between actors at multiple levels		**1**	**1**	**1**
	Social recognition management		**1**	**1**	**1**
	Relationship management type establishment about: = People interacting management = Joint problem solving arrangements		**1**	**1**	**1**
	Culture Management		**1**	**1**	**1**
	Power management		**1**	**1**	**1**
Shared vision	Congruent goals and collaborative futures worked out	**83%**	**1**	**1**	**1**
	Governance structure targeted determination		**1**		**1**
Internal Cooperation	Consencus between internal stakeholders	**17%**		**1**	
	Internal governance structure targeted determination				
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	**100%**	**1**	**1**	**1**
Information Systems (= Devices & management)	Objectivizing and materializing technical, business and involvement aspects of IOR	**33%**		**1**	

Table 32 - Enablers Impact mapping of Middle Management

			FRONT LINE AGENT KEY MISSIONS		
The ranking is calculated by comparison between theoritical maximum and real scores. The presence of "1" means the Active Players' key missions are expected to impact on Enablers. The top four ranking scores are considered to reflect a distinctive impact of Active Players' missions on Key Levers		*JULY 2013*	Renewal Process	Integration process	Entrepreneurial Process
KEY LEVERS	ENABLERS AT STAKE (=participate in the Key Levers effectiveness)	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Managing the tensions between short-term performance and long-term ambition	Managing operational interdependencies and personal networks	Creating and pursuing opportunities
Appropriation of concerns & generation of Trust	Cohesive groups, clans coordination (organic solidarity)	79%	1	1	1
	Social Context consideration			1	
	Contractualization				1
	Buyers committment		1	1	1
	Seller committment		1	1	1
	Trust establishment & management		1	1	1
	Understanding of sensitivity to interdependence of production and exchange relations		1	1	1
	Governance structure well in place			1	1
Balanced Economic benefits	KPIs / Assessments	67%			1
	Cross organizational designed management accounting systems		1	1	1
	Deeper involvement of accountants in the negotiation of actions and profits sharing		1		1
	Review of how the risk/return position of each party is affected by different actions		1		1
Best in Class Network Management / NETWORKING capabilities	Formal impersonal communication	62%		1	1
	Ties among firms - Structural - Relational		1	1	1
	Social recognition management			1	
	Managerial communication to further improve relational performance			1	1
	Technical communication to further improve relational performance			1	1
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)			1	1
	EXPLICIT knowledge management				1
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks (= balance properly level of trust and information needed)	58%		1	
	Know who you are dealing with			1	1
	Information management control relating to the willingness to trust given competence and integrity well recognized			1	1
	Information management control relating to the mastery of events which enables to plan and make decisions on collaborative futures. Fine grained information transfer			1	1
Mastery of Events (= Coordination of tasks)	Cohesive groups, clans coordination (solidarité organique)	77%	1	1	
	Clear Organisation and adequate escalation process		1	1	1
	Constant evolution		1	1	1
	Bonding		1	1	1
	Learning Philosophy		1	1	1
	Contractualization				1
	Coordination mechanisms like escalation pyramid or executive reviews		1	1	
	Setting down goals and methods		1		1
	Recognizing timing with none introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.		1		1
	Governance structure targeted with determination		1	1	
Positive Sensitive attitudes / Relational Capital	Social Capital management including sensitivity to culture	78%	1	1	
	Level of mutual trust, respect and interaction between actors at multiple levels		1	1	1
	Social recognition management			1	
	Relationship management type establishment about: = People interacting management = Joint problem solving arrangements		1	1	1
	Culture Management		1	1	1
	Power management		1	1	
Shared vision	Congruent goals and collaborative futures worked out	50%	1		1
	Governance structure targeted determination		1		
Internal Cooperation	Consencus between internal stakeholders	17%		1	
	Internal governance structure targeted determination				
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	100%	1	1	1
Information Systems (= Devices & management)	Objectivizing and materializing technical, business and involvement aspects of IOR	0%			

Table 33 - Enablers Impact mapping of Front Line Agents

1.2. Application of the model of organizational architecture for executing IORs management control

Resting also on on-field observations detailed in chapter 4, it is then possible to put in perspective the three IORs studied against the proposed model of organisational architecture for executing IORs management control.

Such an exercise consists in assessing RED (Poor), YELLOW (Average) or GREEN (Good) the level of satisfaction well admitted for those Enablers matching with the top four Key Levers and on which Active players' key missions are likely to impact significantly. By taking into account the level of satisfaction reached by those same Enablers, it is then possible to consider to what extend Active Players' respective key missions have contributed.

As detailed in appendices and for each IORs studied, this approach makes it possible to highlight deficiencies in Active Players' key missions. This is done in terms of concrete and positive impact on Enablers, then on their associated *Key Levers*. Also, it provides guidance on corrective actions needed to enhance management control of Active Players' key missions.

This can be summarized with the following assessment matrixes proposed for each IORs studied. They provide consolidated results by *Key Levers* and are self-explanatory: poor level of satisfaction on the Enablers identified translates into poor level of satisfaction reported RED in the matrix with regards of the top four *Key Levers* identified for each Active Player.

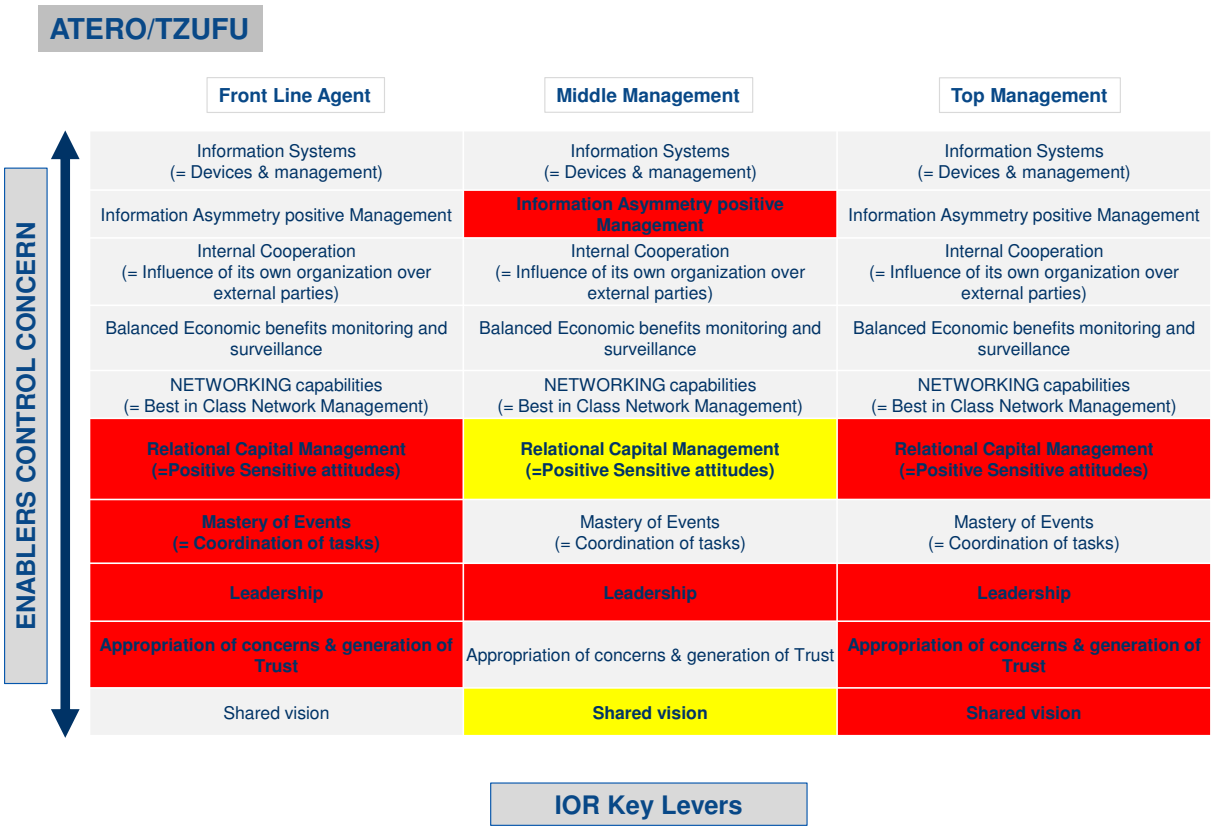


Figure 34 - A Guidance Matrix for Active Players' Key Missions Management Control ATERO/TZUFU

In the above case of ATERO/TZUFU, regarding Top Management, none of its key missions[98] seems to have a positive and effective impact on Enablers associated with information relational capital management, leadership, appropriation of concerns and generation of trust or shared vision. This suggests a necessary enhancement of the management control of Top Management's key missions in order to help improving their impact on Enablers and subsequently on Key Levers (RED) for the benefit of the IORs considered.

It is also important to note the coherence between the scoring above of Actives Players' Key Missions and the scoring for the management of *Key Levers* detailed in chapter 5, section 1.

[98] Shaping and embedding parties co-operation purpose / Developing and nurturing inter-organisational values / Establishing strategic mission and performance standards.

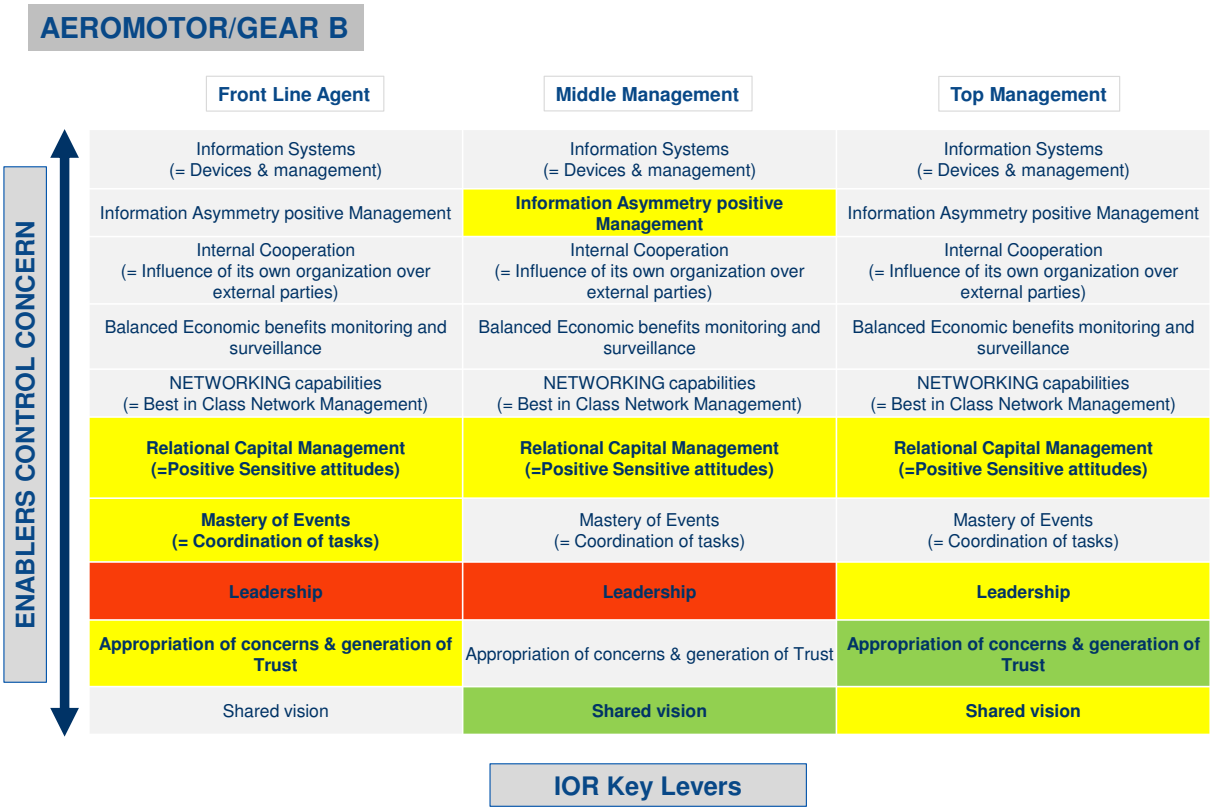


Figure 35 - A Guidance Matrix for Active Players' Key Missions Management Control AEROMOTOR/GEARB

In the above case of AEROMOTOR/GEARB, further necessary improvement is identified on Leadership for all Active Players. This necessary enhancement is worth considering as the vision is successfully shared. Besides, a well-working leadership would inevitably reinforce appropriation of concerns and have a positive impact on the information asymmetry management. The latter is actually a major road block as the two companies are either suppliers or customers to each other.

It is also important to note the coherence between the scoring above of Actives Players' Key Missions and the scoring for the management of *Key Levers* detailed in chapter 5, section 1..

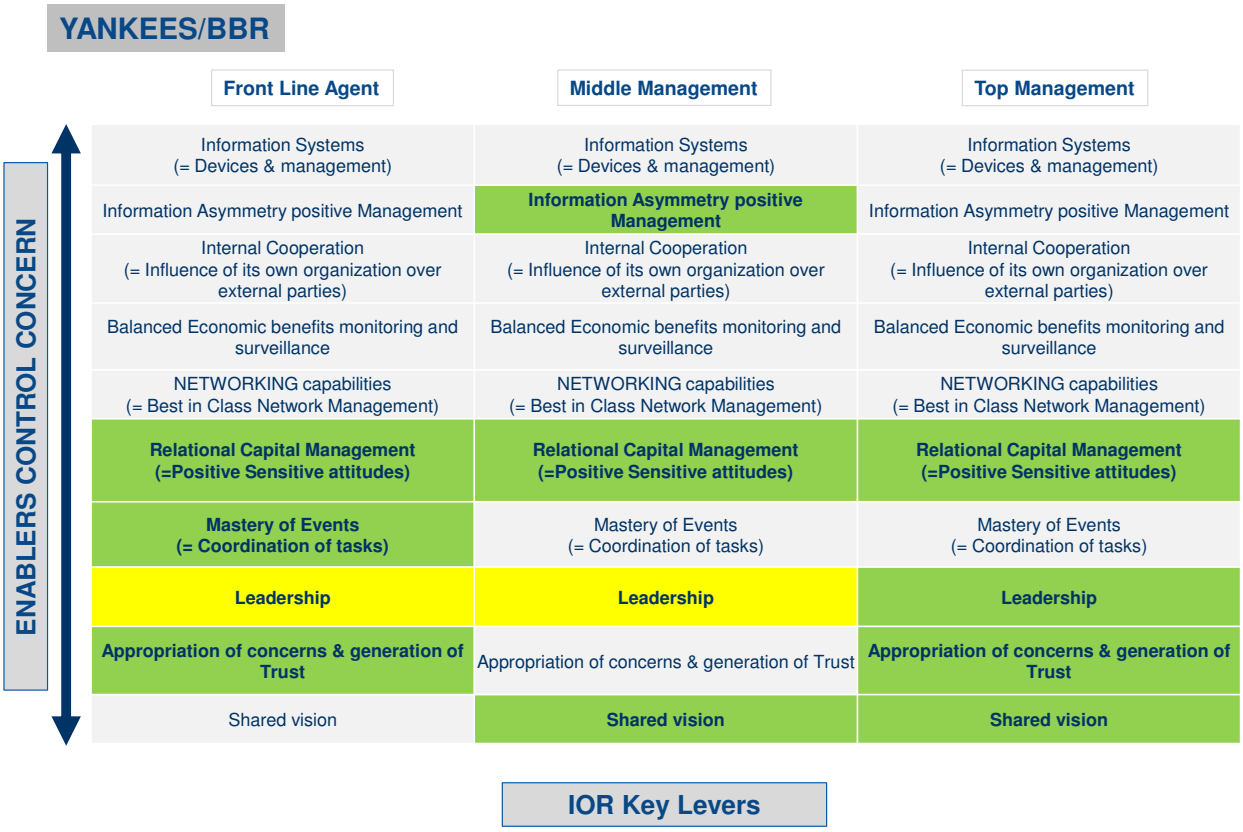


Figure 36 - A Guidance Matrix for Active Players' Key Missions Management Control YANKEES / BBR

As already mentioned several times, the way how the YANKEES /BBR IORs are managed is outstanding. This has been demonstrated for decades, now. Yet, but not surprisingly, Leadership is not always assessed as high as the others Key Levers.

In this regard, it is worth pointing out that the Leadership of Top Management is considered fully satisfactory. This may reinforce the view that the missions of Top Management to secure IORs' *Key Levers* and in particular Leadership are the cornerstone of successful inter-cooperating arrangements.

2. LEADERSHIP, TOP MANAGEMENT AND IOR

After the theoretical foundations, offered in the previous sub-section, of an inter-organisational mode of governance which fosters the interpenetration of IORs' stakeholders and the control tools and mechanisms which should be considered, the two following parts provide a particular insight on leadership and general management.

2.1. Traditional and modern approaches dealing with leadership and applicable to Top Management

The above results reinforce the view that failing Top Management teams are inevitably detrimental for IOR. Also, their *Key Missions* are worth controlling in order to enable a proper activation of *Key Levers* necessary for successful inter-organisational cooperating arrangements. In particular, this activation implies a specific role of Top Management. As per the model of organizational architecture for executing IORs management control proposed, this supposes a specific process for integrating the knowledge, resources and capabilities across inter-organizational cooperating firms in order to contribute actively to the construction and the deployment of successful IOR. This is precisely what is reflected in the YANKEES/BBR cooperation.

Accordingly, it is legitimate to ask what could be put in place to guarantee such a contribution from Top Management, in particular with regards to the sharing of a vision, the appropriation of concerns and the generation of trust across cooperating firms and of course the emergence of appropriate leadership?

Referring to Pettigrew and Whipp (1992), it is assumed that leadership styles have a strong impact by enabling to build a receptive context for change, a sort of legitimation; by creating a capability for change across the organization and through the people; by constructing the content and direction for change through appropriate messages and attitudes towards the teams. In particular, trust and relational norms but also credibility, intellectual curiosity and persuasion of the leaders are important because people involved in IORs see the world as they are said to see it. In the same logic, the notion of *revolutionary* and *evolutionary* change processes (Tushman and O'Reilly, 1996) can be interesting. It suggests that leadership and the

style associated with it have a key impact because the selected approach will be determined by the inclination of leadership to be more or less bold.

Interest in leadership effectiveness is actually one of the most ancient topics of organisational behaviour. Higgs (2003) states that "*for centuries we have been obsessed with leaders, and with identifying the characteristics required for effective leadership*". Though it is an old question, it largely remains unanswered despite different approaches designed to explore the topic. These theories can be broadly classified in two families. The first one - that we shall call the traditional approach - is based on successive studies that added a new "layer" or perspective on leadership effectiveness, but failed to build a coherent framework. The second family, or modern approach, encompasses more recent visions that in some ways go back to the basics and try to combine several models. In the traditional approach three visions of leadership effectiveness prevail: the personality theory, the behavioural approach and the contingency theory.

The personality approach in its scientific version dates from the beginning of the 20th century. Researchers concentrated their studies on historical leaders like Napoleon or Lincoln. The main hypothesis is that effective leaders all exhibit common traits of personality, traits that distinguish them from common folk. The underlying idea is that leadership is innate; one cannot be trained to be a leader.

Though apparently common sense, the personality theory "*failed to produce consistent findings and occasionally degenerated into absurd speculation*" (Moorehead and Griffin., 1992, p. 255). Indeed the list of leader traits became rapidly crowded. Six characteristics may be helpful to select a leader but more than twenty are surely useless. Furthermore, the results were sometimes contradictory, which undermined the key idea that leaders all exhibit common traits of personality. Worse, some researchers based their studies on totally unscientific and esoteric domains like astrology.

Researchers explored another possible factor of leadership effectiveness: the behaviour. The behavioural approach theory tries to identify styles that differentiate effective leaders from less effective ones. A common premise with the trait approach is that "*effective leaders would be the same across all situations*" (Moorehead and Griffin, 1992, p. 256). The milestones of the behavioural theory are two important academic studies conducted during the late 1940's

and the 1950's at the Michigan University and the Ohio State University. They produced more or less the same results. Leaders styles can be analysed according to two dimensions: people and task (designation vary according to the studies). A people centred leader is essentially concerned with the wellbeing of his subordinates, while a task-oriented leader is more concerned with the efficient completion of the job. The general idea is that what makes an effective leader is his ability to be at the same time people and task oriented. These leaders are supposed to consistently obtain better results both in terms of output and employee satisfaction.

Though it shed a new lighting on leadership effectiveness, the behavioural approach was not without weaknesses. For once, one could argue that behaviour and traits are linked. This idea is consistent with basic tenet that all behaviour is a function of both the individual and his environment. Yet, associated studies conducted are often fairly inconclusive. More important, some researches showed that there was no "*one-best way*" for leadership style, a crucial assumption of the behavioural approach. Then, it became evident that situational variables had to be considered, hence the development of contingency theory.

The contingency theory is a radical change in the way leadership effectiveness is seen. It is based on the premises that no "*one best way*" exists. On the contrary, it contends that the effectiveness of a leader does not only depend on his personality or behaviour but also on the situation. A leader may be effective in a given context but ineffective in another situation. The favourableness of the situation rests with the leader-subordinates relations, the degree to which the tasks to perform are structured and the power available to the leader. The leader's personality is supposed to balance between two extremes: task or relationship orientations. To measure to what degree a leader is task or relationship-oriented, Fiedler (1967) devised a tool called the "*Least Preferred Co-worker"* or LPC. The problem is that the LPC has always been subject to controversy since one does not know what it exactly measures. Besides empirical evidence of Fielder's model are scarce if any. Another milestone of contingency theory focused on the leader behaviour rather than on his traits. One of the major contributions the model made to leadership effectiveness theory is the hypothesis that the way how they appreciate the utility of the leader's behaviour will influence subordinates outcomes (Miles and Petty, 1977). However, as Moorehead and Griffin (1992) noted, if the major predictions of the model have been supported by empirical evidence, the model in itself has not entirely been validated. This lack of validation is mainly due to the fact that since the model is built on

several other theories (e.g. the path goal valence instrumentality expectancy), its validity depends on the validity of those theories it relies on (Mawhinney and Ford, 1977).

In response to this situation, a corpus of theories has progressively emerged focusing on the idea that what makes an effective leader is his ability to cope with change. Under the umbrella of modern approach two major models are then worth considering in the frame of IORs management: charismatic and transformational leaders. Both are supposed to be the most effective leaders since they have better abilities to devise and implement large-scale change.

"*Charisma is a form of interpersonal attraction that inspires support and acceptance and is likely to make a highly charismatic supervisor more successful in influencing…*" (Moorehead and Griffin, 1992, p. 276). The concept of charismatic leader is some kind of a return to the trait approach. Indeed, charisma is a trait of personality often associated with self-confidence and a strong need to influence. This theory has been very popular because the success of high-profile companies was often attributed to charismatic leaders.

Alternatively, but successfully applied to the study of top-level managers, the concept of transformational leadership was developed by Bass (1985). This concept is underlining a remarkable ability to develop positive relationships with subordinates in order to strengthen employee and organisational performance. Key competences put forward are attributed charisma, intellectual stimulation, ability to inspire subordinates by crafting a vision and convincing employees in the attainability of this vision (inspirational motivation) and to meet the emotional needs of subordinates (individualised consideration). Job centred and people focused, transformational leaders prove to be the champions of change and quite suitable when experiencing business process reengineering or downsizings or mergers, in particular.

Overall, these approaches identify key factors of success for leadership effectiveness assumed to be requested from Top Management involved in IORs management. While context is a crucial parameter to take into account, behaviour is also a fundamental point. Personality traits constitute probably an important factor, maybe only in an indirect way. Some traits may predispose a leader to have a given style. As for how these traits would prevent a leader to adopt another style more appropriate to a given situation remains unknown. Strong managerial skills as well as the ability to work in teams are also critical when dealing with inter-organisational cooperating arrangements. However, on-field observations can reveal

different types of behaviours or non-demonstrated skills among top managers while, at the same time, these things don't seem to be controlled. In any case, these peculiarities are worth considering for management control and successful IORs.

2.2. Critical issues commonly observed with regards to the control of Top Management

After taking into account traditional and modern approaches dealing with leadership, it is now worth exploring some concrete experience about its practice by Top Management teams. Resting on multiple exchanges on which we could capitalize, in particular a substantial discussion with Mr Boat Coach, it is proposed to examine further the responsibility of Top Management approached as the heart of the success or failure of cooperation in civil aerospace.

In this regard, it is worth mentioning that Mr Boat Coach trained CEOs and top managers from BBR and GEARB. Consultant specializing in performance management and change management within major French and international companies, his consultancy practice introduced managerial dimension in the practice of coaching and for 20 years, has been transferring his methods of coaching performance to thousands of managers and hundreds of teams in major French and international groups.

According to him, due to self-interest or poor leadership, a major chronical concern is the non-execution by top managers of some initiatives, approaches and practices, although they are commonly expected by most stakeholders, especially in the management of IOR. In particular, even though it may not be politically correct, Mr Boat Coach underlines that there is here "*a fundamental problem with crocodiles. They think only their interest and will manipulate people in the management system instead of making them grow. You have a correlation between the density of crocodiles and the type of mobilization of the entire population over time".*

Also, assuming that leadership is essential not only for communicating the vision, but for the co-responsibility to deploy it and to carry it with ambition, the strategic plan should be borne by the leadership to bring the ambition and realism that go well. However, this step does not work well and too often there is atomization: Human Resources will work on their own, IT on theirs, Finance on theirs etc ... a systemic approach is lacking. According to Mr Boat Coach "*in France, there is little systemic approaches with a globalizing scenario to see how the interactions will occur while it is in the business model that we should have this systemic vision as claims the socio-dynamic approach*".

This is an important point when it comes to dealing with the question of the role and impact of leadership and with the notion of shared vision. The latter is actually very important so that people understand how they should play, as previously said. Yet, Mr Boat Coach underlines that in most industrial groups, when making a strategic plan "*in the direction to three years… they look at the figures of the previous year and the previous three years. They put a small multiplier, and they revisit the figures with the coefficient that goes well. But there is no thinking about strategic analysis or the evolution of the market. It is often tinkering and established to serve Top Management's interests".* Said differently, such an approach is all the more questionable as *"only qualitative inputs will allow take directions for 5 or 10 years".*

Such practices were actually observed at ATERO and GEARB where a dominant hierarchical management exists: the leader decides and has authority over the people below who do not challenge the power of their chiefs. In practice, this translates into an inability to accountability that often occurs in the aerospace industry. The consequences are multiple: limited cultural opening, strict operation mode and co-language blood.

Thus, Top Management would muzzle free will and "*between the function of the leader of the referent, the boss, his style, the default values he has and the power games that will stimulate all the courtiers who are around that obedience or are conniving, there is a powerful dynamic in the system*" as noticed by Mr Boat Coach. This situation is all the more remarkable that, as we are reminded of the Icarus agenda (i.e. work on programming and submission), individuals who feel legitimized, are able to do things around the transgression of social rules, because they are given permission, they have the established law on their side and thus they are secured in what they do.

Another feature encountered in the field of civil aviation was the listening level granted to subordinates. This was concretely revealed by a process of listening to the ground initiated by Mr Boat Coach and his teams through several entities of BBR about the perception that subordinates may have about their Top Managers. The conclusion was clear: for 2/3 of employees, Top Management is not interested in what they can offer as an idea. There is actually a real correlation between the layers of the top and bottom layers with occasionally a real hiatus. Thus, individuals do not share the same company, the same concerns.

Unsurprisingly, people will then often speak of a distance from the decision-field, which in the case of inter-organizational co-operations can be devastating.

Finally, Mr Boat Coach also pointed out something not much described in the studies or in the literature, nowadays. Neither the business press nor the books speak of it: the collective anxiety. The crisis has only exacerbated this phenomenon of collective anxiety that is several years old. In addition, the decline in economic leadership in Europe stimulates an anxiety to get results even before the financial crisis coming. The focus for results has just been amplifying and causing a deterioration of management practices that had yet tended to improve since the 1980s and 1990s.

In summary, the role of Top Management should be to instill the desire to win in those who have the fear of losing. Yet, this can no longer be done simply by means of ambitious operational objectives. It could be done differently, by infusing daily actions with significance, creating spaces for open discussion in order to facilitate cooperation, while giving free rein to emotions in the life of the team.

Still, prevailing practices are not necessarily going in the right direction, especially with the more or less coercive legal framework for the production of financial information within civil aerospace firms. In this regard, it is worth reminding that an organizational stewardship devices control (Agamben and Rueff, 2007) is required in large companies to ensure transparency and accountability published financial statements. Since 2003 and the Financial Security Act (FLSA), all limited companies listed and unlisted in France are obliged to include in their annual reports a report detailing control procedures implemented by the company for the production of information about its financial situation. Obviously, such rules are hugely constraining for Top Management even though, as stated in the Financial Markets Authority (AMF) as a framework dedicated to internal control (MFA 2004, 25), this normative accretion is performed without necessarily specifying the characteristics that must be of a satisfactory internal control.

In any case, it seems relevant to wonder whether that more or less erratic deployment trends about the stewardship of increased production figures really serve the management of both stakeholders (internal or external). Just like in the case of "accounting at fair value", by relying on management tools making the technician expertise and formal control the

undisputed basis of the representation of the performance, is it irrelevant or exaggerated to consider that when they are deployed, the usual prevailing tools for controlling the Top Management actually appear as vectors of new situations of moral hazard, instead of encouraging the latter to work on a shared vision, appropriation of concern and the generation of trust between stakeholders?

This whole invites to study even further how means of control are applied to Top Management. While one should of course not neglect the difficulty to exert control on it, and as testified by control and measurement of leadership effectiveness which is a question that remains almost unanswered, the mechanisms in place to control Top Management activities may not be enough appropriate for the sake of inter-organisational cooperating arrangements. Generally, not only across civil aerospace firms, further research still seems justified with regards to the inter-organisational relationships management control and the accounting tools and devices commonly in place today, to one extent or another.

CONCLUSION

This research deals with the strategic management control of inter-organisational relationships (IORs) in civil aerospace with a focus on *Key Levers*, management control devices and tools. Based on a qualitative approach and ethnographic practices, it is part of pragmatic constructivist epistemological paradigms. It analyses a phenomenon that we believe has not been extensively explored which certainly presents the drawback of generating findings that are singular. Hence, as a whole, this work presents some limitations stemming from the research design and its implementation despite the numerous precautions taken. Importantly, in the future, we look forward to having the opportunity to put the initial findings proposed in this thesis to the test on a broader population, and not necessarily limited to the civil aerospace industry.

The contribution of this research was not meant to be a prescriptive but rather a qualitative study of inter-organisational interfaces management with firms viewed as open social systems and with people setting up inter-organisational relationships because outsiders can bring a fresh and often valuable perspective to the table. One of the primary values of alliances and effective working relationships being the access it provides to different experiences, perspectives and knowledge, inter-organisational co-operating arrangements within the industry are thus meant to add value by improving product quality, productivity lead time and cost reductions, but also to be more creative through accelerated learning. Hence, it was considered that managing IORs should aim at developing co-operative partnerships at the root of strong competitive advantages and with long-term commitments. Such arrangements were not viewed as a tactical device to provide a short-term fix for a problem, but rather as something which requires a shared contribution and respective adaptations of needed assets or competencies. This perspective is at odds with the views that consider outsourcing as an end in itself rather than a strategic tool for enhancing overall performance. This position is particularly relevant for what is at stake within civil aerospace, given its evolution over recent decades.

Yet, a major concern underlined through this research was that although IORs may be very desirable, most often they prove quite difficult to establish and sustain, and existing academic

literature on this topic and the practices observed on the ground are rather fragmented. Consequently, through a perspective that went beyond the boundaries of the firm, it was proposed to further analyse the purpose of the shift from integration to disintegration along with its mechanisms and its strategic consequences. Following this line of thought, it was then proposed to first investigate in much more depth the rationale and the root causes for different degrees of integration of value-adding processes.

Subsequently, we could then set out to analyse why the implementation phase of commonly advocated inter-organisational strategic management control principles, devices and mechanisms is not suitable for the civil aerospace context. This was done in order to deal with our proposed research question**:**

"*How is management control organised within industrial co-operations when applied to the dimensions of strategy, structure and tools dimensions in the case of civil aerospace industry?"*

While IORs are vital, why do the modalities of their control have very low success rates? Why have we reached a situation in which actors accept to invest so much in management tools that we know to be inefficient? What about possible alternatives applicable to the civil aerospace sector?

Based on relevant academic research to substantiate our approach as well as on field experiences and observations, we concentrated on a comprehensive and effective outline of the key characteristics of IORs which justifies the need for particular attention to be paid to both formal and informal control devices along with structures of control. Also, we laid emphasis on what is concretely at stake for strategic management control tools and devices when dealing with IORs. This legitimised an academic exploration into the formation process and the reality of the impact of IORs strategic management control devices and tools within civil aerospace firms. This also explains why we were determined to bring to light the need to find a fit between the types of co-operating arrangements and the types of control, along with an underlying question regarding the root causes for failures when faced with the stubbornness of stakeholders, in particular.

By doing so, we were able to establish a synthesis of the existing academic contributions which was capitalised through specific processes and tools before coming down in favour of any one option. This suggested that going beyond functionalist approaches is relevant in order to study the influence of social practices (*i.e. interpersonal relationships*) on the performances of inter-organisational practices.

This led to a better understanding of ***Key Levers*** at play and worth controlling when setting the basis of a targeted success that would heavily depend on inter-organisational interface management abilities. By using those *Key Levers*, a first concrete singular contribution consisted in establishing a "*Co-operation Complexity and Key Levers Fit" (CCKLF)* matrix. This was proposed to provide support and correctly understand how various sub-group actors can be reciprocally influenced to achieve their individual objectives, but also how they should co-ordinate with each other to successfully deliver a collective result within an appropriate structure and by taking into account *Key Levers*. This decision was made assuming that if the above is not guaranteed, potential recommended management control approaches are at great risk. On one hand, the tools and devices implemented to exert management control types might not be adapted to a certain level of complexity, which is inevitable. On the other hand, it is probably impossible for them to be handled without any suitable organisational structure, especially in the case of civil aerospace. In this context, three "archetypes" defined in the academic literature were reviewed: the control of results through the market, the control of behaviours (and therefore ultimately results) through bureaucracy and another form of behaviour control, namely the clan as developed by Dumoulin (1996), Hakansson and Lind (2004), through trust in capabilities, willingness and commitment as suggested by van der Meer-Kooistra and Vosselman (2000), Adler (2001), Langfield-Smith and Smith (2003) or, according to Dekker (2004), through the socialisation of individuals[99].

By doing so, we aimed at better understanding from a management control viewpoint the means and devices advocated or deployed across civil aerospace firms to achieve successful IORs on which observed strategies in civil aerospace rely increasingly because they can, at

[99] The term "social control" is also developed by Langevin and Naro (2003) in their literature review dealing with organisational control devices. In their view, social control is about complementary processes consisting in creating or reinforcing the socialisation of individuals in addition to their appropriation of organisational purposes i.e. (1) selection and training processes for members from the organisation (2) management style processes aimed at enhancing communication between actors and their involvement (3) factors constituting cultural variables of organisations (myths, symbols) and (4) external socializing mechanisms like training or ex ante assessment by a community of professionals.

least in theory, contribute to the creation of value. Considering these perspectives, though multiple and more or less complex, enabled us to point out a number of things including, especially in the case of bureaucracy and *Transaction Costs Economics (TCE)*, a glaring lack of related TCE research with very little produced regarding the examination of the organisational mechanisms of governance (Grandori, 1997; Sobrero and Schrader, 1998; Zaheer and Venkatraman, 1995; Zajac and Olsen, 1983). Also, it was underlined that by "*isolating the transaction from its context and treating it as an independent event*" (Dekker, 2004, p. 31) TCE would actually elude a necessary dimension of control which takes into account the social context which in turn could "*result in informal coordination and monitoring and high trust between partners*" (Klein *et al*., 2000).

Finally, quite rapidly, it became possible for us to underline that there is a certain level of maturity in the co-operation literature dealing with management control principles and approaches. Still, it is not very developed with regards to management control tools, devices and mechanisms; a major void when considering that successfully addressing inter-organisational relationships is inevitably and highly dependent on appropriate management control tools and devices.

However, the output obtained through our observations has made it possible to focus on the management control practices and behaviours encountered within the inter-organisational co-operating arrangements of major civil aerospace firms. Supported by the *Key Levers* mentioned earlier, we aimed at providing meaningful insight into the control mechanisms and tools which fail, to one extent or another, for each of the IORs proposed for observation. Three IORs were chosen for the purpose of this study, because each of them is representative of different inter-organisational relationship management within civil aerospace that range from successful, to failed, to somewhat 'stuck in the middle'. Although the methods of observation varied slightly for each case, they remained in line with the basic requirements for the proposed research and the intention to study and assess in practice how control can be exerted in the framework of IORs.

The findings put forward were based on another contribution of this thesis: the ***Maturity Level Grid Analysis of IORs Management Control*** which could be used through internal and external audits. This grid organises control devices and mechanism types, namely formal or

informal, against IORs *Key Levers* and their *Enablers*[100] suited for reciprocal inter-organisational relationship types. In those relationships, stakeholder's activities are necessary inputs for each other's activities. Such relationships are for instance characterised by what is extensively reviewed within the Resource and Dependence Theory (Pfeffer and Salancik, 1978) and by high failure rates attributed to the difficulty of managing them (Ireland *et al.*, 2002). Also, due to increasing dependence and increasing uncertainty, such relationships are said to require increasing need for co-ordination and joint decision making (Dyer *et al.* 2001; Galbraith, 1977; Gulati and Singh, 1998). Finally, the structure chosen to govern such IORs proves critical to its success (Ittner *et al.*, 1999; Osborn and Baughn, 1990).

This tool was set up to be used as an analysis grid from which it is possible to assess the IORs studied with regards to their ability to satisfy requirements induced by the *Key Levers* identified. Based on such a systematic analysis and qualitative judgement of the transcriptions of on-field exchanges, this consisted in assessing each *Enabler* by taking into account their meaning and major attributes before allocating them assessment scores (Poor, Average, Good). Subsequently, for each IORs studied, it became possible to deduce a scoring for *Key Levers* by simply averaging the scores obtained for their respective *Enablers*. In the end the qualitative data obtained through our participating observation and case studies could thus be capitalised. By making good use of such an analysis process and on the ground experiences it was possible to highlight specific issues and effects linked to incompatibility, poor appreciation or even non-recourse to management control tools with regards to the *Key Levers* as advocated within the ***Co-operation Complexity and Key Levers Fit (CCKLF) Matrix.*** This assessment of the formal and informal control practices or devices used where appropriate for each *Enabler* of each *Key Lever* enabled us to underline key limits, in particular with formal control devices.

By following such a process, our intention was also to thoroughly compare the characteristics of the three IORs considered and to establish a correlation between their respective level of generally-acknowledged success and their assessment scores with regards to their *Key Levers* and control types management. Building on such a process intended to highlight critical aspects that can provide sound causes for the failure and success of inter-organisational interface management related to management control.

[100] Enablers participate in the Key Levers effectiveness

Indeed, building trust proved a crucial issue in sustaining the collaborative relationships as did the leader's role as a facilitator to establish the credibility of the co-operating members. Encouraging shared understandings instead of inter-group communication along with the development of a common language to create shared understandings also proved pivotal. In particular, it was concluded that the mutual involvement of co-operating stakeholders in problem resolution develops tacit knowledge[101]. Also, it was underlined that being responsive to relationships and learning processes should be considered paramount in the management of inter-organisational relationships.

Finally, our analysis process helped establish a sound formulation of reasons that could explain why formal control tools should not prevail over informal management control tools and that using formal instruments (such as formal contracts or asset ownership) cannot realistically be the panacea in the framework of IORs (Dekker, 2003; Ding *et al*., 2013). It was concluded that as often as not, the systematicality and complexity of the design and implementation of firms' prevailing formal management control tools can render them virtually inappropriate when dealing with IORs. Accordingly, it was underlined that instrumental approaches prove to be only a limited part of the overall equation in successful IORs management control within civil aerospace. In fact, both formal and informal control mechanisms prove relevant in securing or helping drive the different levels of inter-organisational arrangements. Instead of focusing exclusively on contractual clauses (liabilities, obligations, breach conditions, etc.), measures and other financial or operational performance indicators, appropriate management control tools would benefit from being interpreted differently. They should not be exclusively formal but focus on specific ***Enablers*** dealing with identified *Key Levers.*

In particular, relational contracts are an option that should be considered, as they offer important advantages over formal contracts, even though they are also vulnerable to people reneging on them. Consequently, the relationships of the parties involved are the central issue for which appropriate control tools are needed. Any integration decision should be made at the service of those relationships after recognising that implementing satisfactory relational contracts requires optimising the boundaries of the firms with regards to asset ownership, but also with regards to the way inter-organisational relationships are managed.

[101] This is about organisation innovation and the concept of tacit knowing is underlined by scientist and philosopher Michael Polanyi (1962).

As a result, it was suggested that organisational business relationships must be sought in the long-term. One key and primary element of IORs should be to fully understand the IORs configurations beforehand and not move forward with negotiations that hammer out details such as clear-cut vision of ultimate goals, the milestones that will measure progress and mechanisms for resolving conflicts and disagreements along the way. Importantly, it was also underlined that control mechanisms cannot avoid contradictions and especially limitations from the existing management accounting literature as developed by Caglio and Ditillo (2008, p. 867) due to the "*ambiguity in the accounting literature related to how inter-organisational relationships have been studied*" and some authors having sometimes positioned themselves as "*contributors on networks while in reality, they have focused on dyadic inter-organisational relationships. This has led them to neglect that inter-firm relationships are often nested within a wider network of relationships and to underestimate the influence of the network's architecture on cost and accounting controls".*

Overall, we focused on providing tangible arguments and findings to support the idea that definitely, IORs management control tools should deal with the control of actors' behaviours (social and cultural), actions (which is measurable), and processes or ways of doing things, especially with regards to capabilities and knowledge creation management. Indeed, after consolidating and interpreting results from on-field observations, it was possible to propose a sound academic contribution to the understanding of which management control mechanisms, tools and structures should be defined and implemented when dealing with IORs in civil aerospace.

In other words, the ***IORs Management Control Challenge*** was put forward as the building process and management of core competences for creating value (e.g. knowledge creation). We set a demonstration to underline that management control devices and their associated tools should deal with the following areas: motivation of actors in establishing an industrial co-operation; mutual understanding and knowledge management; stakeholders' attitudes and behaviours; networking and relationship management types established within co-operating firms; management of contracts; product positioning and portfolio management; level of consensus within and outside the organisations; control level of projects launched with key assumptions (e.g. if key factors are not properly assessed, regardless of the tools deployed, failure is almost guaranteed); co-ordination of tasks and lack of vision testified by leaders. An

additional contribution of this thesis can then emerge and is reflected in a specific sequencing of the *Key Levers* according to their level of criticality. Deduced from the *Co-operation Complexity and Key Levers Fit (CCKLF) matrix*, this is the ***Co-operation Snowball Effect concept*** which supports the idea of a necessary symbiosis between formal and informal control. As a principle, the *Co-operation Snowball Effect concept* stipulates that effective IORs require the successful sequencing of the ten *Key Levers* mentioned above (i.e.: Shared vision, Appropriation of concerns & Generation of Trust, Leadership, Mastery of Events (i.e. Co-ordination of tasks), Relational Capital Management (i.e., Positive Sensitive Attitudes), Networking capabilities (i.e. Best-in-Class Network Management), Balanced Economic Benefits Monitoring and Surveillance, Internal Co-operation (i.e. Influence of the organisation over external parties), Information Asymmetry (positive) Management, Information Systems (i.e. Devices & Management).

The *Co-operation Snowball Effect concept* provides insight into the priorities that should be kept in mind when dealing with IORs management control and helps better define the scope of the IORs management control tools recommended for successful IORs. The dynamic in time of this snowball effect is explained by the interdependence of the *Key Levers* identified as well as the principles of systems thinking put forward by Senge (1990), in particular. Rather than focusing on *Key Levers* separately, we suggested to look at a larger number of interactions between them as a whole.

Given the above position in the context of IORs within civil aerospace, and through the analysis of the three co-operating arrangement types offered in this thesis, it has also become quite clear that a major hurdle for building on the *Key Levers* proposed is most certainly linked to a problem of successful orchestration and execution of inter-organisational co-operating arrangements i.e. the ability to reconcile business systems, individuals, culture and structures in order to align and support initiatives, link and leverage capabilities or create purpose and challenge. Focusing on aspects related to the IORs strategic management control structure was viewed as a major asset to help further clarify which inter-organisational management control mechanisms and associated structural elements may deserve most attention. This view was reinforced especially with the IORs proposed for analysis and within the importance of premising both knowledge and expertise as key strategic resources is reinforced.

Consequently, it was proposed to explore the aspects pertaining to structure or organisational architecture. This consisted in appreciating suitable structural conditions upon which an appropriate deployment of formal and informal management control tools and mechanisms makes it possible to align with the *Co-operation Snowball Effect concept* and to address the question of enactment and effective deployment. This took shape in another contribution of this thesis, namely the ***IORs Scope of Management Control Matrix*** which takes into account how *Key Levers* can be enacted or impacted by three combined and coexisting processes: *entrepreneurial process, horizontal integration process* and *renewal process.*

Heavily inspired by authors like Chandler (1962), Cyert and March (1963), Bower (1970), Bartlett and Goshal (1993), the *IORs Scope of Management Control Matrix* formalises a necessary refinement of both the scope of activities and the tools for IORs strategic management control. Also, it is likely to reinforce existing academic positions (Hopwood, 1996; Otley, 1996, 1998) regarding a necessary transformation from traditional accounting to more managerial attributes. Additionally, such a refined strategic management control scope may be positioned as reconciliation between Williamson (1993, 2008) and Granovetter (1985, 2005) for elements such as innovation, tacit knowledge – Takeuchi and Nonaka, I. (1986) - or network, structural and social embededdness – Uzzi (1997).

Importantly, it was underlined that the three processes mentioned above coexist because of the overall symbiosis within and across the "*Active Players"* necessarily put in the limelight as defined by Larson (1992). Three core positions were thus put forward: *Front Line Management* who should be performance driven and act as real entrepreneurs to impact on initiatives and flexibility; *Middle Management* who should integrate strategies and capabilities jointly and horizontally to impact on co-ordination and reconciliation of systems or structures and *Top Management* who should jointly create the vision and challenge the status quo to impact on both motivation and reconciliation of people, culture and structures. Such individuals would take on the role of initiator for change and co-operation. Their impact would consist in interrupting old patterns. They would thus restructure the behaviours of the other stakeholders. Accordingly, reciprocity between stakeholders could become an unwritten rule relying on the appropriation of concerns in particular. Holistically, for each *Active Player* type, management control tools should thus focus on the *Enablers* which match the *Active Players' key mission.* This was put forward through the ***Guidance Matrix for Active Players' Key Missions Management Control*** established for the three IORs observed.

Finally, our analysis reinforced the view that failing *Top Management* teams are inevitably detrimental to IORs. Hence, we started exploring what could be put in place to guarantee the contribution from *Top Management*, in particular with regards to the sharing of a vision, the appropriation of concerns and the generation of trust across co-operating firms and, of course, the emergence of appropriate leadership. After taking into account traditional and modern approaches dealing with leadership, some concrete experiences about its practice could be capitalized. Critical issues commonly observed with regard to the control of Top Management were thus highlighted. Assuming that the role of *Top Management* should be to instill the desire to win in those who have the fear of losing, it was put forward that prevailing practices were not necessarily going in the right direction, especially with the more or less coercive legal framework for the production of financial information within civil aerospace firms. Just like in the case of accounting at fair value, by relying on management tools making technical expertise and formal control the undisputed basis of the representation of the performance, a question was raised: is it irrelevant or exaggerated to consider that when they are deployed, the usual prevailing tools for controlling Top Management actually appear as vectors of new situations of moral hazard? Shouldn't they instead encourage Top Management to work on a shared vision, towards the appropriation of concerns and the generation of trust between stakeholders? While one should of course not neglect the difficulty in exerting control over it, and as testified by the effectiveness of leadership control and measurement which is a question that remains almost unanswered, what appropriate mechanisms are in place to control the activities of Top Management for successful inter-organisational co-operating arrangements?

In any case, it seems relevant to wonder whether the more or less erratic deployment trends regarding the stewardship of increased production figures actually serve the management of both stakeholders (internal or external). In particular, and not only across civil aerospace firms, further research seems justified with regards to the inter-organisational relationships management control and the accounting tools commonly in place today. This may afford the opportunity to provide additional insights in research dealing with alternative modes of control and their real influence on most traditional management control approaches. This may substantiate the view that despite the fact that they prevail within most corporations, hierarchical and formal modes of control do not necessarily prove relevant or sufficient to deliver tangible successful achievements. Indeed, appropriate management control tools are

still needed to put under a necessary control the maturity level of teams (managers and subordinates), the level of culture shared, the management style and the leadership dynamic encountered within inter-organisational relationships. This sounds really justified as they prove necessary to preserve the relevancy of major actions along with risk-taking levels that can elevate commitment and emotional intensity across inter-organisational stakeholders. Finally, achieving all of this may be unlikely without controlling mutual trust, authentic communication and open-minded dynamics on which complicity between actors can be grounded.

Conclusion

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APPENDIX

Appendix

APPENDIX 1: BIODATA - STEPHANE NOGATCHEWSKY (DATED 2013)

Stephane has lived in Germany, in the UK and in France. He is fluent in all three languages.

He started his career as a financial analyst in an investment Bank (1994-1996). He then held **projects and purchasing management positions in the automotive industry** within *Valeo* (1997-1999) in Germany.

In 1999, he joined the **aerospace industry** and then evolved exclusively within Anglo-Saxon blue chip companies with a significant global exposure. Between 1999 and 2001, Stephane was s**trategic sourcing manager mainland Europe** within *TRW Aerospace*.

He joined "*AEROMOTOR"* in 2001, where he successfully held **supply business executive positions in Operations & Global Purchasing**. In 2005, he joined the sales force to hold the position of **sales executive** in France and won strategic sales campaigns.

In 2008, he was approached by *"ATERO"* to become **industrial strategy director**. Since 2012, within "*ATERO"*, he has been holding **a global cross-divisional position**. In particular, he is in charge of growth operations management activities (internally & externally).

Since 2011, Stephane has also been teaching management accounting, supply chain management control and strategy at Paris Dauphine University and HEC Paris.

Stephane is interested in inter-organisational relationships management and business development activities with particular emphasis on management control and operations.

He used to be an advanced rugby player, and outside his work likes skiing, running and participating in various family activities.

He is 40, married with one daughter and three sons.

NB: for strict confidentiality reasons, names of companies are kept anonymous

Appendix

APPENDIX 2: SEMI FORMAL INTERVIEWS – QUESTIONNARY TYPE A

Interviewee/COMPANY: **Date:**

Preamble: General description of the research field

Civil aerospace is a *capital intensive* and truly *international* environment. Imminently *political*, this sector is also mainly driven by *technological and competitive focus*. This requires a proper management of *products, geographical and cultural diversity* through strategic alliances[102], vertical partnership and buyer-seller co-operations in particular. Accordingly, the associated *inter-organizational interfaces* management faces with decentralization of assets and delegation of responsibilities which can be assimilated to the management of "*federations of companies*".

From an "inter-organizational / buyer-seller" relationships viewpoint and beyond an obvious cost optimization dimension, this raises the challenge of successfully aligning and supporting joint initiatives, building and leveraging respective capabilities, or creating purpose for both seller and buyer. Such reciprocal relationships are thus expected to enable the sharing of specific strengths like investments, resources or knowledge with risks occurring for mutual (rather than individual) gain. If not properly controlled, such a necessary *mutual dependence* is not likely to succeed as testified by numerous examples[103].

Accordingly, it is quite legitimate to review what the **root causes for failure** may be and whether well identified ***Key Levers*** really exist. Particularly, it is justified to review to what extend formal control devices should not prevail on **informal control**. Also, in order to describe and understand what doesn't work with the **implementation** of prevailing devices and best practices principles, the type of **organizational architecture** likely to enable

[102] Strategic alliances viewed as a set of cooperative arrangements between two or more firms with an intended common strategy that rests on win-win attitudes adopted by all stakeholders.

[103] Over the last decade the number of alliances has grown rapidly at an average rate of 25 percent per year (Parise and Casher, 2003). However, alliances do not have an effective track record: 50 to 60 percent of alliances fail within three years (Ellis, 1996; Parise and Casher, 2003; Segil, 2004). This lack of success is probably driven in large measure by the frequent tensions between competition and co-operation inherent in alliances (Bharat and Tarun, 2004) and not successfully controlled and managed

approaches induced from the above considerations is worth considering along with a **refinement of the scope for *Management Control*.**

SECTION A: ***Inter-firms interactions in general***

- What are the key motivators for an industrial cooperation?
- What factors affect significantly the performance of an industrial cooperation?
- What kind of role/impact can *(mutual) dependence* have with regards to the strengthening of ties between Inter-Organizational Relationships (IORs) stakeholders?
- What role *trust* and *relational norms* established between partners (asymmetrically dependent ones in particular) may have in IORs? Could they limit risks of opportunism and foster cooperation in the long term? Why?
- Why are co-operations failing so often?
- How do you imagine the ideal Inter-Organizational / buyer-seller relationships?
- Given today's environment, could you explain whether IORs / alliance are well realistic means to maximise mutual gains?
- What are the characteristics of any failing inter-firms cooperation?

SECTION B: ***The Cooperation studied: PARTNER X/COMPANY***

- What was the **purpose** for this particular cooperation?
- What **assets and strengths** would you insist on to characterize this cooperation?
- What **weaknesses** would you insist on to characterize this cooperation?
- What are the characteristics of the organizational architecture established for this particular cooperation?
- In what such an organizational architecture is appropriate to get the best from all stakeholders expected to be part of this particular cooperation, namely Top Management, Middle Management and Front Line Agents?

Management Control is about **safeguarding the devices deployed for reaching strategic objectives**[104].

- Resting on such a definition, how would you assess/consider *Management Control* deployed within this particular cooperation?

[104] It is a system of **organizational information** seeking and gathering, **accountability** and **feedback** designed to ensure that the enterprise adapts to changes in its substantive environment and that the work behaviour of stakeholders is measured by reference to a set of operational sub-goals (which conform with overall objectives) so that the discrepancy between the two can be reconciled and corrected where appropriate (Anthony, 1965; Lowe,1971).

Appendix

SECTION C: *Ranking of Key Levers*

Key Levers **Ranking (by importance/criticality): 1 means most important; 10 means least important**	Averaged ranking	Interviewee
Balanced Economic benefits monitoring and surveillance	10	
Mastery of Events (= Coordination of tasks)	9	
Information Systems (= Devices & management)	8	
Appropriation of concerns & generation of Trust	7	
Information Assymetry (positive) Management	6	
NETWORKING capabilities (= Best in Class Network Management)	5	
Relational Capital Management (=Positive Sensitive attitudes)	4	
Internal Cooperation (= influence de l'organisation du client sur le contrôle de ses fournisseurs (voir Plans Gwen)	3	
Leadership	2	
Shared vision	1	

OPEN QUESTIONS FROM INTERVIEWEE

Appendix

APPENDIX 3: SEMI FORMAL INTERVIEWS – QUESTIONNARY TYPE B

Interviewee/COMPANY: **Date:**

Preamble

Study on how moderate the negative and counter productive effects of highly dependent buyer-seller relationships in order to create/sustain a competitive advantage in line with targeted core competence in service management

Job position, time spent in that role / in the company (Interviewee)

SECTION A

***Relational Exchange View*/ bureaucracy-based control versus social-based control**

- Do you believe that firms seek firstly to exchange and cooperate in the long term to achieve mutual gains rather than behaving opportunistically to satisfy in the short term their individual interest?
- Do you think that dependence in a relationship encourage the parties to strengthen their ties?
- Do you believe that trust and relational norms established between asymmetrically dependent partners could limit risks of opportunism and foster cooperation in the long term?
- How do customers look to protect themselves from dominant suppliers' opportunism? By establishing legal and hierarchical links with suppliers (LTAs..etc)?
- Does it work well?
- Do you COMPANY customers have a real possibility to intervene directly or encroach on dominant supplier's organization
- Do you believe that trust and relational norms established between asymmetrically dependent partners could limit risks of opportunism and foster cooperation in the long term?
- Do you believe there is enough communication and information exchange with dominant customers? Do you have any process guidance in place?
- Do you think that establishing interpersonal relationships is the cornerstone of the cooperative process in the long term?
- Do you think that working with dominant suppliers, you as a customer, are well able to understand how to use power and leverage effectively?
- Do you believe you understand well your position of relative power when you begin to develop longer-term relationships with your supplier?
- From a seller viewpoint what would be your recommendation / process guidance to maximise value creation through buyer-seller relationships? Limit transactional risk and reduce information asymmetry?
- Do you believe that COMPANY is good at applying game theory i.e. a systematic way to understand the behaviour of the other players in situations where the fortunes of all are interdependent and uncertainty is present?

SECTION B

Your business market and Procurement/Supply-Chain Management

- Why did an alternative to vertical integration become increasingly necessary over the past decade?
- Is supply-chain management a key component of services management strategies? Is it strategic or tactical? To what extent?
- Do you believe that leading companies use many of the same practices and experience common problems in supplier development and other supply-chain management activities?
- Are you convinced of the superior performance achieved through supply-chain management in Japanese automotive manufacturing?
- Do you think that what is appropriate for one situation may not be appropriate for another? Why?
- Do you think that most often buyers pursue unrealistic relationship-management strategies in circumstances that are not conducive to the desired outcomes? Why?

Brief description of your purchasing organisation

- Selling strategy of your business unit (objective, construction): reduce transactional risk and exit situations of vassalage?
- Selling process and stakeholders involved (various departments)
- What are the objectives given to sellers?
- Do you have satisfying/reliable systems of information processing surveillance and assessment of dominant suppliers?
- Which judgement do you have on your customers buyers' community (skills, knowledge, assets…)?
- What are your expectations (suppliers) towards your clients?
- What are the relational modes with these suppliers? What are the current road blocks for that? What should change?

SECTION C

- With COMPANY, what is working well today?
- What is not working well enough?
- Where the road blocks come from? Please detail around stakeholders' engagement in particular.
- Given today's environment, are strategic alliances / JVs between COMPANY and Partner X realistic to increase/maximise mutual gains?

OPEN QUESTIONS FROM INTERVIEWEE

APPENDIX 4: SEMI FORMAL INTERVIEWS – QUESTIONNARY TYPE C

Because many of the data were collected ethnographically, the following items, inspired by Uzzi (Northwestern University) summarize the questions but only partly convey the nuances and details of the lengthy, interactive, and face-to-face discussions reported in this thesis.

- **INTERNAL ORGANIZATION:**

✓ Is this a proprietorship, partnership, or corporation?
✓ How many years of industry experience do the principals have?
✓ Do you produce any products in-house?
✓ Why do you contract instead of produce in-house?
✓ Do you outsource work that was done in-house?
✓ Is the decision to produce in-house primarily financial, organizational, or historic?
✓ How many firms work for you per year?

- **MARKET AND PRODUCT CHARACTERISTICS:**

✓ What are the characteristics of your product?
✓ How is your production organized?
✓ How sensitive is your product's demand to quality, price, and fashion trends?
✓ How has your market changed in the last 5 years?
✓ How has the firm adapted to these changes?
✓ What does it take to succeed in this business?

- **FORMING INTER-FIRM CONTACTS:**

✓ How do you contact new contractors? When will you use new contractors?
✓ What role does reputation play?
✓ How does the typical relationship begin and develop over time?
✓ Are written contracts used and when?

- **INTER-FIRM INTERACTIONS:**

✓ What kinds of relationships do you form with contractors?

Appendix

- ✓ Is opportunism a problem?
- ✓ How do you protect yourself?
- ✓ How are disagreements resolved?
- ✓ How do you manage the tradeoffs?
- ✓ In what ways is power gained in a relationship?
- ✓ When are you most vulnerable in a relationship?
- ✓ How do you respond to poor performance?
- ✓ How do you react to a contractor that passes on his price increases?
- ✓ What happens when a new contractor offers you a lower price than your present contractor(s)?
- ✓ Do you visit your contractor's shop?
- ✓ In what way do you reward good performance?

- **NETWORK OUTCOMES:**

- ✓ What benefits do you get from each type of relationship?
- ✓ What are the downsides?
- ✓ What kind of information is shared in different relationships?
- ✓ Please describe your contractual agreements with regard to setting performance and price.
- ✓ How are new products created and test marketed?
- ✓ How are investments in new equipment made?
- ✓ How do you increase your ability to respond to the market?
- ✓ What promotes innovation?
- ✓ What events or conditions lead to close business relationships?
- ✓ What mechanisms are effective in reducing costs?
- ✓ Do you attempt to attain a specific mix of relationships?
- ✓ What prevents you from attaining the mix you want?

APPENDIX 5: INDUSTRIAL STRATEGY ANNOUNCEMENT - INTERNAL NOTE

« ATERO » doit faire face, d'une part à une augmentation des volumes de production liés aux cadences des programmes actuels et au démarrage de production des nouveaux programmes, et d'autre part à un contexte économique fortement concurrentiel et contraint par la faiblesse du dollar et la hausse des prix matière.

Pour apporter une réponse industrielle, nous devons adapter nos schémas de production en terme d'implantation de compétences et de politique Faire / Acheter

Nous avons le plaisir de vous annoncer la nomination de **Stéphane NOGATCHEWSKY** en tant que Directeur Stratégie Industrielle rattaché à la Direction Production, en liaison avec la Direction Supply Chain, à compter du 2 janvier 2008.

Ses Missions principales seront :

- Elaborer la stratégie industrielle
- Piloter le plan de développement permettant de répondre à la demande
- Garantir l'amélioration de la structure des coûts de production et en particulier la réduction de sensibilité au dollar
- Adapter la répartition Faire ou Acheter
- Améliorer le processus global de maîtrise de la chaîne fournisseurs
- Développer les synergies avec les autres sociétés du Groupe

Je vous remercie de vous joindre à moi pour réserver le meilleur accueil à Stéphane et lui souhaiter toute réussite dans ses nouvelles fonctions.

MrGroup Vice-Président Production

Diplômé de la Warwick Business School (MBA), et de l'ESSEC, Stéphane a travaillé au Royaume-Uni, en Allemagne et en France. En 2001 il a rejoint « AEROMOTOR » (Civil, Defence and Corporate Aerospace) en tant qu'Exec. Engineer, Directeur BU Supply puis Directeur Régional. Auparavant, il avait travaillé dans l'industrie automobile.

Appendix

APPENDIX 6: SYNTHESIS OF REPORTED BUYER-SELLER RELATIONSHIPS IDEAL TYPES

- "… the relationships should be some sort of father and son. The father should be not only speaking well. It should be an example for the son and should take the hand and walk together. This is my idea of … this is a marriage … a business case that last for 30 years is like a marriage. Ok you can divorce, but divorce is very expensive. If you want to maintain a good marriage, you have not only to fall in love at the beginning but you have also to rest on a solid point of view and pave the future way day-by-day ... and this could be done only if the big player is paying attention that there is a small kid".

- "Consolidating COMPANY's position is important. One thing we are still bad at is that too many people think they have the right to go and talk to a supplier… The problem we have is that everyone seems to believe from project, to engineering, to plant that they can go and talk to suppliers…

- "… strengthening our relationship management so that our major suppliers get a single clear message from COMPANY of what is needed. The other thing is about the processes we have. Particularly, on the engineering side… Our engineers are very internally locked in. We need to open their eyes and their minds. We start to do this to show them how we work with suppliers, and engage them earlier so that we can get their ideas and incorporate them more efficiently.

- "With a dominant supplier you want to look at opportunities for both of us to win. Well, if they can do engineering work for us, we don't have to do the work. That's cost, not price and the result is that we don't incur what the supplier incurs for us. It is an opportunity for both sides to gain."

- "… First, buyers should remain in their positions long enough to understand the supplier market and the suppliers, ultimately. They should understand how they work, understand their organization, know the people in those organizations, understand their strategies, there should be transparency in the relationships in both directions. And we should be together on whether we're competitive or not competitive in dealing with the ultimate customers requirements."

- "…ten years ago the relationships between OEM and the partner or supplier were more protective from the viewpoint of the OEM and in the interest of the supplier. It was like a father with a child. .. Now the business became so difficult for everybody involved, that the attention to the profit is priority … The supply chain became a key element for the success of the programme…you inevitably must consider more stable relationships, more structured more ties in situations with certain partners. This is workable if you construct a team that is engaged for a certain period of time, for a certain number of programmes and the derivative of the programmes"

- "… It should be a real team aimed at making the best for the program from all the viewpoints. Sometimes the team can loose but sometimes it will gain. This is clearly the real change…. in today's business practices, you have the need to establish a stable and structured team to gain all the best from a flexible supply chain capable of overcoming all difficulties by taking the best from all the member of the team. Obviously at a point all the team member must be ready to work as real partner and not to take advantage from the others"

- "… transparency is very, very, very important on both sides definitely and it is crucial to be able to listen to the minority partner sometimes…but it is also critical to well define the point where the two parties can cross the bar of asymmetrical information. This is not also easy to enact because people below in the hierarchical ladder may also not be able to exchange messages containing appropriate strategic considerations."

Appendix

APPENDIX 7: ASSESSMENT OF THE KEY MISSIONS' IMPACTS ON THEIR ENABLERS – ATERO/TZUFU

The ranking is calculated by comparison between theoritical maximum and real scores. The presence of "1" means the Active Players' key missions are expected to impact on Enablers. The top four ranking scores are considered to reflect a distinctive impact of Active Players' missions on Key Levers			FRONT LINE AGENT KEY MISSIONS				MIDDLE MANAGEMENT KEY MISSIONS				TOP MANAGEMENT KEY MISSIONS		
		JULY 2013	Renewal Process	Integration process	Entrepreneurial Process	*JULY 2013*	Renewal Process	Integration process	Entrepreneurial Process	*JULY 2013*	Renewal Process	Integration process	Entrepreneurial Process
KEY LEVERS	ENABLERS AT STAKE (=participate in the Key Levers effectiveness)	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Managing the tensions between short-term performance and long-term ambition	Managing operational interdependencies and personal networks	Creating and pursuing opportunities	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Creating and maintaining organizational and co-operation trust	Linking skills knowledge and resources	Reviewing, developing and supporting initiatives across cooperating firms	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Shaping and embedding parties co-operation purpose	Developing and nurturing inter-organisational values	Establishing strategic mission and performance standards
Appropriation of concerns & generation of Trust	Cohesive groups, clans coordination (organic solidarity)	79%	R	Y	R	79%	1	1	1	83%	R	R	R
	Social Context consideration			Y			1	1	1		Y	Y	Y
	Contractualization				1				1		Y	Y	R
	Buyers committment		R	R	R		1		1		R	R	R
	Seller committment		R	R	R		1		1		G	R	1
	Trust establishment & management		R	R	R		1	1	1		R	R	R
	Understanding of sensitivity to interdependence of production and exchange relations		R	R	R		1	1	1		R	R	
	Governance structure well in place			R	R		1		1		Y	R	
Balanced Economic benefits	KPIs / Assessments	67%			1	42%			1	42%			1
	Cross organizational designed management accounting systems		1	1	1								
	Deeper involvement of accountants in the negotiation of actions and profits sharing		1		1		1		1		1		1
	Review of how the risk/return position of each party is affected by different actions		1		1		1		1		1		1
Best in Class Network Management / NETWORKING capabilities	Formal impersonal communication	62%		1	1	81%	1	1	1	48%		1	
	Ties among firms - Structural - Relational		1	1	1		1	1	1		1	1	
	Social recognition management			1			1		1			1	
	Managerial communication to further improve relational performance			1	1		1		1		1	1	
	Technical communication to further improve relational performance			1	1		1		1		1	1	
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)			1	1		1	1	1		1	1	
	EXPLICIT knowledge management				1			1	1				
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks (= balance properly level of trust and information needed)	58%		1		92%	R	R	R	67%	1	1	1
	Know who you are dealing with			1	1		Y	Y	R		1	1	
	Information management control relating to the willingness to trust given competence and integrity well recognized			1	1		R		R			1	1
	Information management control relating to the mastery of events which enables to plan and make decisions on collaborative futures. Fine grained information transfer			1	1		Y	R	R				1
Mastery of Events (= Coordination of tasks)	Cohesive groups, clans coordination (solidarité organique)	77%	R	R		70%	1	1	1	47%	1	1	1
	Clear Organisation and adequate escalation process		R	R	R				1		1		
	Constant evolution		R	R	R		1		1		1		
	Bonding		R	R	R		1	1	1		1	1	1
	Learning Philosophy		R	R	R		1	1	1				1
	Contractualization				R				1				1
	Coordination mechanisms like escalation pyramid or executive reviews		R	R					1		1		
	Setting down goals and methods		R		R		1		1				1
	Recognizing timing with none introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.		R		R		1	1	1				
	Governance structure targeted with determination		R	R			1		1		1		1
Positive Sensitive attitudes / Relational Capital	Social Capital management including sensitivity to culture	78%	R	R		100%	R	R	Y	78%	R	R	
	Level of mutual trust, respect and interaction between actors at multiple levels		R	R	R		R	R	Y		R	R	R
	Social recognition management			R			R	R	R		R	R	
	Relationship management type establishment about: = People interacting management = Joint problem solving arrangements		R	R	R		Y	Y	Y		R	R	
	Culture Management		R	R	R		R	R	R		R	Y	
	Power management		R	R			R	Y	Y		R	R	R
Shared vision	Congruent goals and collaborative futures worked out	50%	1		1	83%	R	R	Y	100%	R	R	Y
	Governance structure targeted determination		1				Y	Y	Y		Y	R	R
Internal Cooperation	Consencus between internal stakeholders	17%		1		17%		1		50%	1	1	1
	Internal governance structure targeted determination												
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	100%	R	R	R	100%	R	R	R	100%	R	R	R
Information Systems (= Devices & management)	Objectivizing and materializing technical, business and involvement aspects of IOR	0%				33%		1		33%			1

Appendix

Appendix

APPENDIX 8: ASSESSMENT OF THE KEY MISSIONS' IMPACTS ON THEIR ENABLERS – AEROMOTOR/GEARB

The ranking is calculated by comparison between theoritical maximum and real scores. The presence of "1" means the Active Players' key missions are expected to impact on Enablers. The top four ranking scores are considered to reflect a distinctive impact of Active Players' missions on Key Levers			FRONT LINE AGENT KEY MISSIONS				MIDDLE MANAGEMENT KEY MISSIONS				TOP MANAGEMENT KEY MISSIONS		
		JULY 2013	Renewal Process	Integration process	Entrepreneurial Process	*JULY 2013*	Renewal Process	Integration process	Entrepreneurial Process	*JULY 2013*	Renewal Process	Integration process	Entrepreneurial Process
KEY LEVERS	ENABLERS AT STAKE (=participate in the Key Levers effectiveness)	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Managing the tensions between short-term performance and long-term ambition	Managing operational interdependencies and personal networks	Creating and pursuing opportunities	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Creating and maintaining organizational and co-operation trust	Linking skills knowledge and resources	Reviewing, developing and supporting initiatives across cooperating firms	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Shaping and embedding parties co-operation purpose	Developing and nurturing inter-organisational values	Establishing strategic mission and performance standards
Appropriation of concerns & generation of Trust	Cohesive groups, clan coordination (organic solidarity)	79%	Y	Y	R	79%	1	1	1	83%	G	G	Y
	Social Context consideration			R			1	1	1		Y	Y	
	Contractualisation				G				1		G	Y	G
	Buyer committment		G	G	Y		1		1		G	Y	G
	Seller committment		Y	Y	Y		1		1		Y	Y	Y
	Trust establishment & management		Y	Y	R		1	1	1		G	G	
	Understanding of sensitivity to interdependence of production and exchange relations		Y	Y	Y		1	1	1		G	G	
	Governance structure well in place			G	Y		1		1		G	G	
Balanced Economic benefits monitoring and surveillance	KPIs / Assessments	67%			1	42%			1	42%			1
	Cross organisational designed management accounting systems		1	1	1								
	Deeper involvement of accountants in the negotiation of actions and profit sharing		1		1		1		1		1		1
	Review of how the risk/return position of each party is affected by different actions		1		1		1		1		1		1
Networking capabilities (= Best-in-Class Network Management)	Formal impersonal communication	62%		1	1	81%	1	1	1	48%		1	
	Ties among firms - Structural - Relational		1	1	1		1	1	1		1	1	
	Social recognition management			1			1		1			1	
	Managerial communication to further improve relational performance			1	1		1		1		1	1	
	Technical communication to further improve relational performance			1	1		1		1		1	1	
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)			1	1		1	1	1		1	1	
	EXPLICIT knowledge management				1			1	1				
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks (= proper balance between level of trust and information needed)	58%		1		92%	Y	Y	Y	67%	1	1	1
	Know who you are dealing with			1	1		Y	Y	G		1	1	
	Information management control relating to the willingness to trust given recognised competence and integrity			1	1		Y		Y			1	1
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer			1	1		Y	Y	G				1
Mastery of Events (= Coordination of tasks)	Cohesive groups, clan coordination (organic solidarity)	77%	Y	Y		70%	1	1	1	47%	1	1	1
	Clear Organisation and adequate escalation process		G	G	Y				1		1		
	Constant evolution		G	G	G		1		1		1		
	Bonding		Y	Y	Y		1	1	1		1	1	1
	Learning Philosophy		Y	Y	Y		1	1	1				1
	Contractualisation				G				1				1
	Co-ordination mechanisms like escalation pyramid or executive reviews		G	G					1		1		
	Defining goals and methods		Y		Y		1		1				1
	Recognising liming with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.		Y		Y		1	1	1				
	Governance structure targeted with determination		G	G			1		1		1		1
Relational Capital Management (=Positive Sensitive attitudes)	Social Capital management including sensitivity to culture	78%	Y	Y		100%	Y	Y	Y	78%	Y	Y	
	Level of mutual trust, respect and interaction between actors at multiple levels		G	G	G		Y	R	Y		Y	Y	Y
	Social recognition management			Y			R	R	Y		Y	Y	
	Relationship management type establishment about: = management of interacting people = Joint problem-solving arrangements		Y	Y	Y		Y	Y	Y		Y	Y	
	Culture Management		Y	Y	Y		Y	Y	Y		Y	Y	
	Power management		Y	Y			Y	Y	G		Y	Y	Y
Shared vision	Defining convergent goals and collaborative futures	50%	1		1	83%	Y	Y	G	100%	Y	Y	Y
	Governance structure targeted determination		1				G		G		G	G	Y
Internal Cooperation (= Influence of its own organization over external parties)	Consensus between internal stakeholders	17%		1		17%		1		50%	1	1	1
	Internal governance structure targeted determination												
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	100%	R	R	R	100%	R	R	Y	100%	Y	Y	Y
Information Systems (= Devices & management)	Objectivising and materialising technical, business and involvement aspects of IOR	0%				33%		1		33%			1

Appendix

APPENDIX 9: ASSESSMENT OF THE KEY MISSIONS' IMPACTS ON THEIR ENABLERS – YANKEES/BBR

The ranking is calculated by comparison between theoritical maximum and real scores. The presence of "1" means the Active Players' key missions are expected to impact on Enablers. The top four ranking scores are considered to reflect a distinctive impact of Active Players' missions on Key Levers			FRONT LINE AGENT KEY MISSIONS				MIDDLE MANAGEMENT KEY MISSIONS				TOP MANAGEMENT KEY MISSIONS		
		JULY 2013	Renewal Process	Integration process	Entrepreneurial Process	*JULY 2013*	Renewal Process	Integration process	Entrepreneurial Process	*JULY 2013*	Renewal Process	Integration process	Entrepreneurial Process
KEY LEVERS	ENABLERS AT STAKE (=participate in the Key Levers effectiveness)	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Managing the tensions between short-term performance and long-term ambition	Managing operational interdependencies and personal networks	Creating and pursuing opportunities	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Creating and maintaining organizational and co-operation trust	Linking skills knowledge and resources	Reviewing, developing and supporting initiatives across cooperating firms	RANKING OF EXPECTED IMPACT ON KEY LEVERS	Shaping and embedding parties co-operation purpose	Developing and nurturing inter-organisational values	Establishing strategic mission and performance standards
Appropriation of concerns & generation of Trust	Cohesive groups, clan coordination (organic solidarity)	79%	G	G	G	79%	1	1	1	83%	G	G	G
	Social Context consideration			G			1	1	1		G	G	
	Contractualisation				G				1		G	G	G
	Buyer commiltment		G	G	G		1		1		G	G	G
	Seller commiltment		G	G	G		1		1		G	G	G
	Trust establishment & management		G	G	G		1	1	1		G	G	
	Understanding of sensitivity to interdependence of production and exchange relations		G	G	G		1	1	1		G	G	
	Governance structure well in place			G	G		1		1		G	G	
Balanced Economic benefits monitoring and surveillance	KPIs / Assessments	67%			1	42%			1	42%			1
	Cross organisational designed management accounting systems		1	1	1								
	Deeper involvement of accountants in the negotiation of actions and profit sharing		1		1		1		1		1		1
	Review of how the risk/return position of each party is affected by different actions		1		1		1		1		1		1
Networking capabilities (= Best-in-Class Network Management)	Formal impersonal communication	62%		1	1	81%	1	1	1	48%		1	
	Ties among firms - Structural - Relational		1	1	1		1	1	1		1	1	
	Social recognition management			1			1		1			1	
	Managerial communication to further improve relational performance			1	1		1		1		1	1	
	Technical communication to further improve relational performance			1	1		1		1		1	1	
	TACIT knowledge management (= such knowledge is transferable only by experience and practice. It cannot be formalized/codified)			1	1		1	1	1		1	1	
	EXPLICIT knowledge management				1			1	1				
Information Asymmetry (positive) Management	Understanding and adjusting information needs depending on alliances types & business networks (= proper balance between level of trust and information needed)	58%		1		92%	G	G	G	67%	1	1	1
	Know who you are dealing with			1	1		G	G	G		1	1	
	Information management control relating to the willingness to trust given recognised competence and integrity			1	1		G		G			1	1
	Information management control relating to the mastery of events which enables planning and making decisions regarding future collaborations. Fine grained information transfer			1	1		G	G	Y				1
Mastery of Events (= Coordination of tasks)	Cohesive groups, clan coordination (organic solidarity)	77%	G	G		70%	1	1	1	47%	1	1	1
	Clear Organisation and adequate escalation process		G	G	G				1		1		
	Constant evolution		G	G	G		1		1		1		
	Bonding		G	G	G		1	1	1		1	1	1
	Learning Philosophy		G	G	G		1	1	1				1
	Contractualisation				1				1				1
	Co-ordination mechanisms like escalation pyramid or executive reviews		Y	G					1		1		
	Defining goals and methods		G		G		1		1				1
	Recognising timing with no introduction of accounting techniques and processes just because they seem logically relevant for mastery of events.		1		Y		1	1	1				
	Governance structure targeted with determination		G	G			1		1		1		1
Relational Capital Management (=Positive Sensitive attitudes)	Social Capital management including sensitivity to culture	78%	G	G		100%	G	G	G	78%	G	G	
	Level of mutual trust, respect and interaction between actors at multiple levels		G	G	G		G	G	G		G	G	G
	Social recognition management			G			G	G	G		Y	Y	
	Relationship management type establishment about: = management of interacting people = Joint problem-solving arrangements		G	G	G		G	G	G		G	G	
	Culture Management		G	G	G		G	G	G		G	G	
	Power management		Y	Y			G	G	G		Y	G	G
Shared vision	Defining convergent goals and collaborative futures	50%	1		1	83%	G	Y	G	100%	G	G	G
	Governance structure targeted determination		1				G		G		G	G	G
Internal Cooperation (= Influence of its own organization over external parties)	Consensus between internal stakeholders	17%		1		17%		1		50%	1	1	1
	Internal governance structure targeted determination												
Leadership	Lead change and provide a meaning to rally individuals Awareness of the prime importance of faith in likelyhood of success and in satisfying individuals' motivations	100%	Y	Y	Y	100%	Y	Y	G	100%	G	G	G
Information Systems (= Devices & management)	Objectivising and materialising technical, business and involvement aspects of IOR	0%				33%		1		33%			1

Appendix