Rebuilding supplier relationships: an action research study of contract and collaboration complementarity

Abstract

Despite the body of evidence suggesting that contracts can complement social controls, much remains to be learned about situations where complementarity is not evident. The emerging contingency perspective on complementarity provides insights into the complexity of the contract-trust interplay, but little theoretical guidance exists suggesting how this interplay can be influenced such that dysfunctional relationships lacking trust can be transformed. This longitudinal study of three problematic relationships in a complex engineering projects setting exposes a duality in formal coordination mechanisms that has a polarising effect on trust. For dysfunctional relationships to become collaborative, coordination mechanisms need to address impediments to mutuality, enabling new relational norms to develop, which in turn disrupt negative trust cycles, enabling relationship repair.

**Keywords****:** collaboration; contracts; coordination mechanisms; trust; dysfunction; action research

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# Introduction

Collaboration provides access to scarce resources (Reuver & Bouwman, 2012) and enables synergistic interaction between businesses (Daugherty et al., 2006) that is a source of competitive advantage (Dyer & Singh, 1998). Collaboration is founded on social controls such as trust, mutual commitment and cooperative behaviour (Daugherty et al., 2006; Dyer & Singh, 1998); factors with which commercial contracts have not traditionally been considered compatible (Argyres & Mayer, 2007). Contracts provide safeguards against partner opportunism but may signal partner distrust (Yang, Zhou, & Jiang, 2011), inhibiting collaborative behaviour and suggesting an incompatibility (Ghoshal & Moran, 1996; Huang, Cheng, & Tseng, 2014). Although an increasing body of evidence now suggests that contracts may complement collaboration (Cao & Lumineau, 2015; Luo, 2002; Poppo & Zenger, 2002), neither viewpoint is established definitively (Rhee, Kim, & Lee, 2014) and mixed results are still evident, despite extensive research (Sánchez, Vélez, & Ramón-Jerónimo, 2012).

Incompatibility would be problematic because in practice many firms use both contractual and relational governance (Cao & Lumineau, 2015). In complex and uncertain contexts, both may be necessary to compensate for weaknesses in the other (Roehrich & Lewis, 2014), so greater understanding of the interactional effects of these approaches is needed (Rhee et al., 2014). Recently, a more nuanced, contingency perspective has emerged, in which complex interplays between contractual and relational governance are considered for their effects on complementarity (Howard, Roehrich, Lewis, & Squire, 2017; Lumineau, 2017; Weber, 2017). A detailed understanding of how these approaches complement each other is key to enabling the benefits of collaboration to be achieved where complex contracts are an established reality.

Such detail has been slow to emerge because, in a field dominated by cross-sectional studies, there have been few studies of the dynamics of this interplay (Howard et al., 2017). The few longitudinal studies undertaken have provided valuable insights into the role of goodwill trust in contract interpretation and application (Faems, Janssens, Madhok, & Looy, 2008), the role of integrators in maintaining trust and meeting contract objectives (Oliveira & Lumineau, 2017) and the coexistence of dysfunctional and functional performance in relationships (Howard et al., 2017), but still little theoretical guidance exists on how dysfunctional relationships with low trust can be repaired, especially in the presence of complex contracts.

More longitudinal research is needed on the revitalisation of interfirm relationships (Faems et al., 2008), particularly in complex and uncertain environments (Howard et al., 2017). Therefore, this study addresses the question: how can dysfunctional relationships be transformed into functional, collaborating relationships through a realignment of formal and relational governance?

The context is a high-risk, regulated, maritime construction setting in north-western France, featuring the supply of highly-skilled labour. The buyer incurs significant project delays and switching costs where relationships fail, yet three significant strategic relationships had failed prior to the start of the research. Action research was used to investigate and repair three dysfunctional relationships. Unlike observational studies, action research encourages extensions to existing theory to be conceived and tested in the field.

A duality is exposed in coordination mechanisms that has a polarising effect on the development of trust. The findings demonstrate that realignment of coordination mechanisms with the intended style of governance and the targeting of relationship-specific impediments to mutuality enables the development of previously absent trust, and the repair of dysfunctional relationships.

# Conceptual Background

Commercial relationships are managed through two contrasting, basic forms of governance: formal control and social control (Huang et al., 2014). Contracts and formal organisational mechanisms provide the means through which formal control is effected (Argyres & Mayer, 2007; Selviaridis & Wynstra, 2015), whilst trust and relational norms constitute the two main relational control mechanisms (Dekker, Donada, Mothe, & Nogatchewsky, 2018). Relational norms refer to shared expectations about behaviour (Cao & Lumineau, 2015), bilateralism and continuance (Zheng, Roehrich, & Lewis, 2008), solidarity, info-sharing and flexibility (Dekker et al., 2018; Rhee et al., 2014).

The long-raging argument over whether formal and informal governance approaches are complementary (Yang et al., 2011) has recently been supplanted with a more nuanced, contingency approach (Howard et al., 2017; Lumineau, 2017; Weber, 2017) recognising a more complex interplay than previously acknowledged, such that the two forms need to be regarded as semi-coupled (Howard et al., 2017). Contingency perspectives on complementarity are currently fragmented. Complementarity may depend on the deployment of positively framed promotion (relational) contracts, rather than negatively framed prevention (safeguarding) contracts. Promotion contracts set ideal goals, achievement of which generates high positive emotion, whereas prevention contracts stress minimum performance standards, breach of which leads to high negative emotion (Weber, 2017; Weber & Mayer, 2011). Others consider that it is the way contracts are used, rather than their design, that enables complementarity (Huang et al., 2014) and it has also been reported (counter-intuitively) that weak-tie social capital, rather than the strong-ties typically associated with collaboration, are necessary for complementarity (Yang et al., 2011).

Contracts are ubiquitous (Weber & Mayer, 2011) and central to most supply arrangements (Zheng et al., 2008), so the co-existence of contracts and social controls is a necessity, where collaboration is intended. This section unpacks the concepts of contract and trust (as the typical focal element of relational governance) and discusses the interplay between them. The rarely studied concept of dysfunction, relating to governance and relationships, is then considered, followed by a theoretical model illustrating how the emphasis on different governance approaches shifts according to the nature of the relationship.

## The roles of contracts

It is widely acknowledged that contracts fulfil two largely different purposes (Lumineau, 2017), a safeguarding function and a coordination function.

Firstly, contracts act as instruments for obviating moral-hazard, reducing the risk of partner opportunism (Luo, 2002) through *task specificity* in which “a shared, clear understanding” is created through a detailed set of obligations (Zhang, Zhou, Wang, & Wei, 2017, p. 185) and through fixed-price, usage-based, or performance-based remuneration mechanisms (Mouzas, 2016; Selviaridis & Wynstra, 2015). This safeguarding approach becomes progressively more costly and impractical as *complexity* and *uncertainty* in the exchange increase (Schepker, Oh, Martynov, & Poppo, 2014), and ultimately is constrained by human capabilities (bounded rationality) such that, inevitably, many contracts are incomplete (Cao & Lumineau, 2015; Mouzas & Blois, 2013).

Typically, in the contracts literature, *complexity* connotes detailed (rather than simple) contracts (e.g. Praxmarer-Carus, 2014; Shen, Wang, & Teng, 2017) and needs to be distinguished from *exchange complexity,* relating to complexity in supplied products, services, or associated projects (e.g. Oliveira & Lumineau, 2017). As exchange complexity increases, so completeness through complex contracts becomes less attainable.

Contract completeness is also impacted by *uncertainty* arising from ambiguity, partner uncertainty, and volatility. Ambiguity denotes weaknesses in understanding of the here-and-now (Carson, Madhok, & Wu, 2006) that could be exploited opportunistically (Ford & Mouzas, 2010), whilst partner uncertainties highlight doubts about sourcing (network uncertainty) and capability (fulfilment uncertainty) (Ford & Mouzas, 2010). Volatility describes business environment uncertainty that constrains future predictions. Unforeseen contextual contingencies increase contracting costs (Mouzas, 2016) but can be managed through flexible umbrella (framework) agreements that facilitate complex business interaction by providing a basis for continued negotiation and action (Mouzas & Ford, 2006). Flexible relational processes become important in volatile business environments (Carson et al., 2006), but safeguards such as performance-based payments may become impractical (Nullmeier, Wynstra, & van Raaij, 2016).

Secondly, contracts fulfil a coordinating function defining the roles, responsibilities and management processes through which conformance with obligations is maintained (Argyres, Bercovitz, & Mayer, 2007; Malhotra & Lumineau, 2011; Schepker et al., 2014). Coordination addresses *contingency specificity* through which the parties agree how unpredicted events are managed (Zhang et al., 2017). Relationships featuring reciprocal inter-dependence require the most extensive coordination (Dekker, 2004).

Although formal coordination is widely recognised in the contracts literature, there is little consistency in descriptions of purpose, benefits or mechanisms. Coordination is variously defined as action: to deal with unanticipated events (Oliveira & Lumineau, 2017), to mitigate negative behaviour (Carson et al., 2006), to facilitate information exchange (Lumineau, 2017) and to align expectations (Argyres et al., 2007). Benefits of coordination include improvements in competence trust (Malhotra & Lumineau, 2011), reduced likelihood of a partner feeling exploited (Lumineau, 2017) and improved efficiency (Shen et al., 2017). Diversity is also apparent in coordination mechanisms, which include definitions of roles and responsibilities (Howard et al., 2017), scheduling and planning (Oliveira & Lumineau, 2017), contingency planning (Zhang et al., 2017), monitoring, reporting and enforcement (Reuer & Arino, 2007), interaction interfaces (Lumineau, 2017) and steering committees (Reuer & Devarakonda, 2016). Given these variations, contract coordination clauses are typically customised, and rarely covered by standard ‘boilerplate’ (Reuer & Devarakonda, 2016).

## Trust and the interplay with contracts

Trust represents the willingness of one party to be vulnerable to the actions of another, based on positive expectations of the other’s motivation (Lumineau, 2017). Trust is a prerequisite for long-term relationships and is positively related to future business intent (Doney & Cannon, 1997). Although many in the contracts literature consider trust to be unidimensional (Cao & Lumineau, 2015), a distinction is often drawn between competence trust, through which the other party’s ability to perform is assessed, and goodwill (integrity) which represents their intentions to behave in a trustworthy manner (Das & Teng, 2001; Malhotra & Lumineau, 2011).

Trust is reciprocal, such that a trusted party is more likely to trust its partner (Doney & Cannon, 1997). Reciprocity means that trust tends either to be built in a self-reinforcing virtuous cycle (Gulati & Sytch, 2008; Huxham & Vangen, 2013; Pomponi, Fratocchi, & Rossi Tafuri, 2015), or dissolved in a negative vicious cycle (Das & Teng, 1998).

Contracts and trust play key roles in relationships, but the nature of their interplay remains equivocal (Cao & Lumineau, 2015). The safeguarding and coordinating functions of contracts have different effects on trust. Safeguards increase competence trust, but decrease goodwill and collaboration intent, whilst coordination provisions increase competence trust and an organisation’s collaboration intent (Malhotra & Lumineau, 2011).

Trust judgements are also conditioned by contextual biases (Weber, 2017). In complex relationships founded on comprehensive safeguarding contracts, the partner selection process creates a positive attribution bias through which competence is initially assumed, such that subsequent (even poor) performance is favourably interpreted and the positive bias reinforced. However, the opposite occurs with integrity (goodwill) trust. Prevention contracts create a negative attribution bias in which opportunism is initially assumed, such that subsequent (even good) behaviour is negatively interpreted and the negative bias reinforced (Weber, 2017). Therefore, these mechanisms act to maintain the status quo. Although even unstable relationships may continue and achieve a significant turnaround in trust dynamics (Faems et al., 2008), this may be dependent on managers’ ability to disrupt the status quo.

## Dysfunction

Predominantly, the contracts literature evaluates factors leading to positive relational outcomes, such that few consider dysfunction conceptually. Dysfunction is discussed in the context of coordination dynamics (Oliveira & Lumineau, 2017), opportunism (Ghoshal & Moran, 1996), trust (Lumineau, 2017), and governance (Howard et al., 2017). Dysfunction can arise where conditions change such that ongoing joint consent is no longer possible (Mouzas & Ford, 2006), or it may be transient, and observed in parallel with functional performance in other areas of the same relationship. When prolonged or recurrent dysfunction occurs, relationships themselves may be considered dysfunctional (Howard et al., 2017), thus threatening their continuance. In this study, dysfunction is considered to mean ‘not operating as intended or expected’, and the subjective nature of intentions and expectations means that buyer and supplier perceptions of dysfunction may differ. Collaborative relationships need to meet partners’ reasonable expectations (Mouzas & Ford, 2006; Mouzas, Henneberg, & Naudé, 2007) such that relationships remain functional from both parties’ perspectives (Howard et al., 2017).

## Theoretical framework

Finally, formal and relational governance interplay is summarised through a theoretical framework (Figure 1) relating three concepts: relationship style, governance approach and risk, to illustrate how governance emphasis needs to vary according to contract uncertainty and relationship style.

🡨 Insert Figure 1 approximately here 🡪

Style describes the relational proximity between buyer and supplier and varies from arms-length to collaborative (Hoyt & Huq, 2000). At the extremes of this continuum, wholly arms-length relationships, devoid of social interaction, are governed through (classical) contracts alone (Williamson, 1979), whereas wholly collaborative relationships, with which formal contracts are considered to be incompatible, are governed solely by social controls (Hardy, Lawrence, & Grant, 2005). Complementarity, therefore, applies only within the area between these extremes. For buyers the choice of relationship style should be determined by weighing the risk of partner opportunism against those arising from contract uncertainty (Dekker, 2004). Highly complex and uncertain exchanges require collaborative relationships to manage unforeseen circumstances (Oliveira & Lumineau, 2017). In these demanding circumstances especially, there is a compelling need to understand the contract-trust interplay better, such that complementarity is ensured. For dysfunctional relationships, lacking trust, this understanding becomes an urgent priority.

# Research Design

This study examines how dysfunctional relationships featuring low levels of trust, and founded on detailed contracts, can be transformed to become collaborative. The research opportunity was afforded by a heavy engineering constructor, experiencing problems with strategic relationships. Action research was selected for its potential to support parallel academic and practical objectives in which it “aims both at taking action and creating knowledge or theory about that action” (Coughlan & Coghlan, 2002, p. 220).

In the light of factors driving “a new zeitgeist of closer ties between research and practice” (Hodgkinson & Rousseau, 2009), there has been a recent revival of interest in action research in management research (Touboulic & Walker, 2016). Action research enables situated proving of developing theory (Zhang, Levenson, & Crossley, 2015), and its relevance to researched organisations ensures mutually beneficial outcomes through a “practical and problem-solving orientation” (Touboulic & Walker, 2016, p. 316).

The focal high-technology maritime engineering firm was experiencing serious issues with strategic relationships, including several failures. The study focused on the most challenging build area within a complex, multi-year construction project, because this area had witnessed the highest rate of relationship breakdowns. Three specialist suppliers are engaged in this work enabling inter-case comparisons that were particularly insightful when evaluating the impact of buyer actions on suppliers. The action research, conducted between 2014 and 2017, is part of an ongoing wider research study, started in 2012. Research is regulated through its own steering committee that exists in addition to the three separate relationship governance boards.

Action research follows iterating cycles of planned and evaluated action. The four typical steps of constructing, planning, enacting and evaluating action (Coghlan & Brannick, 2014) were utilised. Evaluation is a key reflexive stage in the action research intervention cycle (Cassell & Johnson, 2006), generating ideas for discussion with practitioners, and potential extensions to theory that can be field-tested. Cycles of action were aligned to quarterly research steering committee meetings, which preceded the quarterly relationship governance boards.

Four sources of research data were utilised: firstly, discussions and feedback from the formal research governance meetings; secondly, 25 in-depth interviews lasting 90-120 minutes each; thirdly, observation notes from supplier and buyer meetings, and finally, project documentation including contracts. Purposive sampling was employed to ensure that the most relevant informants were selected (Goulding, 2005). Executive owners were engaged initially, followed by commercial and operations managers identified by executives, for the buyer organisation and the three suppliers. Drawing on data collected since the start of the project, including the two terminated supplier relationships, the recent history of the relationships was reconstructed (Figure 2) using a time sequenced critical incident chart (Collis & Hussey, 2014). The effects of events on trust were reconstructed and summarized graphically (Figure 3). Meetings and interviews were all recorded, transcribed and analysed following open, axial and selective coding processes (Strauss & Corbin, 1998), leading to the abductive derivation of a second-order (theoretical) concept (Saldana, 2016), through which the relationships between first-order themes are explained (Table 1).

# Findings

This study examines how dysfunctional inter-organisational relationships, in a complex-projects context, may be transformed into functional collaborative relationships. The focal firm is a €3.5bn turnover engineering constructor, with over 12,500 employees, that relies on sub-contractors for more than 80% of its specialist workforce. The research focused on the construction of a sophisticated engine with a 30-year lifetime and a construction time exceeding two years per unit. This is the most complex area of the main project. Five suppliers (A to E) have been utilised, including two terminated relationships (A and B) and a failed but resumed relationship (C). The parties are contracted through *contrat-cadre* framework agreements, with an annual value of €1-1.5m each. These negotiated agreements define the generic tasks, a task-oriented payments and incentives scheme, obligations and relationships, and a comprehensive set of legal, technical and security safeguards. Order commitment occurs through periodically issued technical specifications and purchase orders, within the framework terms.

## Pre-intervention contextual analysis

The five suppliers engaged on the studied area of the construction each experienced a troubled relationship with the buyer, to the detriment of both sides. In a specialist market the buyer’s sourcing options are limited, and it recognised a need to work more collaboratively.

**A**: Relationship failed in early 2012 due to a perceived failure to adapt to the project complexity. Cross-functional issues within the buyer organisation and its tendency to instruct the supplier on resourcing were subsequently recognised as contributory factors. Contract-based control rather than collaboration was evident. The breakdown resulted in high compensation and switching costs for the buyer.

**B:** replaced A but was also unable to adapt to the technical complexity and uncertainty surrounding the prototype construction. The detailed specifications in the contract did not match reality on-site. B faced financing difficulties when the construction area, plans and supplies were not ready for staff it had recruited. B missed construction milestones and the relationship ended quickly, but with compensation paid to B.

**C:** The oldest relationship with this large, highly experienced company, was abruptly exited in 2010, after more than 20 years. C was initially replaced by A, but the companies subsequently renewed their relationship and have worked together since 2014. C is considered expensive but argues its prices are necessary to meet the buyer’s requirements. C argued that more task autonomy would enable efficiency improvements and lower prices, as almost 30% of its costs were coordination costs. A good dialogue existed, and a willingness to collaborate, but this was not reflected operationally.

**D:** replaced B. The buyer was dissatisfied with this relationship. Although the workforce is suitably qualified, the buyer considered that D lacked the managerial competences to deal with frequent technical changes, or to suggest solutions. This led to a reduction in contracted scope, with other work redirected to E. The buyer recognised that D needed more autonomy to identify and fix issues but did not properly understand D’s perspective on the relationship, the issues it faced, or its suggestions for improvement.

**E:** The most successful relationship from the buyer’s perspective. The buyer values E’s technical skills and managerial competence in handling project complexity. However, E’s perception of the buyer was less favourable. E expected much more buyer support to improve project efficiency, before it could regard the relationship as a collaborative partnership.

<Insert Figure 2 here>

## Addressing relationship dysfunction

Detailed cross-case analysis revealed a wide range of collaboration inhibitors which, through an inductive process, were categorized into six themes (Table 1). Themes are presented below as an unfolding discourse, revealing the inter-related nature of issues and their consequences that, collectively, formed the basis for the initial cycle of remedial action. The consequences to the buyer included project delays, increased operational costs, disputes and compensation claims. Suppliers experienced increased costs, difficulties in resource planning and also expressed a variety of affective reactions, including frustration and feeling uninvolved.

<Insert Table 1 here>

Despite the buyer’s declared ambition for collaboration, the extant style of relationships was more readily classified as ‘arms-length’. This lack of collaborative interaction was evident in relation to designing, planning, problem resolution and misaligned expectations. Suppliers complained of *dysfunctional* *information sharing*, with designs and plans shared too late to enable them to contribute ideas or plan effectively. Suppliers needed to see longer-term plans even if their accuracy was low, but the buyer was perceived not to trust its suppliers with earlier access to sensitive information.

“Instead of talking on a weekly basis, work should be planned on a monthly basis. The division of the work is too small. There are fragments of tasks here and there, instead of a complete picture. We work in the present now. There is no time to fully define the whole work”

“… handling supply delays and improving the level of information granularity communicated to the supplier ... these actions must be taken in coordination with suppliers.” [C, chargé d’affaires, 2016]

The buyer, however, intended to involve its suppliers more when the prototype construction was complete, and design certainty improved, even though the greater benefit of collaboration was during this phase. The phrase “information communicated to” indicates the prevailing hierarchical culture.

“Being at the prototyping stage, is a real constraint. It implies inconsistency and immaturity in the plans and the designs ... This has an impact on the level of granularity on the information communicated to the supplier. We are considering design changes for the future engines, in coordination with the suppliers, in order to integrate their feedback” [Buyer, Site Director, 2016]

Even when detailed plans were released and supplier resources were dedicated to site, suppliers complained of *unfulfilled buyer obligations* relating to materials and construction site readiness that led to delays and increased costs from idle resources. The buyer’s failure to address these issues reduced suppliers’ trust in its competence. Frequent changes to specification to address technical issues also impacted agreed payment schedules, requiring further negotiation.

“The challenge is to avoid our teams being stopped. Every time that a team starts an activity, it is blocked. A team almost never completely finishes what it started. There are always sticking points. Factors causing time loss are numerous: incomplete supply, current configuration changes, etc. We are often beyond the initial provisions of the contract. Any change requires a lot of administrative work. They promise to provide all the necessary supply. But they are never here on time.”

 “Relevant actions are needed on the causes of delays, particularly in providing supplies and all that the supplier needs to achieve tasks, as agreed.” [E, chargé d’affaires, 2016]

Issues relating to information flow and buyer obligations persisted because of *dysfunctional problem management* and escalation processes. Prevailing processes were considered excessively formal and potentially inflammatory (“worsening the situation”).

“When is there an opportunity for suppliers to report on difficulties experienced in the field, without losing time and worsening the situation? In relation to actions, we would ask for an exhaustive report/checkup/assessment of the difficulties, including specific rather than generalised details. This report must be sent two or three days before the meeting. Action is needed on the treatment of operational difficulties. The question is: what is the most relevant body or process to be built in common with suppliers?” [Buyer, Site Director, 2016].

Suppliers felt unable to access buyer representatives with the relevant technical or operational backgrounds with the authority to resolve issues.

“There is no a real exchange. There is no decision making. We take a photo. We discuss where we are. And that is all” [E, Manager, 2016]

These issues reflected *misaligned expectations* for how the relationships should operate, particularly with respect to planning and problem resolution, but the lack of interaction meant that many in the buyer organisation were unaware of the depth of feeling surrounding supplier expectations until these were raised through the research project.

“We don’t feel that we are in a “partnership”, because we have the impression that we are not listened to and the buyer doesn’t interact with us when we express difficulties” [D, Manager, 2016].

The failure to meet expectations adequately undermined the suppliers’ trust in the buyer’s competence, and this in turn promulgated disputes rather than collaboration. The expectation gaps were revealed over many months through interviews and observations at meetings.

At the heart of these issues lay *dysfunctional governance mechanisms* including steering meetings that had unclear agendas, inappropriate attendees and that lacked decision makers.

“Contract meetings are not intended to resolve problems, as this supplier thinks. We need to have a common understanding of the aims and the philosophy of each of the existing meetings. We need also to define a taxonomy of meetings necessary for an efficient partnership, as well as involving the right persons in each type of meeting.” [Buyer, Site Director, 2016].

Suppliers also commented on the need for less “cumbersome” and more “constructive” meetings enabling quicker decision making.

 “A partnership requires more constructive and more advanced meetings” [C, Manager, 2016].

“If we had really all the decision makers and the executives, then we can express a problem, act on it during the meeting. Then we sign at the bottom. But now if we meet, the buyer expresses his problems, we express ours. We take notes. Ok, we will see you later... It is not a constructive meeting. There are cumbersome and heavy procedures that could have been lightened if we had the decision makers in the meeting” [E, Manager, 2016].

The governance mechanisms reflected hierarchical, remote decision-making oriented toward risk reduction (safeguarding) rather than peer collaboration. The consequences, according to C, were increased delays and decreased productivity.

Relationship meetings were also hampered by an *ineffective payments scheme* leading to lengthy debates on the validity of suppliers’ performance-related invoices and additional compensation claims. In a volatile environment, where the effect of variations to inputs is impossible to quantify, performance contracts are not only ineffective “… compensating these delays does not solve the deep problem”, but also increase disputes and inhibit trust building, as partners suspect potential opportunism. Frequent problems also meant that bonuses were unachievable, reducing suppliers’ goodwill trust toward the buyer.

“Today the basic design of the payment mechanism for the suppliers is not relevant, and thus inappropriate as an incentive financial tool. This has resulted in a large number of tasks started-but-pending, verses a tiny fraction of tasks completely finished and invoiced” [C, Manager, 2016]

“Unfortunately, no one got any bonus. The causes are related to the field conditions - unready plans, impossible dependencies, unachievable plans”. [Buyer, Supply manager, 2016]

## Reinforcement cycles addressing mutuality impingements

Initially, despite the buyer’s intentions, neither trust nor collaboration were evident. Indications were that formal coordination mechanisms were inhibiting collaborative interaction and problem-solving. Action was taken to restructure governance boards, with clearer roles for each board, increased authority and more appropriate attendees. Three boards were established to cover operational, contractual and coordination agendas. Complementary changes were made in the field to increase interaction and local empowerment.

These symptom-fixing actions had limited effect however, until underlying issues relating to a lack of mutuality in the relationships were recognized and addressed. The term mutuality encapsulates peer respect, shared expectations and mutually beneficial outcomes, all of which, the data suggested, were suboptimal. Of these elements, the lack of *peer respect* evident in the buyer’s approach to its suppliers was recognized as a key impediment to mutuality. *Peer respect* is defined here as an organisation’s willingness to accept its partner as an equal and is manifested in the extent to which the partner’s knowledge, opinions and expectations are valued. The buyer’s poor understanding of supplier expectations, its unwillingness to engage in joint planning or joint problem resolution, and its failure to remedy its own poor performance, did not demonstrate peer respect, and led to low trust in its competence (Figure 3).

Coordination mechanisms needed to promote mutuality, with less emphasis on culpability disputes and compensation negotiation. Action within the buyer organisation to establish the importance of mutuality was supported by the appointment of a semi-independent head of sub-contracting and an empowered problem solver at site. Changes were made to problem solving, information sharing, planning, change and escalation processes enabling suppliers’ voices to be heard: *“the duration to answer … has been largely reduced. Answers took two months to arrive, now they take two hours”* [C, Manager, 2017]. Improved collaboration enabled amendments to the payments and incentives scheme to be implemented and embedded into framework renewals. The revised payment mechanisms reduced blame attribution and helped bilateral goodwill trust to recover (Figure 3). All revisions were coordinated simultaneously at all levels and ultimately led to considerably improved project outcomes, and the extension of all three relationships into the next multi-year build phase.

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# Discussion

The study examined how strategically important but dysfunctional relationships can be transformed into functional collaborating relationships through a realignment of formal and relational governance. Relationships recovered once the effects of extant coordination practices became apparent, and embedded cycles of trust destruction were supplanted. Contributions to the contracts literature are discussed in relation to the effects coordination mechanisms have on self-reinforcing cycles of trust and though insights gained by examining dysfunctional relationships.

## Theoretical contributions

This longitudinal study complements emerging nuanced perspectives on contract-collaboration complementarity (Howard et al., 2017; Lumineau, 2017; Weber, 2017) with insights into how formal coordination mechanisms affect trust and relational performance. A duality in coordination mechanisms, not previously highlighted, is shown to have important consequences for trust and relationship performance. Coordination is frequently highlighted as one of the two main functions of contracts, but coordination mechanisms hitherto have been discussed as a unitary set (e.g. Schepker et al., 2014). Further, it has been suggested that greater *emphasis* on coordination is the key to improved decision making and dispute prevention (Reuer & Arino, 2007). However, the findings showed a duality through which coordination mechanisms either reinforce safeguards via monitoring and enforcement processes (Reuer & Arino, 2007), or support collaboration and trust building. Inappropriate emphasis on monitoring and evaluation propagates hierarchical management focused on supplier outputs, rather than programme outcomes, such that operational issues relating to buyer dependencies, information sharing, planning, decision making and problem-solving gain too little attention. Negative effects were demonstrated on both goodwill and competence dimensions of trust (Figure 3). Trust cycles are created when attribution biases affect the way subsequent events are interpreted, such that cycles of trust building or destruction become self-reinforcing (Weber, 2017). The study qualifies Weber’s trust propositions on safeguarding contracts, by demonstrating that realignment of coordination mechanisms, rather than removal of safeguards, was the key to transforming trust dynamics.

A second contribution is made by demonstrating the impact that formal coordination mechanisms can have on behavioural norms, and in turn on trust. Earlier studies link *relational* norms such as bilateralism and solidarity with reductions in opportunism, and improved relationship performance (Cao & Lumineau, 2015), but provide little insight into how coordination mechanisms influence norms. The role of norms is underplayed in contracts literature, where trust is often regarded as the primary social governance mechanism (e.g. Yang et al., 2011), but the findings suggest that coordination mechanisms play an important role in establishing the (dys)functionality of relational norms. A focus on safeguarding and supplier outputs (initial position on Figure 4) reinforces collaboration-inhibiting norms in which supplier outcomes are a lower priority, relational expectations are not shared, and the buyer voice dominates. This phenomenon is termed *impinged mutuality* and of its components, *peer respect* extends existing discussions of relational norms in the contracts literature, by recognising an important attitudinal precursor to collaborative interaction. Willingness to accept partners as peers led to earlier and more extensive interaction, through which competence trust and goodwill ultimately, were established. It is not the existence of specific mechanisms that is important, but their alignment with mutuality that enables trust building norms to be established (revised position on Figure 4). Coordination mechanisms including steering committees (Reuer & Devarakonda, 2016), adaptation processes (Schepker et al., 2014), interaction processes (Lumineau, 2017) and escalation processes all existed prior to the intervention, but only became effective once the supplier voice gained an equal weighting.

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The study also contributes to the extant equivocal understanding (Cao & Lumineau, 2015) of the interplay between formal and informal governance by examining dysfunction, a perspective that has received limited attention. Informal governance is dysfunctional where behavioural norms and trust are inconsistent with the intended relationship approach. Formal governance is dysfunctional in collaboration contexts, when it fails to support the development of the intended social controls (i.e. complementarity is not achieved). Prolonged governance dysfunction leads to dysfunctional relationships, threatening their continuation (Howard et al., 2017). The study illustrates how dysfunction is propagated through self-reinforcing negative trust cycles but then demonstrates, through an examination of how dysfunctional governance impinges mutuality, how formal coordination mechanisms can enable new norms to develop, enabling positive trust cycles to be established, and functional relationships to be restored. Outstanding calls for more research on relationship revitalisation (Faems et al., 2008) are thereby also addressed.

## Managerial implications

Managers need to recognise the pivotal role played by formal coordination mechanisms. These mechanisms either support safeguard monitoring and enforcement or foster collaborative behaviour and trust building. Managers must be clear on whether complexity and uncertainty or partner opportunism represents the greater risk and align coordination mechanisms accordingly (Figure 4). Complementarity is achieved only where coordination mechanisms enable the development of collaborative norms, conducive to trust building. It is not the existence of contractual safeguards that damages relationships, but the way they are used (Huang et al., 2014) and for complementarity, managers need to tailor coordination mechanisms around peer respect. Managers need to review relationship incidents and disputes to identify underlying factors that impinge mutuality, and this requires careful reflection on the composition and operation of governance boards (does the supplier voice get equal airing?), the effectiveness and timeliness of information sharing, and buyer commitment to understanding and resolving issues impacting suppliers.

## Limitations and research opportunities

This study context was complex engineering construction in France. Relationship challenges are likely to be similar to those in other complex project settings (see Roehrich & Lewis, 2014), but circumstances leading to mutuality impingement are likely to be context specific. In this study, the high interdependence between buyer and suppliers, increased operational uncertainty and the effects of different sources of uncertainty on mutuality, in other contexts, warrant further investigation. Reported differences in moderating effects of culture on contract-collaboration complementarity (Praxmarer-Carus, 2014), also suggest that applicability in Asian cultures needs to be established. Further research, examining the effects of coordination mechanisms in dysfunctional relationships, may be guided by the following *qualitative* propositions:

*Proposition 1:* Formal coordination mechanisms, aligned with monitoring and enforcement, propagate safeguarding norms, inhibiting bilateral trust.

*Proposition 2:* Formal coordination mechanisms, that successfully ameliorate mutuality impingements, promote relational norms, increasing bilateral trust.

Finally, the study examined three of the focal organisation’s most important supplier relationships but excluded the relationship with the ultimate customer from the study scope. A triadic perspective would allow the effects of the downstream relationship on the definition and operation of coordination mechanisms with suppliers to be considered.

# References

Argyres, N., Bercovitz, J., & Mayer, K. J. (2007). Complementarity and evolution of contractual provisions: An empirical study of IT services contracts. *Organization science, 18*(1), 3-19.

Argyres, N., & Mayer, K. J. (2007). Contract design as a firm capability: An integration of learning and transaction cost perspectives. *Academy of Management Review, 32*(4), 1060-1077.

Cao, Z., & Lumineau, F. (2015). Revisiting the interplay between contractual and relational governance: A qualitative and meta-analytic investigation. *Journal of Operations Management, 33-34*, 15-42. doi:10.1016/j.jom.2014.09.009

Carson, S. J., Madhok, A., & Wu, T. (2006). Uncertainty, opportunism, and governance: The effects of volatility and ambiguity on formal and relational contracting. *Academy of Management Journal, 49*(5), 1058-1077.

Cassell, C., & Johnson, P. (2006). Action research: Explaining the diversity. *Human Relations, 59*(6), 783-814.

Coghlan, D., & Brannick, T. (2014). *Doing action research in your own organization*: Sage.

Collis, J., & Hussey, R. (2014). *Business research: A practical guide for undergraduate and postgraduate students* (4th ed.): Palgrave Macmillan

Coughlan, P., & Coghlan, D. (2002). Action research for operations management. *International Journal of Operations & Production Management, 22*(2), 220-240.

Das, T. K., & Teng, B.-S. (1998). Between trust and control: Developing confidence in partner cooperation in alliances. *Academy of Management Review, 23*(3), 491-512.

Das, T. K., & Teng, B.-S. (2001). Trust, control, and risk in strategic alliances: An integrated framework. *Organization Studies, 22*(2), 251-283.

Daugherty, P. J., Richey, R. G., Roath, A. S., Min, S., Chen, H., Arndt, A. D., & Genchev, S. E. (2006). Is collaboration paying off for firms? *Business Horizons, 49*(1), 61-70.

Dekker, H., Donada, C., Mothe, C., & Nogatchewsky, G. (2018). Boundary spanner relational behavior and inter-organizational control in supply chain relationships. *Industrial Marketing Management, (In Press)*. doi:<https://doi.org/10.1016/j.indmarman.2018.11.010>

Dekker, H. C. (2004). Control of inter-organizational relationships: evidence on appropriation concerns and coordination requirements. *Accounting, Organizations and Society, 29*(1), 27-49.

Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *The Journal of Marketing*, 35-51.

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review, 23*(4), 660-679.

Faems, D., Janssens, M., Madhok, A., & Looy, B. V. (2008). Toward an integrative perspective on alliance governance: Connecting contract design, trust dynamics, and contract application. *Academy of Management Journal, 51*(6), 1053-1078.

Ford, D., & Mouzas, S. (2010). Networking under uncertainty: Concepts and research agenda. *Industrial Marketing Management, 39*(6), 956-962.

Ghoshal, S., & Moran, P. (1996). Bad for practice: A critique of the transaction cost theory. *Academy of Management Review, 21*(1), 13-47.

Goulding, C. (2005). Grounded theory, ethnography and phenomenology: A comparative analysis of three qualitative strategies for marketing research. *European Journal of Marketing, 39*(3/4), 294-308.

Gulati, R., & Sytch, M. (2008). Does familiarity breed trust? Revisiting the antecedents of trust. *Managerial and Decision Economics, 29*(2‐3), 165-190.

Hardy, C., Lawrence, T. B., & Grant, D. (2005). Discourse and collaboration: The role of conversations and collective identity. *Academy of Management Review, 30*(1), 58-77.

Hodgkinson, G. P., & Rousseau, D. M. (2009). Bridging the rigour–relevance gap in management research: It's already happening! *Journal of Management Studies, 46*(3), 534-546.

Howard, M., Roehrich, J. K., Lewis, M. A., & Squire, B. (2017). Converging and Diverging Governance Mechanisms: The Role of (Dys) Function in Long‐term Inter‐organizational Relationships. *British Journal of Management*(In Press).

Hoyt, J., & Huq, F. (2000). From arms-length to collaborative relationships in the supply chain: An evolutionary process. *International Journal of Physical Distribution & Logistics Management, 30*(9), 750-764.

Huang, M.-C., Cheng, H.-L., & Tseng, C.-Y. (2014). Reexamining the direct and interactive effects of governance mechanisms upon buyer–supplier cooperative performance. *Industrial Marketing Management, 43*(4), 704-716.

Huxham, C., & Vangen, S. (2013). *Managing to collaborate: The theory and practice of collaborative advantage*: Routledge.

Lumineau, F. (2017). How contracts influence trust and distrust. *Journal of Management, 43*(5), 1553-1577.

Luo, Y. (2002). Contract, cooperation, and performance in international joint ventures. *Strategic Management Journal, 23*(10), 903-919.

Malhotra, D., & Lumineau, F. (2011). Trust and collaboration in the aftermath of conflict: The effects of contract structure. *Academy of Management Journal, 54*(5), 981-998.

Mouzas, S. (2016). Performance based contracting in long-term supply relationships. *Industrial Marketing Management, 59*, 50-62.

Mouzas, S., & Blois, K. (2013). Contract research today: Where do we stand? *Industrial Marketing Management, 42*(7), 1057-1062.

Mouzas, S., & Ford, D. (2006). Managing relationships in showery weather: The role of umbrella agreements. *Journal of Business Research, 59*(12), 1248-1256.

Mouzas, S., Henneberg, S., & Naudé, P. (2007). Trust and reliance in business relationships. *European Journal of Marketing, 41*(9/10), 1016-1032.

Nullmeier, F. M. E., Wynstra, F., & van Raaij, E. M. (2016). Outcome attributability in performance-based contracting: Roles and activities of the buying organization. *Industrial Marketing Management, 59*, 25-36. doi:10.1016/j.indmarman.2016.05.031

Oliveira, N., & Lumineau, F. (2017). How coordination trajectories influence the performance of interorganizational project networks. *Organization science, 28*(6), 1029-1060.

Pomponi, F., Fratocchi, L., & Rossi Tafuri, S. (2015). Trust development and horizontal collaboration in logistics: a theory based evolutionary framework. *Supply Chain Management: An International Journal, 20*(1), 83-97.

Poppo, L., & Zenger, T. (2002). Do formal contracts and relational governance function as substitutes or complements? *Strategic Management Journal, 23*(8), 707-725.

Praxmarer-Carus, S. (2014). Why the proposal of a complex contract may harm or foster a partner's trust. *Journal of Business Research, 67*(7), 1421-1429.

Reuer, J. J., & Arino, A. (2007). Strategic alliance contracts: Dimensions and determinants of contractual complexity. *Strategic Management Journal, 28*(3), 313-330.

Reuer, J. J., & Devarakonda, S. V. (2016). Mechanisms of hybrid governance: Administrative committees in non-equity alliances. *Academy of Management Journal, 59*(2), 510-533.

Reuver, M., & Bouwman, H. (2012). Governance mechanisms for mobile service innovation in value networks. *Journal of Business Research, 65*, 347-354.

Rhee, J. H., Kim, J. W., & Lee, J.-H. (2014). Interaction effects of formal and social controls on business-to-business performance. *Journal of Business Research, 67*(10), 2123-2131.

Roehrich, J., & Lewis, M. (2014). Procuring complex performance: Implications for exchange governance complexity. *International Journal of Operations & Production Management, 34*(2), 221-241.

Saldana, J. (2016). *The Coding Manual for Qualitative Researchers* (3rd ed.). London: Sage Publications Ltd.

Sánchez, J. M., Vélez, M. L., & Ramón-Jerónimo, M. A. (2012). Do suppliers' formal controls damage distributors' trust? *Journal of Business Research, 65*(7), 896-906.

Schepker, D. J., Oh, W.-Y., Martynov, A., & Poppo, L. (2014). The many futures of contracts moving beyond structure and safeguarding to coordination and adaptation. *Journal of Management, 40*(1), 193-225.

Selviaridis, K., & Wynstra, F. (2015). Performance-based contracting: a literature review and future research directions. *International Journal of Production Research, 53*(12), 3505-3540.

Shen, L., Wang, Y., & Teng, W. (2017). The moderating effect of interdependence on contracts in achieving equity versus efficiency in interfirm relationships. *Journal of Business Research, 78*, 277-284.

Strauss, A., & Corbin, J. (1998). *Basics of Qualitative Research* (2nd ed.). London: Sage Publications.

Touboulic, A., & Walker, H. (2016). A relational, transformative and engaged approach to sustainable supply chain management: The potential of action research. *Human Relations, 69*(2), 301-343. doi:10.1177/0018726715583364

Weber, L. (2017). A Sociocognitive View of Repeated Interfirm Exchanges: How the Coevolution of Trust and Learning Impacts Subsequent Contracts. *Organization science, 28*(4), 744-759.

Weber, L., & Mayer, K. J. (2011). Designing effective contracts: Exploring the influence of framing and expectations. *Academy of Management Review, 36*(1), 53-75.

Williamson, O. E. (1979). Transaction-cost economics: the governance of contractual relations. *The journal of Law and Economics, 22*(2), 233-261.

Yang, Z., Zhou, C., & Jiang, L. (2011). When do formal control and trust matter? A context-based analysis of the effects on marketing channel relationships in China. *Industrial Marketing Management, 40*(1), 86-96.

Zhang, Q., Zhou, K. Z., Wang, Y., & Wei, H. (2017). Untangling the safeguarding and coordinating functions of contracts: Direct and contingent value in China. *Journal of Business Research, 78*, 184-192.

Zhang, W., Levenson, A., & Crossley, C. (2015). Move your research from the ivy tower to the board room: A primer on action research for academics, consultants, and business executives. *Human Resource Management, 54*(1), 151-174.

Zheng, J., Roehrich, J. K., & Lewis, M. A. (2008). The dynamics of contractual and relational governance: evidence from long-term public–private procurement arrangements. *Journal of Purchasing and Supply Management, 14*(1), 43-54.

**Formal control**

**Complementarity potential**

**Social control**

Collaborative

Arms-length

**Relationship style:** (Hoyt & Huq, 2000)

Safeguarding Emphasis

Coordination Emphasis

Strong Emphasis

Low Emphasis

Exclusive

Emphasis

(Poppo & Zenger, 2002)

Opportunism risk highest

**Risk evaluation:**

(Dekker, 2004)

**Formal controls**

**Typical Governance**

(e.g. Huang, 2014)

**Social controls**

Uncertainty risk highest

Trust only: no contracts (Hardy et al. 2005)

Classical contracts (Williamson, 1979)

Figure 1 - Governance emphasis for different relationship styles

Construction programme start

C re-engaged. Need for change recognized. Research start

Major governance restructure

Devolved empowerment. Closer joint working. Payments scheme workaround. Renewed D&E

Learning imported into next phase contracts

Construction phase complete End of research phase

D engaged

A&B exit engaged

Initiative to extend peer working. Increased supplier autonomy

Figure 2 - Critical events timeline

Supplier resources idle (not earning)

Reluctance to share design & planning information

Buyer side issues

Ineffective resource planning

Construction delays

Increased costs

< S🡪Bcomp

> S🡪Bcomp

> S🡪Bgood

< S🡪Bgood

> B🡪Scomp

< B🡪Scomp

> B🡪Sgood

< B🡪Sgood

Key:

< S🡪Bcomp = reduced supplier trust in buyer competence

> B🡪Sgood = increased buyer trust in supplier goodwill

**Operational effect**

**Project outcome**

Supplier invoices for added costs

Joint planning & problem management

Resolution of Buyer side issues

Expected costs

Suppliers perceive buyer as less opportunistic

Improved dependency management

Reduced delays

Removal of PBC scheme

> Commitment to revised charges scheme

Improved resourcing

Inclination to collaborate

reluctance to collaborate

Lower charges: buyer perceives supplier as less opportunistic

***Negative trust cycle***

> B🡪Sgood

***Positive trust cycle***

**(Dys)function**

Figure 3 - Self reinforcing cycles of trust

**Formal control**

**Complementarity**

**Social control**

(revised position to counter uncertainty)

Collaborative

Arms-length

**Relationship style**

(Hoyt & Huq, 2000)

Mutuality Emphasis

Strong Emphasis

Light Emphasis

Monitoring Emphasis

Low Emphasis

High Dependence

Classical contracts (Williamson, 1979)

Trust only: no contracts (Hardy et al. 2005)

 (initially positioned to counter opportunism)

Case studies

**Risk evaluation:** (Dekker, 2004)

**Formal Coordination**

**Revised governance model, highlighting duality of formal coordination mechanisms**

**Social controls**

**Formal Safeguards**

Strong Emphasis

(Poppo & Zenger, 2002)

Figure 4 - Revised framework with reoriented coordination mechanisms

**Table 1. Coding table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Illustrative quotes** | **(Example) Open codes** | **1st order themes (axial codes)** | **Description** | **2nd order concepts (theoretical codes)** |
| “we know that there will be a workload, but we don’t know how much”“…improving the level of information granularity communicated to the supplier” [C]Every time, the problem is about data … It is truly a nightmare [C] | Plan sharing Information granularity | Dysfunctional information sharing | Designs and plans shared too late. Suppliers not consulted in planning process | Mutuality (goal for functional norms): * Peer respect
* Shared expectations
* Mutually beneficial outcomes

Impinged mutuality:* Factors sustaining dysfunctional relational norms that damage trust.
 |
| “They promise us to provide all the necessary supply. But they are never here on time” [C]“pre-requisites … before our arrival, are not done … action on the causes of delays is needed” [E] | Promises not metAvailability of inputsCause of delays | Unfulfilled buyer obligations | Buyer issues affecting suppliers were not being resolved |
| “as long as I don’t have clear vision, I will never put resources in the field” [E]“what we want to do is encourage direct exchanges and decision making in the field” [E] | Resourcing On-site decision making | Dysfunctional problem management | Poor processes for managing recurrent problems leading to negative actions |
| “we have the impression that we are not listened to” [D]“the buyer doesn’t interact with us when we express difficulties” [D]“we are not used to incentives … we have a culture of time and quality” [E] | Not listened toInteraction expectationsUnwelcome incentives | Mis-aligned expectations | Buyer unaware of supplier expectations for relationship. Suppliers felt uninvolved. |
| “A partnership requires more constructive and more advanced meetings” [C] “There are cumbersome and heavy procedures” [E]“Contractual meetings are not intended to resolve problems, as this supplier thinks” [Buyer]“hierarchical direction … put tremendous pressure on the site” [Buyer] | Poor meeting designCumbersome governancePoor meeting understandingHierarchical direction | Dysfunctional governance structure | Operations managers unempowered; poorly structured boards; Frustration with remote decision making |
| “Of the two … reward high performance, or … compensate for loss, I choose the first” [buyer]“unfortunately, no one got any bonus” [buyer] | Compensation paymentsUnworkable incentives | Ineffective payment scheme | System of rewards and penalties creating tension because of attribution disputes  |

**Appendix**

Table 2 - Interviewees' roles and interview dates (All 1.5 - 2 hours long)

|  |  |  |  |
| --- | --- | --- | --- |
| Interviewee | Date | Years of Experience | Company |
| Chief of sub-contracting office-1 | Oct 2015 | 16 | Buyer |
| Purchaser | Oct 2015 | 10 | Buyer |
| Supervisor 1  | Oct 2015 | 3 | Buyer |
| Supervisor 2  | March 2016 | 15 | Buyer |
| Chargé d’affaires | March 2016 | 8 | Supplier C |
| Chief of sub-contracting office-1 | March 2016 | 16 | Buyer |
| Contract execution manager2 (CEM) | April 2016 | 5 | Buyer |
| Technical execution manager | April 2016 | 20 | Buyer |
| Chief of sub-contracting office-1 | April 2016 | 16 | Buyer |
| Site Director  | April 2016 | 12 | Buyer |
| Supply manager | April 2016 | 12 | Buyer |
| Site Manager/coordinator | April 2016 | 20 | Buyer |
| Manager  | June 2016 | 12 | Supplier C |
| Manager | June 2016 |  | Supplier D |
| Chargé d’affaires  | June 2016 |  | Supplier D |
| Coordinator  | June 2016 | 10 | Supplier D |
| Manager  | June 2016 | 15 | Supplier E |
| Chargé d’affaires | June 2016 | 10 | Supplier E |
| Contract execution manager | Nov 2016 | 15 | Buyer |
| Chief of sub-contracting office\*-2 | Nov 2016 | 4 | Buyer |
| Chief of sub-contracting office-2 | Feb 2017 | 4 | Buyer |
| Chief of Sub contracting office­-2 | March 2017 | 4 | Buyer |
| Manager  | March 2017 | 12 | Supplier C |
| Chargé d’affaires | March 2017 | 8 | Supplier C |
| Chief of Sub contracting office-2 | April 2017 | 4 | Buyer |
| \* CSCO replaced mid-2016 |  |  |  |

Table 3 - Observed meetings

|  |  |  |  |
| --- | --- | --- | --- |
| **Observed Meeting** | **Duration** | **Companies** | **Date** |
| Contract execution manager and chargé d’affaires (supplier)  | 1 hour | Buyer + Supplier C | Oct. 2015 |
| Monthly meeting with C | 1,5 hours | Buyer + Supplier C | Oct. 2015 |
| Monthly meeting with C | 1,5 hours | Buyer + Supplier C | June 2016 |
| Monthly meeting with D | 1,5 hours | Buyer + Supplier D | June 2016 |
| Monthly meeting with E | 1,5 hours | Buyer + Supplier E | June 2016 |