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**Understanding process of management control changes in  
hybrid organisational contracts**

**By  
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A thesis submitted to  
Keele University for the degree of DOCTOR OF PHILOSOPHY in  
Management  
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## **Certificate of Originality**

I, Ume Zaidi, hereby declare that this thesis is my own work, except where due acknowledgement is made in the thesis. This thesis has not been submitted at any other educational institution.

## **Dedication**

To my husband,

*Tehseen Abbas*

## Acknowledgement

All praises to **Allah Almighty** for giving me the strength to successfully complete this thesis.

First and foremost, I am grateful and feel honored to have been guided by two very talented and wonderful supervisors – Professor Istemi and Dr Shirley. I appreciate their unwavering encouragement at every stage of my thesis. Their patience and kindness were vital for me and helped me navigate challenging times with ease. I wish to thank my supervisor Professor Istemi Demirag, for his fundamental role in my research journey. I want to express my sincerest appreciation and admiration as your guidance was relentless despite residing far away in Estonia. Your wisdom and continuous support were intellectually stimulating and allowed me the independence to develop my own critical thinking. I greatly appreciate your expert guidance and helpful feedback throughout my research process, and for carefully reviewing and commenting on my numerous revisions. It has been a challenging yet rewarding experience working with you. I must add that your inspiration, enthusiasm, and encouragement were a driving force behind my thesis completion. I would like to thank my co-supervisor Dr Shirley for her advice, comments, and invaluable support. We had many insightful and memorable discussions thanks to your knowledge and experience. I truly appreciate your constructive comments and suggestions, which helped me improve the thesis in a significant way.

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## **Abstract**

Motivated by controversial public and private sector hybrid organisational relationships and, more broadly, by repeated calls regarding control and management of hybrid organisational relationships, this thesis is concerned with the understanding process of changes in management controls of Street Lighting Private Finance Initiative (PFI) contract. In particular, it aims to illuminate the process by which emergent form of management control problem, performance measure issue, managed in operational PFI contract under the umbrella of ‘contract modernisation’. In doing so, the process of ‘contract modernisation’ was viewed as a hybrid process as it enabled lateral communication and collaboration between PFI actors. The theoretical framework for this study draws broadly on the sociology of science and technology literature and is specifically grounded in translation, boundary objects and irreversibility concepts of actor-network theory. Complementing this framework, I adopted a qualitative research approach using unstructured interviews supplemented by internal documents that actors used during the change process. Research participants are County Council and Service Provider actors directly involved in the day-to-day operations of the Street Lighting PFI project. My empirical analysis broadly concluded with respect to managing performance measure changes in PFI contract that: the process of establishing the ‘existence’ of performance measure problem plays an important role in the identification of various actors’ lack of understanding of hybrid organisational contracts and incorporated management controls; actors’ ‘desire for a sustainable relationship’ is subject to change and negotiations over time; actors in hybrid relations change approaches from contractual to relational depending upon the practicalities of the situation; actors successfully stabilised hybrid relationship through the relational mechanism of reciprocity; hybrid management controls measures introduced under modernised contract unintentionally contributed towards environmental sustainability through the reduction in carbon emission and in doing so, created value beyond hybrid organisational boundaries.

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## Chapter One: Background and Motivation

### 1 Introduction

Improvement of operational efficiency through the collaboration of organisations is a fact of life in the business world today. Accordingly, organisations have increasingly been involved in hybrid organisational relationships in pursuit of efficiency (Dekker, 2004, Andon, 2012), value creation (Vakkuri et al., 2021, Grossi et al., 2021), competency and specialised skills (Quinn and Hilmer, 1994, Andon, 2012, Mahama and Chua, 2016) in order to compete in a globalised marketplace.

Despite this enthusiasm to form collaborative relationships, many hybrid organisational relationships failed to achieve their objectives for numerous reasons (van der Meer-Kooistra and Kamminga, 2015, Christ and Nicolaou, 2016, Mahama and Chua, 2016). The extant literature has identified that the significant contributing factor to this failure is the way such arrangements are controlled and managed in practice (e.g., Anderson and Sedatole, 2003, Chua and Mahama, 2007, Mahama and Chua, 2016).

Consequently, many accounting scholars (e.g., Mouritsen et al., 2001, Anderson and Dekker, 2005, Kurunmäki and Miller, 2011, Kastberg, 2016, Ahmad et al., 2020, Weichselberger and Lagström, 2021) explored the role of management controls in hybrid organisational relationships. In this regard, this thesis aims to understand the role of management controls in hybrid organisational relations. In particular, it focuses on the process of management control changes and how hybrid parties successfully manage those changes for a long-term sustainable relationship.

This chapter presents an introduction of the thesis by discussing first the background and context of this study, followed by practical motivation in section 1.2 and problem statement in section 1.3. The case study context is presented in section 1.4, which sets the stage for the research questions that this thesis aims to address. The theoretical and methodological approaches are presented in section 1.5. The significance of this study is provided in section 1.6. Section 1.7 details the structure of the thesis.

## **1.1 Background**

Hybrids<sup>1</sup> “can take the form of organisational arrangements that do not readily fit traditional models of hierarchies or markets” (Miller et al., 2008, p943). In other words, hybrid organisation relationships are combination of two or more organisations (normally found separate), e.g., outsourcing arrangements, alliances and contracting-out. Therefore, in accounting literature terms like alliances, partnerships, inter-organisational relationships, and inter-firm networks are used to refer hybrid organisational relationships/arrangements. Hybridity also represents the interaction between public and private companies through distinct modes of ownership (e.g., Private Finance Initiative projects (PFI)), parallel but sometimes competing institutional logics, diverse funding sources, and varied form of social and institutional controls (Grossi et al., 2021).

Moreover, hybrids “can also take the form of hybrid processes, practices or expertise” (Miller et al., 2008, p943), e.g., an engineer who takes on an accountant role, a physician who also does administrative tasks (Kurunmäki, 2004). As such, hybridisation can happen “whenever

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<sup>1</sup> Hybrids have been defined in various ways in extant literature. The chapter two section 2.1.1 explains the concept of hybridity adopted by this study.

two or more elements normally found separately are combined to create something new” (Miller et al., 2008, p961).

Combining elements to define hybrid organisational relationships provides a direct link to complexity. Therefore, hybrid organisations are considered complex institutional settings (Johanson and Vakkuri, 2017) and complicated venues (Grossi et al., 2019). In such relationships, context matters because, in practice, these relationships are located in complex networks with numerous connections (Minnaar et al., 2017). Hybrid organisational relationships are complex because of various ties and temporally (Mahama and Chua, 2016). For instance, where parties were trustworthy in the past but are now seen as exploitative, such changes in partner(s) behaviour over time will have an impact on the choice of management controls to affect the behaviour of partner(s). Extant hybrid management control literature (e.g., Thrane, 2007, Vélez et al., 2008, Marques et al., 2011, Mahama and Chua, 2016, Minnaar et al., 2017) indicates that static analysis (i.e., data collected and analysed at one point in time) ,due to its reductionist assumptions and deductive reasoning, provides a limited understanding of dynamics of hybrid organisational relations. This approach gives insufficient attention to local circumstances, processes, practices and changes related to control patterns (e.g., Miller et al., 2008, Kurunmäki and Miller, 2011, Kastberg and Lagström, 2019, Weichselberger and Lagström, 2021). As such, it provides a limited understanding of the process of changes in control patterns as a result of changes in actor networks.

To address this issue, hybrid management control studies (e.g., Mahama and Chua, 2016, Ahmad et al., 2020) have made an attempt to capture the dynamics of hybrid organisational relations. These studies have employed various methods and theoretical approaches to understand how management controls in hybrid relation work in practice. However, in terms of how such relationships are managed, keeping in view the dynamics of the relationship, the

literature is inconclusive. For instance, on the one hand, there is extensive focus on the role of trust in the management of hybrid organisational relationships (see, e.g., Vélez et al., 2008, Tsamenyi et al., 2013, ter Bogt and Tillema, 2016, Abdullah and Khadaroo, 2020). This is because hybrid organisational contracts are inherently incomplete (Anderson and Dekker, 2005); therefore, it was argued that trust plays a fundamental role in the management of uncertainty. On the other hand, economic perspective-inspired scholars also argued that given parties enter into hybrid relations for economic gain, trust is a weak proxy to define and explain these relationships (Grafton and Mundy, 2017). Overall, there is a lack of clarity regarding how hybrid organisational relationships are managed in practice.

This study firmly places itself within the discourse about management of hybrid organisational relationships. As a result, it aims to address the methodological concerns and the gaps in the associated literature. More broadly, this study is also motivated by limitations<sup>2</sup> in the extant literature, which seeks to understand the role of management controls in managing hybrid organisational relationships.

## 1.2 Practical motivation

The empirical setting of this study is Street Lighting Private Finance Initiative (PFI hereafter) project<sup>3</sup> UK. However, it is important to mention here that *this is not a PFI thesis*. The public and private hybrid relationship is chosen to illustrate the complexity of hybrid organisational relationships due to different objectives and the long-term nature of the relationship. As Andon

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<sup>2</sup> Chapter two section 2.6 explains the gaps in hybrid management control literature.

<sup>3</sup> “In PFI projects the private sector designs, builds, finances and operates assets such as roads, hospitals, and schools, in return for a revenue stream in the form of an annual unitary charge paid by the procurer, that is used to repay debt, fund construction and operations, and provide a return to investors” (Demirag et al., 2012, p1319).

(2012) argued in studying public and private hybrid organisational relationships, 'hybrid tension' arise when commercial imperatives come into conflict with public values. Such hybrid relationships create tensions due to the presence of different motives, logics and interest. Therefore Andon (2012) study suggested that understanding its implications for the application of management controls needs consideration. For example, at operational stage of the hybrid relationship how do the differences between the organisation (e.g., in terms of goals, logics and interest) enable or constrain effective management and governance of such arrangements? How do actors reconcile those differences to manage contractual changes e.g., performance requirements?

With regard to PFI arrangements, these, in particular, have gained much popularity among politicians in numerous countries in an attempt to resolve high-cost overruns using conventional public procurement methods for infrastructure, education, health etc., by creating incentives among parties in a hybrid contractual relationship (Grimsey and Lewis, 2004, Grossi and Thomasson, 2015). It has been argued by Broadbent and Laughlin (2003) that competition for PFI contracts would achieve the best value for money as private sector organisations will bring new, better and more efficient design solutions due to the fact that cost will be reduced in terms of allocating risks to the parties who are better able to manage them (Broadbent and Laughlin, 2003, Demirag et al., 2011, Demirag et al., 2018).

Indeed, PFI arrangements have allowed numerous projects to go ahead, which would not have been possible using conventional methods of government borrowing due to budget deficits (Nisar, 2007). That is why the UK government has supported and encouraged the PFI collaborative arrangements in a vigorous manner (Demirag et al., 2011). On the other hand, there are also concerns regarding the government's handling of the growing costs associated

with the PFI projects<sup>4</sup> (Plimmer and Ford, 2018). There are many examples of controversial PFI deals<sup>5</sup>. One of the notable examples is the collapse of construction giant Carillion. Demirag (2018, p3) argued that “Carillion could have implemented management control strategies involving better collaboration, joint working and greater exchange of information (i.e., trust practices) with its overseas partners, together with the UK public sector without whom it is difficult to achieve the desired outcomes”. The practical motivation of this study arises from these issues of control and management in a public and private hybrid organisational setting, and that has driven more interest in how these complex networks are managed in practice.

### **1.3 The research problem**

Extant literature is in agreement that hybrid organisational contracts and incorporated management controls are inherently incomplete (see, e.g., Anderson and Dekker, 2005, Minnaar et al., 2017, Ahmad et al., 2020). Studies have identified various ways hybrid organisations deal with such incompleteness, e.g., social controls, which are commonly seen as shared values and trust (e.g., Langfield-Smith, 2008, Grafton and Mundy, 2017). Furthermore, the notion of trust has received extensive attention from scholars and is considered a “precondition” for the management of hybrid organisation relations (Free, 2008, p629).

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<sup>4</sup> For example, according to the investigation by Plimmer and Ford (2018), in Frederick Bremer School, pupils have to use 10 years old computers due to rising cost associated with PFI deal. To meet the PFI payments, school has to cut cost, reduce staff and freeze new equipment purchases.

<sup>5</sup> For example, according to investigation by Sunday Herald (2011), multinational corporations are being paid whopping £4.8 billion to run sewage work plagued by breakdowns, pollution and ponds.

However, this view only provides a partial picture of the management of hybrid organisational relations (Grafton and Mundy, 2017). A major reason for this is that in public organisations role of superordinate authority and legal systems mitigate the abilities of the actors to prioritise trust (Ring and Van de Ven, 1994, Barretta and Busco, 2011). According to the report of the National Audit Office, due to the failure of various PFI projects as a result of poor project governance, public organisations have to strictly follow contractual controls (NAO, 2010). Hence the results or findings could be misleading. I, therefore, argue that extant research is inadequate regarding public and private hybrid organisational relationships in which the role of government and strict contracts has been ignored, as it assumes a fundamental role of trust for the management of hybrid relationships. This makes public and private organisational setting an interesting area to explore how organisations in such relationships are controlled and managed in practice, given the incompleteness of the contracts.

Given the importance of this area of work, our understanding of public and private hybrid organisational relations still remains limited, which is evident from repeated calls (Miller et al., 2008, Kurunmäki and Miller, 2011, Andon, 2012, Grossi et al., 2019, Ahmad et al., 2020, Caglio and Ditillo, 2021). In this regard, Grossi et al. (2019) have recently emphasised the need for further research regarding actual practices that are used to manage public and private sector hybrid relationships.

“Future studies would likely benefit from going deeper into the actual practices in order to observe not only from the outside or to make interpretations based on what is written in different formal documents”  
(Grossi et al., 2019, p.16).



Moreover, the following chapter will discuss how the studies which have sought to address the management controls and management of hybrid organisational contracts during operational stages provided limited understanding regarding the precise mechanism. These are reflected by how the management control problem in the original contract is identified; intent for collaboration is interpreted; key actors from analysis are excluded, and management control change is successfully managed with wider impacts. The purpose of this thesis is to specifically address these concerns.

#### **1.4 Case study context and research aims**

In response to repeated calls regarding the lack of attention towards public and private hybrid organisation relations in hybrid management control literature (e.g., Miller et al., 2008, Ahmad et al., 2020), the empirical setting of this study is Street Lighting Private Finance Initiative (PFI hereafter) project<sup>6</sup> UK. It is important to re-emphasise here that *this is not a PFI thesis*. The study has used PFI relation to show the complexity of public and private sector hybrid organisational relationships due to presence of different objectives and the long-term nature of the relationship.

As this thesis focuses on the process of performance measures changes in the PFI contract, this section provides a background of the case study. The details of the Street Lighting PFI project, including management structure and management control system, are presented in Chapter 4 (section 4.1.1.1).

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<sup>6</sup> “In PFI projects the private sector designs, builds, finances and operates assets such as roads, hospitals, and schools, in return for a revenue stream in the form of an annual unitary charge paid by the procurer, that is used to repay debt, fund construction and operations, and provide a return to investors” (Demirag et al., 2012, p1319).

The 25 years Street Lighting PFI contract was signed in 2003 between Lighting for County (pseudonym- LFC hereafter) and County Council<sup>7</sup> (CC hereafter). LFC is a private organisation. In PFI terminology, it is called Special Purpose Vehicle (i.e., SPV). The SPV delivers this project through another private contractor called EFG Ltd (pseudonym). All operations of the PFI contract have been carried out by Service Provider, i.e., EFG Ltd (SP hereafter). The SP is responsible for finance, design provision and maintenance of road lighting equipment.

The process of performance measure changes started in 2010, i.e., after the original contract was signed and sealed and the PFI contract was fully operationalised. Therefore, the main parties involved during the changes were SP<sup>8</sup> and CC. In 2010 SP raised concerns regarding misalignment between the original contract and incorporated performance measures and requested for review of original PFI contract to CC. This resulted in controversies, conflicts and disagreements not only at the hybrid organisational level but also at SP intra-organisational level. It took three years for the parties to come to an agreement and design a ‘durable’ and ‘irreversible’ revised contract (parties called it a modernised contract) for the long-term sustainable hybrid organisational relationship (Callon, 1990). Both parties introduced several changes (e.g., energy conservation measures that significantly reduced the cost), including SP's performance measure changes.

Therefore, this thesis focuses on how actors in public-private hybrid organisational relations manage performance measure changes. The process of performance measure changes is called

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<sup>7</sup> Due to confidentiality of data the real name of County is kept confidential.

<sup>8</sup> SP is completely responsible for the operations of the Street Lighting PFI contract.

the *'process of contract modernisation'*. As such, in the rest of the thesis, the *'process of contract modernisation'* is used as a reference to the *'process of performance measure change'*.

To understand the process of successful management of change, it is important to understand why the Street Lighting PFI contract and incorporated performance measures needed a change in the first place. In this regard, the first research question focuses on understanding the process of identification of performance measure problem in a practical setting and how actors established the existence of the performance measure problem. In this context, the first research question for this study will address the stated research aim as follows:

***Research question 1: How parties at the operational stage of hybrid organisational relationship identified and established the existence of the performance measure problem in original PFI contract?***

The second research question is designed to understand that once a performance measure problem is identified and established in a hybrid organisational setting, how do actors (SP and CC) align their interests such that the original contract can be renegotiated/reviewed, and change can be successfully managed? This is important given the differences in the objectives of both organisations.

***Research question 2: How is the interest of the actors in hybrid relation aligned to manage performance measure changes?***

In connection to research question 3, once the interests of the actors are aligned, what techniques or methods did both parties use to successfully manage the changes in the PFI contract for a long-term sustainable relationship.

*Research question 3: How, and what method(s) did the actors in hybrid organisational setting used to successfully manage the performance measure changes in PFI contract?*

## **1.5 Theoretical and methodological approach**

Actor-Network Theory (ANT afterwards) methodologically inspires this thesis to explore how actors in hybrid organisational relationships managed the performance measure issue and use methods to follow and trace various actors involved in the contract modernisation process. The translation (Callon, 1986, Latour, 1987), boundary objects (Star and Griesemer, 1989, Star, 2010), and convergence and irreversibility (Callon, 1990) concepts of ANT<sup>9</sup> have been used in this thesis to investigate the process of contract modernisation.

ANT considers the world as a network composed of technical, social and natural actors/entities, which are treated symmetrically and are viewed as a call for careful investigation of association (Latour, 2005). Therefore, Latour (2005) called it the ‘sociology of associations’ as opposed to the ‘sociology of the social’ of ‘social construction’<sup>10</sup>. To put it differently, ANT is concerned primarily with showing and describing how associations develop and change over time (Latour, 2005). Essentially, this implies that studies adopting

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<sup>9</sup> Please see chapter three section 3.6 for details.

<sup>10</sup> One distinctive feature of ANT is that it is rooted in constructivist ontology, not ‘social constructivism’. This is explained in detail in Chapter 3 section 3.2.

the ANT approach would examine the issues related to the formation of networks and investigate networks created by human and non-human actors.

It is important to clarify here why I have chosen ANT and how it is related to my research context. In this chapter, I offer a brief recount of one of my first introductions with ANT. This experience was a revelation to me, not only in terms of how to conceptualise and conduct research but also in terms of the confirmation of an ontology that felt natural to me.

After reading Latour vignettes of ‘European hotel keys’<sup>11</sup> (Latour, 1990, p109) and ‘door hinge’<sup>12</sup> (Latour, 1992), I started thinking about how objects could influence human actions. The way I interpreted my day-to-day observations changed as soon as I began to apply this type of symmetry between humans and nonhumans to my observations. I noticed, for instance, self-service checkouts at supermarkets and robotic vacuum cleaners at home as a delegation of human authority to technology. Similarly, a baby walker as a delegation of human authority to a device that helps babies to walk.

After becoming familiar with ANT via Latour’s illustrations, I quickly began to understand the notion of symmetry and how important it might be to consider the interdependence of humans and nonhuman during the process of change.

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<sup>11</sup> The story of ‘European hotel keys’ is related to the hotel manager who for security reasons requires the guest to leave the room keys at the reception before leaving the hotel. As a reminder he placed the sign asking for the key at the hotel exit. Even inscribing his wishes through official sign some of the hotel guests did not comply. Therefore, he attached the heavy metal with the keys that reasserted his wish that key stays at the reception when guests leave. This resulted in guests complying with the requirement. Hence, using a nonhuman artefact as an instrument the manager is able to influence his guests (human) behaviour.

<sup>12</sup> Latour illustrates his point by utilizing door hinges as an example of power being vested in the hinges by allowing them to open and shut.

ANT has been recurrently applied in accounting research, in particular, it is used to understand the process of change. Some scholars have paid attention to the phenomena while ‘in the making’, that is, before it becomes irreversible by transforming into black box (Latour, 1987, Callon, 1990). For example, the introduction of cost benefit tool (i.e., social investment funding) from three different perspectives in hybrid organisation relation between 21 Swedish municipalities and cooperative partners (Kastberg, 2014, Kastberg and Lagström, 2019, Weichselberger and Lagström, 2021), birth of alliances (Mahama and Chua, 2016), changes in management controls (Thrane, 2007), formation of hybrid organisation relationships (Mouritsen and Thrane, 2006) and the introduction of management controls in two hybrid organisational relationships (Mouritsen et al., 2001).

Others have taken a different stance and set out to re-open the constructed black boxes by tracing the processes by which accounting phenomena becomes taken for granted. For instance, “hospital of average cost” (Llewellyn and Northcott, 2005), and revised contract (Minnaar et al., 2017) etc. When ANT was applied to the studies of this kind, it assisted in understanding why some efforts yield better results than others. It has also provided answers to questions such as: why some networks are more stable and durable than others?

Having said that, the approach used in this study pays attention to the phenomenon by re-opening the black box of a revised contract (i.e., modernised contract) and tracing back the process of contract modernisation that resulted in the stabilised and irreversible contract (Latour, 1987, Callon, 1990). In view of the purpose of this study<sup>13</sup>: how public (CC) and

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<sup>13</sup> “If socio-technical systems were the creation of heroic actors this choice would be vital; if networks were all that mattered, it would be trivial—any actor in the network would (eventually) lead us to all other actors and their intermediaries. Since actors and networks are mutually constructed the choice is constrained by the *focus of study*” (Jones and Dugdale, 2002, p125).

private (SP) sector actors managed performance measures change in the PFI contract (section 1.4), I chose to follow CC and SP<sup>14</sup>.

As a part of the ANT approach, the relationships and actions of human actors, techniques and knowledge are examined symmetrically while contract modernisation was in the process of making. Moreover, it is important to emphasise here that this study does not attempt to apply this theory in entirety, rather it focuses on some of its concepts, i.e., translation (Callon, 1986, Latour, 1987), boundary objects (Star and Griesemer, 1989, Star, 2010), and convergence and irreversibility (Callon, 1990), and applies them to the stories that emerge from the empirical investigation.

The concept of translation (Callon, 1986, Latour, 1987) is relevant because the modernised contract was problematised as a ‘solution’ for the ‘problem’ of misalignment between performance measures and the intent of the contract. In order to solve this problem, the original contract needed to be renegotiated. However, CC actors were not willing to carry out the changes. This resulted in disagreement, conflicts and controversies, subsequently requiring SP actors to use various interessement devices. Here the concept of ‘boundary objects’ (Star and Griesemer, 1989, Star, 2010) is applicable to understand how actors achieved consensus despite differences in the objectives of both organisations. Once the interests of the actors aligned, to create the irreversible network, actors were required to form a convergent network. In this respect, the concept of ‘convergence and irreversibility’ is used in this study to capture the

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<sup>14</sup> Rather than focussing on individual actors, similar to Skærbæk, P. 2009 study, which considered ministers and parliament department as an actor, in this study, CC and SP are considered an ‘actor’.

precise mechanism that allowed the PFI actors to create ‘durable’, ‘stable’ and ‘irreversible’ contract (Callon, 1990).

With regard to data collection, unstructured interviews and internal and publicly available documents were used. The interviews were tape-recorded and transcribed using a word document. Data analysis started with coding segments of data. After that, memo writing helped in identifying themes and gaps in the data to guide subsequent data collection and analysis. Finally, as an analytical tool, ANT helped in deconstructing the process of contract modernisation. In tracking and following the process of performance measures changes, various transformations and displacements occurred. These are explained in detail in Chapters 5, 6 and 7.

## **1.6 Significance of the study**

The following factors contribute to the importance of the study:

This research adds to the knowledge of control and management of hybrid organisational contracts and incorporated management controls. The focus on the change process induces an understanding of the precise mechanisms parties used to successfully manage change. In extant hybrid management control literature, there are repeated calls regarding the relationship between controls and trust (Caglio and Ditillo, 2008, e.g., Mahama and Chua, 2016, Minnaar et al., 2017), which is evident from the fact that majority of the studies are focused in exploring this relationship (see, e.g., Vélez et al., 2008, Langfield-Smith, 2008, Ditillo et al., 2015, ter Bogt and Tillema, 2016, Kastberg, 2016, Dudau et al., 2020, Reusen and Stouthuysen, 2020, Krause and Swiateczak, 2020). This study has argued that such focus has resulted in inadequate attention being paid to other mechanisms that play an important role in the management of



hybrid relations. This argument is based on the belief that existence of the contract, legal system, role and responsibilities of the actors as organisational agents mitigate their abilities to prioritise trust (Ring and Van de Ven, 1994). Moreover, the trust could be ex-post labelling of personal effects by actors involved in hybrid organisational relations (Grafton and Mundy, 2017).

This study fills in this research gap. It provides a detailed description of real-life contract and incorporated performance measures problem of the PFI contract that has been in place for nine years. Focusing on the detailed process of changes in the PFI contract has provided in-depth insights into precise mechanisms that actors have used in practice to manage the change successfully. The changes in management controls of the contract are studied in detail, starting with the identification of the problem at intra-organisational level, and introducing it at the hybrid level. There is also a detailed examination of how the contract is reviewed. This has allowed me to understand common ups and down of dynamic hybrid organisational relationships.

The main contribution is an empirical illustration of the role of reciprocity, i.e., give and get situation, in managing the management control changes for the mutual benefits of both organisations. The methodological features of ANT have allowed me to capture precise details of the process of contract modernisation. The process-focused approach has shown the inability of the public sector actors to carry out any change in contract despite having a good working relationship with a private contractor. That resulted in actors using the relational mechanism of reciprocity. This study, therefore, broadens the significance of understanding ‘other’ relational mechanisms in the control and management of PFI hybrid relationships, which has so far remained focused on the role of trust in explaining hybrid organisational relations.

Second, this study is based on the investigation of associations between CC and SP and other actors. Rather than pre-structuring the research, I followed what actors did on their own while managing the change. The association of actors include both human (e.g., CC, SP, SPV, and government) and nonhuman actors (e.g., contract and incorporated performance measures and government white paper etc.) (Latour, 1990). This highlighted the complex process of establishing the existence of ‘the performance measure problem’ at the SP intra-organisational level. Previous studies have started a process of change with a well-defined set of problems where actors agree that ‘the problem’ exists (see, e.g., Callon, 1986, Ahmad et al., 2020, Minnaar et al., 2017). This kind of analysis provides a limited understanding of the internal workings of ‘the problem’ and the complex process through which the problem crystallises.

This contribution is important as the process of unpacking the existence of the problem highlighted the roles and identities of various actors. This has allowed the study to understand the lack of understanding of various actors involved in bidding the contract. As a result of which, they were not accepting it as a problem in the first place. The lack of understanding resulted in a lack of due diligence and ended up in accepting a contract which was written in a prescriptive manner. The antiquated style of contract did not allow actors to embrace technological innovations. The contribution, therefore, has practical significance as well. The strict terms and conditions of the PFI contract leave no room for innovation. Such an approach makes the performance management system easy but fails to achieve the benefit that can be availed through technological innovations. However, contract designers should consider flexibility when designing contracts in such areas. Technology is improving every day, and many energy-saving devices are introduced more often. Writing strict contracts can result in organisations not taking benefit of potential savings. This change was achieved through reciprocity in this study, but it came with a cost not only in terms of money but also in time.

It has been argued by Koppenjan et al. (2019b) that if hybrids only focus on efficiency and effectiveness, they will not be classified as smart. Such an approach neglects the values that society expects from organisations and governments, for instance, delivering public services (Grossi et al., 2019, Johanson and Vakkuri, 2017). In this regard, this study adds to the management control literature by showing the implication of hybrid organisational controls on a wider environment. In this study, through reciprocity, parties introduced cost saving measures that unintentionally<sup>15</sup> produced a positive impact on the environment in terms of reduction in carbon emission levels. Hence, it shows how hybrid organisational controls can contribute to environmental sustainability. This contribution has a practical implication in terms of how hybrid management controls can create value beyond hybrid organisational boundaries.

## **1.7 Thesis structure**

Thesis consists of total nine chapters, including this introductory chapter.

In Chapter Two I have examined some exemplary studies in the hybrid management control literature. Using Miller et al. (2008) classical work ‘accounting, hybrids and the management of risk’ in the phenomenon of hybridity as a basis of literature review, these studies are categorised according to their emphasis towards management control in hybrid organisational setting: emphasis on stable-design control approach (i.e., focus on ideal world) and emphasis on operational-design control approach (focus on real world). Literature review provides the context for the study and identifies and discusses research gaps. It highlights that hybrid management control literature is inconsistent regarding how hybrid organisational relationships are managed and controlled in practice.

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<sup>15</sup> This impact of re-contracting was unintentional as main reason parties enter in renegotiation was to make cost savings.

A discussion of how Actor-Network Theory (ANT) is used in the empirical work is presented in Chapter Three. The proposed ANT concepts provide a basis for exploring complex relations, interactions, and negotiations between the County Council, Service Provider, and other actors, and how they influence the process of managing management control changes. Chapter Four describes the research methodology, including research philosophy, research approach and empirical data analysis details.

This thesis presents its empirical findings in three chapters. Chapter Five consists of two phases. Phase one highlights the process of crystallisation of performance measure problem. It shows efforts of main translator at Service Provider intra-organisational level to establish the existence of problem. Phase two presents the discussion of performance measure problem at hybrid level, i.e., between County Council and Service Provider. Chapter Six continues the discussion from previous chapter by presenting the process of interest alignment. It showed ups and down of hybrid relationship and precise mechanisms by which County Council changed its approach from contractual to relational and agreed for contract renegotiation. Chapter Seven concludes the empirical findings by showing fundamental role of reciprocity in managing the process of performance measure problem. It showed how and under what conditions County Council agreed for modification of performance measures. It showed various measures that can result in cost savings for the County Council. It also presents intended and unintended consequences of performance measure problem.

Chapter Eight situates research findings regarding research questions and relates them to previous studies and literature. Finally, Chapter nine concludes the empirical work, briefly reviewing the research findings and discussing empirical evidence analysis. After discussing

the study's contribution, this chapter considers the study's limitations and suggestions for future research.

## **Chapter Two:**

# **Understanding Role of Management Controls in Hybrids**

## **2 Introduction**

It has been more than twenty years since accounting scholars (e.g. Hopwood, 1996, Frances and Garnsey, 1996) emphasized the importance of research that considers hybrids<sup>16</sup> or also known as interfirm collaborative relationships, arguing that despite “new commercial realities” (i.e. long-term relationship between actors) accounting scholars have so far ignored hybrid relationships. In response to this, many contributions in the hybrid accounting literature have been made to overcome this shortfall and to explore the role of management controls in hybrid organisational settings.

The aim of this chapter is to investigate how these contributions have viewed the role of management controls in managing the hybrid organisation relationships and to identify a gap in hybrid management control literature. As such, this chapter is an attempt to critically assess the hybrid management control literature contributions to address two main questions: what do we know and what do we need to know about the role(s) of management controls in hybrid organisations?

To achieve the aims of this chapter Miller et al. (2008) classical work ‘accounting, hybrids and the management of risk’ in the phenomenon of hybridity has been used as a basis for literature review. Miller et al. (2008, p943), in their classical work ‘accounting, hybrids and the management of risk’ in the phenomenon of hybridity, argued that hybrids “can take the form

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<sup>16</sup> A wide variety of terms such as, alliances, partnerships, inter-organisational relationships and inter-firm networks are used in interfirm accounting literature to refer hybrid relationships.

of organisational arrangements that do not readily fit traditional models of hierarchies or markets. They can also take the form of *hybrid processes, practices or expertise*". In this respect, authors argued that hybrid research should not be limited to organisational form rather, it should include hybrid practices, processes, and expertise that enable a lateral flow of information.

I have selected Miller et al. (2008) work because I am interested in understanding the process of changes in the PFI contract during the operational stage. I believe Miller et al. (2008) study provides a good starting point for analysing literature because the main argument of Miller et al. (2008) is that hybrid research should not be limited to organisational form rather, it should include practices, processes, and expertise that enable a lateral flow of information. The process of changes in the PFI contract happened under the umbrella of 'contract modernisation'. In terms of Miller et al. (2008), the process of 'contract modernisation' can be seen as a hybrid process because it enables the lateral flow of information between actors in PFI hybrid relation. It is where the issue of performance measures is actually managed. Additionally, it is worth noting here that this study did not focus on hybrid control practices. There is, in fact, little understanding of the difference between hybrid control practices and hybrid control processes (Miller et al., 2008).

**Structure of the chapter:**

In section 2.1, boundaries and limits of review are defined. In section 2.2, the current state of work is divided into two approaches followed by analysis in the discussion section. Section 2.3 presents the review of hybrid management control literature according to emphasis of studies on stable design approach. Section 2.4 explains the shortcomings of stable-design approach studies in meeting the practicalities of hybrids. To meet the limitations of stable-design studies

section 2.4 presents the review of studies that focused on operational dynamics of hybrids. Finally, section 2.5 presents the conclusion by highlighting gaps in literature.

## **2.1 Boundaries and limits of review**

### **2.1.1 Definition of hybrids and management controls**

The hybrid organisational arrangements have traditionally been used by the organisational scholars to describe the combination of two or more distinct forms of organisations (see, e.g., Borys and Jemison, 1989). According to organisational literature there are numerous reasons why hybrid organisations arise, a generic goal is to avoid the disadvantages of unitary organisation, e.g., operational inefficiency and lack of economies of scale (Powell, 1987). Hybrid organisational arrangements offer a wide array of solution to address such problems since they combine the strength of multiple independent organisations (Thorelli, 1986).

However, accounting scholarship specifically management accounting and control research traditionally emphasises hierarchical and vertical relations over lateral relations. In this regard, accounting scholars (e.g. Hopwood, 1996, Frances and Garnsey, 1996) emphasized the importance of research that considers hybrids or also known as inter-organisational relationships, arguing that despite “new commercial realities” (i.e., long-term relationship between actors) accounting scholars have so far ignored hybrid relationships. In response to this, many contributions in the hybrid accounting literature have been made to overcome this shortfall and to explore the role of management controls in hybrid organisational settings (please see section 2.2 for review and analysis).

Hybrids have been defined in various ways in extant accounting literature. One group of scholars followed the footsteps of organisational theorists and remained focused towards the role of management controls in inter-organisational relationships (see, e.g., Dekker, 2004,



Emsley and Kidon, 2007, Zahir-ul-Hassan et al., 2016), while other explained the various ways of conceptualization of hybrid organisations e.g., through dimension of institutional logics and approach towards value creation (see, e.g., Vakkuri et al., 2021), yet some moved beyond the hybrid organisational forms and paid attention to hybrid processes and practices (see, e.g., Miller et al., 2008, Thambar et al., 2019).

The concept of hybridity this thesis is relying upon is differences in logics of public and private hybrid organisational relationships (see, e.g., Grossi et al., 2021, Vakkuri et al., 2021). The combination of commercial imperatives with public values makes such relationship complex and at the same time interesting to understand how these organisations cooperate while maintaining or reconciling differences. Moreover, the empirical focus of this study is on the process of management control changes, therefore this thesis also pays attention to hybrid processes due to lateral flow of information between hybrid organisational actors (see, e.g., Miller et al., 2008).

The **definition of management controls** for the purpose of this review is taken from Phua et al. (2011) in order to allow comprehensive coverage of control mechanisms and devices to manage hybrid organisational settings. According to Phua et al. (2011, p. 1796), management controls are “the devices, mechanisms, and processes that encourage the achievement of organisational goals by influencing behaviour”.

### **2.1.2 Limits of Review approach: Basis of journals and paper selection**

This study began with choosing which accounting journals to include in order to determine the broad areas and themes of the research published in peer-reviewed journals over the review period (2008 to 2021). Taking into account Scopus’ strong criterion for selecting journals for inclusion, it was decided to analyse research papers published in accounting journals within

the database. Then, I used the Chartered Association of Business Schools 2018 academic journal guide categories to identify highly influential ‘accounting journals’ focusing on those classified as ‘3’, ‘4’ and ‘4\*’ from the Academic Journal Guide. As a result, 27 Scopus-listed Academic Journal Guide journals were identified (please see table 2.1). This decision was made to avoid the risk of subjective specification in the area, yet some academics have shown concerns regarding ranking and assessing the quality of research (Tourish and Willmott, 2015, Guthrie et al., 2019), mainly because it downplays other perspectives (Unerman, 2020). Nonetheless, it is commonly accepted that journal rankings are important indicators of the quality of accounting research publications that boost ‘legitimacy’ for accounting research (Thomson, 2014, p.17). A similar ranking system has been used by Garanina et al. (2021) and Rinaldi (2022).

Afterwards, I used ‘purposive sampling’, also called the judgement sampling technique, to identify the studies from this body of research (Etikan et al., 2016).

“Purposive sampling involves the researcher in selecting a sample that appears most likely to provide the in-depth information relevant to the study research question, addressing key characteristics of a phenomena which the researcher wishes to better understand” (Parker and Northcott, 2016, p1116).

In accounting research, the use of purposive sampling for qualitative data collection has been demonstrated by Anderson and Guilding (2006) and Malina et al. (2011). Compared to a

systematic review,<sup>17</sup> which eliminates biases and provides clarity (Cornish, 2015), the purposive sampling technique can uncover concentrated sources of evidence (Campbell et al., 2020, Etikan et al., 2016), eliciting depth and detail rather than abstract and simple quantitative values (Parker and Northcott, 2016). The studies conducted by Cornish (2015) and Campbell et al. (2020) are good illustrations of the purposive sampling approach. Cornish (2015) study invalidated systemic reviews in favour of context-specific studies. Campbell et al. (2020) empirically demonstrated the application and usefulness of purposive sampling in three case studies where context was a key issue. These studies justify the choice of the purposive sampling approach for this study because the extant hybrid accounting literature is in agreement regarding the context-specific nature of hybrid organisational arrangements (see, for example, Grossi et al., 2019, Vakkuri et al., 2021).

This illustrates the inappropriateness of the systematic review approach for this study. Furthermore, it can be argued that hybrids are everywhere in the world, constantly mixing and linking heterogeneous things (Callon, 1990, Latour, 1993). This argument, therefore, requires a careful selection of papers that meet the aims of the study rather than defined research protocols (Waddington et al., 2012).

From selected journals, papers that specifically include words hybrids, hybridisation, alliances, networks, interfirm, outsourcing, joint venture, partnership and inter-organisational, Public-Private Partnership (PPP) and Private Finance Initiatives (PFI), hybrid process and hybrid expertise in their titles selected first. However, if paper titles are insufficiently informative,

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<sup>17</sup> Systematic review is “a clear protocol for systematically searching defined databases over a defined time period, with transparent criteria for the inclusion or exclusion of studies, as well as the analysis and reporting of study findings” (Waddington et al., 2012, p360).

then we read the abstracts of the papers to determine their appropriateness for this study. Keeping in view the aims and objective of this study, we only included papers that are related to management controls in hybrids and excluded papers on auditing, tax and financial reporting. It is acknowledged that these papers add to our understanding with regard to the roles of accounting controls in a broader sense but are not directly or specifically related to the primary interest<sup>18</sup> of this study.

Afterwards, the selection of journals increased through a kind of ‘snowball method’ because sometimes selected papers used references from journals which was not considered at the start of the selection process (van Helden and Uddin, 2016) and that are particularly found to be relevant with the aims of the study. Therefore, I included three more journals, i.e., Journal of Management Accounting Research and Journal of Public Budgeting, Accounting, and Financial Management and Public Administration. In total, from 30 journals, 57 papers related to the role of management controls in hybrids (Table 2.1 gives an overview of the numbers of selected papers from each journal) have been selected. Having selected the papers, the full text of the papers was analysed.

**Table 2.1:** No. of papers per journal related to primary interest of the study.

Journal Name	Journal Abbreviation	No of the papers related to the primary interest of the study
Management Accounting Research (MAR)	MAR	15
Accounting, Organisation, and Society	AOS	12
Accounting, Auditing, and Accountability	AAAJ	8
Critical Perspective on Accounting	CPA	5
Financial Accountability and Management	FAM	3
Accounting Review	AR	2
Public Administration	PA	2
Accounting and Business Research	ABR	1
Abacus	ABACUS	1
Accounting and Finance	AF	1

<sup>18</sup> The primary interest of this study is the review of hybrid management control literature specifically related to management controls for example, performance measures. It does not include review of papers that relates to audit, tax and financial reporting. Moreover, during review and analysis of hybrid management control studies, where necessary reference to accounting literature, management accounting literature and contracting-out literature has also shown.

Journal of Accounting and Public Policy	JAPP	1
Journal of Management Accounting Research	JMAR	4
Journal of Public Budgeting, Accounting, and Financial Management	JPAFM	2
<b>Total</b>		<b>57</b>

The papers selected for review are first summarised, and each summary is then categorised according to focus, main findings, and contribution, theoretical underpinning, and method used for data collection (Summaries of 57 papers according to different categories are compiled in the form of tables and are presented in appendix 1). I identified two broad groups of studies. i.e., studies emphasising stable-design controls and operational-design controls. For example, the review of the literature identified that various papers have argued that extant hybrid management control research is mainly static in nature (please see table 2.2) and emphasises considering dynamic and operational aspects of hybrid relations (e.g. Thrane, 2007, Mahama and Chua, 2016, Minnaar et al., 2017, Tomkins, 2001).

**Table 2.2:** Example of papers showing emphasis of extant literature on stable-design control approach.

(Tomkins, 2001, P.168)	“The adoption of an inverse relationship between trust intensity and information reflects a simplistic <b>static</b> analysis that ignores the dynamic process of building trust and the role that information has in that”.
(Dekker, 2004, P.47)	“The framework and case study were described and analysed in a rather <b>static</b> way”.
(Thrane, 2007, P.252)	“I argue that much of this literature has relied on static or simple cybernetic conceptions of control, examining <b>static</b> patterns of control and centralized controls”.
(Vélez et al., 2008, P.969)	“Conceptualizing management controls and trust as either substitutive or complementary reflects a <b>static</b> analysis that ignores the dynamic process of building trust”.
(Marques et al., 2011, P.290)	“In this present paper our approach has been relatively <b>static</b> , as our aim was to show the linkages – at a point in time”.
(Mahama and Chua, 2016, P.29)	“Extant work tends to be <b>static</b> in nature”.
(Minnaar et al., 2017, P.30)	“Much of the literature on control and trust takes a rational perspective in which control and trust are considered to be <b>stable</b> solutions to control problems”.

In this respect, this literature review is an attempt to synthesise hybrid management control literature according to their emphasis on stable-design controls (i.e., static as explained above) and operational-design controls to analyse the current state of the art and identify gaps in hybrid management control literature. The studies that have emphasised **stable-design control** consider the management controls in hybrid relations to be relatively coherent and stable. Stable. By reducing relations to linear, unidirectional pathways, they show an ideal rather than the real world (Boedker, 2010). On the other hand, the term ‘operational-design’ has been borrowed from operation management literature (see, e.g. Fred, 2017). It shows how an enterprise actually works based on the belief that it is a network of collaborations. The scholars who emphasise on the role of management controls while considering operational dynamics of the hybrid relations are classified as ‘**emphasis on operational-design controls**’. It is believed that studies emphasising operational-design controls due to their focus on actual practices help in understanding the contributions of the studies as suggested by Miller et al. (2008) regarding hybrid control practices, processes and expertise.

As such, by examining aspects in a structured way, we can gain an understanding of the role and importance of management control scholarship in a hybrid setting that is not readily apparent while taking a fragmented view. As such, this chapter aims to bring together and reconcile insights from fragmented literature and highlight gaps in the literature.

## **2.2 Review and Analysis**

This section presents a framework to make sense of different approaches towards hybrid management controls. The framework focuses attention on two main design control approaches according to the emphasis of extant hybrid management control literature, i.e., stable and operational. These are discussed below:

### 2.3 Emphasis on stable-design controls

Studies that emphasise stable-design controls consider management controls in hybrid relations as relatively coherent and stable. By reducing relations to linear, unidirectional pathways, they reflect an ideal rather than the real world (Boedker, 2010). The scholars using this stance argue that once ideal controls are designed, top management can control the hybrid relations from distance (Minnaar et al., 2017). Therefore, the management controls are shown as creating order that is passive to human interpretation (Boedker, 2010). This stance is explored below.

Choice of management controls for the design of governance structure<sup>19</sup> is the focus of a group of hybrid accounting studies (Dekker, 2008, Ding et al., 2013, Dekker et al., 2016). Governance structures are perceived to be related to the partner selection process (Dekker, 2008), task interdependence, transaction risk and scope (Ding et al., 2013) service characteristics in contracting out public services (Ditillo et al., 2015), legitimacy-seeking (Johansson et al., 2016) and comprehensive management accounting information (Dekker et al., 2019). Although organisations try to take control of their hybrid activities through governance structures, this is not the only way to do so. Several studies point out the importance of relational governance mechanisms such as trust, experience, interdependence, coordination, and partner selection as alternatives to traditional social controls (Dekker, 2008, Langfield-Smith, 2008, Krause and Swiateczak, 2020, Ditillo et al., 2015, Johansson et al., 2016).

For instance, Dekker (2008) showed that extensive partner selection arrangements provide organisations with knowledge and information about partners, leading to the design of a

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<sup>19</sup>Governance in this context means a system of control and operation of the organisation and the mechanism by which it and its people are held accountable. Dekker (2004) discussed various mechanisms of governance such as “legal and private ordering” (for example, contracts), “organizational mechanisms” (for example, command and authority structure), “informal controls” (for example, trust, coordination and repeated interactions).

comprehensive governance structure (i.e. formal control mechanisms). However, prior transaction experience can have a moderating effect on the choice of governance arrangement and partner selection. In addition to prior ties, a pre-alliance period that allows hybrid partners to work closely on the design of a governance structure can develop trust among partners (Langfield-Smith, 2008). In contrast, a lack of face-to-face interaction (for instance, a virtual setting) can hinder the development of trust due to a failure to understand verbal and non-verbal cues (Bisbe and Sivabalan, 2017). However, the stable stance towards management control raises the question of what happens if hybrid partners, boundary spanners, or those who are involved in the day-to-day management of the hybrid relation change. For example, if another firm takes over a hybrid partner, how does this affect the governance arrangements? This control that was designed while making extensive efforts and investments in partner selection might be unsuited to the way the new manager/management handles the hybrid organisational issues (Merchant and Otley, 2020). The investment in controls gives rise to switching costs which can act as a barrier (Phua et al., 2011). The changes in the hybrid partner can also affect the level of trust. Hence, the pre-alliance period (Langfield-Smith, 2008) that parties spent to form an effective control package can be wasted or affected. Similarly, a manager's perception regarding trust, developed based on prior ties (Dekker, 2008), may increase or decrease after changes in the partner (Langfield-Smith, 2008).

Indeed, partners' performance and future behaviour are based on how their dealings with other firms (third parties) can provide indirect information. Dekker (2008) speculated on the concept of third parties serving as trust intermediaries. More recently, Reusen and Stouthuysen (2020) assessed the impact of information from third parties on the emergence of trust and partner selection within hybrid organisation relations. They argued that the trust impressions of buyer managers are not based solely on their own experiences with the supplier but rather on those of others, such as other buyer firms (third parties). Using the experimental method, they found



that buyers' trust in potential suppliers differs depending on the information that is available from third parties. They also concluded that competence trust is easier to transfer than goodwill trust because the supplier's past performance and good intentions constitute a sufficient assurance of the supplier's good intentions only if it is explicitly disclosed that other firms had satisfactory dealings with the supplier in the past.

Consequently, organisations have to rely sometimes on information provided by third parties to trust and select partners and write a contract so that the risk inherent in hybrid arrangements can be reduced. Hybrid risk can be managed through detailed and inclusive contracts (Ding et al., 2013), path creation and morphogenesis (Boland Jr et al., 2008), social controls (for instance, trust-based control (Langfield-Smith, 2008), and formal controls in combination with an integrated information system (Christ and Nicolaou, 2016). The complexity and uncertainty of contractual obligations often make it impossible to specify each party's terms clearly and completely in advance, so most contracts are incomplete (Van den Abbeele et al., 2009, Vosselman and Van der Meer-Kooistra, 2009). Consistent with Dekker (2008) findings, Ding et al. (2013) maintained that a complementary relationship exists between partner selection and the complexity of the contract. They insisted that it is the transaction risk that induces the hybrid organisations to carefully select partners and design more inclusive and specific contracts. The design of a detailed and inclusive hybrid contract also depends on the organisation's internal management accounting information<sup>20</sup> (Dekker et al., 2019, Caglio and Ditillo, 2012). The existence of the contract increases the amount of management accounting information exchanged (Caglio and Ditillo, 2012), compared with that exchanged in a relationship not governed by a contract (Dekker, 2004). Moreover, when this information is comprehensive it results in the development of greater value contracts and facilitates complete contracting

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<sup>20</sup> Dekker et al.'s 2019 study makes this argument from the buyer's perspective.

(Dekker et al., 2019). These findings also raise the question of whether a complete contract (as claimed by Dekker et al., 2019) also results in better performance because a consensus exists in the hybrid accounting literature that even if a contract is carefully designed, it can never be complete (Anderson and Dekker, 2005). Like other hybrid accounting studies, Dekker et al. (2019) study focuses only on the perspective of one party (in that case, a buyer). The relationship may work differently from the supplier perspective, depending on whether the supplier has the same access to information or not. Other factors, such as the relationship between parties and power differences (Free, 2008), may also affect performance.

Prior research (for instance, Fiske, 1993) indicates that power differences affect the way that information is obtained and how information about other people is processed. In an experimental study, Van den Abbeele et al. (2009) showed that a buyer's position of power may prevent suppliers from sharing information about their total cost of ownership,<sup>21</sup> leading to poor negotiation outcomes. Moreover, the type of information required also plays an important role. For example, a buyer's request for a supplier to open his books (open book accounting) can harm the buyer–supplier relationship (Windolph and Moeller, 2012) because sellers consider such a request an indicator of distrust (Windolph and Moeller, 2012). If more precise information identifies joint profit improvements, the seller's perception of fairness increases (Kadous et al., 2005).

Previous studies (for instance, Ittner et al., 1999) argued that to improve profit margins, buyer organisations often share their cost information with sellers not only for building trust but also to gain concessions. Masschelein et al. (2012) demonstrated that precise information – for example, activity-based costing information supplied by the buyer – can improve or impede negotiation in the supply chain depending on the argument made by the buyer. These

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<sup>21</sup> The total cost of ownership – that is, all costs associated with a purchase, not just the price – is used to support purchasing decisions.

negotiations affect the way that hybrid relations are managed in practice. However, the emphasis in these studies on stable-design controls provides limited information on how and under what conditions the hybrid control system motivates actors to share information and what effect it has on the performance.

Nevertheless, these governance design choices need to be examined for their performance effects. Not much empirical work has considered the consequences of these choices (Dekker et al., 2016). Essentially, hybrid organisational controls support organisations' collaborative goals (the purpose of hybrid relations), and therefore this question must be answered. Dekker et al. (2016) and Stouthuysen et al. (2017) have made an effort to address this concern. Dekker et al. (2016) investigated the combination of formal and relational practices for the management of hybrid performance. Using a survey method to collect data from 61 hybrid relationships, the authors found that firms use these three performance management practices<sup>22</sup> to achieve collaborative objectives by mitigating relational risk<sup>23</sup> and performance risk.<sup>24</sup> The association between these practices and collaborative goals is mediated by the nature of the transactions in which firms engage to accomplish these purposes. This shows that performance management practices are always designed to achieve the objectives of the hybrid organisation. In theory, the purpose of performance management is to set measures that help to achieve organisational objectives. However, in practice that does not always occur. Studies emphasising operational-design controls (discussed in the next section) have shown how inadequate performance measures create hybrid organisational conflicts and disagreements (Ahmad et al., 2020, Minnaar et al., 2017).

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<sup>22</sup> These practices include hybrid performance, interaction between boundary spanners, and information sharing.

<sup>23</sup> Risk that the partners will not cooperate honestly.

<sup>24</sup> The threat of poor performance despite full cooperation.

Stouthuysen et al. (2017) argued that the impact of control on performance is contingent upon the motivation of hybrid organisations.<sup>25</sup> By studying survey data from 236 organisations, they showed that relational controls are effective when used in exploration alliances but don't have the same effect on outcome control and exploitation alliances. An organisation's relational control level must be carefully proportioned in an ambidextrous alliance. When these controls exceed a moderate level, they negatively affect control configurations that use outcome and behaviour controls. Stouthuysen et al. concluded that (mis)alignment between alliance motivation and formal control mechanisms leads to improved (worse) performance.

The above-mentioned studies were conducted mainly in private sector contexts. They provide initial interesting insights into the relationship between factors such as transaction characteristics and the design of control systems/ governance control choices. With regards to public sector, there is a global trend toward the hollowing out of states (Rhodes, 1994), which means that the majority of welfare services are now provided indirectly through contracted third parties instead of public agencies. For government policy and welfare to be implemented effectively, these contracts and relationships must be managed in an effective way.

In this regard scholars have drawn on hybrid organisational control and contracting-out literature to understand the control and management of public services (see, for example, Marvel and Marvel, 2007, Cristofoli et al., 2010, Ditillo et al., 2015, Johansson et al., 2016, Brown et al., 2017, Johansson and Siverbo, 2018).

Johansson et al. (2016) and Ditillo et al. (2015) used surveys to study the control mechanisms of contracted-out public services. The findings of their studies relative to relational mechanisms were surprisingly different. Johansson et al. (2016) found no role for coordination problems in

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<sup>25</sup> That is, why organisations enter into hybrid relationships (alliance motivations).

explaining variation in public sector controlling systems. In contrast, legitimacy-seeking played a prominent role due to stakeholder pressures. This factor also affected the control system's focus because stakeholder pressure is strongly related to formal and visible types of control. During the implementation stage of the control system in hybrid public-private relationships, formal controls take precedence over coordination due to stakeholder pressure. The intensive use of formal controls proves the legitimacy of the operation and services to the stakeholders.

Ditillo et al. (2015) found that trust-based controls were pervasive and strictly linked to the nature of the services that public organisations provide. However, they identified mismatches between traditional rational models and actual control practices. For instance, the choice of control mechanisms related to the contracting out of services in the public sector cannot be explained using the traditional service characteristics variables identified in the literature (for example, task uncertainty, asset specificity, political orientation) because trust-based controls are more common in public organisations due to the nature of the services they provide. The differences in the findings of the two studies relative to relational mechanisms could suggest, as Johansson et al. (2016) proposed, that the absence of coordination as a part of the control system does not mean that it is not important. It might be exercised through the informal channel of communication (Ditillo et al., 2015), which the survey approach could not capture.

Thus relational mechanisms of control play a crucial role when explaining hybrid control configuration in public sector hybrid relations (Krause and Swiatczak, 2020). Krause and Swiatczak (2020) showed, that the influence of trust building in shaping formal controls goes in both directions. Trust may also be shaped by formal controls. This is because establishing clear goals may encourage transparency by creating a sense of interdependence. Since trust is

earned and developed over time, formal controls can be indicators of transparency during this process. In the absence of formal controls, there can be poor transparency and, consequently, a low level of trust.

To sum up, nearly all studies emphasising stable-design controls have looked at the relationships between formal controls and relational controls – particularly the complementary and substitutive relationships between controls and trust. This suggests trust is a static phenomenon, whereas in practice it is a complex phenomenon, and there can be no universal definition of trust that suits all theoretical purposes (Free, 2008). Moreover, such an approach ignores the complex process of building and damaging trust (Tomkins, 2001, Vélez et al., 2008). Indeed, few studies emphasising stable-design controls have discussed the complexity and incompleteness of contracts. They have shown primarily that complex and risky transactions may need to be, and can be, managed using trust-based controls as it is very difficult to design a complete contract. Therefore, trust is considered an essential element for improving hybrid organisational performance.

These studies show an ideal world rather than a real one (Boedker, 2010). In the ideal world, the control choices of managers can manage hybrid organisational problems. However, in practice, things work differently. For instance, complex situations require a manager to improvise rather than work as planned. Similarly, the existence of trust is not always good, for example, dominant partner may be hiding self-interested intentions under the guise of trust (Hardy et al., 1998). It can be a truce and not trust that enables different organisations to develop relatively stable working relationships (Coad and Cullen, 2006). Grafton and Mundy (2017) rejected the existence of trust and argued that it is enlightened self-interest that regulates the behaviour of actors in hybrid relations because they enter into such relationships for expected gains and losses. This underlines the importance of understanding hybrid processes

(Miller et al., 2008) such as the process of accounting change (Hopwood, 1987) to analyse how and under what conditions specific contractual or relational methods are used to manage hybrid organisational relationships.

To address the above-mentioned issues, studies emphasising operational-design controls are presented in the next section, showing through various methodologies adopted by hybrid management controls scholars how operational-design controls work in practice.

## **2.4 Emphasis on operational-design controls**

From the analysis of studies in the previous section, we can say that role of management controls in hybrid organisational relations is a practical, contested and situated phenomenon. Therefore, it is better not to pre-structure research but to understand how hybrid organisations work in practice. As such, this section presents studies that have emphasised the role of management controls while considering the operational dynamics of hybrid organisational relations<sup>26</sup>. These studies have employed inductive reasoning (various methods, for example, interview, observations, document analysis etc.) and theoretical approaches (e.g., concepts from actor-network theory and governmentality) to understand how management controls in hybrid relations work in practice. This has allowed scholars to come up with novel findings. These are elaborated below:

### **2.4.1 Management controls and trust**

Similar to studies emphasising stable-design controls, these scholars have also explored the relationship between hybrid organisational control practices and trust. Contrary to the

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<sup>26</sup> The term operational design has been borrowed from operation management literature (see e.g. Fred, 2017). It shows how enterprise actually works based on the believe that it is a network of collaborations.

substitutive and complementary relationship between trust and controls as identified by stable-design control scholars, I identified alternative and novel interpretations.

Vélez et al. (2008) carried out a longitudinal study of the manufacturer and its distribution channel that was in place for the last 19 years. During their study, different control tools that makeup management control systems were gradually introduced to all agents by the manufacturer. As the relationship was already established between the manufacturer and channel members, so when a new control system was introduced, for example, the manufacturer outsourced administrative tasks, it improved the trust among the hybrid partners. This shows where hybrid organisational relations change over time and add more hybrid controls practices, but if relational mechanisms, for example, trust is already very well established among the partners, any new management controls (formal and informal) improve that trusting relationship, i.e., without making a sign of distrust (Cäker and Siverbo, 2011). Therefore, Vélez et al. (2008) argued that formal controls do not necessarily cause inflexibility but can enable hybrid partners to be more independent and demonstrate their capabilities within the limits that are set up for them. As such, it allows mutual trustworthiness since hybrid partners use the same system.

These views towards trust give an impression as if trust is reciprocal (Das and Teng, 1998, Sako, 1991), i.e., when one partner in the hybrid setting is trusted more, the other will also be trusted more and vice versa. However, in practice, different partners could have different perceptions of trust (Tsamenyi et al., 2013). This has been highlighted in Tsamenyi et al. (2013) study. They studied international joint ventures to understand the process and pattern of trust development and what effect the contract and accounting controls had on this. They showed that depending upon the institutional environment of the organisation, partners' perception



towards trust can be different. For instance, partners from less developed countries place more reliance on the relational mechanism (trust) compared to Western partners, who put more effort into controlling and monitoring the relationship.

Kastberg (2016) concluded that the same control initiatives/mechanisms could have different meanings for different parties. In the public sector network setting author found that benchmarking related to the cost allocation model created trust between the parties. However, the same has been used by other parties as a control tool in order to limit trust between others. The findings of this study resonate with the Kurunmäki and Miller (2011) and Gooneratne and Hoque (2016) studies. Kurunmäki and Miller (2011) study showed that the management controls, on the one hand link service delivery level with policy reformers, on the other hand, they create professional disagreements. This is because when several parties are involved, the same management controls could have different meanings for different parties. In a similar vein, in a multiparty setting, trust can be generated through the rhetorical role of the persuasion mechanism where formal control systems are not sufficient to address the uncertainty inherent in a particular policy area (Dudau et al., 2020).

It might also be possible that hybrid organisational partners portray that they trust each other whereas, in reality, they only want to get financial benefit. For instance, Free (2008) study shows that relational mechanisms of trust, cooperation and coordination were present in ‘trade talks’ to induce competitive bids from rivals. Moreover, joint problem solving, and open book accounting (calculative practices) provided a forum to create trustworthiness. However, in practice over the course of the relationship, financial performance got precedence that did little to promote trust. ‘Trust talks’ as highlighted in trade press was not present in practice. Unlike Free (2008), Neumann (2010) found that the dominant partner used a cooperative strategy by

giving up his powers so that the weaker partner could make the investment. In order to start a relationship, both partners gathered information so that a trustworthy partner could be selected. After selection, they designed an extensive governance structure (e.g., monitoring methods, decision-making rules and information sharing rules etc.) to avoid ex-post opportunism. Formal governance allowed the partners to interact on a day-to-day basis which enabled goodwill trust among partners.

Indeed, trust is interpersonal (Ring and Van de Ven, 1994), e.g., partners assess the trustworthiness of other partners before entering into the hybrid relationship. Once the relationship starts, it is assessed on the basis of formal mechanisms, i.e., contracts and incorporated performance measures. This is because the parties cannot fully rely on trust at an interpersonal level due to legal system (contractual requirements) or organisational roles and responsibilities, thereby mitigating the parties' ability to prioritise trust (Ring and Van de Ven, 1994). In this respect, Grafton and Mundy (2017) argued that the "concept of 'trust' adds neither to explanations nor predictions about the management of risks within the alliance, indicating that it is more appropriately described as "an ex-post labelling of personal effect by those involved in economic exchange" ( p. 15). Their study identified various relational contracting mechanisms that firms in co-opetitive settings used to manage performance. For example, repeated exchanges, commitment to a shared set of values, implicit understanding between partners, the implicit threat of collective sanction etc. Based on their findings, they concluded that the recurring interactions between the firms provide opportunities for continuous sharing of information about behaviour while strengthening the sense of unity that, in turn, let to self-regulating behaviours. Similarly, it might be a truce and not trust "in which conflicts of interest are suppressed by institutionalised routines which enable the different

organisations to develop a relatively stable working relationship” (Coad and Cullen, 2006, p.365).

Unlike studies emphasising stable-design control, Minnaar et al. (2017) study has taken one step further by attaching trust to contract and control structures where such control mechanisms are designed in consultation with operational staff of hybrid organisations. Authors found that in practice, trust is not a pre-existing category (i.e., competence trust or goodwill trust) that can be straightforwardly implemented rather a consequence. It emerges because of assigning trust properties to an actor, i.e., quasi-actor. For example, it can be attached to a human actor because of his interpersonal skills, or it could be attached to a non-human actor (Latour, 1987),( for instance, contract) because it truly reflects the wishes of operational staff working “at the margin” of a hybrid setting (Miller et al., 2008).

Similarly, Ahmad, Connolly, and Demirag (2020), in the roads PPP case study, found that initially set management controls were perceived inadequate and unfair by contractors<sup>27</sup>. Enactment of trust practices at the time of introducing changes in the contract and incorporated management control elements played an important role in creating long-term sustainable relationships. This also illustrates that hybrid organisational contracts are an ongoing process that requires parties to continuously re-engage areas that are poorly specified in original contracts (English and Baxter, 2010).

Nevertheless, when any control change is introduced in a hybrid organisational setting, the pace, sequence, and timing of intervention mechanisms play a central role in the development

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<sup>27</sup> Scholars emphasising stable design control shows that purpose of the performance management is to set measures that help achievement of organisational objectives (Dekker et al., 2016).

of a trusting atmosphere and integration of activities (Agndal and Nilsson, 2019). As such, considering trust as a continuous process can provide helpful insights. For example, Mahama and Chua (2016) found initially, trustworthiness was a necessary condition for participation in alliances. Afterwards, other elements are added, e.g., competent, innovative and to open their cost books, etc. In this way, trust emerged over time with diverse meanings and through different routines. They also identified evidence of distrust and how hybrid actors carried out repair work to rebuild trust.

Similar to studies mentioned in section 2.3, this section shows that role of management controls and trust in a hybrid organisational setting has received extensive attention of the scholars. The concept of trust was introduced into management control research by Tomkins (2001)<sup>28</sup> and remains unchallenged today for explaining hybrid organisational relationships<sup>29</sup>. Afterwards drawing from trust literature various theoretical perspectives of trust have been adopted by management accounting scholars. For example, cognition-based trust theory and affective-based (McAllister, 1995, Cook and Wall, 1980). While the concept of cognition-based trust refers to the belief that an individual is reliable, dependable and competent, the affective-based trust is defined as mutual interpersonal concern or emotional attachment (Cook and Wall, 1980). In hybrid management control literature, the interpersonal trust has been discussed through various lenses, for instance, thick and thin trust, competence trust, and goodwill trust (see, e.g., Vosselman and Van der Meer-Kooistra, 2009, Mahama and Chua, 2016, Ahmad et al., 2020). Some scholars have used the umbrella term ‘trust practices’ to refer to coordination

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<sup>28</sup> “The adoption of a belief by one party in a relationship that the other party will not act against his or her interests, where this belief is held without undue doubt or suspicion and in the absence of detailed information about the actions of that other party” (Tomkins, 2001, p165).

<sup>29</sup> Please see also Grafton and Mundy (2017).

and collaboration between actors involved in hybrid organisational relationships (see, e.g., Minnaar et al., 2017, Ahmad et al., 2020).

However, it is also argued by Free (2008, p635) that “much of the work uses the term trust when referring to related concepts such as cooperation, reciprocity or stability”. This shows that the concept of trust is mistaken for related concepts like reciprocity and cooperation. While trust is an emotional value attached to actor/multiple actors (Minnaar et al., 2017) reciprocity, “specifies that one should repay help with help, or at least not repay help with harm” (Meeker, 1984 P.227). That shows reciprocity is logical and requires understanding something without involving emotions and addressing an issue with proof. In other words, trust is developed and earned over time as a result of consistent behaviour. Reciprocity is a practice that does not have consistency as a prerequisite. For example, in order to trust someone to drive me to work, I would need to count on them consistently on multiple occasions to give me a ride. Meanwhile, I can reciprocate someone’s action by giving them a ride, not requiring consistency as a prerequisite.

The concept of reciprocity has been widely documented in the field of game theory (Axelrod and Hamilton, 1981). However, the hybrid management control literature implicitly acknowledges the existence of reciprocity during contract negotiations (Minnaar et al., 2017, Kastberg and Lagström, 2019, Ahmad et al., 2020). The focus is more on ex-post results of negotiations, i.e., whether trust is created or not, and not on how parties reciprocate each other needs. For instance, Minnaar et al. (2017) study has shown how incompleteness of contract and incorporated control measures resulted in re-contracting. In their study, after contract is amended according to the *wishes of the hybrid partners*, the actors attached trust to the new contract and controls. Similarly, Ahmad et al. (2020) study showed an interactive review of the PFI contract based on *‘mutual understanding and needs of the partners’*. Their study showed

that mutual understanding resulted in the development of ‘trust practices<sup>30</sup>’. However, how that ‘*mutual understanding*’ and ‘*partners needs*’ was developed and discussed during contract review; is not captured in their study. This indicates more emphasis on ex-post consequences of the contract review exercise that generated trust but the specific mechanisms by which parties negotiated in order to understand the ‘*needs*’ of each other. Hence, resonates with findings of the Grafton and Mundy (2017) that trust could be an “ex-post labelling of personal effect by those involved in economic exchange” ( p15).

This highlights that existing hybrid management control research is inadequate regarding the role of reciprocity during renegotiation phases of contract review in the hybrid organisational setting. This **gap**, therefore, drives this study to explore whether, and if so, reciprocity plays any role during the contract renegotiation phase of the Street Lighting PFI contract.

#### **2.4.2 Management controls and actors’ intention to collaborate.**

“The success of the hybrid organisation is dependent on communication among all participants with the *intent to collaborate* in a joint problem-solving effort” (Boland Jr et al., 2008 p. 911) (emphasis added).

Understanding parties’ intent towards the relationship allows for the assessment of the extent of their willingness to cooperate so that appropriate controls can be designed<sup>31</sup> (Nooteboom, 1996). Different contributors in private sector hybrid organisation literature (see, e.g., Van der

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<sup>30</sup> An umbrella term to show collaborative approaches.

<sup>31</sup> In this regard, Nooteboom, B. 1996. Trust, opportunism and governance: A process and control model. *Organization studies*, 17, 985-1010. documented various reasons why actors want to cooperate; material interest (i.e., economic advantage), fear and coercion (i.e., due to sanctions or penalties), bonds (i.e., friendship) and ethics (i.e., values or norms).

Meer-Kooistra and Vosselman, 2000, Langfield-Smith, 2008, Caglio and Ditillo, 2012) and public sector contracting out literature (see, e.g., Cristofoli et al., 2010, Ditillo et al., 2015, Johansson et al., 2016) have attempted to demonstrate the importance of control choices and their determinants<sup>32</sup>. These studies have mainly focused on ex-ante design of management controls based on the assumption of other organisation in hybrid relations behaving opportunistically. While these contributions have documented various controls that allows hybrid organisational actors to take long-term perspective towards the relationship, for instance, Cristofoli et al. (2010) and Ditillo et al. (2015) discussed that existence of contract allows the parties to take long-term perspective towards the relationship, once the relationship is in operational stage and existing controls or already established controls do not provide satisfactory answer, how parties deal with that situation still needs to be known. In such circumstances what are the basis of actors decision towards long term sustainable relationship?

In hybrid management control literature, the concept of hybrid partners' intention for long-term relationships or cooperation has so far received the attention of scholars emphasising stable-design control approaches (please see section 2.3). With regard to operational-design control approaches the concept is still evolving. It has been implicitly discussed in a few studies. However, Marques et al. (2011) explicitly investigated parties' motivation to cooperate in the network setting. These are elaborated below:

In Minnaar et al. (2017) study, the desire for a relationship was the existence of the contract. As parties knew that if they exited it would bring serious/harmful legal consequences (fear or coercion). In Ahmad et al. (2020) study, the cooperative approach towards contract

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<sup>32</sup> Review and analysis of these studies are presented in section 2.3 because majority of these studies have emphasised on stable design control approach.

renegotiation was used to avoid a costly elaborative arbitration system (material interest and fear) and hence resulted in a trusting relationship. This shows that desire could be for reputational purposes or to avoid expensive costly termination clauses or could be both. In the studies of Free (2008) and Neumann (2010) (as explained in section 2.4.1), actors had a desire for collaborative working, but both used entirely different ways to practice it. For Free (2008), the intention for cooperation could be for material interest as management accounting practices operated to conceal the self-interested actions of partners in hybrid relations. While, for Neumann (2010), the intention to collaborate could be due to ethics as a cooperative strategy adopted by the dominant partner allowed the generation of goodwill trust.

Marques et al. (2011) study explicitly investigated public sector organisations' assessment of motivation to cooperate<sup>33</sup> of other organisations in the network (i.e., mixed-type network setting). Similar to the study conducted by Marvel and Marvel (2007)<sup>34</sup> regarding contracted-out services, Marques et al. (2011) study found that where the intention to cooperate is for material interest, formal management controls (e.g., individual goals and performance targets) are used.

Where that motivation is based on friendship and bonds, social controls were more common. However, where intent to cooperate is based on material interest and bonding simultaneously, formal mechanisms are used.

The above-mentioned studies illustrate that the 'intention of parties for long-term sustainable relationship' can be interpreted in various ways by different actors. That makes this term

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<sup>33</sup> Motivation to cooperate means the extent to which parties in hybrid setting is willing to cooperate (Ring and Van de Ven, 1994).

<sup>34</sup> They found that intensity of controls depends on delivery mode (i.e., for-profit or not-for-profit) due to differences in goals of public and private service providers. For-profit organisations are monitored more intensity than not-for-profit service providers.



complex and ambiguous. The differences in the perception of actors lead to different shades of their intentions for a sustainable relationship. These intentions or desires are unique to each organisation. Also, for example, the expectations of different actors in hybrid relations about particular management control issues could be different. Some want to resolve that issue for economic gain while others due to good working relationships etc. Moreover, there is a possibility that depending upon particular circumstances, that intention also changes. For example., in the study of Marques et al. (2011), one of the network organisation behavioural controls were established on the initial assessment of high “motivation to cooperate” and high “contribution to network performance”, but no outcome controls were established. Over time situation changed and due to the opportunistic behaviour of that organisation, Port changed the control package. However, their study failed to cover those dynamics due to the static approach. This shows that it could be possible that parties want to stay in a long-term relationship because of good working relations. Afterwards material interest becomes the basis of a sustainable relationship. This shows that the ‘intention of parties for a long-term sustainable relationship’ is subject to change and negotiation (Smith et al., 1995) among hybrid partners.

Indeed, understanding the intentions of actors for cooperation towards sustainable relationships is vital during the change process (Axelrod and Dion, 1988), for example, changes in the management control system. Because it involves negotiations about ‘how’, ‘why’ and ‘in what way’ change should be implemented. Exploring the perception of actors about their intentions towards long-term relationships might shed some light on how they conceptualise the desire for sustainable hybrid organisational relationships. In this respect, treating actors as black boxes ignores the interaction between their inner processes and the dynamics of their relationship (Kastberg, 2014). Therefore, analysing their desires for a sustainable relationship

can help in understanding how they (mis)align their interests to carry out (un)successful change.

The above discussion highlights a gap in extant hybrid management control literature related to how and with what effect parties'/actors' intent to collaborate changes over time. This gap thus drives this thesis to further investigate the process of performance measure change to analyse whether, and if so, how parties desire for long-term relationships changes over time.

### **2.4.3 Enabling role of management controls**

Unlike, studies emphasising stable-design controls that presupposes that control are created at distance, another group of scholars, emphasising operational-design controls believe, that governance control structures are co-produced, and we never know who makes it (Latour, 1984). Researchers go into the field looking for expansions and perhaps even surprises due to the unpredictable nature of the connections (Boedker, 2010). It is believed that to predetermine or prescribe the role of management controls in hybrid relations is impossible, rather, the relationship is formed discursively via actor-network (Latour, 1984). According to this approach, management controls can be considered as a social objects with a variable ontology that changes based on their performance and implementation (Boedker, 2010). The main focus of researchers using this approach is to uncover the underlying phenomena by considering the role of human and non-human actors (Latour, 1987, Latour, 2005). In this regard, management controls system/practices are considered as a non-human actor that has agency of their own in hybrid management control literature.

Indeed, parties in a hybrid organisational setting can align their interest for successful results even without consensus (Star and Griesemer, 1989, Star, 2010). In this regard, there are various

ways authors interpret management controls while aligning the interest of the actors in a hybrid setting, for instance, as mediating instruments (Kurunmäki and Miller, 2011), boundary objects (Busco et al., 2017), and inscriptions (Zawawi and Hoque, 2020). In doing so, management controls play an active role that: has intra and inter-organisational effects (Mouritsen et al., 2001, Cuganesan and Lee, 2006, Zawawi and Hoque, 2020), create stability and instability in hybrid relations (Kastberg, 2014), integrate and fragment entities (Thrane, 2007), hybridise and de-hybridise (Kastberg and Lagström, 2019), can change from incidental to central (Chua and Mahama, 2007), build trust hierarchy (ter Bogt and Tillema, 2016), create innovation (Busco et al., 2017), can be a source of inter-professional encounters (Kurunmäki and Miller, 2011), generate re-contracting (Minnaar et al., 2017), influence organisational actions (Zawawi and Hoque, 2020) so on and so forth.

Busco et al. (2017) found that how boundary role of management control practices constructed collective space where various concerns can be voiced. With companies commercial and social logic, they did not reduce diversity and variety; instead, by attracting various interests, they acted as a boundary object. This identifies an enabling role of management controls. Minnaar et al. (2017) showed the enabling role of contract and incorporated control structures. They found that the contract designed by top management while entering into hybrid relations was not a true reflection of the day-to-day activities of the operations. Therefore, the operational staff was not happy with that. The parties' desire to work with each other was based on the fact that if they exited, they had to face harmful legal consequences. Therefore, the contract performed in an unexpected way through re-contracting. Based on their findings, they argued that rather than being instruments, contract and control structures are actors, with agency and the capacity to interact. For instance, the new contract allowed the parties to design controls in association with each other. Hence parties attached trust to new controls and contract. This

shows that the contract-control-trust nexus is not created by instrumental relations but is produced by and constitutive of associations among human actors and non-human actors (Latour, 1987, Latour, 1990). As a result, complex interactions can occur with unexpected results.

Zawawi and Hoque (2020) showed how external (Minister statement) and internal inscriptions (partnership agreement) generated a new inscription called balance score card and aligned the interest of the purchaser and with the provider. Hence, it created stable relationships. Kastberg (2014) found that accounting and control not only work as framing devices (e.g., to pull actors together through mediating techniques, e.g., cost allocation model) but also how the same devices become a source of destabilization (e.g., controversies related to cost allocation model). The study identified various formative problems related to the establishment of identities and the definition of services. To pull actors together, accounting devices acted as mediating techniques to facilitate coordination and reduce risk. To make hybrid relations denser resulted in disentanglement (i.e., the introduction of one shared system, but the needs of specific users are different). These disentanglements caused controversies and raised the question with regard to how hybrid relations are organized.

In a similar vein, for Kastberg and Lagström (2019) cost-benefit management accounting tool is an object (non-human actor) around which the actions are centred. While looking at the implementation process of this tool, they found that the complexity of a hybrid setting can be reduced through intensive framing (i.e., stabilisation of conditions for interaction) or de-hybridisation (i.e., conversion into the single-purpose organisation). This shows that complex task plays an active role either through framing or de-hybridization. This is because the objects/ tools/ tasks that bring actors together to hybridise also create overflows, and it is possible that

these overflows would not allow the implementation of those tools and hence results in de-hybridisation.

Mahama and Chua (2016), while focussing on the formation of alliances and selection of partners, argued that management control systems had not emerged simply after the formation of alliances “but actively shaped their formation and subsequent mode of operation” (p. 44). Their study illustrated the partner selection process in an entirely different approach compared to stable approach scholars (Dekker, 2008, Ding et al., 2013). They found the fundamental role of accounting controls in trials of trust for the selection of supplier. Over time trust emerged with diverse meanings and through different routines. Similar findings were found by Ahmad, Connolly and Demirag (2020) in the roads PPP case study.

Kurunmäki and Miller (2011), drawing on governmentality studies, focused on local processes and practices to understand how management controls link local service delivery processes with the larger political culture. The study identified that a regulatory hybrid seemed to be a solution for long-standing issues faced by local service providers. The management control practices introduced under the header of the Health Act 1999 behaved as mediating instruments between policy reformers and local service delivery as these practices acted as a linkage between different actors, agencies and aspirations etc.

Unlike Kurunmäki and Miller (2011), who showed how calculative practices, i.e., budget and resource allocation etc., shape individuals, Guven-Uslu et al. (2020) presented how individuals influence and shape these practices to meet government ideals. Hence by engaging with calculative practices, the boundary spanners present the attributes of calculable objects (Callon, 1986). Their argument is based on Miller (2001) assumption that calculative practices and

social relations they form and manage share a reciprocal relationship. In order to meet the expectations of different organisations in a hybrid setting, a reciprocal approach towards calculative practices is required. The evidence in their study of commissioning of healthcare in NHS showed that the absence of reciprocity resulted in difficulties in achieving desired outcomes of organisations involved in a hybrid setting. This inadequacy resulted in semi-formal boundary spanners adopting alternative practices to help in hybrid organisations' decision-making.

Overall, these studies show how management controls as an active actor produce unexpected results. However, these enabling roles of controls are limited to the extent of hybrid organisational boundaries. Although scholars (e.g., Mouritsen et al., 2001, Cuganesan and Lee, 2006, Zawawi and Hoque, 2020) have shown how management controls generate intra and inter-organisational effects simultaneously, the understanding of extra-organisational effects is limited.

Nevertheless, Thambar et al. (2019) extended the work of Miller et al. (2008) and looked at the multi-firm hybrid control processes that help in managing systemic uncertainty in the cotton industry. In doing so, they considered the wider implications of hybrid organisational controls. Similarly, Dudau et al. (2020) showed role of trust and control in relation to child victims in Wales and England. They concluded that formal controls are not applicable in these organisations due to high complexity. Rather, managers use rhetoric to build trust within the network to solve wicked problems. This illustrates that hybrid organisational management controls have a capacity to generate value beyond the boundaries of a hybrid setting.

However, as Vakkuri et al. (2021) and Grossi et al. (2021) argued that in order to understand the role of hybrid organisations in creating extra-organisational effects: i.e., value-creation, understanding the different orientations<sup>35</sup> of hybrid organisations plays a fundamental role. For example, public-private hybrid relations can be conceptualised as a reconciliation of competing value-creation logics through compromises (Grossi et al., 2021, Vakkuri et al., 2021). Essentially, this means that hybrids should have the ability to embrace the multiple values of public and private organisations (Grossi et al., 2021). However, these competing value-creation logics pose a challenge while designing management control tools. Because actors in hybrid relations have divergent interests and values, they act according to multiple logics (Grossi et al., 2019, Vakkuri et al., 2021), making it challenging to produce accounting information that meets the needs of every stakeholder. Hence, creating tension. On the other hand, it is also argued by Grossi et al. (2021) that the multiplicity of the values allows actors to define and produce a broader picture of management control tools. Therefore, creates opportunities for management control in a hybrid organisational setting. As such, the challenge is bringing the right people with the right capabilities and problem-solving skills together that can deal with multiple values inherent in hybrid relations as well as finding ways that can help resolve today's societal problems (Koppenjan et al., 2019a).

As mentioned in section 2.4.1 that accounting scholars are mainly concerned with how formal and relational methods help manage hybrid organisational relationships. The value-creation stance can take it one step further that, how hybrid organisational relations can be managed to help resolve complex societal problems. However, this area has so far received limited attention of the hybrid management control scholars. I, therefore, argue that hybrid management control

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<sup>35</sup> Orientation of hybrid organisations can be conceptualised through their value creation mechanism: 1-) 'mixing' where a novel variant of values are created by combining with existing values 2-) 'compromising' is reconciliation of competing value-creation logics through compromises, 3-) 'legitimising' is about justification of different expectations of various audiences (Vakkuri et al., 2021 and Grossi et al., 2021).

scholars can make a significant contribution by paying attention to the value-creation role of the management controls. In particular, how hybrid controls create value beyond hybrid organisational boundaries because dealing with management control issues related to inside hybrid organisational boundaries will not help tackle social and environmental issues (Jacobs and Cuganesan, 2014, Dumay and Guthrie, 2019, Steccolini, 2019).

## **2.5 Summary and conclusion**

Hybrid organisations are considered complex institutional settings (Johanson and Vakkuri, 2017) and complicated venues (Grossi et al., 2019). As such, in such relationships, context matters. Because, in practice, these relationships are located in complex networks with numerous connections (Mahama and Chua, 2016). Hybrid organisational relationships are complex not only because of various ties but also complex temporally (Minnaar et al., 2017). For instance, where parties were trustworthy in the past but are now seen as exploitative, such changes in partners' behaviour over time will have an impact on the choice of management controls to affect the behaviour of the partner. Extant hybrid management control literature indicates that static analysis (i.e., data collected and analysed at one point in time) due to its reductionist assumptions and deductive reasoning provides a limited understanding of the dynamics of hybrid organisational relations. This approach gives insufficient attention to local circumstances, processes, practices and changes related to control patterns (Miller et al., 2008, Kurunmäki and Miller, 2011, Kastberg and Lagström, 2019, Weichselberger and Lagström, 2021). As such, it provides a limited understanding of the process of changes in control patterns as a result of changes in actor networks.

To address this issue, hybrid management control studies (e.g., Mahama and Chua, 2016, Ahmad et al., 2020) have made an attempt to capture the dynamics of hybrid organisational relations. These studies have employed various methods and theoretical approaches in order to



understand how management controls in hybrid relations work in practice. However, in terms of how such relationships are managed, keeping in view the dynamics of the relationship, the literature is inconclusive. In this regard, the following are the major outcomes of the literature review:

**Firstly**, both design-control approaches have focused on formal and relational control methods. There is an extensive focus on the role of trust in the management of hybrid organisational relationships (see, e.g., Vélez et al., 2008, Tsamenyi et al., 2013, ter Bogt and Tillema, 2016, Abdullah and Khadaroo, 2020). This is because of the fact that hybrid organisational contracts are inherently incomplete (Anderson and Dekker, 2005) therefore, trust plays a fundamental role in the management of uncertainty.

While studies emphasising stable-design controls are mainly interested in the complementary and substitutive relationship between management controls and trust, studies emphasising operational-design controls have presented that role of management controls and trust in a hybrid organisational setting is a practical, situated, and contested phenomenon. Consequently, the relationship has been conceptualised in varied ways. One group of scholars presents the fundamental role of trust for the sustainability of hybrid organisational relationships despite actors having different perceptions towards it (e.g., Vélez et al., 2008, Kastberg, 2016, Dudau et al., 2020). By contrast, another group of scholars showed that it is not trust but ‘enlightened self-interest’, ‘truce’ or just ‘trust talks’ that regulate the behaviour of actors in hybrid relations (e.g., Coad and Cullen, 2006, Free, 2008, Grafton and Mundy, 2017). This indicates a lack of clarity in terms of how hybrid organisational relationships are managed in practice.

Free (2008) argued, and I also observed that in extant hybrid management control literature, the concept of trust had been used in reference to concepts such as collaboration and reciprocity (this has been explained with reference to some recent examples of studies in section 2.4.1). However, more focus of the studies has been on ‘trust’ while how ‘reciprocity’ is practiced remains to be known. *To fill this void, this thesis is an attempt to explore whether, and if so, reciprocity plays any role during the contract renegotiation phase of the Street Lighting PFI contract.*

**Secondly**, in hybrid organisational relationships, it is an implicit assumption that parties will work together for a long-term sustainable relationship. It is evident from the discussion in section 2.4.2 that there could be various reasons why actors want to stay in long-term relationships, ranging from good working relationships to material interest. However, the concept of hybrid partners’ intention for long-term relationships or cooperation has so far received the attention of scholars emphasising stable-design control approaches (please see section 2.3). With regard to operational-design control approaches the concept is still evolving. *In this regard, this thesis has tried to analyse whether, and if so, how parties’ desire for long-term relationships change over time.*

**Thirdly**, hybrid organisational relationships are created by society, sometimes unintentionally (Grossi et al., 2021). For instance, in pursuit of productivity, public services (e.g., education, transport and health) have adopted hybrid organisational models. The purpose of hybrid organisational arrangements is, therefore, to mobilise more resources and parties to address the complex challenges our society faces (Koppenjan et al., 2019b). Redundancy and synergy are thus created. However, in practice, sometimes, these expectations are not justified. For instance, in the case of public and private hybrid organisational relations, the government

which tries to act as a smart client can be simply outsmarted by private parties that utilise smart counterstrategies (Mills and Koliba, 2015). As Demirag et al. (2009, p206) argued that there are few evidence suggesting public-private hybrid organisational partners “are becoming aware of their accountabilities to public sector stakeholders”. There are also numerous real-life controversial public and private hybrid organisational cases. For instance, controversies related to NHS PFI deals where private contractors are shelling out billions of pounds from the public purse (Triggle, 2019). Moreover, Demirag and Khadaroo (2010) argued that, in theory, government publications state that PFI enables headteachers to focus more on educational needs through the reduced administrative burden; in practice this is not the case<sup>36</sup>. As a result, hybrid organisational arrangements “instead of providing solutions for wicked problems, could become the problem themselves” (Koppenjan et al., 2019b, p149).

The above discussion shows that hybrids are created to tackle societal problems sometimes fail to generate value (Madhok and Tallman, 1998). The extant literature has identified that the significant contributing factor to this failure is actually the way such arrangements are controlled and managed in practice (e.g., Anderson and Sedatole, 2003, Chua and Mahama, 2007, Mahama and Chua, 2016). Consequently, hybrid management control scholars remained focused on the control and management of hybrid forms with too much focus within the boundaries of hybrid organisational setting (as explained in sections 2.4.1, 2.4.2 and 2.4.3). Vakkuri et al. (2021) argued that:

“The current understanding of hybrid governance relies excessively on the primacy of organizational reasoning, in which the rationality of a system is examined by summing local rationalities into a larger whole. For instance,

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<sup>36</sup> In their study it was because of the significant differences in culture and interest between public and private sector that hinder service delivery.

performance measurement focuses on the rationality of mechanisms through which “organizational” goods are transformed into “public” or “common” goods. This reflects a highly sequential, linear process of evaluating complicated societal activities. With such an organizational lock-in problem, we cannot grasp all the important roles and influences of hybrid organizations on societal activities” (Vakkuri et al., 2021, p256).

In this respect, as I presented in section 2.4.3 that, recently, few hybrid management control studies (Thambar et al., 2019, Dudau et al., 2020) empirically showed how hybrid organisational controls generate extra-organisational effects by creating value beyond the boundaries of hybrid setting. Moreover, Vakkuri et al. (2021) and Grossi et al. (2021) provided theoretical insights related to the value-creation role of hybrids. In my view, this area warrants further research. As Koppenjan et al. (2019b) argued that if hybrids only focus on efficiency and effectiveness, then they will not be classed as smart. Such an approach neglects the values that society expects from organisations and governments, for instance, while delivering public services (Grossi et al., 2019, Johanson and Vakkuri, 2017). As mentioned in Chapter 1, section 1.5 that ANT methodologically inspires this thesis. *In this regard, this thesis using concepts from ANT, aims to explore ‘more enabling properties’ of management control (Hopwood, 1987) beyond hybrid organisational boundaries.*

**Finally**, as mentioned in section 2 of this Chapter that this thesis draws on Miller et al. (2008) definition and suggestions in the phenomena of hybridity. Miller et al. (2008) study argued that hybrid research should not be limited to organisational form. Instead, it should include hybrid practices, processes, and expertise that enable a lateral flow of information. In this regard, this study has not only focused on the contributions of the studies related to hybrid organisational relationships but also on hybrid control practices, processes, and expertise.

Analysis shows that hybrid management control literature has now moved beyond organisational forms as suggested by Miller et al. (2008) study and is now paying more attention to hybrid control practices (Minnaar et al., 2017, Kastberg and Lagström, 2019, e.g., Ahmad et al., 2020, Zawawi and Hoque, 2020, Weichselberger and Lagström, 2021). Although there is, in fact, little understanding of the difference between hybrid control practices and hybrid control processes (Miller et al., 2008). I identified only few studies that explicitly followed Miller et al. (2008) suggestion of hybrid processes and expertise (Kurunmäki and Miller, 2011, Kastberg and Lagström, 2019, Thambar et al., 2019, Weichselberger and Lagström, 2021).

This thesis focuses on hybrid process<sup>37</sup> of ‘contract modernisation’. This involves lateral flow of information between County Council and Service Provider regarding changes in performance measures of operational PFI Street Lighting contract. The aim is to understand how actors in hybrid relations manage performance measure changes in PFI contract. Recently, Kastberg and Lagström (2019) suggested that:

“An interesting area certainly seems to be to further analyse how the difficulty of “hot” hybridity is escaped (if ever successfully). By escape, we mean how the complexity is reduced sufficiently enough in order to allow for action. Further research on means and techniques that enable hybrids to push the capacity to handle a more complex set of actors, while not de-hybridizing the object too much, would be of interest” (Kastberg and Lagström, 2019, p723).

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<sup>37</sup> Hybrid process as defined by Miller et al., (2008) is a process that enable lateral flow of information.

This study is an attempt to fill this gap and argue that if we want to know techniques that actors use to manage hybrid relations and reduce complexity, for example, during any change in the life of hybrid organisation relations, obviously, we need to look at the detailed process of change. We need to follow actors to see what they are doing on their own rather than pre-structuring the research (Latour, 2005). In doing so, the study aims to fill the gaps highlighted above.

To fill in these gaps, ANT methodologically inspires this thesis to explore how actors in hybrid organisational relationships manage the performance measure issue and use methods to follow and trace various actors involved in the contract modernisation process. The translation (Callon, 1986, Latour, 1987), boundary objects (Star and Griesemer, 1989, Star, 2010), and convergence and irreversibility (Callon, 1990) concepts of ANT<sup>38</sup> have been used in this thesis to investigate the process of contract modernisation. These are explained in more detail in the next chapter.

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<sup>38</sup> Please see chapter three section 3.6 for details.

## Chapter Three: Theoretical Underpinning

### 3 Introduction

An important feature of this study is its reliance on the ANT concepts: translation (Callon, 1986, Latour, 1987), boundary objects (Star and Griesemer, 1989, Star, 2010), convergence and irreversibility (Callon, 1990). A key feature of ANT is that it proposes a third alternative to realism and social constructivism: constructivism (Latour, 2005). However, many scholars have translated it differently depending on their particular research interests (Justesen and Mouritsen, 2011, p162). Therefore, this chapter attempts to clarify the misunderstandings related to, for example, the definition and identification of an ‘actor’ and ‘network’. In this regard, this chapter presents a brief overview of ANT, its constructivist roots, also how it is discussed in accounting research.

This chapter is organised as follows:

Section 3.1 presents a brief overview of ANT followed by its philosophical underpinning in section 3.2. the symmetry between actor and actants, intermediaries and the meaning of ‘network’ is presented in sections 3.3, 3.4 and 3.5, respectively. Main concepts of ANT, that I have applied in this study and their relevance in accounting research are discussed in section 3.6. Section 3.7 provides the empirical evidence of the ANT concepts in hybrid management control literature. Section 3.8 justifies ANT as an appropriate choice for the understanding process of performance measure changes in the PFI hybrid setting. The final section presents the summary of the chapter.

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### 3.1 Brief overview of ANT

The early development of ANT has been attributed to three pivotal scholars: Bruno Latour, Michel Callon and John Law (Robson, 1991, Justesen and Mouritsen, 2011, Robson and Bottausci, 2018). Its origin can be traced to the studies of the sociology of scientific knowledge that began in the late 1970s. Early research work of ANT carried out by the main proponents of this theory was focused primarily on scientific and technological innovation, e.g., Latour (1987) *Science in Action*, (Latour, 1999a) *Pandora's hope: essays on the reality of science studies* and Callon (1986) seminal study of *Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay*. Nevertheless, over the years, this theory has gained widespread acceptance by interdisciplinary scholars who have applied it to various areas,<sup>39</sup> including social sciences<sup>40</sup> (Justesen and Mouritsen, 2011).

To begin with, ANT considers the world as a network composed of technical, social and natural actors/entities, which are treated symmetrically and are viewed as a call for careful investigation of association (Latour, 2005).

“ANT is the name of a movement, a displacement, a transformation, a translation, and enrolment. It is an association between entities which are in no way recognisable as being social in the ordinary manner, except in the brief moment when they are reshuffled together” (Latour, 2005, p.64).

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<sup>39</sup> E.g., information system, geography and development projects etc.

<sup>40</sup> It is important to note at this point that many of the seminal writings of ANT theorist has been inspired in part by Foucauldian research work (Justesen and Mouritsen, 2011). For example, the concept of translation in ANT has also been influenced by writing of Foucault to certain extent, as according to Law (1986) ANT concept of translation “owe more than a little to the writing of Foucault”.



One distinctive feature of ANT is that it is rooted in constructivist ontology, not ‘social constructivism’. As a constructivist, ANT rejects object and subject dichotomy by emphasising interdependent relationship in an actor-network:

“That, *by themselves*, things don’t act. Indeed, that there are no things “by themselves”. That, instead, there are relations, relations which (sometimes) make things” [ emphasis in original](Callon and Law, 1995).

In this regard, next section presents the philosophical underpinning of ANT.

### **3.2 Philosophical underpinnings of ANT**

Research philosophy is a set of beliefs and assumptions that researchers use to collect and analyse data (Guba and Lincoln, 1982). Different world views must be taken into account while conducting accounting research (Burrell and Morgan, 1979). In this regard, ANT raises an important question about world views: Do we live in two worlds, one based on natural objects, the other on social objects (Latour. 1999a)?

“If ANT can be credited with something, it is to have developed a science study that entirely bypasses the question of ‘social construction’ and ‘realist/relativist debate’” (Latour, 1999b, p22).

For many years, this question has been the subject of a philosophical debate between realism and relativism, which has divided scholars into two opposing groups. ANT, however, discard the strict dichotomy between objective and subjective and employs a symmetry between

actants and actors. ANT is different from social constructivism or realism by having a constructivist ontology. Latour (2005), in his book 'Reassembling the Social', specifically explained the difference between 'constructivism' and 'social constructivism'.

“When we say that a fact is constructed, we simply mean that we account for the solid objective reality by mobilizing various entities whose assemblage could fail: ‘social constructivism’ means, on the other hand, that we replace what this reality is made of with some other stuff, the social in which it is ‘really’ built” (Latour, 2005, p91).

The above quote shows that for ANT, 'construction' is about mobilising numerous entities to explain objective reality. It means, according to Latour (2005), 'construction' is all about association and composition (Latour, 2005). While, according to 'social constructivism', the word 'constructed' meant “that something was not true” (Latour, 2005 p.90). This interpretation of 'construction' makes ANT the 'sociology of associations' as opposed to the 'sociology of the social' of 'social construction' (Latour, 2005).

In “social constructivism”, social development is socially situated, and the construction of knowledge is done through interactions with others (Vygotsky and Cole, 1978, as cited in McKinley, 2015). The social constructivists operate on the strange assumption that either something is real and unconstructed, or it is constructed and unreal, fabricated, or made up (Latour, 2005). “Constructivists”, on the other hand, believe that “to be contrived and to be objective went together” (Latour, 2005 p.90).

“Constructivism” and “social constructivism” can also be differentiated on the basis of their view related to Society. It is explicitly mentioned that ANT does not intend to describe a Society. Rather, “it is all about summing up a number of interactions through various devices, inscriptions, forms, formulae and forms into a very local and very tiny locus” (Latour, 1999b, p17). In terms of social constructivism, Society can explain something that Nature cannot (Latour, 1987).

For Latour (2004), social constructivism has a flaw in that it believed that one could only critique “matter of fact” effectively if one moved away from it and focused on the factors that made it possible. Moreover, as mentioned above that Latour (2005, p91) criticised ‘social constructivists’ for replacing ‘social’ with some special ‘stuff’ which cannot be explained otherwise. Whereas, from constructivist philosophy, ‘social’ refers to a temporary humans and non-humans association (Latour, 2005).

The rejection of the duality of Nature and Society also implies the rejection of the dualistic relationship between object and subject (Justesen and Mouritsen, 2011). According to Latour (1987), objectivity and subjectivity are determined by the power of their representations rather than Nature and Society. Therefore, ANT examines a generalised symmetry between actors and actants instead of the symmetries between Nature and Society and subject and object (Callon, 1986, Latour, 1987).

### **3.3 Symmetry between actor and actants**

“The name of the game is not to extend subjectivity to things, to treat humans like objects, to take machines for social actors, but *to avoid using* subject-object distinctions *at all* in order to talk about the folding of humans and nonhumans”  
[ emphasis in original] (Latour, 1999a, pp193-194).

The above-mentioned claim of Latour (1999a) replaces the Nature and Society and object and subject distinction, and creates symmetry between actors and actants. In ANT terms, the ‘actor’ means an entity that has the ability to produce actions. If an actor makes no difference, it’s not an actor” (Latour, 2005, P.130). Considering the concept of actant, Latour (1987, p84) suggested, “to call whoever and whatever is represented **actant**” (original emphasis). Latour (1999a, pp179-180) explains this with the help of an example of ‘gun’ and ‘gunman’. Neither people nor guns kill, according to Latour (1999a); rather, it is a “hybrid actor” of a “gun and a gunman” (p180). Because when you have a gun, you are a different person (Latour, 1999a). This shows that the gunman’s agent is a gun and the agent for the gun is a gunman. Which means “agents can be human or (like the gun) nonhuman” (Latour, 1999a, p180).

There is considerable controversy over the agency of nonhumans in ANT (Sayes, 2014). Moreover, “proponents of ANT seem reticent to give either a simple or precise definition” of ‘nonhuman’ (Sayes, 2014, p136). Therefore, it is more common for people to consider humans as actors and nonhuman as actants on the basis that nonhuman lacks agency (Sayes, 2014). In this regard, Chua (1995) study is a good example. Chua (1995, p117) argued that “it is people who makeup accounting numbers in specific ways to try and achieve certain objectives. Software, by contrast, has neither interest nor agency”. This means, for Chua (1995), nonhumans are actants.

In order to minimise confusion, Latour (2005, p71) redefined the term actor as “*anything* that does modify a state of affairs by making a difference” [ emphasis in original]. By this definition, an actor can be seen as a mediator able to transform or alter what others do. Actants, on the other hand, serve as intermediaries or placeholders that pass inputs directly to outputs without undergoing any transformation (Latour, 2005, Callon, 1990).

### 3.4 Intermediaries

Callon (1990, p134) defines intermediaries as:

“An intermediary is anything passing between actors which defines the relationship between them” (p135).

Intermediary includes heterogeneous materials, for instance, “technical artefacts” (e.g., machines and scientific instruments), “human beings and skills” (e.g., their knowledge and know-how), and “money in all its different forms” (Callon, 1990, p135). Moreover, it also includes inscriptions<sup>41</sup> (e.g., books, reports and articles etc.) (Latour, 1986).

In ANT, Latour (2005) sees the distinction between intermediaries and mediators as the first uncertainty, and it also explains all subsequent uncertainties. As an explanation, Latour (2005) argues that while intermediaries offer predictable outcomes, mediators, on the other hand, are unpredictable. For instance, a mediator may become complicated and take a number of directions at once, like a banal conversation “where passions, opinions, and attitudes bifurcate at every turn” (Latour, 2005, p39).

Therefore, an intermediary “transports meaning or force without transformation” (Latour, 2005, p39). Mediators, on the other hand, “transform, translate, distort, and modify the meaning or the elements they are supposed to carry” (Latour, 2005, p39).

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<sup>41</sup> According to Latour (1987, p68) inscription is an “instrument, any setup, no matter what its size, nature and cost, that provides a visual display of any sort in a scientific text”.

### 3.5 What is network in ANT?

“Actors are network effects. They take the attributes of the entities which they include” (Law, 1999, p5).

The actors cannot be studied without considering the networks through which their identities are constructed (Law, 1999). In this regard, ‘network’ in ANT has nothing in common with, for instance, a computer network. In fact, “it is only one of the possible final and stabilized state of an actor-network” (Latour, 1996, p370) [original emphasis]. A network is not just about humans but also about nonhumans (Latour, 1996). Additionally, a network is a tool used to “describe something”, “not what is being described” (Latour, 2005, p131).

Law (1999, p5) calls the concept of actor-network “*intentionally oxymoronic*” since it implies both a centred actor and decentred network [emphasis in original], which means that both terms are linked in such a way that neither can be defined without the other. Hence it is essential that the terms ‘actor’ and ‘network’ must be hyphenated since it does not separate them but rather emphasise their inter-relationship as defining each other in action. In this context, Callon (1987) explains that:

“An actor-network is reducible to neither an actor alone nor a network ..... as an actor- network is simultaneously an actor whose activity is networking heterogeneous elements, that is, many dissimilar elements and at the same time a network that is able to redefine what it is made of“(Callon, 1987, p93).

In extant ANT-inspired studies, for instance, Young (1995) and Gendron and Barrett (2004), scholars have made an attempt to construct a network of support in order to enrol other actors.

This has resulted in readers misinterpreting the concept of ‘actor-network’ with ‘social network’. To deal with this confusion, Latour (2005, p132) proposed calling the network a “*worknet* or *action net*” [ emphasis in original]. According to Czarniawska (1997), the action net emphasises the importance of paying attention to not just the network’s structure but also the activity and actions that are occurring within the net.

With its focus on connections within the network, the notion of ‘action net’ goes beyond the traditional distinction between ‘technical’ and ‘social’ factors (Latour, 1987, Callon and Latour, 1992), paying attention instead to how they come together to produce particular effects (Chua and Mahama, 2007). In this regard, Chua and Mahama (2007) study placed the alliances within the larger and more complex network of hybrid relationships that significantly affects the operations/functioning of accounting controls. For instance, the study found the role of the third party (i.e., government agencies) very clear at the time of supplier entering the supply contract. However, their influence on the composition of case organisation infrastructure was crucial. These interacting sets of actors set an obligatory passage point for case organisations and suppliers to be enrolled. Hence, showed how other elements within the larger complex action nets also have an impact on the accounting control choices.

### **3.6 Actor network theory concepts applied to this study**

This study investigates the process of contract modernisation in order to understand how performance measure change has been managed in Street Lighting PFI contract UK. The purpose of this section is, therefore, to present the meaning of translation (Callon, 1986, Latour, 1987), boundary objects (Star and Griesemer, 1989, Star, 2010), and convergence and irreversibility (Callon, 1990) concepts in ANT and how these concepts have been applied in

accounting research<sup>42</sup>. In this section, ANT concepts are presented, which will heavily influence the analysis presented in chapters 5 to 7.

### 3.6.1 Translation

The notion of ‘translation’ was first introduced by Michel Serres, and then further refined by Latour and Callon (Brown, 2002). The concept of translation is difficult to grasp (Justesen and Mouritsen, 2011), given it is not explicitly defined by Callon (1986) and Latour (1987). However, the term was loosely defined by Latour (1999a, p179) as “displacement, drift, invention, mediation, the creation a link that did not exist before and through which things that were previously different are made equivalent”. The concept is then simplified by Latour (2005) to include “any movement” by “an actor in space and or time”, which is visible through “attachments that lead an actor” in whichever direction is desired.

Indeed, translation is the key concept behind the progress of ANT (Callon, 1986, Latour, 1987). According to Latour (1987; 2005), translation is the foundation on which ANT was built. Therefore, ANT formed its identity from the work of Callon (1986) and Latour (1987). Using the analytical approach of human and nonhuman actors, Callon (1986) applied the concept of translation to a research project on scallops. Latour (1987) showed how a knowledge claim could be translated by scientists into black box through the use of various strategies. Therefore, while drawing mainly from the work of Callon (1986), this study also uses ideas from the work of Latour (1987; 2005).

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<sup>42</sup> It is important to mention here that purpose of this section is not to provide a full review of ANT inspired accounting literature.



### **3.6.2 Four moments of translation**

Callon (1986) seminal work on the domestication of scallops and fishermen in St Brieuc Bay shows that translation occurs through the following four stages. However, it must also be noted that these four moments overlap in reality (Callon, 1986). Furthermore, not all actor-networks undergo all four stages of translation, and the process may stop or fail at any point in time (Alcouffe et al., 2008).

#### ***3.6.2.1 Problematisation***

Problematisation is a moment where the main translator(s) identify the problem, make efforts to subscribe to other actors, define their identities, and realise them that they/he have the right solution or definition of the problem (Callon, 1986). In the context of Callon (1986) study, the scientists initially problematised the fishermen's issues and offered a possible solution. Scientists problematised because they were seeking to advance knowledge regarding scallops and fishing. The issue of depleting fishing stock was a problem for fishermen. Therefore, the scientist took this opportunity for positioning themselves as indispensable and proposed the domestication of scallops as a solution. As such, the scientist played the role of 'obligatory passage points (OPP)'. OPP is designed by powerful actors to allow all information to pass through it (Latour, 1987). According to Callon (1986), for the formation and success of the network, all the actors must pass through OPP. The aim is to make a new definition recognisable for other actors, making its acceptance an OPP for engaging or entering into the network and becoming indispensable in the process or activity.

The concept of problematisation has been widely used by ANT-inspired accounting studies (e.g., Robson, 1991, Miller, 1991, Becker et al., 2014, Minnaar et al., 2017).

According to Robson (1991):

“The outcome of the process through which the aims, interests and objectives of the discourses are translated into the procedures and objectives of accounting techniques and calculations” (Robson, 1991, p551).

Robson (1991) study problematised the Accounting Standard Steering Committee in the UK as a ‘solution’ to the ‘problem’ of failure of profit forecasting, auditing, and accounting practices and the consequences of the rise of investment calculations. Similarly, Miller (1991) study problematised discounted cash flow technique as a ‘solution’ to the ‘problem’ of existing methods of capital investment decision of enterprise. These studies examined translation from a discursive and rhetorical perspective. Alcouffe et al. (2008) argued that showing the correct solution in order to persuade and subscribe actors makes problematisation a rhetorical process. Moreover, although Minnaar et al. (2017) study did not specifically use the notion of ‘problematisation’, ‘re-contracting’ involving operational staff is indeed a ‘solution’ proposed for the ‘problem’ associated with the original contract designed by actors at distant.

Regarding ANT-inspired hybrid management control studies, the concept of problematisation has been extensively studied. For instance, Mouritsen et al. (2001) study problematised management controls (functional analysis and open book accounting) as a ‘solution’ to the ‘problem’ of ‘knowledge gap<sup>43</sup>’ in a hybrid outsourcing relationship. Cuganesan and Lee (2006) study problematised information technology in procurement networks to deal with the issue of maverick spending. Mahama and Chua (2016) work presented the formation of alliances as a solution for the high distribution and warehousing costs, so on and so forth.

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<sup>43</sup> When organisations enter in outsourcing relationship it means distance working between two organisations. That information gap requires controls so that relation can be controlled from distance.

Despite different research aims, one similarity in all of the above-mentioned studies is that they all started with a well-defined set of problem where all parties have shown agreement that ‘the problem’ exists that need changes. As such, they proposed a ‘solution’ in order to solve a problem. This approach shows a lack of attention to how the existence of ‘the problem’ is established. This necessitates a need to re-open a black box of ‘the problem’ to understand how actors crystallise ‘the problem’. Because if too much attention is paid to the ‘set’ dimensions of the problem, we risk ignoring the processes and practices (Miller et al., 2008) those actors (human and non-human) has to go through in order to crystallise the problem.

The notion of problematisation is important to this study because contract modernisation was proposed as a ‘solution’ to the ‘problem’ of misaligned performance measures by the Service Provider (a private organisation) to the County Council (public organisation) for the long-term sustainable PFI relationship. However, before that actor at Service Provider (private organisation) level has to problematise, which indicates that ‘performance measures problem’ exists. In this study, the concept of problematisation will be discussed in Chapter 5 to illustrate how contract modernisation was problematised by Service Provider.

### ***3.6.2.2 Interessement***

Interessement is a moment where an attempt is made to lock the actors whose identities or roles are defined at the problematisation stage (Callon, 1986). In order to achieve interessement, various devices and techniques are employed with the aim of implementing such actions (Callon, 1986). As the term ‘inter-esse’ means ‘to be between’ actors and their aims; hence this tension will lead actors to choose only what, in their eyes, will aid them in reaching their goals (Callon, 1986, Latour, 1987). In the context of Callon (1986), research scientists used devices

such as towlines and collectors to maintain the stability of the scallops. This indicates that the important feature of this moment is the concept of devices which plays a fundamental role in dealing with resistance and convincing other actors.

Latour (1987) provided additional insights related to the concept of *interessement*. Since *interessement* is about ‘translating interest’ (Latour, 1987, p108), a variety of methods can be employed depending on whether the interests of the actors align. In this respect, Latour (1987, pp108-121) presented five scenarios; a) “I want what you want”; b) “I want it, why don’t you?”; c) “If you just make a short detour”; d) “reshuffling interests and goals”; and es) “becoming indispensable”.

The first situation, i.e., “I want what you want”, is about the explicit interest of others (Latour, 1987, p108). It is the simplest strategy as by choosing to serve others’ interests, one lets himself be enrolled by others (Latour, 1987). The second scenario, “I want it, why don’t you?” according to Latour (1987, p111), occurs where one actor (i.e., program designer) is powerless and wants to translate the interest of powerful actors. ‘Devices of *interessement*’ plays an important role in this scenario in order to deal with resistance and for persuading powerful actors (Callon, 1986). However, due to the rarity of this scenario Latour (1987) suggest that detour can often be necessary, which results in third scenario. It is sometimes necessary to use a “series of interpretations of interest” to seek the consent of others (Latour, 1987).

The main shortcoming of the third scenario is unclarity “related to the length of the detour and other ways of attracting actors” (Latour, 1987). An attempt to address these weaknesses results in the next strategy of “reshuffling interest and goals” (Latour, 1987, p113). This scenario is crucial for a primary actor if the intention is to dissolve the explicit interest of those whose enrolment is needed (Latour, 1987). According to Latour (1987), a primary actor may use different tactics, e.g., “displacing goals” (p114), “inventing new goals” (p114), “inventing new

groups”(p115), “rendering the detour invisible<sup>44</sup>” (p116).

All of the previous scenarios/strategies lead to the fifth scenario, i.e., “becoming indispensable” (Latour, 1987, p119). This occurs in a situation where the fact-builder is strong enough that other actors must pass it in order to spread their claims. According to (Latour, 1987, p120), “no negotiation, no displacement would be necessary since the others would do the moving, the begging, the compromising and the negotiation”.

The moment of interessement has been used in ANT-inspired accounting research (e.g., Skærbæk, 2009, Becker et al., 2014, Zawawi and Hoque, 2020). According to Becker et al. (2014):

“Interessement describes a group of actions that a certain entity exerts in attempts to bring the identities defined in the problematization phase to life. It is in this moment that devices are built and placed between the related set of actors in order to stabilise or “lock in” the actor’s performance of the role and responsibilities defined on their behalf”(Becker et al., 2014, p326).

Becker et al. (2014) study illustrated three interessement devices that the government of the two states and project committee used in order to enrol public sector accountants for the introduction of accounting output-based budgeting. These devices considering the age and practical experience of four groups of public sector accountants included: ‘meeting and circulation of cost centre reports’, ‘financial and/or career benefits, and ‘creation of new positions and/or re-configuration of previous positions’. Becker et al. (2014) study show

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<sup>44</sup> It means “at once offering new interpretations of these interests and channelling people in different directions” (Latour 1987, p117).

individual perspectives towards the use of interessement devices.

In this respect, this study that is about understanding how public and private sector hybrid organisational actors managed performance measure change in the PFI contract is expected to present multiple strategies and interessement devices that are used during the process of contract modernisation. In explaining this, the study illustrates how certain devices and strategies work for a particular group (e.g., senior management, legal department etc.) and why not for others. This will be illustrated in more detail in Chapters 5 and 6.

### ***3.6.2.3 Enrolment***

It is not necessary that interessement results in successful alliances. According to Callon (1986), if the interessement devices are successful, it leads to enrolment. Successful networks are created through the enrolment of actors involved and their translation of interest in such a way that they willingly participate in a particular way that maintains the stability of the network (i.e. when actors punctualised (Law, 1992)).

As such, the moment of enrolment is about how easily identified actors get enrolled. It is concerned with the formation of a stable network of alliances. Every enrolment requires some kind of negotiation and begins with some trial and error (Callon, 1986). Moreover, enrolment does not happen in a one-sided, one-off manner that can be predicted *ex-ante* (Briers and Chua, 2001). Therefore, it is difficult to track who enrol whom (Briers and Chua, 2001). Finally, any problem with enrolment means that further work with regard to interessement devices is required in order to make smooth enrolment (Skærbæk, 2009).

In ANT-inspired accounting research, the concept of enrolment has been widely used (e.g., Ezzamel, 1994, Briers and Chua, 2001, Andon et al., 2007). Ezzamel (1994) study showed how the opposition group succeeded in their efforts to resist the application of the new budgetary system in UK university through their technical accounting knowledge and calculations that

cast doubt on the Financial Centre's proposal. In this way, Financial Centre failed to enrol actors for the successful implementation of the accounting system.

#### ***3.6.2.4 Mobilisation***

The final stage of translation is mobilisation. Successful mobilisation means the network starts to speak as one (Callon, 1986). "In this way, the network starts to operate as a recognizable "actor" and can produce some effect in the world through its intermediaries" (Gherardi & Nicolini, 2005, p. 6). This means that at this stage, there is no controversies and solution are widely accepted. Because the mobilisation process involves maintaining more or less stable relations between various interests (Mouritsen et al., 2001), however, this stability can be contested at any time. If this happens, then according to Callon (1986, p. 15), "translation becomes treason". In Callon (1986) study, the translation finally failed due to the betrayal of fishermen and also, nonhuman actants (i.e. scallops population) did not anchor themselves like sample scallops. This shows the indeterminacy of success and failure (Briers and Chua, 2001, Alcouffe et al., 2008).

In addition, it is vital to note here that success does not necessarily mean people will be convinced once the program starts working. On the contrary, the only way a program will succeed is if all the relevant actors agree on it (Latour, 1987). In this respect, Minnaar et al. (2017) study specifically presented how the original contract between hybrid organisations did not work because operational staff considered performance measures as unfair and showed resistance against that.

Moreover, heterogeneous actors are behind the construction or translation of any practice/system. There is always a possibility of differences of opinion when multiple actors are involved (Arnaboldi and Azzone, 2010). For example, Arnaboldi and Azzone (2010) study

illustrated how actors with louder and softer voices brought controversies in the process of construction of performance measurement systems in public sector Italian universities. The heterogeneity did not allow that system to act as a closed product (black box) that can be taken for granted. Instead, such a system continually translates as new actors join the network and technical devices enter the system.

So far, I have presented four moments of translation based on the study of Callon (1986) and Latour (1987) and their implication in accounting and specifically in hybrid management control literature. It is crucial to reemphasise here that four moments of translation can overlap and that different strategies can be applied at each stage (Callon, 1986). The concept of translation is relevant to the translation of contract modernisation to be presented in chapters 5 to 7.

### **3.6.3 Boundary objects**

The concept of the boundary object was introduced by Star and Griesemer (1989) with regard to situations related to difficulties in cooperation and coordination. The concept is relevant to this study as it helps in understanding how despite having divergent objectives, public and private organisations achieved cooperation and managed the performance measurement change in the PFI contract.

Star and Griesemer (1989) study was based on sociological work of translation. However, their study suggested modification in intersement model of Latour and Callon. Using a more ecological approach, it has been identified that collaboration can be achieved even in the absence of consensus (Star and Griesemer, 1989).



According to Star and Griesemer (1989):

“Boundary objects are objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use and become strongly structured in individual site use. These objects may be abstract or concrete. They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, a means of translation” (Star and Griesemer, 1989, p393).

As such, boundary objects are shared object that results in action and consist of various groups involved in collective action. In the process of translation, boundary objects play an important role (Star and Griesemer, 1989). Boundary objects carry different meanings for different groups; however, through interpretation and means of translation, it becomes common to multiple groups (Star and Griesemer, 1989). That is why Star and Griesemer (1989) called them a ‘means of translation’ (p393).

Briers and Chua (2001) further developed this concept by explaining that boundary objects “ties together actors with diverse goals because it is common to multiple groups but is capable of taking on different meanings within each of them” (p241). This means that it connects different actors during the process of translation by mediating conflicting interests (Briers and Chua, 2001). Therefore, construction/management of boundary objects happens when these actors make an effort to align their interests (Star and Griesemer, 1989, Star, 2010).

Star and Griesemer (1989) study classified physical boundary objects into four categories: repositories, ideal types, coincident boundaries and standardised forms. The fifth type of boundary object is proposed by Briers and Chua (2001): the visionary boundary object.

“Visionary objects are conceptual objects that have high level of legitimacy within a particular community. They can evoke similar emotive and affective responses from a wide spectrum of people; possessing a sacred quality that makes it difficult for a ‘rational’ person to go against them...But the precise identity of these objects is unknown until it is customised and tailored to specific settings” (Briers and Chua, 2001, p242).

In 2010, Star stressed that the boundary object model must have three features in order to be useful: interpretive flexibility, infrastructure and work requirement, and the dynamic between ill-structured and more tailored uses of the object (Star, 2010, p601). She argued that there had been a large amount of emphasis on using the concept regarding interpretive flexibility, and this has often been misunderstood or confused with the process of switching back and forth between structures that are poorly structured and those that are well structured (Star, 2010).

The first dimension requires that as a shared object, it allows interpretive flexibility, meaning that it offers collective working without consensus. For instance, Briers and Chua (2001) showed that data repository practices allowed different experts to hold together despite differences in objectives. The second aspect is ‘infrastructure and work requirements’ (Star, 2010). An organic infrastructure because of information needs is required (Star, 2010). This could be a language, conventions, standards, or practice structure to facilitate cooperation (Star, 2010). The final feature, as explained by Star (2010) study, is the core of the notion of the

boundary object because it exists between two or more social worlds where it is weakly structured. At the same time, it is strongly structured by local groups for their use. This requires various groups to switch back and forth between the object's weakly structured and more tailored form.

In ANT-inspired accounting research, the notion of boundary object has been of interest to scholars who seek to understand the role of enterprise resource planning systems (Dechow and Mouritsen, 2005) and activity-based costing systems (Briers and Chua, 2001). While in hybrid management control literature, the concept has been recently applied by Busco et al. (2017). Their study illustrated the role of management control practices (i.e., physical boundary objects) as an actor that mediates process of innovation while maintaining multiple logics.

Overall, in ANT-inspired accounting research, the concept of boundary objects is still evolving as only a few studies (Briers and Chua, 2001, Dechow and Mouritsen, 2005, Busco et al., 2017) have so far applied this. Moreover, these studies have paid particular attention to physical boundary objects while visionary boundary objects received inadequate attention. Visionary boundary objects are 'conceptual objects' that give rise to 'emotive' and 'affective' responses..... (Briers and Chua, 2001, p242). These are important because, as Kastberg (2014, p745) argues, "when actors are treated as black boxes, the interaction between the *inner processes* of the actor and the relations has been neglected.

The concept of visionary boundary objects is important to this study because the public and private sector organisations have different objectives. This means that actors could have different *perceptions* regarding what is an appropriate solution to a problem. Conflicts and disagreements could occur due to different *thought processes*. It is believed that the notion of

visionary boundary objects facilitates the understanding of how they achieve reconciliation to support translation and their intention toward long-term sustainable relationships.

### **3.6.4 Convergence and irreversibility**

#### ***3.6.4.1 Meaning of convergent network.***

“Convergence is the way in which parts of heterogeneous networks converge to create unified spaces linking incommensurable elements, and irreversibility relates to how some of these links achieve longevity and tend to shape future processes of translation” (Callon, 1990 p.132).

As this study involves changes in performance measures of the Street Lighting PFI contract, therefore it is interesting to observe and understand how actors in hybrid relationships are enrolled and how they collaborate to make translation successful for a long-term sustainable relationship. In this regard, it is believed that Callon (1990) notion of ‘convergence and irreversibility’ provide a helpful guide.

Callon (1990) defines ‘convergence’ as a term that:

“Measures the extent to which the process of translation and its circulation of intermediaries<sup>45</sup> leads to agreement” (Callon, 1990 p.144).

Convergence is a combination of ‘alignment’ and ‘coordination’ (Callon, 1990). Translation can be rejected because of conflicts and controversy in any network (Callon, 1986, Callon, 1990). Disagreements can relate to an actor or to an intermediary (Callon, 1990). They can spark controversy or lead to abstention, and they may or may not be resolved (Callon, 1990).

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<sup>45</sup> Callon 1990 defines “intermediary as anything passing between actors which defines the relationship between them”.

This shows that disagreements can vary in scope. However, through alignment actors can communicate with each other and make translation successful (Callon, 1990). An accepted translation tends to shed its history; it becomes self-evident, something everyone agrees upon, a perfect bit of information that circulates effortlessly (Callon, 1986, Latour, 1987, Callon, 1990). Such translation generates a shared space and commensurability (Callon, 1990). On the other hand, '*disalignment*' result in separate spaces without any common measures (Callon, 1990, p145) [original emphasis].

The degree of coordination is a second dimension of convergence (Callon, 1990). A network with strong coordination has predictable behaviour when it has a local and general rule (Callon, 1990). For example, through contractual clauses. On the other hand, the absence of specific rules results in a weak coordinated network (Callon, 1990).

Callon (1990) symbolised a convergent network with the 'Tower of Babel'. The point is that in the highly convergent network:

- 1- Despite heterogeneity, the activities of the actors fit together.
- 2- Actors in the network can identify and mobilise the skills without adaptation and translation.

Hence, in convergent networks, actors would be able to speak for the entire network (Callon, 1986, Callon, 1990, Latour, 1987). Furthermore, the network as a whole would be able to concentrate on a single goal (Callon, 1990).

It means that in this study, for private-sector organisations (Service Provider), enrolment of public sector organisations' actors (County Council) and holding them together requires a stable convergent network for a sustainable long-term relationship. However, as Callon (1990,

p148) argued that “strongly convergent networks only develop after long periods of investment, intense efforts, and coordination”. In this regard, Chapter 7 presents the intense efforts of the actors in both organisations to create a convergent network. As such, the notion of ‘convergence’ plays a vital role in this study to understand how actors in a hybrid organisational setting form a convergent network to modernise the contract.

#### ***3.6.4.1 Meaning of irreversible translation.***

“Degree of irreversibility of translation depends on two things: (a) the extent to which it is subsequently impossible to go back to the point where that translation was only one amongst others; and (b) the extent to which it shapes subsequent translations” (Callon, 1990, p149).

The notion of irreversibility helps understand the actors to make translation less reversible (Callon, 1990). According to Callon (1990), when interrelationships are numerous and heterogeneous, the more likely it is that network coordination takes place and alternative translation will be successfully resisted. The point is irreversibility increases when elements, intermediaries and translators are entangled in a web of interrelationships (Callon, 1990). In such a tightly coupled network, any attempt to redefine one element will lead to the retranslation of the whole.

Moreover, translation might also be irreversible if it leads to the search for a substitute or translation that will lengthen its life or scope (Callon, 1990). To explain it, Callon (1990) provided the example of apprenticeship. Where in the process of mutual adaptation, the elements involved in translation become interdependent. For example, a skilled machinist

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cannot function without a machine. The practice of this results in the circulation of specific objects (Callon, 1990). The creation of these systemic effects is the manifestation of normalisation<sup>46</sup> (David, 1987).

“In a word, irreversibilisation, taken as the predetermination of translation and as the impossibility of a return to competing translations, is synonymous with normalisation” (Callon, 1990, p151).

Once the translation becomes normalised or standardised, it could lead to quantification (Callon, 1990), where an upper and lower threshold of expected performance is decided. The precise and quantified standards result in irreversible translation (Callon, 1990). However, Callon (1990) also argued that putting a network into numbers is rarely possible. On the other hand, “it is silly to reject all quantification” (p152). Moreover, the choice of quantitative or qualitative method is entirely dependent on the state of the network (Callon, 1990).

For Callon (1990), punctualisation emerges when a network becomes highly convergent and irreversible. In ANT scholarship, the concept is often referred to as a black box<sup>47</sup> (Callon, 1990, Latour, 1987).

“When a network is strongly convergent and irreversibilised, it can be assimilated to a black box whose behaviour is known and predicted” (Callon, 1990, p152).

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<sup>46</sup> Michel Foucault used the term ‘normalization’ to describe his account of disciplinary power in *Discipline and Punish*, it means the creation of idealized norms of conduct.

<sup>47</sup> Latour (1987, p2) defines the term black box as: “the word **black box** is used by cyberneticians whenever a piece of machinery or a set of commands is too complex. In its place they draw a little box about which they need to know nothing but its input and output” [original emphasis].

Callon was the first ANT theorist who defined the concept of punctualisation (Gehl, 2016). According to Callon (1990, p153), “the process of punctualisation ... converts an entire network into a single point or node in another network”. Callon’s analysis of punctualisation relates it with the ideas such as “durability”, “stability”, and “irreversibility”, all seem to be important characteristics of a successful actor-network (Callon, 1990). The black-boxing process, according to Latour (1999a, p184) is a seven steps process with ‘punctualisation’ considered the pinnacle. Therefore, for many ANT-inspired studies, in particular, ANT-inspired organisational scholarship (e.g., Fairhurst and Cooren, 2009, Cooren, 2001), punctualisation is viewed as a goal – a unified, stable and coherent association is something to strive for (Warzynski and Krupenikava, 2010).

However, in the case of ANT-inspired accounting studies concept of a black box is more common than irreversibility and punctualisation. In this regard, some scholars have focused on the implementation of black box, e.g. “new accounting numbers” (Chua, 1995), implementation of ABC costing (Briers and Chua, 2001) etc. The point is to understand phenomena while ‘in the making’ (Justesen and Mouritsen, 2011). In contrast, another group has focused on the re-opening black box, for instance: ABC (Jones and Dugdale, 2002) and ‘hospital of average cost’(Llewellyn and Northcott, 2005). Hence the focus is to trace the process of accounting phenomenon becoming taken-for-granted (Justesen and Mouritsen, 2011).

In this respect, this study resonates with ANT-inspired accounting studies that paid attention to “re-opening the black box of ....” Because this study travel back to when the modernised contract (or in other words performance measure changes in PFI contract) was a possibility



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instead of certainty; when the renegotiation of original PFI contract was contested and controversial (detailed analysis is provided in Chapter 7). However, in this study, the concept of ‘convergence and irreversibility’ is used to capture the precise mechanism that allowed the PFI actors to create ‘durable’, ‘stable’ and ‘irreversible’ contract (Callon, 1990). In doing so, this study also responds to the recent call of Robson and Bottausci (2018) regarding the lack of attention towards ‘stabilisation<sup>48</sup>’ in ANT scholarship.

### **3.7 Empirical evidence of ANT in hybrid management control literature**

In the previous section, I have explained the ANT concepts applied in this study. While discussing, I have also explained the relevance of the concepts in extant accounting literature. This section is specifically focused on how ANT concepts<sup>49</sup>: translation (Callon, 1986, Latour, 1987) and convergence and irreversibility (Callon, 1990) has been received the attention of hybrid management controls scholars in order to justify the contribution of this study presented in chapter 8.

The notion of translation has received particular attention in accounting research, specifically for studying accounting change (Justesen and Mouritsen, 2011). For instance, the introduction of a new budgeting initiative in UK university (Ezzamel, 1994), the implementation of an activity-based costing system (Briers and Chua, 2001), the implementation of the benchmarking system (Siverbo, 2014), and the process of construction of performance measurement system in public sector Italian universities (Arnaboldi and Azzone, 2010). In a

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<sup>48</sup> “Yet, stability, in our view, has received considerably less attention” (Robson and Bottausci (2018, p71).

<sup>49</sup> The concept of boundary objects and its relevance and application in ANT-inspired accounting and hybrid management control literature is already explained in section 3.6.3.

similar vein, the concept of translation has caught the attention of many hybrid management control scholars (e.g., Thrane, 2007, Chua and Mahama, 2007, Mouritsen et al., 2001, Mahama and Chua, 2016, Weichselberger and Lagström, 2021).

Surprisingly, compared to ANT-inspired accounting research, where scholars have viewed translation while ‘in the making’ and also by ‘re-opening the black box’, in ANT-inspired hybrid management control literature<sup>50</sup> nearly all studies (with the exception to Minnaar et al. (2017)<sup>51</sup> study) have paid attention to phenomena while ‘in making’ that is, before it becomes irreversible by transforming into black box (Latour, 1987, Callon, 1990).

In this regard, studies have looked at: the introduction of cost-benefit tools (i.e., social investment funding) from three different perspectives in hybrid organisation relation between 21 Swedish municipalities and cooperative partners (Kastberg, 2014, Kastberg and Lagström, 2019, Weichselberger and Lagström, 2021), birth of alliances (Mahama and Chua, 2016), Changes in management controls (Thrane, 2007), formation of hybrid organisation relationships (Mouritsen and Thrane, 2006), the introduction of management controls in two hybrid organisational relationship (Mouritsen et al., 2001).

Despite different research aims, context<sup>52</sup>, and forms of management controls<sup>53</sup>, these studies all encountered: (1) the role of management controls in the stabilisation or destabilisation of

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<sup>50</sup> As already mentioned in section 3.6.4.1 that in ANT-inspired accounting studies concept of black box is more common than irreversibility and punctualisation. Therefore to understand how convergence and irreversibility has been applied in extant hybrid management control literature I have looked at the studies focusing on notion of black box. While doing so I have also considered whether and how those studies has looked at the durability and stabilisation of translation. Because ‘durability’ and ‘stability’ is a characteristic of successful translation according to Callon 1990.

<sup>51</sup> Minnaar et al (2017) has not explicitly used translation concept. Their specific focus was how original contract and incorporated control structures played an active role in re-contracting. However, because they demonstrated the change process therefore concept of translation shows relevance.

<sup>52</sup> Context here means various hybrid organisational settings e.g., private-private, public-public, and private-public organisational relationships.

<sup>53</sup> For example, Mouritsen et al., 2001 focused on *functional analysis and open book accounting*, Chua and Mahama, 2007 looked at *performance measurement system*, Zawawi and Hoque, 2020 viewed *business planning*

hybrid organisational relationships and (2) the active role<sup>54</sup> of management controls. These are elaborated below:

**Firstly**, with regard to the role of management controls in the stabilisation or destabilisation of hybrid organisational relationships, indeed, the introduction of management controls in a hybrid organisational setting is a challenging task. Callon (1998) argues that economic actors require a stable frame in order to perform calculations, conditions must be defined, and consequences should be measurable. Whereas in a hybrid organisational setting, extant accounting research has shown that identities are often in conflict and roles are poorly defined (Croft et al., 2015), measures are not readily available (Christensen and Læg Reid, 2008), or may result in destabilisation unintentionally (Kastberg, 2014). Therefore, it is difficult to achieve stabilisation or stabilised relations (Kastberg, 2014). Moreover, Kastberg and Lagström (2019) argued that stabilisation is challenging in a hybrid organisational setting since actors are not just heterogeneous but also entangled in a variety of networks with ‘ties’, ‘obligations’ and ‘traditions’ that might be difficult to overlook. For example, Callon (1998) and Caglio and Ditillo (2008) emphasised the importance of contracts and coordination in framing<sup>55</sup> exchange relations. However, hybrid accounting research has shown how much advanced and specific contract is designed; loopholes cannot be avoided (Minnaar et al., 2017).

In respect of efforts of actors in a hybrid organisational setting to make translation successful/stabilised, Kastberg (2014) study observed various mediating techniques (e.g., redefinition of roles, standardisation of system, reallocation of responsibilities etc.) that are

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*agreement and individual performance agreements* as an inscription that has an ability to create stability by aligning interest of actors in hybrid organisational relationship.

<sup>54</sup> A wide variety of terms such as: enabling role, generating entity, performative and mediating role has been used in extant accounting literature in reference to active role of accounting.

<sup>55</sup> Framing means actions that are taken in order to stabilize the relationship.

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employed for the successful translation of governance model in hybrid organisational relationship between IT service provider, municipality, and a purchasing unit. For example, the role of IT service provider was changed from being a profit to a cost centre. The point was to make the cost model more transparent<sup>56</sup>. Callon and Law (2005) argued that as elements multiply, destabilisation becomes more likely. Kastberg (2014) study empirically showed that stabilising translation through various techniques also resulted in disentanglements. For instance, the transparency of cost caused controversies. Some actors argued that cost does not matter if users are happy; others raised questions regarding the calculation of cost.

Taking this idea further, in another study, Weichselberger and Lagström (2021) illustrated the role of destabilisation in terms of disentanglement in achieving stabilisation. The authors determined and problematised tension between management control need to produce stabilisation while maintaining hybridity and how temporal stabilisation opened up the room for new problematisation. Their study observed that stabilisation (even though temporary) could be viewed by dividing the introduction of the ‘Social Investment Fund’ into various translation points. For instance, ‘*strategizing*’- translation of concrete design idea of the program into practice (Weichselberger and Lagström, 2021, p716), ‘*administrating*’ – translation into more specified objectives and inclusion of more actors (e.g., experts and administrators) (Weichselberger and Lagström, 2021, p719). These translation points are shown as interconnected through ‘productiveness’ and ‘active mediation’ of experts. However, it is important to mention here that the authors considered this stabilisation (i.e., at each translation point) temporal and hence irreversible in terms of time. Nevertheless, they are not irreversible in themselves (Latour, 1993).

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<sup>56</sup> The governance model was problematized as a solution for the problem of high IT cost due to user specific services.

With regard to re-opening the black box of ‘revised hybrid organisational contract and incorporated control structures’, Minnaar et al. (2017) study traced the change process that led to a revised contract and incorporated control structures among hybrid organisational actors. Their study showed that the contract failed to create the order and stability that the designer of the contract aimed for. Operational staff failed to assign trust to the original contract due to a lack of clarity regarding required performance. Minnaar et al. (2017) disclosed how re-contracting was problematised as a solution for unclear performance measures. In terms of techniques that actors used in order to create ‘durable’ and ‘stable’ contract (Callon, 1990), Minnaar et al. (2017) innovatively explained how local management participated in the contract review exercise. New contract and control structures were designed interactively. Parties assigned trust to the new contract. To show parties’ efforts in making it irreversible<sup>57</sup>, Minnaar et al. (2017) study observed that actors made an effort to build their relationship further by participating in various other ‘saving projects’.

Minnaar et al. (2017) study is important to this thesis because changes in the original contract make strong relevance to this study. However, Minnaar et al. (2017) study has not explicitly use translation and irreversibility concepts. Moreover, their study has not taken the process approach and therefore provides limited information with regard to precise methods that actors used to persuade other actors to re-contracting.

Overall, ANT-inspired hybrid management control literature is inconclusive and indicates that management controls can potentially stabilise as well as destabilise hybrid organisational

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<sup>57</sup> According to Callon 1990, translation might also be irreversible, if it leads to the search for the substitute, or translation that will lengthen its life or scope.

relationships. However, most of the work shows temporary stabilisation or unsuccessful translation because hybrid management control scholars have mainly followed the phenomenon while ‘in the making’. It can be argued that when captured over a longer period, results could be different. This is evident from the Kastberg (2014) study. The author observed unsuccessful translation because the introduction of the governance model pulled the entities together, but the stabilising efforts caused controversies. In Weichselberger and Lagström (2021) study, the authors observed various translation points that achieved temporary stabilisation. The translation points were not compartmentalised but rather semi-integrated and linked through active mediation. Alternatively, I argue that stabilisation or irreversibilisation can be studied by taking a different starting point, which can be done by re-opening the constructed block of taken-for-granted accounting phenomena. I argue that this approach will provide an understanding of techniques and precise methods that actors use to form convergent and irreversible, and stable<sup>58</sup> networks (Callon, 1990).

“Yet, stability, in our view, has received considerably less attention, even though debates about the stability of accounting representations in accounting theory discourses have been a central component of the knowledges/theories in accounting” (Robson and Bottausci, 2018, p71).

**Secondly**, with regard to the active role of management controls, the majority of the studies have viewed management controls as an ‘actor<sup>59</sup>’ such as: in generating intra and interorganisational effects (Mouritsen et al., 2001, Mouritsen and Thrane, 2006, Cuganesan and Lee, 2006); in generating re-contracting in the operational phase of a hybrid organisational relationship (Minnaar et al., 2017); to facilitate coordination and reduce risk (Kastberg, 2014);

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<sup>58</sup> As mentioned in previous section that recently Robson and Bottausci 2018 has identified lack of ANT-inspired work regarding ‘stability’.

<sup>59</sup> In ANT terms, the ‘actor’ means an entity that has an ability to produce actions. If an actor makes no difference, it’s not an actor” (Latour, 2005, p130).

in the formation of alliances and subsequent operations (Mahama and Chua, 2016); in aligning the interest of actors in public-private hybrid setting (Zawawi and Hoque, 2020) in entangling and disentangling in hybrid setting (Weichselberger and Lagström, 2021) etc.

One of the reasons for attributing management controls of hybrid organisations, the role of 'actor' is because of its capacity of pulling actors/entities together and "to some extent "bent" the world round itself" (Kastberg, 2014, p754). While mediating management controls in a hybrid organisational setting creates far-reaching and unexpected effects (Mouritsen et al., 2001). For example, in Mouritsen et al. (2001) study, management control initiatives (open book accounting and functional analysis) were introduced in two hybrid organisational relations. The aim was to close the information gap by controlling at a distance. Authors observed some success with these initiatives, but they noted other consequences as well. The introduced and stabilized control initiatives also led to changes in the roles and identities of [interacting parties].

Moreover, the purpose of the management control system in a hybrid organisational setting is to prevent and resolve conflicts between parties. According to ANT, such systems concurrently foster ambiguity and uncertainty, which provides a platform for new and diverse forms of controversies to emerge (Murdoch, 1998, Callon, 1999). With respect to management controls, "this argument essentially contends that any attempt to mobilize and use accounting systems to control behaviour could equally serve as an opening to other controversies and problems" (Chua and Mahama, 2007, p55). Minnaar et al. (2017) study is a classic example in this respect. The original contract and incorporated management controls between hybrid organisational actors did not work due to incompatibility between contractual terms and practicalities of hybrid organisational operations. The original contract behaved in an unexpected way and

resulted in re-contracting. In this way, contract and incorporated control measures rather than creating stability created controversies and conflicts.

In terms of how the role of management controls as an ‘actor’ in hybrid organisational setting evolved over time, the studies can be divided into two groups: (1) studies that paid attention to the role of management controls in generating intra and inter organisational effects (e.g., Mouritsen et al., 2001, Cuganesan and Lee, 2006, Cuganesan, 2006, Zawawi and Hoque, 2020), (2) studies that focused on the role of management controls at a hybrid organisational level only (Mouritsen and Thrane, 2006, Thrane, 2007, Kastberg, 2014, Mahama and Chua, 2016, Minnaar et al., 2017, Kastberg and Lagström, 2019, Zawawi and Hoque, 2020, Weichselberger and Lagström, 2021).

In respect of the first stream of research, Mouritsen et al. (2001) study illustrated that target costing and open book accounting introduced at the hybrid organisational level also have intra-organisational effects in the form of transformative changes in corporate strategy and technology. Similar findings have been reported by Zawawi and Hoque (2020) in the context of the role of balance scorecard inscription in the public sector hybrid setting. Cuganesan and Lee (2006), on the other hand, showed how management controls (i.e., information technology) introduced at an intra-organisational level to control line personnel engaged in ‘maverick spend’ also affected management controls at a hybrid organisational level. A data warehouse that underpinned technology acted as an inscription device and offered novel information opportunities that led to greater utilization of management controls and greater visibility into suppliers’ performance.



Understandably, the vast majority of hybrid management control studies have remained interested in the role of management controls at the hybrid organisational level (i.e., the second group of studies mentioned above). For instance, Mouritsen and Thrane (2006) presented that through self-regulating and orchestration mechanisms<sup>60</sup>, management controls can be viewed as an ‘actor’ that assists in mediating, shaping, and constructing hybrid organisational relations. Their study showed that management control mechanisms had provided stability to the inherently unstable network enterprise<sup>61</sup> due to differences in the goals of partners. Conversely, Thrane (2007) study depicts management controls as a source of instability rather than end states as it triggers hybrid organisational space by showing controls as a zone of attraction where relationships take different forms and shapes. Through the creation of closer alliances with external entities, it created a conflict of interest between entities within a firm by setting up departments against each other.

Building on the work of Mouritsen and Thrane (2006) and Thrane (2007), Kastberg and Lagström (2019) study demonstrated how accounting control practices (cost accounting, benchmarking and user forums) stabilised the hybrid organisation relations by pulling the actors together (i.e., framing). Moreover, the analysis has shown that the same accounting controls contributed to the destabilisation of hybrid organisation relations by reconnecting them with other complexities and by cutting off links during the process of disentanglement. For instance, Kastberg and Lagström (2019) observed that achieving stabilization means destabilisation simultaneously. This is because of the fact in case organisations introducing ‘one shared system’ meant reducing the embeddedness of the system and making it sufficiently

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<sup>60</sup> Self-regulating mechanisms enable interaction and exchange among partners to occur unobtrusively while such interactions are structures by orchestration mechanisms.

<sup>61</sup> Network enterprise is independent firms with independent goals that intersect to share resources, competence and capabilities.

universal to offer the same level of service to all users. Consequently, the system needs to be disentangled from the distinct operational needs of the users.

In summary, the above-mentioned two streams of ANT-inspired hybrid management control literature has remained interested in the role of management control at intra and inter-organisational level. In presenting this, the above-mentioned studies have shown how management controls behaved in an unexpected way. However, how management controls perform at the extra-organisational level remains to be learned. Lately, accounting scholars (e.g., Thambar et al., 2019, Dudau et al., 2020) have shown interest in the role of accounting at the extra-organisational level. Moreover, Financial Accountability and Management special issue (Thomasson et al., 2020) has also been dedicated to how accounting scholars can engage in the study of ‘wicked problems<sup>62</sup>’. This lack of a wider perspective<sup>63</sup> in ANT-inspired accounting research suggests that we need to go beyond the boundaries of the hybrid setting to extend our understanding of how management controls at the hybrid organisation level can help in resolving the wicked problem (Dumay and Guthrie, 2019).

### **3.8 Why ANT**

This section justifies the selection of ANT as an appropriate choice for the study of understanding the process of performance measure changes in the PFI contract. The discussion in this section is more related to its methodological value in qualitative research.

In Chapter 2, a detailed analysis of the literature has identified that much of the literature has emphasised stable-design control studies (i.e., data collected at one point in time by relying on

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<sup>62</sup> Wicked problems mean societal issues that are difficult to explain and resolve for instance, sustainability, equality, hunger etc.

<sup>63</sup> In this section I have identified this gap with reference to ANT-inspired hybrid management control literature. Same gap has been identified in Chapter 2 (section 2.3.3.3) with regard to studies using other theoretical basis.

cross-sectional surveys). The contingency theory and transaction cost theory are the most common theoretical approaches used in these studies (see e.g., Kamminga and Van der Meer-Kooistra, 2007, Dekker, 2008, Windolph and Moeller, 2012, Phua et al., 2011). While contingency theory presents that the choice of optimal control patterns depends on contingency factors, transaction cost theory shows that human actors, as rational actors reduce transaction cost through a general drive towards organisational efficiency. In other words, these studies have viewed the management control structure as a result of rational decisions or negotiations of actors involved in the relationship. These structures are explained as contingent upon, for instance, institutional environment, relational characteristics, the information supplied and transaction characteristics of the hybrid organisational relationship.

However, such a perspective has been criticised by various management control scholars due to insufficient theoretical power to explain the complexities of hybrid relationships (Dekker, 2004, Coad and Cullen, 2006, Chua and Mahama, 2007, Cooper and Slagmulder, 2004). For example, according to Coad and Cullen (2006, p343) "whilst transaction cost economics supplied a valuable framework for early studies, it was found to have limitations regarding the detailed exploration of inter-organizational phenomena".

Moreover, in Chapter 2 (see section 2.4), a detailed analysis of hybrid management control literature has shown that extant literature indicates that static analysis (i.e., data collected and analysed at one point in time) due to its reliance on cross-sectional surveys and deductive reasoning provides a limited understanding of dynamics of hybrid organisational relations. This approach gives insufficient attention to local circumstances, processes, practices and changes related to control patterns (Miller et al., 2008, Kurunmäki and Miller, 2011, Kastberg and Lagström, 2019, Weichselberger and Lagström, 2021). As such, it provides a limited

understanding of the process of changes in control patterns as a result of changes in actor networks.

In contrast to stable-design control studies, to address this issue, recently, hybrid management control studies (e.g., Mahama and Chua, 2016, Ahmad et al., 2020) have made an attempt to capture the dynamics of hybrid organisational relations. In this regard, while a majority of studies emphasising operational design control approach have been literature review driven (see table 1.2 and 1.3 in appendices), with regard to management control changes specifically, two main approaches adopted by studies are Foucaultian analysis (see, e.g., Ahmad et al., 2020, Kurunmäki and Miller, 2011) and ANT (see, e.g., Kastberg, 2014, Minnaar et al., 2017).

Regarding studies informed by the work of Michel Foucault, concepts of Governmentality<sup>64</sup> (Foucault, 1991) have received the main attention. The concept is related to how government, through a variety of ways, indirectly controls the actions and behaviours of individuals. In contrast to studies emphasising stable-design control approach that follows unidirectional pathways, accounting/management control change is seen to be emerging from a number of situations that prevail across time and space. However, it remains silent as to how such discursive regimes interact with (and reinforce) local practices and processes (Kurunmäki and Miller, 2011).

“While drawing on the governmentality literature, we argued that it needs to be extended beyond existing concerns with large-scale discursive and regulatory shifts, to consider what happens when such reforms come into con-

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<sup>64</sup> “The ensemble formed by the institutions, procedures, analyses and reflections, the calculations and tactics that allow the exercise of this very specific albeit complex form of power” (Foucault, 1991, p102).

tact with the localised aspirations and activities of service providers”

(Kurunmäki and Miller, 2011, p237).

As such, due to limitations of Governmentality literature, Kurunmäki and Miller (2011) have borrowed concepts from ANT to understand the “every day doing” of the practitioners in a hybrid organisational setting in relation to the operationalisation of “modernising government initiative introduced under Health act 1999”.

Similarly, to deal with theoretical and methodological concerns, hybrid management control scholars in recent years have become increasingly interested in ANT. ANT’s constructivist approach challenges positivists and interpretive perspectives (Justesen and Mouritsen, 2011). While the former believes in the generalization of the end product of investigation (Saunders et al., 2009), the latter, on the other hand, focus on the subjectivity of the social world and how various people perceives reality (Hopper and Powell, 1985). ANT constructivist’s epistemology enables management control researchers to see beyond subjective-objective divide (Richardson, 2012). ANT concepts have allowed management control researchers to apply innovative analytical methods to analyse accounting phenomena which is evident from the review of ANT-inspired studies as presented in section 3.7.

Finally, as ANT is the name of a movement, a displacement, a transformation, a translation, and enrolment, and the focus of this study is on process of contract modernisation that involves various transformations and displacements. I believe ANT is an appropriate choice due to its methodological power to capture the precise mechanisms by identifying the role of all actors whether human or non-human that are involved during the whole process.

Keeping in view the strength of ANT as a methodology (section 4.1) and theory (section 3.7) in hybrid management control literature, it is believed<sup>65</sup> that ANT is an appropriate choice for achieving the aims of this study. As such, the next chapter presents how ANT as a methodological tool helps in achieving the objective of this study.

### **3.9 Summary**

This chapter has presented the theoretical underpinning of the study developed from ANT-related concepts. Concepts from ANT exhibit the way in which networks play a critical role in the process of contract modernisation. Using the concept of translation, it shows how various actors are involved in managing the management control change in practice. Moreover, it shows not only how the interest of a variety of actors are aligned with each other but also how interest can be influenced and shaped (Cordella, 2012, Nehemia-Maletzky et al., 2018). Main theoretical constructs that have been introduced to help explain the findings of the study include translation, boundary objects and convergence and irreversibility. The next chapter shows how the theoretical approach is linked with the conduct of the research by explaining the methodology.

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<sup>65</sup> As the focus of this study is on process of contract modernisation that involves various transformations and displacements. The limitations of other approaches explained in this section justifies the choice of ANT for achieving the aims of this study.

## Chapter four: Research Methodology

### 4 Introduction

The previous chapter has shown the theoretical construct of this study developed from ANT. Therefore, the methodological foundations of ANT heavily influence the design of this study. The purpose of this chapter is to present the conduct of the research by showing a link between empirical and theoretical underpinning chapters. It explains the underlying methodological assumptions and methods used to gather research evidence.

The study embraces a constructivist approach and avoids a positivist view. Therefore, data collection methods used in this study include document analysis and unstructured interviews to investigate the process of contract modernisation. The constructivist approach is in line with the aims of the research, which is interpreting the participants perception. In contrast, the positivist view considers outcome and the association between variables.

The research process starts by looking at how actors from the public and private sectors communicated with each other to resolve performance measure issues. Document analysis has provided a direction in developing interview questions/guides to further explore the viewpoint of both parties regarding their actions while working on contract modernisation. Documents provided by the interviewees have also helped in identifying what participants actually did while resolving the performance measure issue.

This is an ANT-inspired study; therefore, not initiated by a predictive hypothesis. Rather, it follows the issues that are generated from the discussions with the interviewees and documents.

The structure of the chapter is as follows: Section 4.1 clarifies if ANT is a theory or methodology by discussing some of its features. Section 4.2 presents the research design of the study, followed by a discussion of the case study strategy, data collection techniques including ethical considerations and data analysis approach in sections 4.3, 4.4 and 4.5, respectively.

#### **4.1 The methodological features of ANT**

The ANT is not a theory...no more than cartography is a theory on the shape of coast lines and deep sea ridges (Latour, 1996, p374).

While ANT is often referred to as a theory, the above-mentioned claim of its proponents clarifies that it is not a theory in the true sense of the world. Similarly, Callon (1999, p182) claimed that ANT “is everything but a theory”. Latour’s view of ANT has been compared to that of a shoebox: an ‘empty concept’, it will not be clear what label it will receive until its contents are filled in (Czarniawska, 2004).

In order to better understand the methodological features of ANT, it is necessary to clarify the term ‘network’ in an actor-network as opposed to physical and social networks.<sup>66</sup> While the concept of ‘actor-network’ has been misinterpreted as ‘social network’, Latour (2005, p217) highlights the concept of ‘attachments’ in order to reduce confusion in understanding ‘actor-network’. Moreover, these features provide the researcher with methodological guidance for following actors and actants.

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<sup>66</sup> The meaning of ‘network’ has already been explained in Chapter 3 section 3.5. This section mainly focus from methodological perspective.



An actor-network is what is made to act by a large star-shaped web of mediators flowing in and out of it. It is made to exist by its many ties: *attachments are first, actors are second* [...] From now on, when we speak of actor, we should always add the large network of *attachments* making it act. As to emancipation, it does not mean ‘free from bonds’ but well- *attached* (Latour, 2005, p217, emphasis added).

As (Latour, 2005) points out, when an actor is a part of a network, that identity of an actor is constructed through its attachments to other actors rather than being inherent to them. The focus on the concept or metaphor of “attachments are first, actors are second” (Latour, 2005, p217) presents a challenge to the ANT-inspired researchers to follow the actors no matter what direction they take (Justesen and Mouritsen, 2011).

In this respect, Latour (2005) proposes that the researcher’s role is to follow actors rather than impose a meta-language. Essentially, this means that a researcher must refrain from judging the actors regardless of whether they are human or not. Moreover, ANT treats every setting as a flat space and empirical observations are used to define its boundaries (Latour, 2005). This methodological feature takes Latour (1987, p4) statement that negates a “clear distinction between context and content”, one step further.

In terms of how a researcher should approach a phenomenon, Latour (1987) proposed that:

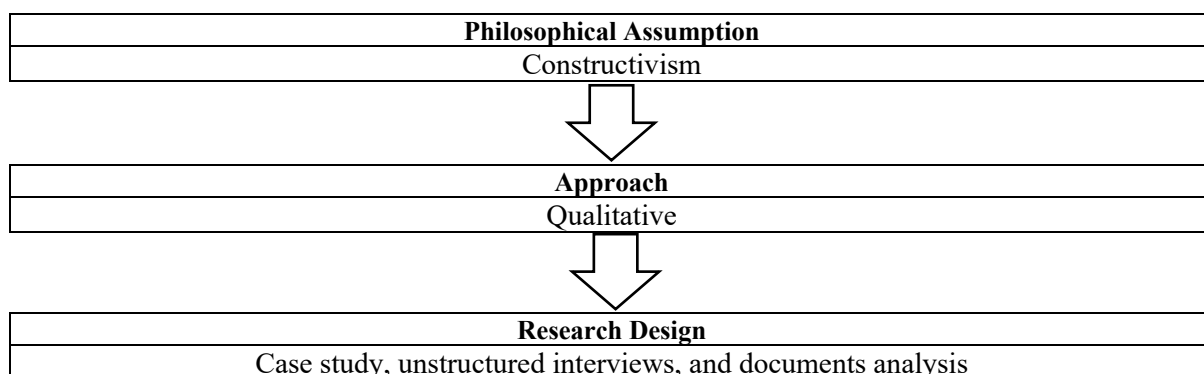
We study science in action and not ready made science or technology; to do so, we *either arrive before the facts and machines are black boxed or we follow the controversies that reopen them* (Latour, 1987, p258, emphasis added).

The above-mentioned rule of the method, as suggested by Latour (1987), provides ANT-inspired accounting researchers with a way of conducting research. For instance, in the previous chapter, section 3.7, I have illustrated ANT-inspired hybrid management control studies that showed how stabilisation (albeit temporarily) or destabilisation happened. In this regard, this rule of the method is applicable to public and private hybrid organisational relationships, given the controversies regarding the control and management of such relationships.

## 4.2 Research design

According to Saunders et al. (2009), research philosophy is the way of developing knowledge because the way we use it for the development of knowledge affects the manner of doing research. Therefore, it is crucial to define the research philosophy of this study first in order to justify the methods that are used in this research. In this regard, this study adopts constructivist philosophical assumptions as detailed in the previous chapter. This approach facilitates the view that the end-product of the performance measure issue, i.e., the modernised contract, is a result of interpretation and interactions of the private and public sector actors, both human and non-human.

**Figure 4.1:** Research design



According to Morgan and Smircich (1980), quantitative data is not suitable for capturing a detailed view of society or understanding social processes. On the other hand, qualitative data recognize the perception of the people by becoming closer to them because they believe that it is difficult to understand people without examining their perceptions (Saunders et al., 2009). As for this study, the complications and complexity of changes in the PFI contract process can only be captured through qualitative strategies. This has helped in understanding how public and private sector actors perceive their roles in dealing with hybrid organisation contractual issues and how hybrid management controls are managed in practice. In this regard, this section presents the research design of the study.

In order to find answers to the research question, the research design provides a framework for the researcher to conduct empirical research methodically (Creswell and Creswell, 2017). According to Saunders et al. (2009), as a link between the data and the questions, the research design plays an important role, even in the presence or absence of pre-specified research question(s).

Following this understanding, this study is a qualitative case study to understand how performance measure issues are managed in public and private hybrid organisational contracts. This methodology is suited to address the research question of this study. This is because understanding of precise methods and techniques that actors use to manage change requires a use of theoretical and methodological approach that appreciate the complexity and fluidity of reality, which may be neglected by research approaches assuming a more linear and causal approach.

### 4.3 Case study research design

A case study is a research strategy where in real life context, particular phenomena are empirically investigated using multiple sources of evidence (Robson, 2002). Contrary to an experimental method where variables or behaviours are manipulated and is usually carried out in a laboratory setting case study method does not try to control behavioural events; instead, it is interested in direct examination of events, hence, focuses on current events rather than past issues (Yin, 2009). One of the advantages of the case study approach is that it provides a substantial grasp of data (Saunders et al., 2009, Karami, 2011). According to Saunders et al. (2009), for a better understanding of the context of research, this method is quite fruitful. This method is useful to understand what actors are doing on their own and their interpretations of (Morgan and Smircich, 1980) how they experienced the performance measure issue in the PFI hybrid setting. According to Yin (2009), the case study approach enables answering ‘how’ questions such as the research question of this study. By exploring a real-life context, this study has tried to collect as much information from participants’ viewpoints. The in-depth understanding has enabled me to interpret the practical and situated ways in which management controls take shape in a hybrid organisational setting.

Accounting research has been questioned as to its relevance to practice, as Cooper and Morgan (2008) noted. However, they argued that considering case studies as a research design is essential if accounting research is to make a meaningful contribution to practice and knowledge. For evaluation of complex and dynamic phenomena where context is critical, Cooper and Morgan (2008) suggest a case study as an appropriate research strategy. This is the case in this study. The next section presents the Street Lighting PFI project case study used in this study.

### 4.3.1 The case: The Street Lighting PFI Project UK

This study has selected public-private hybrid organisational relations due to the lack of attention towards such relations in hybrid management control literature (e.g., Miller et al., 2008, Ahmad et al., 2020). As already mentioned in the introduction section (chapter one) that this is not a PFI/PPP thesis. It has used PFI relation to show the complexity of public and private sector hybrid organisational relationships due to the presence of different objectives. Moreover, there are numerous examples of controversial PFI deals, for example, Carillion and Capita. These concerns raise the question of how these projects are controlled and managed in practice.

In this regard, this study has selected Street Lighting PFI Project UK. One of the reasons for selecting the UK PFI project as a case study is that the UK is one of the largest public-private partnership actors with regard to the number and capital value of projects (KPMG, 2010). According to the special report of the European Court of Auditors 2018<sup>67</sup>, during 1990-2016, there were over 1000 United Kingdom PFI projects worth approximately 160 billion euros. This makes an exciting area to explore.

Also, PFI transport contracts<sup>68</sup> are one of the highest recipients of private finance (Yehoue, 2013). According to the report of the National Audit Office (2020), there are 60 transport PFI projects with a capital value of 7,500 £m. This makes Street Lighting PFI an interesting area for understanding control and management of public and private sector hybrid organisation relations. Finally, in section 2.6 it has been highlighted that extant hybrid management control research is inadequate regarding public and private hybrid organisational relationships in which the role of government and strict contract have been ignored, as it assumes a fundamental role

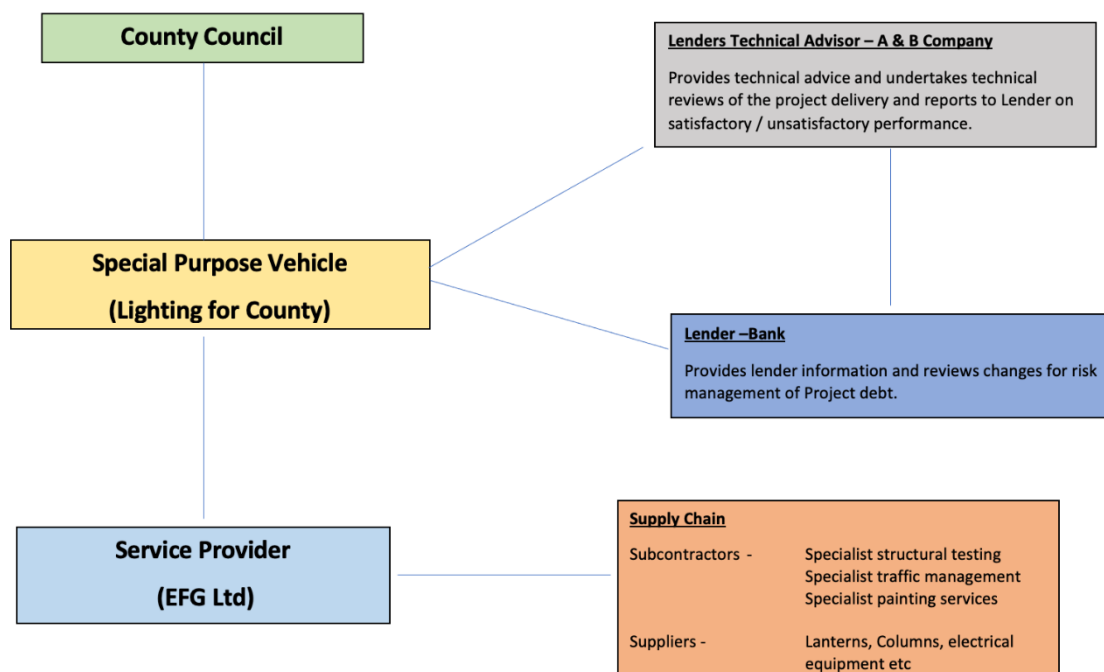
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<sup>67</sup> <http://publications.europa.eu/webpub/ecca/special-reports/ppp-9-2018/en/>

<sup>68</sup> Street Lighting is a part of transport PFI projects.

of trust for the management of hybrid organisational contracts. For example, according to the report of the National Audit Office, due to the failure of various PFI projects as a result of poor project governance, public organisations have to strictly follow contractual controls (NAO, 2010). Hence the results or findings could be misleading. Therefore, this study has focused on the process of performance measure changes in the Street Lighting PFI contract to understand how parties successfully manage those changes for sustainable long-term relationship. The purpose of process-oriented approach using ANT as a guiding framework is to capture specific and precise mechanisms that hybrid organisational actors in practice use for the control and management of such relationships. Therefore, it is believed that the findings of this case study will provide an in-depth understanding of control and management of hybrid organisational contracts given the incompleteness of the contracts.

**Figure 4.2:** Street Lighting PFI project UK structure (DCC 69<sup>69</sup>)



<sup>69</sup> The structure of Street Lighting PFI project is provided by

The above figure presents the structure of the selected PFI project. The 25 years Street Lighting PFI contract was signed in 2003 between Lighting for County (pseudonym- LFC hereafter) and County Council<sup>70</sup> (CC hereafter). LFC is a private organisation. In PFI terminology, it is called Special Purpose Vehicle (i.e., SPV).

SPV deliver this project through Service Provider (another private sector organisation). In this specific case study, initially, in 2003, ABC Ltd was Service Provider. ABC Ltd was selected as a Service Provider for the finance, design provision and maintenance of road lighting equipment. However, in 2008 the contract was taken over by EFG Ltd (pseudonym) due to the incompatibility of the Street Lighting project with ABC Ltd company's main operations.

Regarding management and control of chosen Street Lighting PFI contract, the 25-year original PFI contract has been broken down into different blocks. Each block consists of a 5-year profile. So basically, first five years, i.e. 2003-2008, are called IARP (Initial asset replacement programme), and then each five-year block after that is called:

**AARP block One**    End of IARP to 31<sup>st</sup> March 2013

**AARP block Two**    1 April 2013 to 31<sup>st</sup> March 2018

**AARP block Three**    1 April 2018 to 31<sup>st</sup> March 2023

**AARP block Four**    1 April 2023 to Contract expiry date

During each block service provider must meet six performance standards as set out in the performance measurement document called the "Service Specification Document<sup>71</sup>". Figure 2

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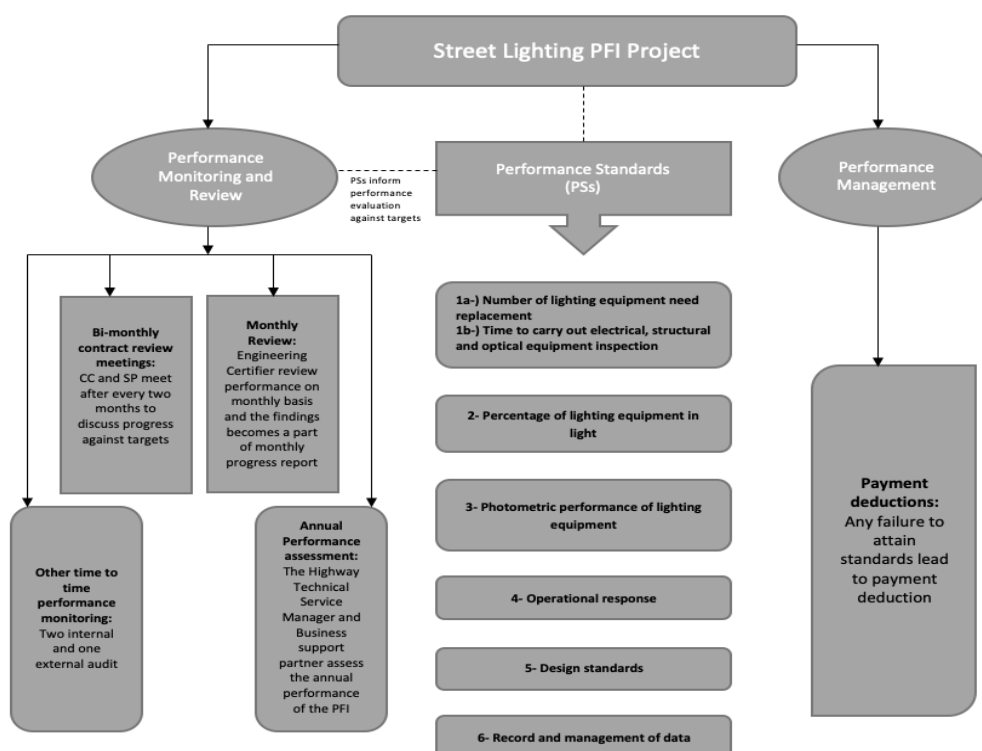
<sup>70</sup> Due to confidentiality of data the real name of County is kept confidential.

<sup>71</sup> Service specification section is incorporated in contract. For easy availability this section is also used as a separate document called service specification document (DCC 72 and DCC 73).

explains the details of performance standards, performance monitoring and review and how performance is managed according to “Service Specification Document”.

Figure 4.3 illustrates that Street Lighting PFI Project includes six performance standards for asset replacement and maintenance. The unitary payments are structured around the achievement of six performance standards<sup>72</sup>. Payment deductions apply where Service Provider fails to achieve standards.

**Figure 4.3:** A representation of Street Lighting PFI project’s management control system



With regard to monitoring and review, the Service Provider produces a monthly report called “Service Providers Progress Report (DCC<sup>73</sup> 71)”. This report is considered a primary document

<sup>72</sup> Information about standards is taken from “Service Specification Document”.

<sup>73</sup> DCC is a document reference used in this study.



for performance monitoring. This report contains information about monthly planned output and actual monthly progress. The progress in that report is further verified by Engineering Certifier. He meets every month with the project team and undertakes various physical checks to confirm the authenticity of the report. In addition to the above, the bi-monthly meetings run every two months. These meetings are basically contract review meetings. For Example, the County Council with Service Provider reviews inventory to see what can be upgraded and where the maximum benefit can be achieved. The “Service Provider Progress Report” is also discussed and reviewed at this meeting.

The annual monitoring is done by the operational staff, e.g., Highway Technical Service Manager and Business Support Officer. The financial models are assessed, and any issues that need to consider are incorporated into the payment model. The other time-to-time monitoring activities include two internal and one external audit.

#### **4.4 Data collection techniques and analysis approach**

This study travels back to when the modernised contract (or in other words, performance measure changes in the PFI contract) was a possibility instead of a certainty (Chapters 5 and 6) when the renegotiation of the original PFI contract was contested and controversial (Chapter 7). In this regard, this study focuses on re-opening the black box of the modernised contract to observe its emergence.

As mentioned in section 4.1 that, the concept or metaphor of “attachments are first, actors are second” (Latour, 2005, p217) provides the researcher with methodological guidance for following actors and actants. Moreover, it presents a challenge to the ANT-inspired researchers

to follow the actors no matter what direction they take (Justesen and Mouritsen, 2011). Therefore, the first step for data collection involves the selection of actor(s).

If socio-technical systems were the creation of heroic actors this choice would be vital; if networks were all that mattered, it would be trivial—any actor in the network would (eventually) lead us to all other actors and their intermediaries. Since actors and networks are mutually constructed the choice is constrained by the *focus of study* (Jones and Dugdale, 2002, p125) [emphasis added].

Keeping in view the purpose of this study: how public (CC) and private (SP) sector actors managed performance measures change in the PFI contract (section 1.4), I choose to follow CC and SP. Rather than focus on individual actors, like Skærbæk, P. (2009) study, which considered ministers and parliament department as an actor, in this study, CC and SP are considered an ‘actors’.

As recommended by Callon (1986, p200), a researcher “cannot simply repeat the analysis suggested by the actors he is studying”. In this regard, to trace back the process of contract modernisation, this study, in addition to internal documents specifically related to the contract modernisation process, also collected data through 20 unstructured interviews and government documents. The data (interviews and documents) were collected from December 2018 to February 2020.

#### **4.4.1 Interviews**

Interviews are a way for an interviewer and interviewee to elicit information through verbal communication. In social science research, interviews are designed to generate insights about social phenomena by engaging interviewees in productive dialogue (Burrell and Morgan,

1979). Having direct access to the interviewee(s) may lead interviewers to probe into the suggestions made by them (Saunders et al., 2009).

Three types of interviews include structured, semi-structured and unstructured interviews. Structured interviews consist of a standardised set of questions (Saunders et al., 2009). Though there is a social interaction between interviewer and interviewee interviewer reads out the questions as written and also in the same tone in order to avoid bias (Saunders et al., 2009).

Semi-structured interviews consist of a pre-determined set of questions which interviewer asks from all participants. Moreover, the interviewer can also ask questions on the basis of emergent themes or ideas (Saunders et al., 2009).

Unstructured or in-depth interviews allow the interviewer to discuss ideas as one wishes and events with regard to the topic area (Saunders et al., 2009). Thus, this approach is the most flexible among the three approaches.

Qualitative un-structured interviews are used as the main approach to explore public and private sector operational staff experience of performance measurement issues and changes in the PFI contract. Moreover, the research question itself demand detail study of the phenomenon because of the context and complexity of hybrid organisations (Hyndman and McConville, 2018, Johanson and Vakkuri, 2017).

To carry out research, meeting with Assistant Director Transport County Council was arranged to explain the benefit of the research. He referred me to Highway Technical Manager (participant no 2) who was involved throughout the process of contract modernisation. In initial meeting with him, desire to study the Street Lighting PFI project as a case study was discussed. Nature of research, organisational personnel and documents that may be required for analysis were corresponded in writing. It was also decided whether participant names would be used or if anonymous position are to be taken.

CC and SP staff members working at operational level of PFI project were approached for interviews with the reference to Highway Technical Manager and Project Manager Service Provider. In total, 11 interviews were conducted with CC participants and 9 with SPs.

With regard to the views of participants on the process of contract modernisation, 12 of the participants were directly involved in contract modernisation (please see table 4.1). Their views played fundamental role in understanding the whole process of contract modernisation. Whereas remaining interviews was mainly focussed on understanding the nature and operation of the PFI contract. This was important due to complex and technical nature of the project. It is important to acknowledge the limits of study in terms of data collected.

Firstly, I was able to interview only those participants who was referred by Highway Technical Manager County Council and Project Manager Service Provider. Those participants provided a good perspective on whole case. However, it was practically not possible to obtain the view of all parties involved in the case (Therefore, there will always be missing voices and perspectives, e.g., CC and SP top management and SPV participants).

Secondly, interviews were conducted after contract has been modernised (i.e., black boxed). Therefore, interview data is more reflective in nature. However, I had access to work material<sup>74</sup> (generally not available to the general public) prepared by the operational staff of both organisations and stored online. Therefore, documentation had retrospectively helped in identifying key actors and events. As a result, I was able to capture the whole process of

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<sup>74</sup> Documents related to modernisation was provided by CC2 at the second interview and SP7 at the seventh interview. Therefore, it allowed me to read and understand the modernisation process during subsequent interviews.

modernisation (and role of those actors whom I was not able to interview), particularly as this material had been discussed and prepared prior to and by the actors I investigated.

The detail and timing of the interviews are mentioned in table 4.1. To ensure the anonymity of the participants, their designations are specified as “operational staff”. The length of interviews was between forty-five minutes to one hour and thirty minutes. All interviews were tape-recorded with the consent of the interviewees. Recorded interviews were transcribed using a word document (please see appendix IV for interview guidance<sup>75</sup>).

Main benefits that this study has gained by using unstructured interviews include:

Firstly, this technique has provided an opportunity to explore the phenomena in detail, which is not otherwise possible by observing the phenomena as an outside observer (Denscombe, 2017) and with pre-determined set of questions from all participants like in semi-structured interviews. For instance, with free-flowing conversation, I was able to ask next question based on the interviewee answer in the previous question. That has resulted in more detailed answers with examples from the interviewees. For example, when I asked participant no 17 about how contract modernisation affected the relationship with the CC? He said that it depends on how different people approached the issue. He initially portrayed that everything went really well. However, when I asked for an example, the example he gave me showed how people who are not directly involved in the day-to-day operations of the PFI contract negatively approached the issue.

According to the participant no 17:

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<sup>75</sup> As data has been collected through unstructured interviews, therefore, guidance provides examples of the some of the questions that has been asked from participants.

“Some of the approaches from the people that weren't involved with the project didn't really gel with thought process slightly. So, it made for a little bit of conflict.”

The statement above illustrates the benefit of using an unstructured interview technique, which would not have been possible if I had taken a structured approach.

**Table 4.1:** Interviewees detail

<b>Interview data (total: 20 interviews from 18 interviewees)</b>					
<b>No.</b>	<b>DATE OF INTERVIEW</b>	<b>DESIGNATION</b>	<b>ORGANISATION</b>	<b>DURATION</b>	
1	05/12/2018	Assistant Director	CC	1 hour	Participant 1
2	19/12/2018	Operational staff	CC	1 hour 30 Minutes	Participant 2
3	19/12/2018	Operational staff	CC	1 hour 30 Minutes	Participant 3
4	25/01/2019	Operational staff	CC	1 hours and 30 minutes	Participant 4
5	25/01/2019	Operational staff	CC	1 Hour	Participant 5
6	4/03/2019	Operational staff	SP	45 minutes	Participant 6
7	19/03/2019	Operational staff	SP	1 hour	Participant 7
8	9/04/2019	Operational staff	SP	1 hour	Participant 8
9	2/05/2019	Operational staff	SP	1 hour	Participant 9
10	16/07/2019	Operational staff	CC	1 hour	Participant 10
11	23/07/2019	Operational staff	SP	1 hour	Participant 11
12	21/10/2019	Operational staff	SP	Document overview meeting	Participant 7
13	6/01/2020	Operational staff	CC	Document overview meeting	Participant 2
14	8/01/2020	Operational staff	CC	1 Hour	Participant 12
15	15/01/2020	Operational staff	CC	1 hour and 10 minutes	Participant 13
16	05/02/2020	Operational staff	SP	1 Hour	Participant 14
17	13/02/2020	Operational staff	CC	1 Hour	Participant 15
18	18/02/2020	Operational staff	SP	1 Hour and 15 minutes	Participant 16
19	20/02/2020	Operational staff	SP	1 hour	Participant 17
20	21/02/2020	Operational staff	CC	1 hour and 30 minutes	Participant 18

Second, the unstructured interview method is also compatible with the philosophical paradigm taken by this study. As much detailed data can be collected through unstructured interviews thus, allow a better understanding of the social world (Saunders et al., 2009).

#### 4.4.2 Documentary sources of data

As suggested by Callon (1990), in following the actors involved, it is beneficial to examine the documents they produce. As such, there has been a recognition of the relevance of using documentation in ANT-inspired hybrid management control studies. For example, an analysis of papers, as presented in appendix 1, shows that documents are an important source of data for ANT-inspired management control studies (e.g., Zawawi and Hoque, 2020, Mahama and Chua, 2016, Kastberg, 2014, Cuganesan and Lee, 2006). This study, therefore, collected data from numerous documents to explore the *process* of performance measures changes in the Street Lighting PFI *contract*.

For data triangulation purposes, publicly available government documents, e.g., HM Treasury report and street lighting review, were examined. Moreover, 92 internal documents, mainly consisting of emails and attachments related to contract modernisation correspondence between the hybrid partners, also analysed. For following actors through documentation, I have read and reread them carefully to not miss any actor that played an important role during the process of modernisation. Table 4.2 provides details of the documents used. Although interviews were initially used as the main data source, the internal document's played a fundamental role in understanding how hybrid organisational partners in practice resolved the issue.

One of the drawbacks of the interview method is that human actors know how to portray themselves. Emails and correspondence that I obtained related to the issue have, however, settled this by providing actual information that parties used in practice to approach and resolve

the performance measure issue. For example, the operational staff of both organisations quoted at the various time that they wanted this relationship to work; therefore, they cooperated with each other. The auditor's report (DCC 29) confirmed this claim:

The Council's approach to this issue is appropriate in that it has made a significant effort to help Service Provider to reduce costs and resolve the issue (for confidentiality purposes, the exact wording of the document cannot be quoted here) (DCC 29).



**Table 4.2:** Contract modernisation milestone documentation

Document details	Date	Key Propositions	Document reference used in this study
Street Lighting PFI Contract	March 2003	Original Street Lighting agreement between County Council and Special Purpose Vehicle.	DCC 3
Documents related to identification of performance measure problem at Service Provider Level and communication with SPV and County Council	November 2009 - August 2010	Potential issues regarding PFI model draft submission to accountant and other SPV equity partner. Outline of SPV payment issue. Establishing that SP contract interpretation is incorrect. Graph showing issues with performance measures. Forecasted model of the performance measures with potential financial impact. The details of intervention criteria and payment issue.	DCC 1, DCC 2, DCC 3, DCC 4, DCC 5, DCC 6, and from DCC 10 - 14.
Documents related to interest alignment between Service Provider and County Council for contract renegotiations.	September 2010 – May 2011	County Council correspondence between legal advisor related to contract obligation. SPV first contract modernisation proposal highlighting review of performance measures and areas that can help County Council achieve savings. Use of graph and charts showing differences and financial impact of the issue. Analysis of asset replacement strategy of previous Service Provider. Correspondence related to contract default by Service Provider. Auditors report related to review of Street Lighting contract. Government white paper related to making savings in operational PFI contracts.	DCC 7-9 and DCC 15 – DCC 34
Documents related to contract renegotiation	June 2011- December 2012	Meetings minutes with special focus on government energy saving requirement. Exchange of proposals and counter proposals between County Council and Service Provider. Cabinet report for approval of changes. Correspondence with police, people panel. Public consultation report Climate report for impact of reduced CO2 emission.	DCC 35 – DCC 92

Moreover, one of the important findings of this study is how private and public sector actors used reciprocity to manage performance measure issues in the Street Lighting PFI contract UK. From interviews only, I would not be able to arrive at this finding. This is because, in interviews, all of the participants highlighted the good working relationship (details are presented in chapter six). They mentioned how they took a collaborative approach in order to arrive at the resolution. This might lead me to conclude the use of trust practice<sup>76</sup> to resolve the issue. However, a detailed analysis of documents related to contract modernisation identified various evidence of reciprocity (details are presented in chapter seven and chapter 8).

#### **4.4.3 Ethical considerations**

A researcher's ethical behaviour involves respecting the rights of the subject(s) of the research and other people who might be affected by the study (Saunders et al., 2009). Keeping in view this, the study has considered ethical issue involved in research design, data storage, and data analysis and interpretation stages. As such, ethical consideration at design of research includes obtaining consent, assuring confidentiality and taking account of consequences of the research study for the respondents (Kvale, 1996).

Before any interviews were conducted, the research was ethically approved by Keele University ethics Committee. The participants anonymity and data storage and security has also been agreed upon. In addition, it has also been ensured that research will not cause any discomfort to the participants (Creswell, 2014).

At data collection stage, consent of the potential participant has been obtained through 'information sheet' (Appendix III). Informed consent basically details information about overall purpose of the research, data collection conduct, any possible benefits and risks due to

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<sup>76</sup> According to Ahmad et al. (2020) trust practices include collaborative and trust-based interactions (p. 12).

participation in study and participants rights of withdrawing from research at any time (Kvale, 1996).

In line with the University data protection policy, data collected through interviews and documents were stored securely in password protected computer in a locked office. All consent forms were stored in secure filing cabinet in PhD office. It was ensured that cabinets remain locked when not in use.

Ethical issues can also arise at data analysis and interpretation stage (Kvale, 1996). Honesty and clarity on the part of the researcher matters most (Kvale, 1996). This issue has been dealt in this study by considering validity and reliability issues in check in order to provide accurate findings and avoiding any misrepresentation (please see section 4.5 for details).

#### **4.5 Data analysis approach**

As previously mentioned, in this study, the particular process of investigation is a process of contract modernisation, i.e., the process of changes in the performance measurements of the Street Lighting PFI contract. This means that exploring the process of contract modernisation is critical to investigating how performance measure issues were resolved between public and private sector actors.

As a researcher, I had access to work material (generally not available to the general public) prepared by the operational staff of both organisations and stored online. As a result, I was able to identify important traces of the formation of an accounting constellation, particularly as this material had been discussed and prepared prior to and by the actors I investigated.

For data management and analysis, I have used NVivo computerised software. Following are the details of step-by-step procedure that I have adopted to analyse interviews and documents.

- 1- Recorded interviews were transcribed using a word document and saved in NVivo.
- 2- Documents are arranged in chronological order to trace the complete process of contract modernisation.
- 3- For data analysis, the nodes were used as codes in NVivo. Different codes were derived by selecting a segment of data from documents<sup>77</sup> and interviews. A few examples are mentioned in table 4.3.

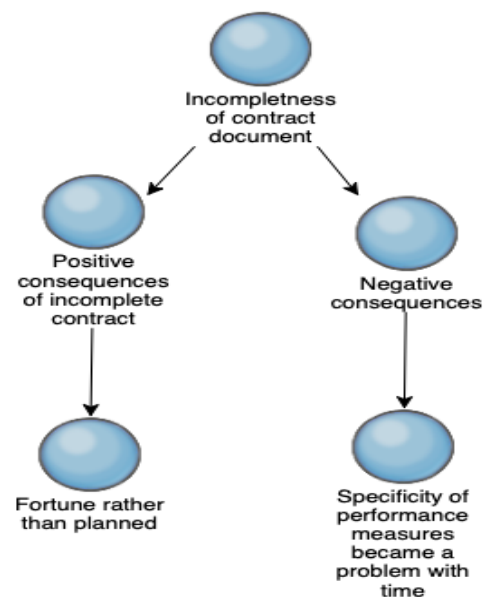
**Table 4.3:** Interviews coding examples

Participant details	Excerpt from interview	Code
Participant no 16 (SP)	“Our relationship with the lighting department within the authority (CC) is very good. If we didn't have a good relationship with them, then we'd be fighting that on our own and it would be very difficult. So, it's an area where the relationships work”.	Good working relationship
Participant no 2 (CC)	“It's just about doing the right thing for everybody. At the end of the day, a sensible contract and a sensible relationship and long term got to be sustainable for both parties, doesn't it? It's got to be mutually beneficially. You both gonna win out of it. So, we just got to have collaborative behaviours”.	Sustainability of relationship
Participant no 7	“The intention of this contract was never to replace all of the assets, because this contract could not be afforded if we replaced all of the assets. And if the intent said we're not doing it, that the	Incomplete contract

<sup>77</sup> Due to confidentiality of documents, excerpts from documents cannot be quoted.

	consequences of this clause meant that we possibly could replace every column under the contract something was definitely wrong”.	
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- 4- As part of the initial data analysis, I read the data and determined the applicable nodes in order to create new nodes where required. I also used the memo and annotation function to record intuitions and explanations regarding certain moves and linked these to a specific part of the data where appropriate. It was also necessary to reread each piece of coded data. NVivo allowed me to retrieve the source of a piece of coded data in order to gain a better understanding of its context. Interpretation at this point was clear as I had gained more insights into the data.
- 5- A comparative analysis of data was carried out to identify the similarities and differences between points (Dey, 1993). For instance, node ‘incompleteness of the contract’ was identified as having both positive and negative consequences. In terms of negative consequences, it created dissatisfaction and controversies at intra-organisational level and hybrid organisational level. With regard to positive consequences, it generated re-contracting that solved not only the performance measure problem but also benefited the CC and SP in terms of cost savings (please see figure 4.4). The detailed analysis is presented in chapter five.

**Figure 4.4:** Extract from NVivo

- 6- The empirical data was assigned to theoretical nodes (i.e., ANT concepts). For example, the node: ‘incompleteness of the contract’ identified the ‘enabling role of performance measure problem’. This is because the performance measure problem generated re-contracting. Every node included multiple sources of data i.e., documents and interviews. For validity and reliability, data from interviews was cross-checked against internal and publicly available documents (please see section 4.4.2 for an example). Triangulation was carried out with the aim of using multiple sources to reach same conclusion as opposed to observing same thing repeatedly.

However, in relation to the concept of “validity” and “reliability” in qualitative research, Parker and Northcott (2016, p1116) stated that, “the terms “credibility” and “trustworthiness” have largely replaced the term “validity” as foundations for generalising from the qualitative data analysed, in the qualitative methodological lexicon”. With regard to the notion of “reliability”, Lincoln and Guba (1985, p316)

argued that: "Since there can be no validity without reliability, a demonstration of the former [validity] is sufficient to establish the latter [reliability;]". Therefore, in this study the focus has been more on credibility of the collected and evaluated data, and the conclusions that were drawn from it (Ryan, 2002).

In this regard, to test data credibility, in addition to triangulation, thick description of collected data is presented (please see chapter 5, 6 and 7). "The concept of thick description did not limit itself to detailed description (thin description), but called upon the qualitative researcher to develop an empathetic understanding of the actors and their context and to probe, analyse and convey observed actions, motives, symbols, meanings and situational contexts" (Parker and Northcott, 2016, p1103). Indeed, the ANT concepts have allowed to produce thick and credible accounts of collected data by giving attention to minute details related to the process of contract modernisation.

- 7- While assigning theoretical nodes, detailed memos were recorded in order to record thoughts and reflections on the data. The importance of NVivo comes from its ability to automate the administrative work for you, leaving you more time for analysing your data. In order to report the results, it was necessary to clarify and corroborate disparate elements found during data analysis (Dey, 1993). Creating accounts of the investigation was another analytical process that required interpretation of the concepts and relationships determined earlier and reflection on their form and significance (Dey, 1993). This study, therefore, borrows narrative technique (Llewellyn, 1999) from management and accounting studies with the aim of producing an "interesting story" (Law, 2009) out of a messy and complicated case study. As when I approached the research site revised contract was signed and sealed. Therefore, the approach that I have used here is paying attention to the phenomenon by re-opening the black box of the

revised contract and tracing back the process that resulted in the stabilised and irreversible contract (Latour, 1987). As a part of this approach, the relationships and actions of human actors, techniques and knowledge are examined symmetrically while contract modernisation is in the process of making. Hence, it is critical to emphasise that ANT should be viewed as a toolbox of methods, a guide to addressing the question, “how do things, people, and ideas become connected in larger units and remain so?” (Czarniawska, 2017, p146).

8- Finally, the reflection on data allowed me to divide the whole process of contract modernisation into four phases. Table 4.4 shows the details of each phase, while a detailed analysis is presented in Chapters 5, 6 and 7. It is also important to mention here that the following four phases are presented in chronological order. This, however, does not mean that the translation process followed sequential order (in terms of four moments as explained in chapter three), as there is a possibility of failure at any stage (Callon, 1986).

- 1- Identification and establishment of performance measure problem at SP level (February 2010 – June 2010)
- 2- Communication of performance measure problem to CC (July 2010 – August 2010)
- 3- Interest alignment for contract renegotiation (September 2010 – March 2011)
- 4- Contract renegotiations (April 2011 – December 2012)



**Table 4.4: Process of contract modernisation**

<p><b>Identification and communication of performance measure problem at Service Provider Level</b></p> <p><b><u>(February 2010 - June 2010)</u></b></p> <p><b>February 2010-</b> identification of problem by participant no 7</p> <p><b>May 2010-</b> presentation of initial findings of issue at SP local level</p> <p><b>May 2010-</b> presentation of financial impact of issue to senior management, bidding team, and legal department</p> <p><b>May 2010-</b> Formal meeting with SPV board to discuss the impact and solution</p>	<p><b>Communication of performance measure problem to County Council</b></p> <p><b><u>(July 2010 – August 2010)</u></b></p> <p><b>April 2010-</b> Informal discussion of the issue between CC and SP</p> <p><b>July 2010-</b> The first <b>offer of contract modernisation</b> from SPV</p> <p><b>July 2010-</b> Potential financial disclosure of the issue in hybrid setting</p>	<p><b>Interest alignment</b></p> <p><b><u>(September 2010 – May 2011)</u></b></p> <p><b>September 2010:</b> CC involved legal advisor to understand contract termination.</p> <p><b>September 2010:</b> SPV sent <b>first contract modernisation proposal</b>.</p> <p><b>October 2010:</b> CC refusal highlighting lack of due diligence of SP related to asset replacement strategy.</p> <p><b>November 2010:</b> CC initial analysis of asset replacement</p> <p><b>November 2010:</b> CC concluded that ‘problem is one SP’s own making’.</p> <p><b>December 2010:</b> issuance of government paper ‘making savings in PFI operational contract’.</p> <p><b>Jan – Mar 2011:</b> Review of PFI contract by independent accounting firm</p> <p><b>March 2011:</b> SP threat of default</p> <p><b>March 2011:</b> CC agreement to review PS3</p> <p><b>May 2011:</b> CC formal confirmation regarding willingness for contract</p>	<p><b>Contract renegotiations</b></p> <p><b><u>(July 2011 – December 2012)</u></b></p> <p><b>July 2011:</b> CC potential saving proposal</p> <p><b>September 2011:</b> SP second counter proposal</p> <p><b>October 2011:</b> SP third proposal</p> <p><b>October 2011:</b> CC acceptance regarding savings but no changes related to performance measures.</p> <p><b>November 2011:</b> SP disappointment and refusal to provide savings figure.</p> <p><b>November 2011:</b> CC approval from cabinet regarding proposed changes</p> <p><b>December 2011:</b> Increased government pressure and CC formal agreement for required changes in performance measures.</p> <p><b>February 2012:</b> Involvement of police and public consultation</p> <p><b>December 2012:</b> <b>Contract modernised signed and sealed</b></p>

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ANT methodologically inspires this thesis to explore how actors in hybrid organisational relationships manage the performance measure issue and use methods to follow and trace various actors involved in the contract modernisation process. The translation (Callon, 1986, Latour, 1987), boundary objects (Star and Griesemer, 1989, Star, 2010), and convergence and irreversibility (Callon, 1990) concepts of ANT<sup>78</sup> have been used in this thesis to investigate the process of contract modernisation. By referring to these concepts, it is interesting to learn how performance measure issue was identified and problematised at the intra-organisational level. Once the issue is crystallised, how it is problematised at the hybrid organisational level? How and what kind of devices are used to align the interest of the heterogeneous actors to stay in a long-term sustainable relationship? Finally, how and what techniques are used to form a convergent and irreversible network. Given the complexity of the hybrid organisational setting and the process of contract modernisation, the four moments of translation need to be flexible and interrelated (Callon, 1986).

This study has used the major transformations described in each of the three empirical chapters to determine powerful actors and controversies that led to the settlement of the performance measure issue. However, it must be noted that according to Callon (1986), within the context of translation, no power relations are assumed between actors except in establishing the obligatory passage point. While Chapter 5 is divided into two phases; phase one presents the problematisation of performance measure problem at SP intra-organisational level; phase two shows the problematisation of issue at hybrid organisation level, Chapter 6 continues the translation of interest and enrolment of CC actors for PFI contract renegotiation. Chapter 7 centres on the efforts of actors to create a convergent and irreversible network.

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<sup>78</sup> Please see chapter three for details.

## Chapter Five: Problematising Performance Measure Problem

### 5 Introduction

This study focuses on understanding changes in performance measures of operational PFI contract under the umbrella of ‘contract modernisation’ to understand how actors in hybrid relations managed those changes. The focus of this chapter is to understand how parties at the operational stage of a hybrid organisational relationship identified and established the existence of the performance measure problem in the original PFI contract? (First research question as presented in section 1.4).

PFI hybrid setting is an important area to explore changes in the contract and incorporated performance measures because of the difference in objectives of public and private organisations. Moreover, in such settings, superordinate authority chooses the partner, not the partners themselves (Barretta and Busco, 2011). It is interesting to understand how these organisations manage changes despite having divergent interests.

The methodological approach of ‘keeping social flat’ i.e., all settings are flat spaces and boundaries are identified by empirical observations (Latour, 2005), means to follow actors no matter what direction they take. As such, this study that started with understanding management of management control change at *the hybrid level* has to take a step back and look at *SP local level*. This is because it has been identified that, initially, nobody at SP intra-organisational level was accepting any problem related to the original contract.

In this respect, this Chapter consists of two phases. Phase one of this Chapter provides the details of how the issue was first identified and the main actor's struggle in proving the problem's existence at the SP local level. While phase two illustrates the introduction of the performance measure issue at the hybrid level. This phase also details different shapes and

forms of performance measure issues, i.e., from abstract to a well-defined problem.

The evidence in this Chapter is mainly drawn from correspondence between the parties that explains the actual events that formally took place between SP and CC. It is also important to mention here that the original PFI contract is between SPV and CC (section 1.4). However, in practice, the operational staff of SP and CC worked together on this project. Therefore, any detailed work, for example, documents explaining the issue, was prepared by SP but forwarded to CC on the letterhead of SPV. This shows that SPV was also involved during the whole process.

The emails are the intermediaries that circulated between the main translator (i.e., SP) and CC to persuade others (Latour, 2005). Additionally, these correspondences provided a critical starting point in identifying the matter of concern that caused the unsatisfactory situation (Latour, 2005). The interviews with participants also complement the data, and the interview data identified the thought process of the participants/actors. Triangulation between documents (emails, contract documents, minutes of the meetings etc.) and interviews provided insights regarding the main translator's efforts in establishing the problem's existence and his identity. It also helps in identifying the matter of concern that was the main cause of all the problems that became prominent after six years of operationalisation of the contract. It also shows the struggles of one party in persuading the other party of the existence of the problem and subsequently for renegotiation of the contract.

The results of this Chapter contribute to the understanding of how and why performance measures issue is established and well-defined in a hybrid setting. The hybrid change process identified that performance measures of the PFI contract needed a change due to misalignment between performance measures and contract objects. The establishment of the issue is not straight forward and clear-cut process, and it requires tracing the footsteps of diverse actors to

understand how the black box of the problem was assembled. Thus, the findings from this Chapter mainly address the first research question focusing on how parties at the operational stage of a hybrid organisational relationship identified and established the existence of the performance measure problem in the original PFI contract?

This Chapter is divided into further four main sections. An overview of the story is provided in section 5.1, which is divided into four phases with the chronological order of the hybrid process of contract modernisation. Section 5.2 discusses the main actor's struggles in establishing the problem. The problematisation of performance measures is explained in section 5.3. Finally, section 5.4 concludes by stating some conclusions with respect to the themes that were introduced in this Chapter.

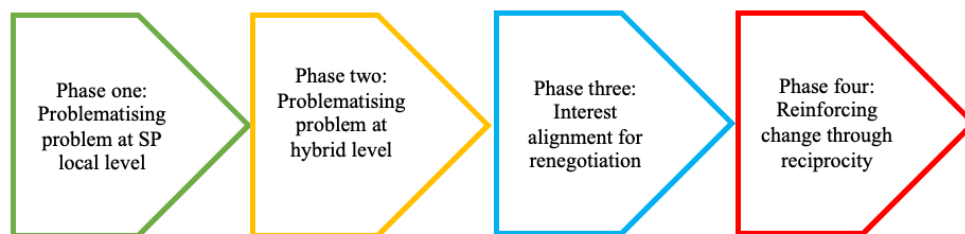
## **5.1 Overview of events**

This study is interested in changes in management control of the PFI contract during the operational stages. However, it is vital to have a brief understanding of events that happened before the management control issue raised by SP. It is believed that it will provide the interpretation and analysis of events that created performance measure problems.

The PFI Street Lighting contract was originally signed between ABC company (pseudonym) and CC in 2003. In 2008 the contract was taken over by EFG Limited (pseudonym) due to the incompatibility of the Street Lighting project with ABC company's primary operations. The EFG Limited, i.e., SP, has taken over the contract with the same staff through TUPE transfer. This Chapter will shed some light on how the takeover and TUPE transfer resulted in a lack of due diligence on the part of SP, and that subsequently created a lack of understanding of the

contract. As a result, SP carried out work that was not required by the original contract. Hence created a misalignment between performance measures and contract objectives.

**Figure 5.1:** Snapshot of process of contract modernisation



Phase one provides the details of the performance measure problem that became evident in February 2010, i.e., after seven years of signing the original contract and two years of taking over. The first phase, therefore, centres around the challenges that participant no 7 faced in the process of crystallisation of the problem. The story moves from the historical origin of the performance measure problem, where none of the actors accepted it as a problem, to its eventual acceptance at the end of phase one. The second phase shows the discussion of the problem in a hybrid setting. It explains the documents that SP used to communicate to CC that they are in serious problem. The documents show clashes between three performance measures that resulted in misalignment between performance measures and PFI contract objectives. This phase also identified the role of the '50% rule' as the main reason for misalignment.

Despite proving the acceptance of the problem, phase three accounts for difficulties in interest alignment among hybrid actors. Phase four shows the exchange of proposals and counter-proposals by exploring the particular ways in which SP and CC actors connect and mutually reinforce each other.

Each of the four phases traces the translation of interest broadly concerned with contract modernisation. The phases are arranged around the important events and significant changes

in the original PFI contract. Chapters 6 and 7 will deal with phases three and four, respectively.

## **5.2 Phase One: Establishing the existence of ‘THE PROBLEM’**

(February 2010 to August 2010)

“But if anybody thinks this (contract modernisation) was an easy process to be able to go, hey, we have a problem, here is a resolution, then no way it was, it was very painful as we went through. It was tough, 18 months, really. The initial bit for us, the whole first year, was really more about us. It was more about us as a project team, getting to grips with the fact that we actually had a problem (Participant no 7, Service Provider).

This quote provides a snapshot of the issue that participant no 7, SP, faced in the battle for contract modernisation and begins phase one of my research. The story moves from the historical origin of the performance measure problem, where none of the actors (even at the intra-organisational level) accepted it as a problem, to its eventual acceptance at the end of phase one. This episode depicts the efforts of participant no 7, SP, in constructing technologies that helped in the crystallisation of the problem. Therefore, interview excerpts in this section mainly relate to the participant no 7 because he is the main actor throughout this phase.

The details of how he identified the problem, communicated it to other actors, and used strategies, e.g., documents, models, charts, and presentations, to convince others that the problem exists are explained in the next section. The important observation at this stage is that he has no idea what the solution could be.

**Figure 5.2:** Phase one timeline of main events

### 5.2.1 Identification of the Issue

It was in February 2010 when participant no 7 was doing the annual review of the project in order to analyse finances that they needed for the current profile (AARP<sup>79</sup> block one due to be completed in April 2013). It is at this point that he calculated a massive difference between the amounts they had to replace columns<sup>80</sup> and the columns that are becoming and requiring replacement are actually exceeding the amount that was set in the original contract. The issue stemmed from one of the elements (clause) of performance measure number three, i.e.,

<sup>79</sup> Annual Asset Replacement Programme

<sup>80</sup> In Street lighting PFI projects word column is used instead of lamp post



"photometric performance". Participants called this element the '50% rule'. That element requires:

“If half of the columns (50%) in a streetlight get hit or damage it means Service Provider have to redesign the whole street according to the current design and specification” (Section 3.1.2, DCC3, original contract)

However, at this stage, he had no idea of the main reason behind this difference (this is explained in the next section). He only knows that the amount of work required according to the contract is different from the actual columns that need replacement.

So, through a profiling check (i.e., how much work they have already delivered and how much work they have to deliver), he spotted a huge issue with a potentially significant impact on the remainder of the contract. To be sure he did his calculations<sup>81</sup> (using self-generated technology, i.e., Ms excel sheets and calculation tools) compared it with the original intent of the contract (i.e., the number of columns as set out in the original contract requiring replacement). Furthermore, found that what is emerging from the calculation actually deviates from the original intent of the contract. Because the set age and condition for the replacement of columns were clearly defined in the original contract, this shows the misalignment between work delivered by SP and the original objective of the contract.

After identifying the significant impact on the remainder of the contract, participant no 7, SP, used various strategies and self-generated devices to convince the other actors about his findings. Following are the details of the strategies he used at the internal level to persuade/convince others that what has been identified could seriously impact the PFI project's future operation.

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<sup>81</sup> For data confidentiality, the exact details of the calculation cannot be shared here.

### 5.2.2 Problematisation strategies

**1- Construction of technology for translation of interest:** He created a working document to set out the issue. This document mainly consisted of columns that require replacement during each block of the contract (as per the original contract) and the details of over-delivered work (actual work). At that time, he was not sure about the financial impact of this difference. He then prepared the internal review document to present/communicate the issue internally at the SP level to form an actor-network. When he presented his workings, the immediate reaction of his Line Manager was as follows:

“His initial reaction was that he didn’t perceive it being an issue and that we should carry on” (Participant no 7, Service Provider).

The above quote shows that the Line Manager denied the problem's existence and that they should continue with what the contract requires. Similarly, other members at the meeting showed the same concerns. The contract was very specific in terms of requirements; therefore, his interpretation of the contract was questioned by other actors. Participant no 9 mentioned that we thought he was misinterpreting the contract requirements at that time.

Initially, his interpretations were questioned as not representing the contract's true intent and later came to misinterpret the PFI contract. He could not convince others that the problem existed, and this technology failed to mobilise his interest. It means that this strategy failed to prove the existence of the issue. Hence, it failed to create a network for further negotiation as the Line Manager denied considering it an issue that should be given much attention.

Starting from here, the main issue he faced at this stage was that nobody accepted it as an issue. It took him three months to establish the problem's existence at the internal level.

“Problem was... understanding that problem exists... so you have to come to

that realisation yourself that it really is a problem” (Participant no 7, Service Provider).

It also created a paradoxical situation for participant no 7 where he started questioning his interpretations. To be sure, he invested all his efforts in calculating the potential financial impact of this issue.

## 2- Use of ‘accounting number ‘for translation of interest:

“So, I had to go away and produce some more information that scaled the issue and put a **number** in the end of it” (Participant no 7, Service Provider).

“He put a **price tag** on it. That was huge. It was between £6 and 10 million. That’s a big number!” (Participant no 2, County Council).

After receiving such a response, participant no 7 started working on the problem. Reviewed the work at the local level and double-checked the findings and impact that could cause if they continue to work according to the current performance requirements. He forecasted the cost using a self-generated document and likely impact on the remainder of the contract and prepared the briefing paper for the internal management. This time he used "numbers" to show the materiality of the issue. At that point, the likely impact of the issue was £10.5 million.

“There is nothing like focussing somebody’s mind if you throw a large number out. It was potentially at that point with the information we had up to £10 million potentially, potentially” (Participant no 11, Service Provider).

Adding numbers in the same document got the attention of senior management, who were not considering it a massive issue in the first place.

“First time I didn’t put the number on it. Second time that got the attention”

(Participant no 7, Service Provider).

It shows that participant no 7 produced an inscription with persuasive power by using numbers to establish his identity to others. It shows the power of "number" in aligning the management's interest with participant no 7. However, this was only at his department level.

### **5.2.3 Intra-organisational controversies**

After looking at the number, the management was convinced that there was something wrong with the contract. So, the document was then passed to the internal PFI bidding team by the Head of Business for reviewing. The member of the PFI bidding team consists of similar persons who were involved at the time of Street Lighting PFI bidding. When they looked at the document, their reaction was explained by participant no 7 as follows:

“His reaction was I couldn’t possibly be right. And that it was all non-sense, and the contract does not work that way” (Participant no 7, Service Provider).

The PFI bidding team denied that there was an issue. So, after getting such a reaction, he passed the document to the internal legal team for analysis. The meeting was arranged. The Managing Director could not attend the meeting for some reasons. Therefore, it was headed by the Head of the Legal Department. Participant no 7, in his presentation, explained the problem to the legal team. Used random roads to show how it was supposed to work and then used roads to show how the impact could affect them. He used forecasted models with a price tag to explain why it could cost them potentially £10.5 million.

The Head looked at the information provided but could not provide any feedback. Therefore, he then worked and checked the issue's level of complexity. He realised that participant no 7 interpretation was correct. He forced the Managing Director to attend the next meeting because

the Head of the Legal Department thought the issue was complex. He insisted that there should be a meeting where different people share their thinking and challenge each other to clearly understand what could happen if they continue to work according to the current requirements. (This shows how a document/inscription created an argument).

The meeting was then arranged. The PFI bidding team also attended that meeting. Participant no 17 mentioned that the bidding team approached the issue in a very adversarial way, and the bid manager completely denied that the contract could be interpreted as explained by participant no 7.

“He could not understand how a contract could be worded in such a way to provide such a casual outcome. So, he dismissed it without reading it”  
(Participant no 17, Service Provider).

However, lawyers in that meeting clearly said to the Bidding Manager that “you are wrong”.

“The lawyer said, you (i.e., bidding manager) are wrong. He (i.e., participant no 7) is correct, quite bluntly” (Participant no 17, Service Provider).

After this meeting, the parties understood clearly that the way the contract document is worded leads to different interpretations; hence, participant no 7 is correct. The problem is finally crystalised at the SP level.

“The solution was **WE HAVE A PROBLEM.... WE HAVE A PROBLEM.** I think that’s the crystallisation of problem. And so rather than we have to renegotiate it, we didn’t know what we renegotiate” (Participant no 7, Service Provider).

Overall, the above phase shows the difficulty in communicating and convincing people at the

internal level that the problem exists.

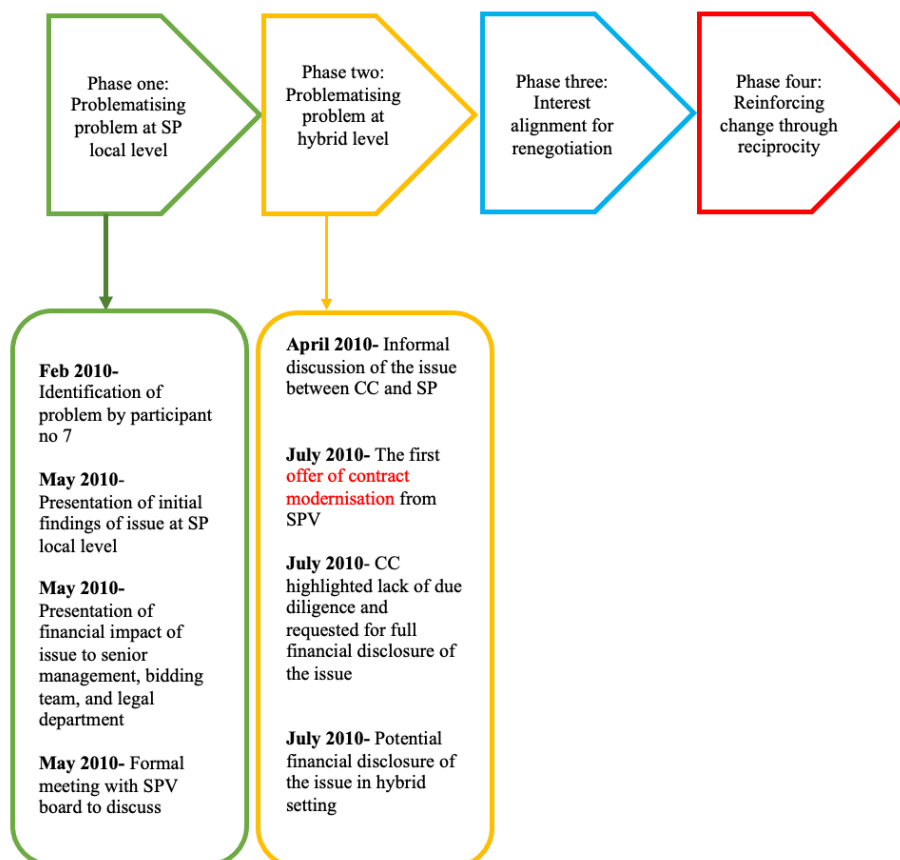
“It was difficult, convincing people initially that the problem was what it was, but we finally managed to cross that bridge” (Participant no 7, Service Provider).

## 5.3 Phase Two: Problematising performance measure problem in hybrid setting

### 5.3.1 Forecasted model of the issue and County Council response

SP operational staff, while convincing internal staff, also approached the CC through an informal channel<sup>82</sup>. Discussed their concerns regarding the performance measure issue. At this informal session, SP mentioned that they wanted to carry out further analysis (DCC6, 2013<sup>83</sup>). It took them around three months to produce the document that explains the issue in detail. The reason, as identified in the previous section, could be the creation of instability at SP's intra-organisational level regarding concerns about the issue's existence. Furthermore, participant no 7 has to make the level of effort to convince that problem exists.

**Figure 5.3:** Phase two timeline of events

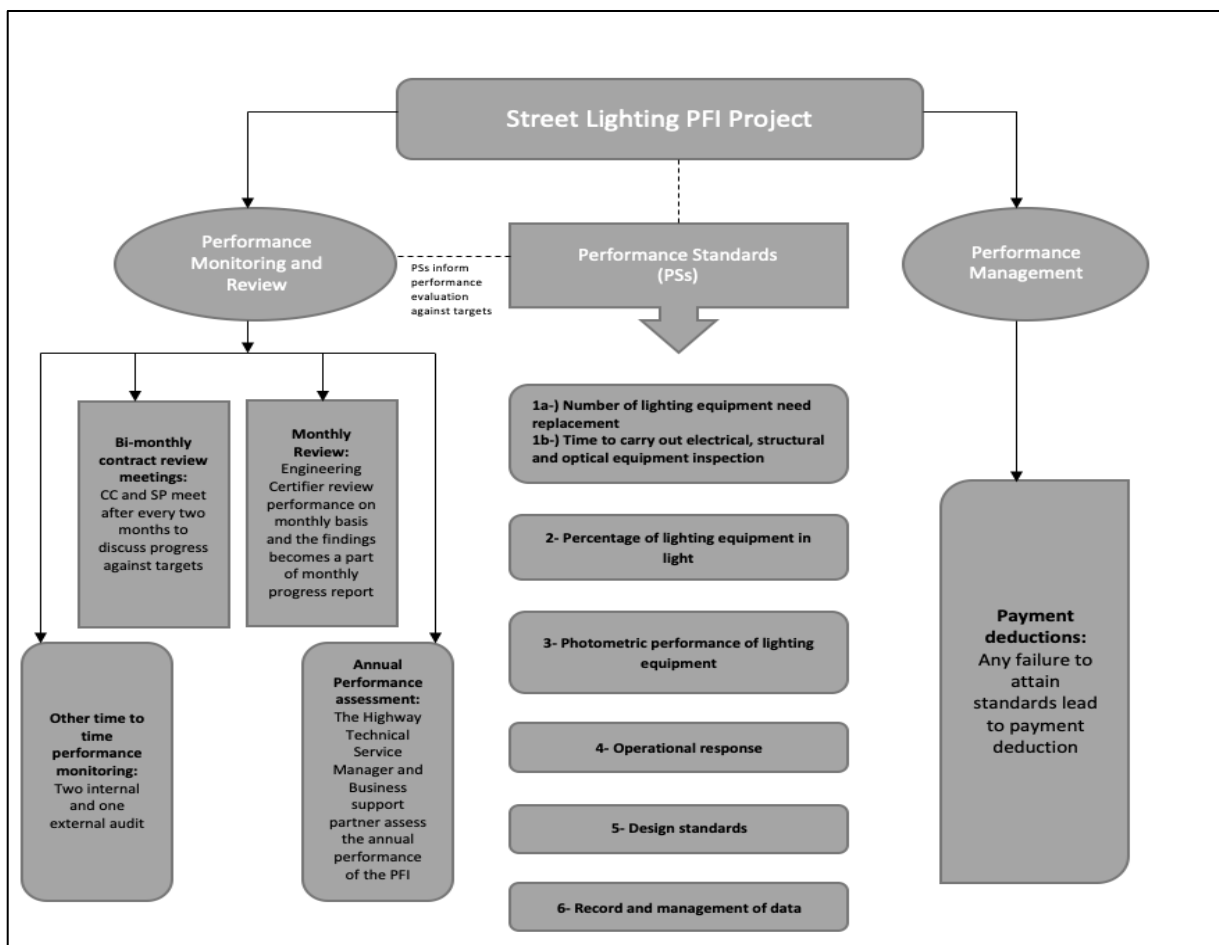


<sup>82</sup> Informal channel here means that during the usual project review meeting, they briefly informed CC their concerns that they are facing some problems but they were not sure what the main reason was.

<sup>83</sup> The document DCC6, 2013 is the PFI modernisation timeline provided by County Council.

In July 2010, the SP emailed<sup>84</sup> with the detailed analysis<sup>85</sup> to the CC. The SP explained the misalignment between indicative point profile<sup>86</sup> as per contract document and actual points for the current AARP block. The points profile shows the associated cost of asset replacement that SP has to incur. Therefore, they were under tremendous financial burden due to potentially significant expenditure.

**Figure 5.4:** SLPP performance management system



The reason SP mentioned is: The performance requirement "structural condition" (i.e., performance standard one), coupled with the 50% rule (i.e. clause in performance standard three), was adversely affecting the number of columns becoming due. Additionally, the number

<sup>84</sup> DCC 12, July 2010

<sup>85</sup> DCC 11, July 2010, initially they used the first document that is without a price tag.

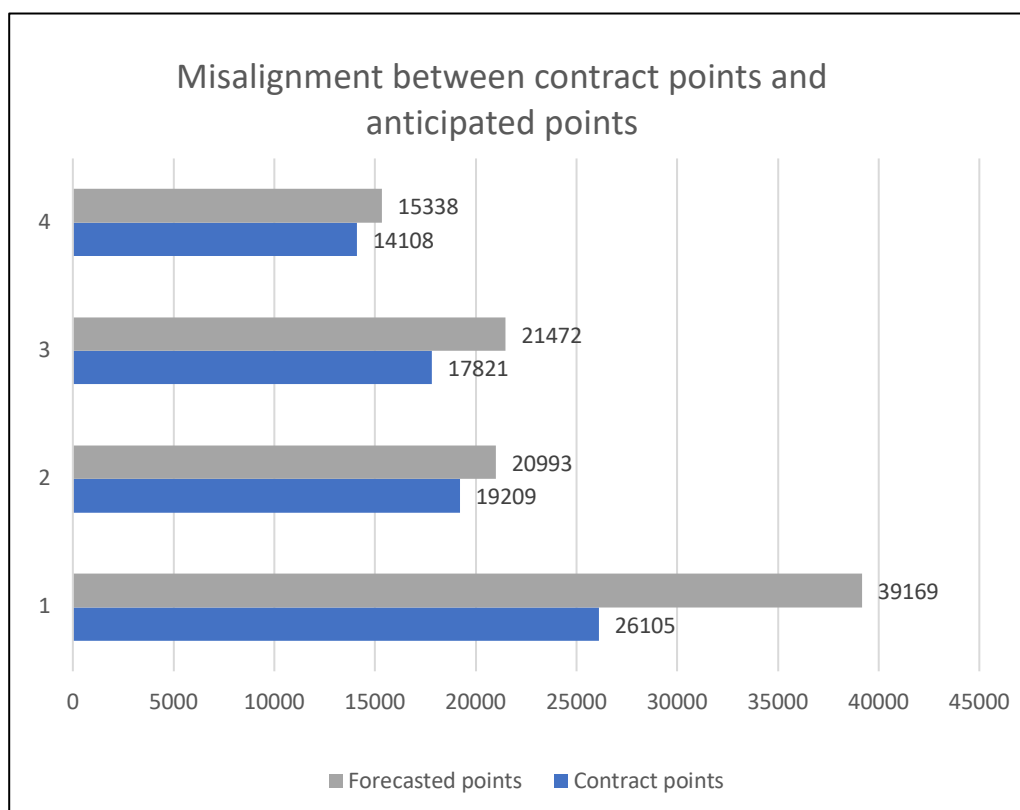
<sup>86</sup> The number of points as explained in the original contract document.



of underage columns under the PFI contract terms would not usually require intervention now needed intervention. In other words, the columns/ units outside the age criteria of the PFI contract now require intervention to meet the design criteria<sup>87</sup> (i.e., performance requirement five). Meeting the design criteria becomes an issue where the number of columns on particular roads needs to be increased and requires all assets to meet design standards.

Therefore, by reviewing the previous work (i.e., in the IARP block) that has been done so far, they identified that the replacement mechanism of columns requires SP to replace many columns in the subsequent blocks that have been replaced in other blocks. In order to prove their analysis, they showed a graph to compare indicative points as per the contract document with anticipated points based on their calculation.

**Figure 5.5:** Misalignment between contract and forecasted points<sup>88</sup>



<sup>87</sup> According to DCC 3, 2003 document, the design criteria requires that design standard on particular road should be uniform in terms of physical and lite appearance (appendix F, (p)).

<sup>88</sup> The chart is prepared using document DCC 11, July 2010. Due to confidentiality of data, the actual figures are adapted. However, the adapted figures show the similar trend as identified by SPV in DCC 11 document.

The above figure highlights the issue. According to SP investigation, the bar value indicates the points value of assets to be replaced and compares the contract points with forecasted quantities. It shows that based on the SP interpretation of the work delivered during the IARP block, they anticipated that at the end of AARP block 1 the points would be 39169, compared to indicative contract points of 26105. Similarly, for AARP block 2 they anticipated 20993 compared to 19209 indicatives etc.

In addition to the above, they showed understanding of the contract document by highlighting the true intent of the contract. They highlighted that the purpose of the contract is to achieve the best value points based on the replacement of assets according to their age. This means that assets should not be replaced prematurely, and there should be a sustainable programme related to future maintenance (i.e. after the completion of PFI). Furthermore, they also highlighted the strictness of the contract concerning restrictions in swapping or moving around different blocks to achieve the best value from the contract. For instance, where columns require intervention due to structural failure, afterwards, to fulfil the age intervention requirement in different AARP or other structural failures could trigger the 50% rule (i.e., replacement to meet design standards). This means duplication of work and hence high cost to SP, which adversely affects the best value intent of the PFI contract. As such, the SP requested to review the intervention criteria to solve the issue of increased points and associated costs.

At this point, SPV was also involved due to the seriousness of the issue. Based on this detailed analysis, the SPV mentioned that the issue explained by SP is against the true intent of the contract (i.e., the spirit of value for money) due to early and more than once replacement of assets (DCC 12, July 2010). Considering the massive impact due to intervention criteria, the SPV offered to CC that they have some suggestions that could help CC make some savings from the contract through the *“modernisation of the PFI contract”*.

**County Council Response:**

The CC responded by reminding the SP and SPV that the actors agreed upon the points profile/indicative points at the time of signing the contract (DCC 13, July 2010). They further pointed out that at the takeover time, they also had a chance to fully re-consider the requirements of the PFI contract. Based on this argument, they raised the question concerning SP asset replacement methodology during the initial asset replacement block.

However, the CC mentioned that the difference between the points profile as per the contract document and the financial model is massive. Therefore, they requested SP to disclose the potential financial exposure to justify the seriousness of the issue.

The interview data has also identified that after receiving a letter directly from an operational member of the PFI, the thought process of the CC actors changed. For instance: while discussing the DCC 11, July 2010 document the participant no 1 mentioned that:

“And that (DCC 11 document) came from (participant no 7 i.e. operational staff member of SP). I kind of trusted his information, and I said, look, do some number crunching come back to us .... we need numbers. Because we were getting lots of verbal comments, there is a problem there is a problem.... show us the problem...” (Participant no 2, County Council).

The above quote shows that they trust the information an operational staff member provided, but they need a “*number*” that shows the issue's impact. As such, the next chapter elaborates on whether the inclusion of “*number*” changed the situation or not?

So far, it can be inferred that still, CC has not seemed to be ready to re-negotiate the contract. They were continuously seen questioning SPV and SP's due diligence and understanding of the

contract. Therefore, SP again failed to create an actor network to solve the issue.

**Table 5.1:** Snapshot of SP, SPV and CC perspective towards conflicting relation between performance measures

Service Provider Main Proposition	SPV's Main Proposition	County Council's Main Proposition
<p>The clash between three performance standards acts as a barrier in achieving best value points which is based on replacement of assets according to their age. The intervention criteria should be reviewed.</p>	<p>The intervention criteria could result in massive financial impact on the remainder of the contract. We have some suggestions to earn savings therefore requesting to modernise the contract</p>	<p>You should have considered this at the time of signing the contract. You also missed an opportunity during takeover.</p> <p><b>Further action:</b> request the disclosure of potential financial exposure</p>

### 5.3.2 Problematizing due diligence

It has been already mentioned (section 5.2.3) that the bidding team involved in the signing of the contract was not accepting the problem's existence. Moreover, in the previous section, CC also highlighted SP and SPV's lack of due diligence. This section will provide empirical evidence regarding the lack of understanding of the bidding team related to the PFI contract. It shows the controversies between the parties regarding the PFI contract and financial model. These disagreements were entangled and eventually contributed to SP's failure to persuade the CC that the contract renegotiation. This failure added more dynamics to the translation of PFI contract modernisation in subsequent episodes.

In 2003 PFI contract was signed between ABC Ltd and CC. It was then taken over by EFG Ltd in 2008. During taking over, the bidding manager was hired as an external expert to analyse the PFI contract. However, after a year of successful takeover, he raised concerns regarding PFI financial model and approached the CC in November 2009 (DCC1, November 2009). According to the bidding manager, they were underpaid for the work they had delivered. The

reason he mentioned was related to the calculation of months during each AARP<sup>89</sup> block. This is explored below:

When the original contract was signed, the 25 years PFI contract was divided into five years block (i.e., 60 months). The below table explains the details and duration of each five years block as per the contract document.

**Table 5.2:** Blocks as per original contract document (Source: DCC 3, original contract)

Block	Duration	Number of Months
IARP	18 <sup>th</sup> May 2003 – 18 <sup>th</sup> May 2008	60 months
AARP 1	18 <sup>th</sup> May 2008 – 31 <sup>st</sup> Dec 2012	55 months
AARP 2	1 <sup>st</sup> January 2013 – 31 <sup>st</sup> Dec 2017	60 months
AARP 3	1 <sup>st</sup> January 2018 – 31 Dec 2022	60 months
AARP 4	1 <sup>st</sup> January 2023 – Contract expiry date	

The Street Lighting PFI Contract requires renewal, replacement, and maintenance of street lighting assets. Therefore, whenever SP renew, replace, install, or refurbish any item, they get performance points. The performance points range from 1 to 4. The number of performance points depends on the type of asset. For example, if SP install/renew any column<sup>90</sup> that is more than 6 meters, they will get 4 performance points and 1 point for the refurbishment of the column less than and equal to 6 meters. These points allow them to assess the stock. Each point carries a value, which is the value of the contract over the life of the contract. The number of the points to be delivered during each block is set when signing the contract. The parties can

<sup>89</sup> Annual Asset Replacement Programme

<sup>90</sup> In Street Lighting PFI project for lamp post the word "column" is used.

determine the points they can get according to work delivered. They can also calculate how much they can get by delivering the work.

While explaining the issue, he mentioned the difference between the financial model and the contract document (please see table 5.3) regarding the number of months in each block (DCC 2, November 2009). They mentioned that they had worked 3000 points ahead of the financial model programme because of the following (DCC 2, November 2009):

- 1- To avoid operational risk and penalties, the SP has to work in advance.
- 2- More columns were failing due to condition<sup>91</sup>.
- 3- Issue number 2 triggers the 50% performance measure rule of the contract. That rule requires that if half of the columns in a streetlight get hit or damaged, SP must redesign the whole street according to the current design and specification.

**Table 5.3:** Difference between financial model and contract document (Source: DCC 2 and DCC 3)

Block	Duration as per contract	Number of Months	Duration as per financial model	Number of Months
IARP	18 <sup>th</sup> May 2003 – 18 <sup>th</sup> May 2008	60 months	1 <sup>st</sup> April 2003 – 31 <sup>st</sup> May 2008	60 months
AARP 1	18 <sup>th</sup> May 2008 – 31 <sup>st</sup> Dec 2012	55 months	1 <sup>st</sup> June 2008 – 31 <sup>st</sup> March 2013	58 months

The above table highlights the difference between the financial model and the original contract document regarding the duration of PFI blocks. According to the contract and the financial

<sup>91</sup> The word "condition" as explained by the Project Manager means: the street lighting columns used in the late 60s, early 70s were non galvanized. The concrete columns manufactured in late 70s and early 80s, the column manufacturers used less material. So, they made the concrete columns using thinner concrete. And so rock soaps that is used for preventing the road from freezing were rotting the columns. As a result of which the columns were failing faster than expected.

model, the IARP block is 60 months. At the same time, the first AARP block's duration as per the contract document is 55 months.

SP follows the financial model for the payments, and they can see that they have delivered work for 58 months during AARP 1, i.e., over-delivered the work. Based on this timing difference and accelerated work required because of columns failing earlier due to conditions, the SP requested that payment mechanisms be reviewed, and steps should be taken to reconcile the contract document with the financial model of PFI (DCC 2, November 2009).

The bidding manager understood that the PFI unitary payment depends on the number of performance points accrued. Based on his understanding, he was claiming a review of the PFI payment mechanism.

After receiving an email regarding the financial model issue in November 2009 from SP, the CC forwarded this issue and related documents to the internal legal department in order to understand the CC's obligations to give due consideration to SP's claim regarding the review of discrepancy and also early conditional failure issue in the context of PFI contract (DCC 10, 2009).

However, participant no 18 mentioned that:

“If I recall, he couldn't provide any advice, and so we subsequently appointed an external legal advisor” (Participant no 18, County Council).

The quote mentioned above highlights the complexity of the PFI contract, as even the legal department could not provide guidance regarding County's obligation in such a scenario. As a result, it was challenging for the County Council to find relevant expertise to understand the issue.

This is further affirmed by participant no 9:

“We do have access to legal team.... nobody understands this contract and we tend to have to go out to external [...]. They didn't understand... emm... the first two (lawyers) didn't really understand the PFI contract” (Participant no 9, County Council).

The understanding of the contract required a higher level of expertise. Before getting the lawyer's opinion, CC responded to SP regarding the financial model issue explained in the next section.

**County Council's Response: Service Provider lack of understanding of the PFI Contract:**

In response to bidding manager concerns, firstly, regarding the contract document, participant no 1, CC, clarified that any failure or success of AARP blocks is not related to performance points, but age-related intervention criteria of columns as set out in the contract. The age-related criteria set specific age when the columns should be replaced.

As such, participant no 1 CC raised a question regarding the bidding manager's understanding of the contract document (DCC 5, December 2009). For example, he used words like:

“My reading of the Contract Agreement is that it has been written to allow (DCC 5, December 2009).

The participant no 1 response is further affirmed by participant no 2, CC:

“He doesn't understand how this contract works. He was spotting things and



asking this is a big risk to SP. My view was yeah that's the contract. That's how the contract is written, all right, and he didn't understand the intricacies of how we're going to deliver this particular contract” (Participant no 2, CC).

Secondly, he mentioned that the contract document clearly allows flexibility in terms of contract start and end dates. The contract document did not intend to complete all blocks in an exact 60 months' time scale. So, any delay related to the contract start date could be adjusted to the contract end date.

Thirdly, concerning reasons being ahead of the financial model, the CC mentioned that the contract document allows the SP to work in the deficit of planned points. So, if they work in advance to avoid any penalties, it is their choice.

“SP has carried out work not required by the contract, has not engaged with CC to seek work rounds and suggests problem is one of their own making” (DCC 6, January 2013).

Concerning reasons two and three, CC emphasised that before the contract was awarded to SP, they were given ample opportunity to assess any risk and how the risk level can change over time. Furthermore, the Head of Highways raised the question regarding due diligence at the time of the contract takeover in 2008 (i.e., when EFG took over ABC).

“I am bound to say that I am somewhat surprised that this issue was not raised in 2008 when EFG took over the contract from ABC” (DCC 5, December 2009).

Based on the above, he concluded that the "problem is one of their (SPs) own making" because they have over-delivered against the requirement of that specific block. At the same time, the

contract document is quite flexible regarding working in a deficit of performance points. There is a target threshold to ensure that CC pays for the work delivered by SP (DCC 4, November 2009). Moreover, that threshold was 50% for the AARP block under discussion. In response to SP's claim regarding "early conditional failure of lighting columns", CC clarified that such a level of risk would have been incorporated in the financial model during the contract signed and acceptance time. Also, the contract document is the main document between the parties, and it takes precedence over any other document, for example, the financial model (DCC 5, December 2009). Therefore, any difference in dates between the two documents will not affect the payment profile. Hence, the reconciliation exercise will not benefit the PFI contract (DCC 5, December 2009).

In summary, the CC understood the SP's concern, but they justified with the help of the contract document that the problem was their own making and closed the matter by refusing to offer any solution. According to the participant no 2:

“We were in the end of the year we kind of agreed, yes, there is a problem but it's your problem”.

At that point, CC's perspective was that because they had over-delivered the contract, therefore, the bidding manager was trying to get more money out of the contract.

“He (bidding manager) was trying to be too clever to get too much for the EFG (SP)” (Participant no 15, County Council).

**Table 5.4:** Snapshot of SP and CC perspective towards misalignment between financial model and contract document

Service Provider Main Proposition:	County Council Main Proposition:
<p><b>Due to misalignment between financial model and contract document the payment mechanisms should be reviewed and steps should be taken to reconcile contract document with the financial model of PFI</b></p>	<p>There is a lack of due diligence and understanding of the contract document.</p> <p><b>Explicit response:</b> Yes, you are in a problem. But it is your own making.</p> <p><b>Implicit response:</b> Bidding manager trying to get more money out of the PFI contract.</p>

It shows that top management has limited knowledge regarding operational conditions. Data identified that when parties designed the contract, they did not envisage the impact of performance measure number three. The interviewee mentioned that top management and experienced personalities, e.g., Ex-ILP presidents with a high level of technical expertise, the Head of Finance at the County Council, and the Department for Transport, were involved in the contract design. On the one hand, they designed very specific performance measures and strict contract due to related expertise in the field, on the other hand, technology improved with time. Modern technology is much more advanced and economical than in 2003 (i.e., when a contract gets signed). The specific measures and the strict contract became an issue with the introduction of modern technology. This is because the strict contract does not allow the parties to save by using a modern way of managing the Street Lighting PFI. It is discussed in more detail in the next chapter.

### 5.3.3 Forecasted model with the price tag

It has been already explained that during phase one, the identification of potential costs changed the thought process of the SP internal management team. However, the following events will show whether the forecasted model with the price tag of the performance measure issue changed the CC perspective towards the solution or not.

The SP has explained the predicted points profile with reference to intervention criteria. Therefore, it is imperative to understand the intervention criteria according to the original contract and how the payment system works between CC, SPV and SP to clarify the financial impact as explained by SP in document DCC 14, 2010. In this regard, three intervention criteria for the street lighting assets as per the original contract document are:

**Age Criteria:** The columns should be replaced if concrete columns reach the age of 45, and steel and all other columns are of 40 years within the blocks (2.5.1, page 36, Original contract).

**Structural condition:** Appendix B of the contract explains different structural conditions that SP has to comply with. If any columns fail to meet those criteria, then SP is required to replace that column (Appendix B, Original contract).

**50% Rule:** If half of the columns in a streetlight get hit or damaged, Service Provider must redesign the whole street according to the current design and specification" (Section 3.1.2, Original contract).

How and in what way the 50% clause could/was created a problem over time is explained with the help of the following example.

#### 1- Situation one:

Suppose there are three columns on any road. One of the columns requires changing because it meets the age criteria set out in the original contract. Furthermore, the other two columns have not reached their replacement age, which does not meet the 50% rule. So, the Service Provider will be required to change that particular column only. This means they are not required to redesign the road.

## **2- Situation two:**

If we assume that one column requires replacement due to age criteria and the other column became damaged due to a road traffic incident or traffic collision. It means that more than 50% of the columns need changing (i.e., 2 out of 3). If Service Provider cannot get the lighting design, they have to move the third column as well so that all columns in the road meet the similar design specification. This means the third column was working fine, and only the performance requirement forced the unnecessary replacement.

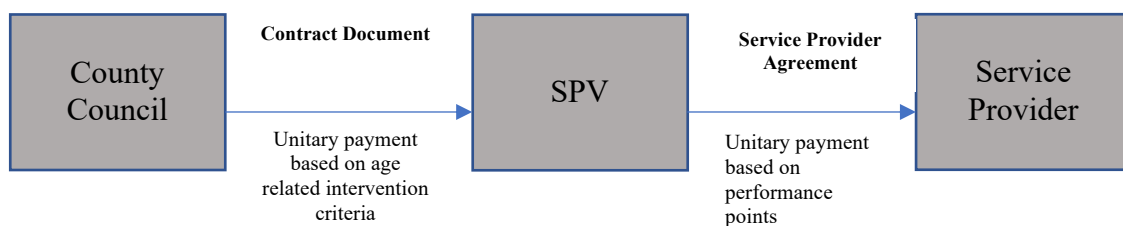
This means that in a situation with 60 or more columns, this 50% rule could create a massive problem. Suppose any of the columns do not need replacement because they have not reached the required age as per the original contract. In that case, they eventually require changing, which is an extra cost because it is not a part of an original contract., require changing. Which is an extra cost. Because it is not a part of an original contract.

“Just one clause, it caught everybody” (Participant no 4, County Council).

The unintentional impact of this requirement was that because things changed over time, and where columns changed subject to the intervention of the contract. It means that where SP never intended to replace the road could unintentionally become completely replaced. Which also meant replacing columns earlier than were required. The impact of the 50% clause was that the columns that were becoming or requiring replacement exceeded the amount of work required per contract. This issue deviates from the original intent of the contract because it was not the intention of the contract to replace all columns. Moreover, no finances were in place for the extra work due to the 50% rule. Because the prices for repairing and replacing the columns were set in the original bid, and that is the total amount that SP could get over the contract's life.

In explaining the financial details, the SP clarified the payment issue related to the points profile. In addition to the main PFI contract document (i.e., between SPV and CC), the Service Provider Agreement (SPA) operates between SPV and SP (DCC 4, 2020).

**Figure 5.6:** Payment mechanism



The above figure shows that the unitary payment follows a draw-down payment mechanism. The CC pays to SPV, and SPV draws down to SP. The CC pays a unitary charge to SPV based on age-related column replacement criteria. At the same time, the payment that SP gets from SPV relies on performance points achieved during the particular block. SP was claiming high-performance points because, following three intervention criteria, they replaced more columns

than required to get unitary payments. Because they replaced many columns, they were expecting more payments. However, the issue is the difference between the two documents' payment mechanisms.

The "Service Provider Agreement" details the anticipated and indicative performance points SP has to achieve during the contract's life. The word "indicative" is used because the actual points depend on compliance with the above-mentioned intervention criteria (DCC14, 2010). The performance points as per "Service Provider Agreement" and financial model<sup>92</sup> determines the amount that SP gets from SPV.

SP showed the points as per the financial model because they get paid by SPV based on financial model points. However, there is no difference between contract points and financial model performance points (Please see figure 5.5). The difference is the way these documents explain the payment mechanism. The contract document payments are related to the age-related intervention criteria (DCC 5, December 2009). The financial model is a part of the "Service Provider Agreement". The SPV release payment to SP based on performance points achieved (DCC 14, August 2010).

In order to carry out the analysis, the SP used the "Asset Management System (AMS)". The AMS is the software SP uses to record the performance data (DCC 3, 2003). This is because the record and management of data in the system decide the amount of work that has been done and that needs to be done. As such, the AMS plays a critical role in the management of the PFI contract.

“The asset management databases audited three times a year for accuracy,

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<sup>92</sup> The Financial Model shows how the project will be delivered in financial terms and takes into account every aspect of the contract in terms of income and expenditure over the life of the project (DCC 4, 2020).

because that's really important to the contract the accuracy of that database”

(Participant no 9, County Council).

To prove their point with evidence, the SP used AMS to look at the work that has been done from 2003 to 2008, i.e., IARP and, based on that, they predicted performance points that could happen at the end of the current block, i.e. from 2008 to 2012. They explained the information with reference to the Service Provider Agreement and the financial model. They showed that if only age-related criteria (i.e., contract document requirement) are used, the result is different as compared to when the three above-mentioned intervention criteria are used. Their findings identified the massive impact of the 50% rule on the performance points:

**Figure 5.7:** Impact of 50% rule on PFI contract delivery

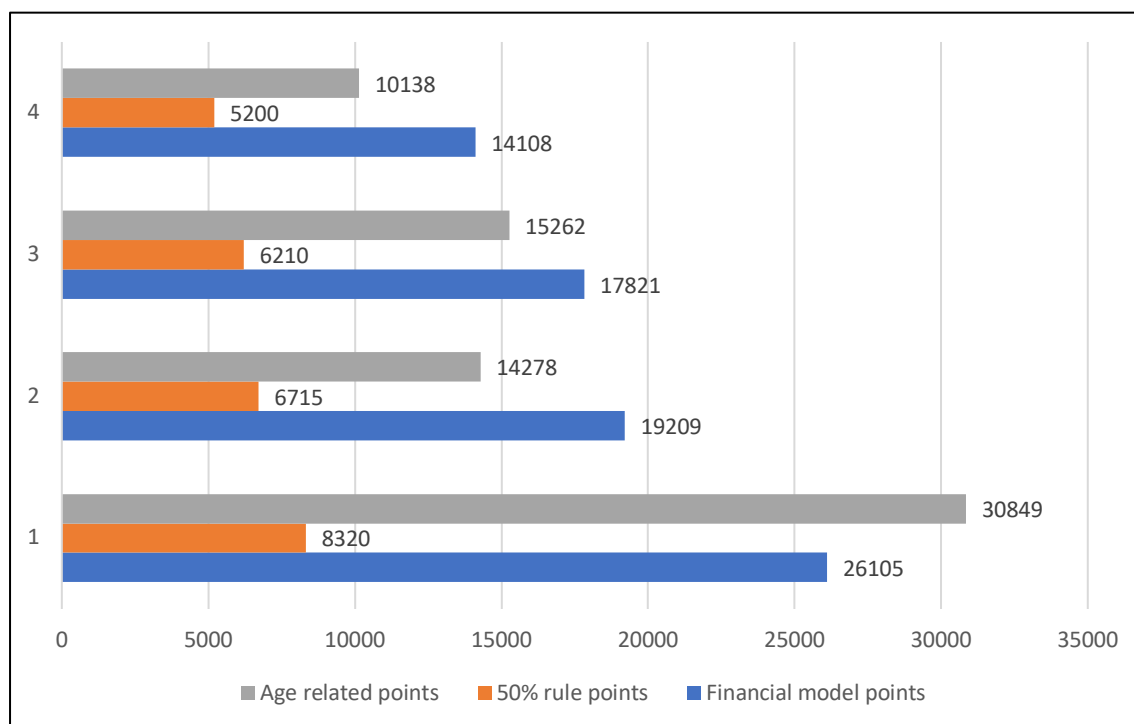


Figure 5.6 shows that the division between age-related performance points and 50% rule points shows that SP has to carry out a large amount of work due to the 50% rule requirement. For instance, during block 1 the contract performance points are 26105; however, out of 39169



predicted points, 8320 points relate to the 50% rule. In the remaining blocks, the 50% rule results in SP being exceedingly ahead of financial model points. Otherwise, if SP follows age-related criteria, they are well covered under the financial model performance points. This also shows that SP has to incur a high level of expenditure in order to meet intervention criteria far greater than recovery from SPV.

Due to the confidentiality of information, this thesis cannot show the full calculation. However, only the calculation of cost that could arise as a result of the 50% rule is as follows:

**Table 5.5:** Calculation of potential loss due to 50% rule

<b>AARP Block</b>	<b>Anticipated 50% rule points</b>	<b>Anticipated points age</b>	<b>Total cost</b>
<b>1</b>	8320	272.54	2,267,532.8
<b>2</b>	6715	327.82	2,201,311.3
<b>3</b>	6210	391.58	2,431,711.8
<b>4</b>	5200	423.90	2,204,280
<b>Total</b>	26445		9,104,835.9

The above calculations show that only applying the 50% rule could cost approximately £9 million to SP. From here onwards, the 50% rule got a prominent position in all future discussions.

To sum up, in line with the aims and objectives of the study, phases one and two identify why performance measure change was needed at the operational stage of the PFI contract and how actors established the problem's existence. Phase one shows the main translator's struggles in establishing the problem at the SP level. It shows the controversies at the intra-organisational level regarding misinterpretation of the intent of the PFI contract, and how qualitative

information regarding the issue with quantitative numbers attracted actors' attention and formed the SP level network. Taking the process approach revealed that the issue that started with the difference between work required as per contract and work that needs to be done based on actual conditions of street lighting columns changed into a well-defined performance measure problem at the end of phase two. This depicts that the performance measure issue has taken different shapes and forms since it has been identified. It started with the difference between the number of columns that require replacement according to the contract, and the number of columns actually need replacing. Then, further analysis showed the clash between different performance requirements. Afterwards, it's been identified that the main problem is one clause of performance standard three, i.e., 50% rule.

Finally, this process has also brought forth a lack of due diligence as the main reason for the performance measure problem that created the unsatisfactory situation in hybrid relations. However, this will be discussed in more detail in the next chapter.

## **5.4 Conclusion**

To understand the hybrid process of performance measure change, it is crucial to first identify why the change was needed during the operational stage of the Street Lighting PFI project and how actors established the problem's existence. Findings identified that misalignment between performance measures and PFI contract objective created a need for changes in performance measures. However, following actors to understand the hybrid change process, the study found that identifying performance measure misalignment was not a simple and clear-cut process. Instead, a complex process of getting the support of actors, firstly to prove at the intra-organisational level that misalignment exists, and secondly, to convince hybrid partner for the contract renegotiation. This chapter has focussed on the first part of this complex process, i.e.,

establishing the existence of the problem and proving that the PFI contract is not doable under the current performance requirement. In doing so, this chapter has provided an understanding of how performance measures manage to engage the actors around the establishment of problems in a PFI hybrid setting. This chapter shows how performance measure issue has taken different shapes and forms before it is crystallised in the hybrid relationship and has created a dynamic for performance measure changes.

In conclusion, the following analytical themes based upon ANT concepts (see chapter 3 for details) can be drawn from the above account of PFI performance measure problem identification:

#### **5.4.1 Problematising problem**

The findings in this chapter have shown that every translation does not need to start with the main actors coming up with a well-defined set of problems that other actors fully acknowledge. In this regard, participant no 7 search for a well-defined problem during phase one has shown his struggles to gain acceptance of other actors at his organisation level (i.e., Service Provider) that problem exists, who at first believed that the contract was working fine. For example, for the Line Manager, “it is not an issue, and we are working right”, for Senior Business Support Partner, “he is mis-interpreting the contract requirements”, for bidding team, “his interpretation was all non-sense and that is not how contract works, and finally for legal team, “we understand what you saying but we need to look at it in greater depth”.

The above account depicts the cooperative and conflicting situations among four groups of actors: operational staff, senior management, bidding team and SPV. In contesting the existence of the problem, participant no 7 attempted to enrol many heterogeneous devices and

connect them with powerful other groups of actor-networks (Callon, 1986, Latour, 1987). The success of his endeavors to create or present himself as an obligatory passage point rested importantly on the construction of technologies that tied the actors in a network (Callon, 1986).

The struggle to get acceptance of the problem revolved around the need to construct persuasive device that would capture the attention of other actors (Callon, 1986, Latour, 1987). At one time, participant no 7 started questioning his interpretation of the issue when he failed to mobilise the interest of his senior managers. Initially, his interpretation was considered a misrepresentation of the true intent of the contract, and later his analysis came to misinterpret the PFI contract. The first technology was based on qualitative details of the issue. He then constructed another technology with quantitative analysis highlighting the potential financial impact of the issue (i.e., cost). Later technology, due to the inclusion of qualitative details with a quantitative price tag of £9 million, got the attention of the actors (Robson, 1992, Latour, 1987). This shows that the interrelation between quantitative numbers and qualitative documents changed the actors' views (senior management) (Robson, 1992). Numbers help materialise and evaluate abstract ideas (Mahama and Chua, 2016). The price tag was not a neutral representation of reality. Rather, the stability, mobility and combinability of later technology provided a powerful explanation of participant no 7 understanding and interpretation of the issue (Latour, 1987, Robson, 1991).

However, getting the attention of actors does not mean successful translation of the problem (in this case, successful translation means acceptance of the problem). It still requires the enrolment of senior management, the bidding team and the legal team in such a way that they are willing to participate in a particular way that maintains the stability of the network (Callon, 1986, Callon, 1990). To materialise the presence of actors, their expertise also plays an

important role in their enrolment (Callon, 1990). It can be achieved when the researcher follows the actor-network rather than giving preference to any one actor (Latour, 2005). The legal team understands the intricacies of the PFI contract. Their expertise and professional knowledge played an important role in making senior management believe that participant no 7 understanding is correct. As such, an actor network was formed at the SP level, which resulted in the problem's establishment.

Enrolling in such a context is a complicated process, where different interests are intertwined and shared between actors (Callon, 1986, Latour, 1987). In such an environment, it is not easy to track who enrolls who, implying that enrolment does not happen in a one-sided, one-off manner that can be predicted *ex-ante* (Briers and Chua, 2001). For example, participant no 7 enrolled Head of the Legal Department, who then enrolled the Managing Director and bidding team or did the bidding team enrol because they had no choice as the Head of the Legal Department questioned their understanding? Act of enrolment can be viewed from a different perspective; is it a forecasted model with a price tag or the expertise of the legal team that resulted in the enrolment of actors, or is it both? However, participant no 7 eventually succeeded in proving that problem exists. As a result, from the point of view of multiple actors, enrolment in an organisation often takes the form of an interactive, constantly changing process (Briers and Chua, 2001). However, in hybrid relations, actors' enrolment could differ from within an organisation setting. The technologies that worked and made the enrolment easier at the SP level might not work or partially work in a hybrid setting. This will be discussed in more detail in the next chapter.

This shows that accepting the problem's existence is not a straightforward and clear-cut process, whose alignment is already obtained. This narrow view reduces the complexity of the real world. The static approach of considering "problem" as a black box with its "reductionist

assumptions” and “deductive reasoning” may simplify social complexity and “messiness” and “shield out unnecessary noise”, it nevertheless limits the knowledge that can be gained (Boedker, 2010). It is therefore vital to re-open the black box of the problem to understand and interpret its internal working. That requires tracing the footsteps of diverse actors to understand how the black box of the problem was assembled (Latour, 1987).

#### **5.4.2 Enabling role of hybrid performance measures problem in generating intra-organisational effects**

In establishing the problem's existence, the contract and incorporated performance measures issue were defined, discussed, modified, reshaped and well-defined in a hybrid context. This study provides an understanding of how performance measures manage to engage the actors around the establishment of the problem in a PFI hybrid setting. The performance measure issue was not a pre-existing category waiting to be discovered by the actors; rather, the issue crystallised through an elaborate process of efforts of various actor groups.

It was easy to consider the performance measure issue as a matter of accepted fact that actors widely used in hybrid relations during contract modernisation (Latour, 1987). For example, instead of talking about the difference between work delivered and work that should be delivered according to the intent of the contract as initially identified, the 50% clause of performance measure three was the centre of discussion. In other phases (see Chapters 6 and 7), none of the actors talked about how this issue was shaped and reshaped; instead, 50% clause problem has become a matter of accepted fact. The 50% rule issue was shaped by the interaction and participation of various actors, for example, participant no 7, the legal team, senior management, the asset management system, a forecasted model with or without a price tag etc.

In theory purpose of the contract and incorporated performance measures are to reduce the complexity of hybrid setting by producing standardised measures (Dekker et al., 2016). However, in practice, standardised measures left incomplete spaces through misalignment between performance measures and PFI project objectives. For example, in this study, performance measures required that if 50% or more columns on any street need replacement, the remaining columns should be replaced to meet design criteria. This clause's strict and prescriptive nature resulted in SP replacing more columns than originally agreed in the contract. Things changed over time; the number of columns increased and, as such, the implication of the 50% rule. However, nobody was interpreting it in the long term. Therefore, the difference in interpretation resulted in nobody accepting it as a problem. This explains how difficult it is for the parties to design a complete contract. Because things change over time, therefore, creating strict and specific documents creates issues.

This incompleteness resulted in negotiations around the set of performance measures (performance measures one, three, and five). Phase one showed how performance measure problems created space for questioning and debate at SP organisational level. The performance measure problem converted from one form to another through the process of association and calculations, how participant no 7 communicated and informed other actors, and the debates and controversies it generated can be seen to set the agenda for further action in the PFI hybrid setting (Hopwood, 1987).

The material representation of the performance measurement system only partially represents the PFI hybrid world, as they are inherently incomplete, therefore, cannot guarantee rational decision-making (Jørgensen and Messner, 2010). Establishing the existence of a performance

measure problem at the SP level does not automatically mean that actors will accept it in a hybrid setting. It also depends on the interpretation and responses of other parties in a hybrid setting, i.e., CC and SPV. In this respect, both intentional and unintentional consequences from the perspective of CC, SPV and SP will likely shape the outcome. This is elaborated on in the next section.



## **Chapter Six:**

### **Phase Three: Conceptualising sustainability of relationship and making cost savings from PFI project.**

(From September 2010 – March 2011)

#### **6 Introduction**

The previous Chapter discusses how SP establishes the problem's existence and highlights the lack of due diligence and the process that refined/redefined the performance measure problem. This Chapter continues the discussion regarding how and under what conditions the contract modernisation negotiations started to solve the problem identified in the previous Chapter. It aims to answer the second research question: how the interest of the actors is aligned to solve performance measure issues in a PFI hybrid setting. The document analysis and interview data have allowed in identifying negotiations and interactions between PFI partners to solve the performance measure problem. This Chapter shows the fundamental role of two elements 1-) the attempts of the operational team of hybrid partners towards the sustainable relationship, 2-) to make cost savings from operational PFI contract in aligning the interest of actors in a hybrid relationship.

The findings from this Chapter highlight the interactions and negotiations among actors to start the contract modernisation process. This Chapter, therefore, enhances the understanding of how the interest of the actors in hybrid relations is aligned to manage performance measure changes.

This Chapter is divided into further nine sections. Section 6.1 conceptualise a good working relationship between the operational staff of SP and CC. It provides the basis for analysing the actors' inner processes and the relationship's dynamics. The legal team's suggestion regarding

the continuation or termination of the contract is discussed in section 6.2. The first formal contract modernisation proposal and CC response are explained in sections 6.3 and 6.4. This forms the basis of section 6.5 related to the reason for contract renegotiation. Section 6.6 details the impact of the government paper "making savings in operational PFI contract" on the interest alignment of PFI actors. Discussion related to the review of the PFI contract by an independent accounting firm is provided in section 6.6. CC's first cost-saving proposal is explained in section 6.7. The parties' desire for a sustainable relationship is discussed in section 6.8. Section 6.9 concludes by stating some conclusions with respect to the themes that were introduced in this Chapter.

## **6.1 Conceptualisation of good working relationships**

In the previous Chapter, I explained the details of the letter (DCC 14, August 2010) that SP sent to CC regarding disclosure of the financial impact of the performance measure issue and the role of the 50% rule in that. The document analysis showed that CC officially responded to the SP after three months. Meanwhile, the operational staff of CC and SP did various discussions. The interview data identified the operational staff's collaborative and joint approach toward the issue. However, a collaborative and joint approach just not automatically means that both parties trust each other. It will be elaborated on in the next Chapter.

SP and CC operational staff's views show that they understand each other and want to make this relationship work. Following are a few excerpts from the interviews:

“The 50% clause in the contract was hurting SP. It (50% rule) was forcing them to go into streets unnecessarily with the young assets out ...for me that's... this is a public money why we've taken our assets that have got

another 20 years life in them why because the contract says 50% intervention, we need to renew the whole street” (Participant no 8, County Council).

“We used exactly the same briefing document showing the level of numbers, because we're talking to individuals now who are familiar with the contract and familiar with the issues out on site. And therefore, explaining it to them was very simple” (Participant no 7, Service Provider).

“Their reaction was....it was an acceptance that the issue existed. They had an initial thought process, that that was not necessarily the intent of the contract. And understanding the excellent work that had been done to get us to that point, their desire to keep us as the service provider, and understanding that this would give us a great strain of finances, which they don't really want to do to us” (Participant no 14, Service Provider).

“He (participant no 7, SP) knows exactly where both partners are coming from. He understands this contract more than anyone...because he's worked with some other PFIs he has seen how different personalities just create friction and the end product is the wrong end product” (Participant no 2, County Council).

The quotes above show that both parties have a very good relationship with each other. For CC, the project was delivering what it was supposed to deliver, but the wording that CC participants used, for instance, "hurting SP" and "forcing them", shows the CC's desire to

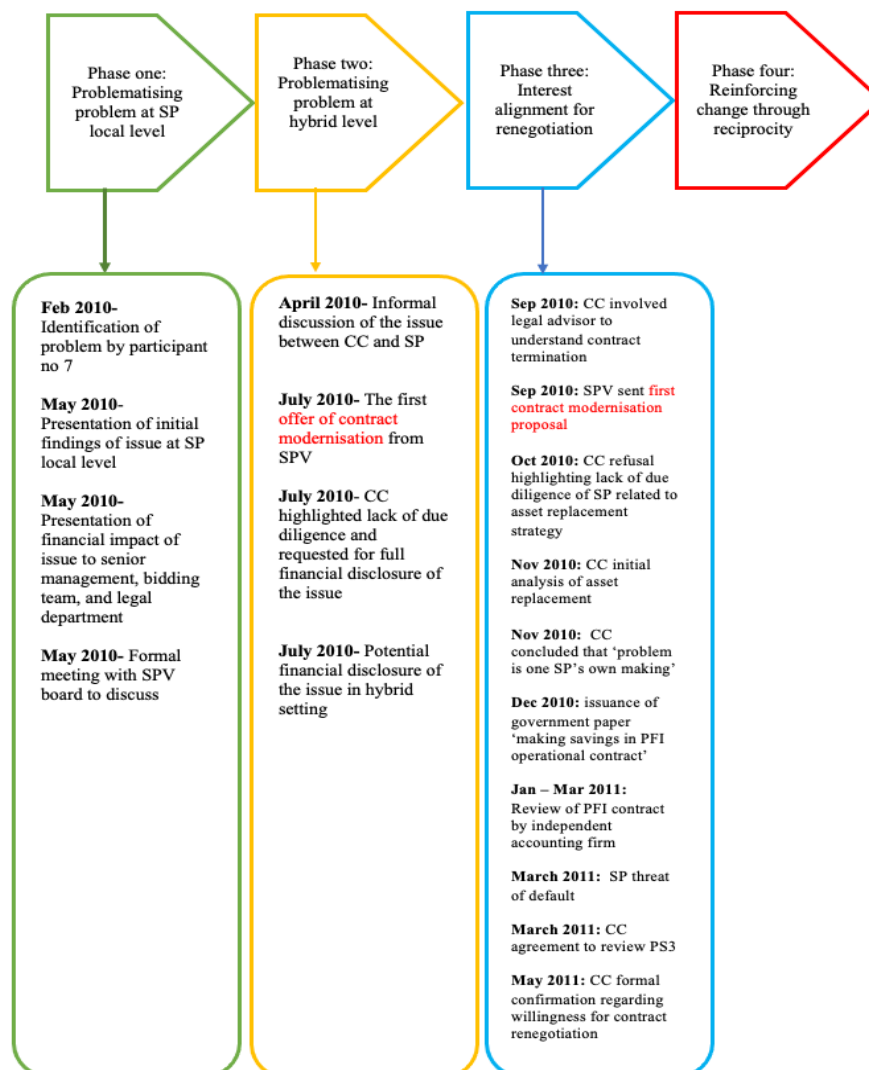
continue working with the SP and help them resolve the issue. This is further affirmed by the following:

“There's a natural desire for them to want to make it (contract) work”

(Participant no 7, Service Provider).

The above-mentioned interview excerpts are presented to show the good working relationship between the operational staff of both organisations. This understanding played an important role in the way they resolved the issue. Details are presented in the next Chapter.

**Figure 6.1:** Timeline of phase three events



## 6.2 Involvement of legal advisor

The document analysis identified that before formally responding to the financial disclosure of SP, the CC involved the Legal Advisor to understand their obligations in case the PFI contract is terminated or needs to be terminated. Because the impact of the issue, as shown by the SP, was massive.

The lawyer explained that the contractor (i.e., SP) could terminate where "council default events" occur (DCC 15, September 2010). Due to data confidentiality, the exact clauses cannot be mentioned here. But the council's default events relate to the situation. For example, where:

- 1- A certain sum of the money is due, and the council has not paid despite several notices being served by the contractor (Page 88 (18.9) DCC 3, original contract).
- 2- The council's breach of certain obligations does not allow the contractor to carry out its performance obligations for the period of three months (Page 88 (18.9) DCC 3, original contract).

However, the Legal Advisor suggested that *CC should not go for the termination of the contract. Instead, they should ask the SPV what they are offering under "contract modernisation"* and how that can be accommodated under the terms of the PFI contract (DCC 15, September 2010).

In response to the legal advisor suggestion, the CC participant mentioned:

“So, at that point, we said, okay, well, what's in it for us? We knew it was serious for them. You know, why should we renegotiate contract.....what is the benefit to the authority?” (Participant no 2, County Council).

### 6.3 First formal contract modernisation proposal from SPV

“So, we agreed to renegotiate key elements of the contract. So, both parties went away, and produced our wish list” (Participant no 9, County Council).

As such, in September 2010, the SP sent the first formal contract modernisation proposal (i.e., DCC 16, September 2010) to the CC. In their proposal, they considered the problem of the 50% clause combined with age-related criteria and early failure of the columns as an opportunity that can bring benefits to all parties through contract modernisation. Following are the details of the proposal:

First of all, they mentioned that they have carried out a detailed analysis and found that the main issue is duplication of the work due to the 50% rule. Through remodelling of modified intervention criteria, they found that additional savings can be introduced, which will offer the best value in terms of financial and engineering requirements. For instance, through changes in maintenance regime and dimming of streetlights. They proposed two scenarios:

#### 1- Change the 50% rule to 100%:

The feature of this proposal requires that if on any road less than 100% of the assets require replacement, then it should be treated on a one-to-one basis. If 100% of the assets need replacement, they should be fully redesigned.

#### 2- Modification to 50% rule:

The modified 50% rule consists of two features:

- 1- If less than 50% of columns require replacement, it should be done on a one-to-one basis.
- 2- Where none of the assets was previously replaced, and if more than 50% of assets

require replacement, then the full design scheme should be done. However, where some assets have previously been replaced, then the best-fit design scheme should be done. This means that non-compliant assets should be replaced. Where necessary, they propose the use of more energy-efficient lights to achieve energy savings.

In addition to the two above scenarios, the SPV proposed that instead of following five years blocks, the contract should be treated as one period. They justified their point by saying that proposal will reduce the number of visits, duplication of work and road disruptions. However, they mentioned that option two can bring more potential energy savings compared to option one<sup>93</sup>. Because option two has greater potential for future value propositions, for instance, through a dimming regime.

#### **County Council Response to contract modernisation proposal:**

In response to the SP proposal, the CC asked for further clarification through the presentation of scenarios in the form of a diagram (DCC 17, September 2010). They also asked that from the SP proposal, the source and calculation of potential savings are unclear. The SP provided diagrammatic details by showing different roads and columns under both scenarios, i.e., from 50% to 100% and modified 50% (DCC 18, October 2010). However, the document analysis identified that SP did not provide any energy-saving details as required by the CC (DCC 19, October 2010). After getting diagrammatic details of the proposal, in October 2010, CC formally sent a letter to respond to issues that have been raised since 2009 (DCC 21, October 2010). The purpose of the letter was to formally write down the CC's understanding of SPV and SP concerns.

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<sup>93</sup> Due to the confidentiality of data, the amounts cannot be disclosed.

The financial disclosure letter<sup>94</sup>, as explained above, shows the performance points regarding age-related intervention criteria and 50% rule intervention criteria. The CC raised concerns that firstly CC asked for clarity regarding why SP performance points exceed in case of age-related intervention criteria alone. The reason CC raised concern is that the age-related replacement criteria are the requirement of the PFI contract. Therefore, according to the contract performance expectations, there should not be an issue with that. As such, the CC asked the SP to look at the asset replacement strategy adopted by the previous Service Provider, as it might be carried-over work of the prior block. Hence, again highlights negligence related to due diligence.

Concerning the contract modernisation proposal, the CC explicitly rejected the changes in the 50% rule and mentioned it as a contractual requirement. However, they showed some flexibility in terms of design variation to avoid work duplication (i.e., asset replacement more than once). As such, they required the details of duplicate work done since the start of the contract to understand the possibilities of using design variation. Also, regarding the actual schemes where the SP showed their concerns, the CC asked that it needs to be determined so that a practical solution could be designed.

Finally, the CC concluded the letter by requesting the collaborative and open book approach to speed up the energy-saving process through LED lighting, dimming and part night switching strategy.

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<sup>94</sup> DCC 14, Aug 2010.



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## 6.4 Initial analysis of asset replacement work

In November 2010, the SP provided the data to CC related to the asset replacement strategy adopted by the previous contractor during the first eight years of the contract (DCC 22, November 2010). They also provided the details of the actual scheme that are of concern in the current block and how they want reprofiling of asset replacement in those schemes. The data provided showed the combined effect of the 50% rule and age-related criteria resulting in the replacement of columns more than once and the inclusion of assets that fall outside the age criteria of the PFI contract (DCC 22, November 2010). They identified around 1438 assets that they have replaced more than once. Moreover, this time SPV showed a model that helps calculate the benefit of reducing lighting levels in order to save energy costs.

About the CC response, to understand the logic of their reply, firstly, I have mentioned the areas where the CC has raised concerns regarding SP's failure to understand and apply the true intent of the PFI contract. Second, I have shown the areas where CC agreed to help SP. The response is as follows:

After looking at the data, the initial thoughts of the CC were similar to what they have been saying since November 2009, i.e., the SP has carried out the work not required by the contract. As a result, the performance points have been affected (DCC 23, November 2010). However, this time they showed it with the evidence. For instance, they included specific streets (see below table), a number of columns that SP replaced but were not required under the terms of the contract and associated performance points. They again raised the question regarding SP's understanding of the true intent of the contract as they failed to use the facilities of the contract that allow them to reduce the unnecessary replacement.

**Table 6.1:** Details of roads where SP carried out extra work not required by contract.

<b>Street<sup>95</sup></b>	<b>No of columns involved</b>	<b>Performance Points awarded</b>	<b>Comments</b>
<b>Bal Street</b>	10	30	Underage columns replaced
<b>Cray Street</b>	6	18	Underage columns replaced
<b>Me Close Street</b>	8	24	Underage columns replaced

The CC also elaborated on the SP's failure by adding recent live schemes where they needlessly replaced the assets.

**Table 6.2:** Recent details of roads where SP carried out extra work not required by contract

<b>Street<sup>96</sup></b>	<b>No of columns involved</b>	<b>Performance Points awarded</b>
<b>Pool Road</b>	44	176
<b>Tone Road</b>	38	152

Regarding replacing assets to meet design specifications (i.e., performance requirements), the CC disagreed with regard to the "number of assets" data provided by SP. Moreover, they also identified that SP had not used design variation facilities of the PFI contract. As a result of which, they replaced columns more than once. CC was not in agreement with the number of columns of data provided by SP.

From this, the CC inferred that during the last eight years, the SP, due to a lack of understanding of the true intent of the contract has replaced significant number of assets that falls outside the PFI intervention criteria and have over delivered the contract which is one of their own making.

<sup>95</sup> Pseudonyms used for confidentiality of data.

<sup>96</sup> Pseudonyms used for confidentiality of data.

Therefore, advised them to engage with CC in future for the management of day-to-day activities.

In the previous section, I mentioned that CC showed some flexibility in meeting performance standards, i.e., design variation, to reduce the needless column replacement. In this letter, they showed with evidence the areas and streets where they have actually used the design variation concept and omitted that from the replacement programme.

### **6.5 Why contract should be renegotiated**

“We didn't accept any detail what we accepted was the premise that yes, they had a problem. Yes, we would work with them to resolve the problem but there have to be benefits to both the county council and to them” (Participant no 2, County Council).

“If SPV simply wanted us to resolve their specific issue then it would have gone no further i.e., it had to be a mutual arrangement for the modernisation agenda” (DCC 27, February 2020).

The SP actors made every effort to convince the CC to enter into contract renegotiations, including adversarial methods (section 6.8). But despite their efforts, it has been identified that it was CC's internal conditions (i.e., government pressure to make cost savings) coupled with operational staff's "desire to make PFI relationship work" that actually pushed them to take advantage of this situation and agree for contract renegotiation.

### 6.5.1 Funding Issues

The previous section identified the areas where CC agreed to help and where they have clearly indicated the contractual requirement and closed the matter. The interview data identified that after getting a CC response, the SP started an internal financial review and contingency planning to cope with the situation. Meanwhile, the government put more pressure on the UK councils to reduce spending to deal with financial crises. The below section highlights the funding issues that the council has been facing. It is important to understand why they entered the PFI relationship first, to make sense of why they agreed to the contract renegotiation.

#### *6.5.1.1 Why County Council entered in PFI relationship*

The interviews identified the funding pressure as one of the main reasons for the County Council entering into the PFI relationship. Before the PFI contract started, the CC was responsible for around 100,000 streetlights (DCC 8, 1998). The average life of streetlights was 25 years, with nearly a quarter of the lighting units beyond repair. The annual budget of CC was insufficient to cover the cost, and there was a risk that many of the streetlights could fail. The interviewees highlighted the issues they have to face due to lack of funding. It is identified how difficult it was for CC to manage when the same funding is available to manage other areas like public health, social care etc.

“So, we are always having tension within the organisation about where to spend the money. So vulnerable children always..... always gonna take precedence over managing an assets.... highway asset and in a political arena, you making relatively short short term decisions” (Participant no 1, County Council).

As such, it's been a focus of government to enable Local Authorities to manage this infrastructure in the best possible way. But, according to the interviewee, for Local Authorities, the asset management is a challenging task because:

“When your operational environment is local authority..... this driven by...local politics as opposed to asset management” (Participant no 2, County Council)

He explained that private organisations could generate income by using asset management practices. The Local Authorities, like Local Highways, get revenue support grants to spend on roads. But how much they can spend on roads is determined by how much they need to spend on other areas, such as public health, special care and all other things they are responsible for. The insufficient funding resulted in CC spending money on other priority areas (i.e., special care) and not on replacing and improving street lighting assets/equipment.

“That you not got the right money so you robbing from one thing to do something else. So, it's relatively easy not to spent money on street lighting. We will do that next year because we got all the priorities for the time being that overtime aggregate into a situation where can't see a way out of it” (Participant no 1, County Council).

It is evident from the above quote that CC was facing challenges in meeting competing demands, and as a result, the street lighting area was ignored for quite a long time. When they received funding from the government, the other areas, for instance, social care and childcare,

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took precedence over street lighting. This shows the tension that CC has to face to manage competing demands.

The impact was that the CC had to take short-term decisions by using the reactive approach, for example, repairing streetlights rather than replacing them. The long-term effect was that 25% of the CC street lighting assets were beyond repair and needed urgent replacement due to added risk (DCC 7, 2003). And the street lighting reached to the situation where most of the existing units deteriorated and needed urgent replacement or renovation—for example, cracked concrete columns, sub-standard electrical systems, inefficient lighting sources, etc. Defective columns that were in danger of falling over carry a liability. For example, if one of the columns fell over, landed on somebody and killed somebody, this associates liability, reputational, and political risk. So essentially, the main driver or motive of the Local Authority at that time was that they just needed a formal asset management approach, i.e., the financing model, to get itself out of this situation.

“So, it’s purely about having a sensible life cycle to optimise the value for money and efficiencies. For years and years not having enough worries for getting itself into a mess.... working reactive not doing the right things in a sense of becoming a more expensive way of managing asset and it needs to get itself to a step where it can now implement a nice life cycle and manage these things in an optimum way” (Participant no 18, County Council).

As a result of which, they started to find long-term solutions. Keeping in view the funding issues coupled with an urgent need to replace and renovate lighting units, the CC submitted a business case for the procurement of renewal and maintenance of street lighting equipment.

The business case considered various options for replacing and renovating road lighting units, for example, operating lease, joint venture, traditional capital expenditure and PFI (DCC 8, 1998).

As this study is mainly focused on operational aspects of the PFI project; the detailed analysis of why and under what conditions PFI was selected as the preferred option is beyond the scope of this study. However, from document analysis, it is identified that PFI was considered a preferred business solution based on three criteria, i.e., risk transfer, cost, and feasibility under County Council capital control. While according to the participant no 18:

“I think the thing at the time was the PFI was just the flavour of the day and that was the financing model that potentially was pushed by central government and there was government grant, so we get PFI grant they pay part of the bill for us.... The alternative option would have been to just go and borrow the money as a county council and do it itself, but this was more financially beneficial because government would back in it at the time by providing and paying part of financing bill by giving us PFI grant every year towards the bill” (Participant no 18, County Council).

This shows that the government promoted the PFI model by offering annual grant/ funding contributions. As CC was already under pressure due to:

- 1-) Insufficient funding
- 2-) Deteriorated position of road lighting equipment.

In this situation, the annual capital grant was considered an incentive to solve both problems

CC faced at that time. Senior Business Support Partner further affirms this:

“The PFI model was available through Department of Transport through central government at the time. It was model that was being promoted and if you went down that model you also got funding contribution from central government. Whereas if you just borrow the money directly you would have .... so if your financing cost is say 2% per year on the capital you borrow if you went to PFI it might be 2.5% but actually we get 1% of it paid for by central government. So, from county council point of view its more cost effective to PFI rather than just borrow the money directly” (Participant no 3, County Council).

As such, 25 years<sup>97</sup> Street Lighting PFI project was signed between CC and SPV (currently called Lighting for County pseudonym).

### **6.5.1.2 Impact of austerity on Streetlighting PFI contract**

Signing the PFI contract and getting the ring-fence amount did not solve the asset management issues of the CC, as they have been under continuous pressure from the government to achieve savings on the project.

It has been identified that not only did CC participants discuss the funding issues, but SP participants also mentioned the difficulty and tension that CC was facing due to limited funding. They mentioned that the funding issues that CC is facing relate with austerity. Because while discussing funding problems, the interviewees mentioned the impact of austerity in

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<sup>97</sup> For confidentiality purpose exact date of the contract signing is not mentioned.



managing funds. For instance, the following quote of participant no 7, Service Provider, affirms the lack of funding that the County Council has to deal with.

“If you think back this was the start of austerity, all of their highway lighting budget... all of their budget reduced dramatically” (Participant no 14, Service Provider).

The budgeting issue due to austerity was evident from the PFI income and expenditure statement of CC (DCC 28). This confirms that County costs were exceeding the budget and therefore placing pressure on the budget. For instance,

- 1- 2007-08 the SLPP expenditure was £118,500 higher than income for that year.
- 2- 2009-10 the SLPP income was £225,719 less than that year expenditures.
- 3- 2011-12 the SLPP expenditure was £114,500 higher than income for that year.

The above calculation shows that in alternate years the expenditure is higher than the income of the PFI contract. This shows that funding pressure seems to be a never-ending issue. Because it did not stop with PFI, but actually it is continuously forcing the CC to find ways to save money. It is elaborated on in the following section.

## **6.6 Role of government inscription “Making Savings in Operational PFI Contracts”**

The austerity period has triggered a fundamental rethinking of how local services are designed and delivered. In this regard, in January 2011, the HM Treasury designed a deficit reduction plan to achieve economic stability. HM Treasury issued a paper "making savings in operational PFI contracts". The paper's purpose was to cope with difficult economic situations by engaging

in deficit reduction plans. It has been argued that due to financial crises, there is a need to find a sustainable way to run public services, which requires strong contract management and reduction of the cost across the public sector.

Due to the complex nature of the PFI contract, any changes mean that actors must have a good understanding of the PFI contractual terms. Furthermore, any changes in contractual terms require the cost-benefit analysis of risk transfer over the whole life of the contract.

This paper is specifically issued to look for measures to help reduce operational PFI contracts' costs. In this paper, the HM Treasury proposed:

- 1- Measures that authorities can use before introducing any changes to the contract in order to achieve cost savings.
- 2- Potential cost-saving areas.
- 3- Sources of support and information that can help in managing the contract savings.

This paper has played an essential role in CC agreeing to modernise the contract. In response to the government paper, the CC appointed an accounting firm "to review all high-value contracts to ascertain if costs could be reduced" (DCC 30, February 2020). Their review backs up what CC was doing to save cost. It is important to discuss first the areas where CC proposed the SPV to consider for potential cost savings. Afterwards, the review of an accounting firm is explained.

On 1 December 2010, the CC sent their first proposal for the potential contract savings. They identified 13 areas where they think that, through renegotiations, they can achieve possible cost savings. Among 13 areas, they also proposed a review of performance standard 3 (i.e., 50%

rule). One important finding is that, according to the advice of the legal department (DCC 15, September 2010), the CC entered into renegotiation to see how they could benefit from the situation in terms of cost savings. From interview quotes, it is also evident that the CC agreed to solve the problem because they wanted something in return. However, from document analysis, it has been identified that, on the one hand, the CC 29 November 2010 closed the matter by saying that the SP has to abide by the contractual requirement, while on the other hand, the CC sent a letter on 1 December 2010 (i.e. one day after closing the matter) to SPV regarding potential cost savings and has included a review of performance standard 3. This shows that they want SPV to comply with the contract requirement, and where possible, they are showing flexibility, but they also want to get some benefit in return for showing that flexibility.

### **6.7 Review of PFI contract by independent accounting firm**

As a result of government cost-saving pressure on operational PFI contracts, from January 2011 to March 2011, a review of the Streetlighting PFI project was carried out by an independent accounting firm (DCC 29, April 2011). The audit aimed to assess the areas where CC can achieve cost reduction.

The review covered every aspect of the contract. However, for the thesis, only the review related to performance measurement issues and related CC response is considered, as the discussion of all other areas is not within the scope of this study.

The independent accounting firm reviewed correspondence between SPV and CC regarding the additional cost SP was claiming due to replacing more columns than anticipated and replacing some columns more than once (i.e., 50% rule). Their findings identified that:

The CC approach is appropriate in response to SPV's claim that the contract is not operating as intended. Because they have taken a collaborative approach to help SPV identify the measures that will help the SPV reduce the unnecessary replacement, they also supported the CC approach regarding the following:

- 1- Despite having ample opportunity, SPV/SP has not adequately assessed the risk profile of the contract (i.e., lack of due diligence).
- 2- The problem is Service Provider's own making by replacing assets not required by the contract.
- 3- The CC has tried to revisit the contract terms to help the SP and SPV.

The accounting firm supported the CC approach towards various measures that can help them and also SP and SPV to achieve cost savings. These will help CC benefit from reducing energy consumption through using modern technology and switching off during certain periods. The approach will also benefit SPV and SP by moving lamp replacement from three to four years. Moreover, this step will help in achieving the aims of the guidance issued by HM Treasury regarding savings in operational PFI contracts. Finally, they reminded the CC that if SPV wanted to escalate this issue further, then they should seek legal advice because the increase in expenditure could leave SPV at risk of breach of contract.

Overall, their assessment of the PFI contract showed that the benefit of renegotiating contract terms is higher than termination of the contract for all actors due to associated cost-saving benefits.

The review, as mentioned above, of the accounting firm, in addition to reaffirming the CC view regarding the performance measure issue, has also promoted the government programme of cost reduction in operational PFI contracts.

## 6.8 SP adversarial approach and CC first cost saving proposal

It is mentioned above that CC refused to accept the SP proposal of the 50% rule. However, they agreed to take other measures that can bring savings and reduce the impact of potential financial loss. In this regard, they sent a potential cost-saving proposal. Following are the areas which they mentioned that can help in bringing savings:

**Table 6.3.** CC list of areas for potential savings, Source: DCC 25, Dec 2010

1- Reducing night-time patrol frequencies.
2- Reduction in the number of bollards to be cleaned.
3- Review the interval between column maintenance visits
4- Review of performance standard 3 and design criteria.
5- Lamp change frequency review
6- Review impact of dimming and standard of lighting
7- Assess the conversion to 50W lamp from 70W

However, SP did not respond in this regard, and this is evident from the following details of the meeting held in March 2011:

It has already been discussed in the previous section that actors who were not directly involved in the operational delivery of the project do not understand the relationship between CC and SP operational staff. In March 2011, the CC and SP met for the solution development meeting.

The interview data identified that when CC communicated the findings of the accounting review, some top management actors at the SP level approached the CC in a way that was inferred as a threat to the CC.

“So our relationship with the client got to such a point where we felt that we were able to always be open and honest, some of the approaches from the people that weren't involved with the project didn't really gel with that thought process slightly.....[]....They were slightly adversarial, they were trying to do almost the resolution, try and bully the resolution through to the authority who didn't need bullying, they wanted to get to this point (Participant no 11, Service Provider).

To explain his point further, the interviewee explained with the help of an example that it's all down to the individual's personality type (i.e., a natural behaviour). Some people prefer to use adversarial language to get to their point. A similar happens in this case. So, the actor (i.e., one adversarial person) did not actually say that “if problem is not solved, we will withdraw this contract”. But he actually used language from which it can be inferred. However, the other SP actors (same organisation members) were uncomfortable with how this specific actor used a negative strategy to solve the issue.

“So, it's that kind of inferred threat that he was putting into some of the language that he was using. And we don't like that. We don't work that way. We never have done” (Participant no 7, Service Provider).

“But these guys, they're just pushing for response. They're pushing to see how much they can get. They're not working on it on a client relationship or so forth” (Participant no 11, Service Provider).

The above quote is an example of a situation where actors approach the issue in an unsustainable way. For such actors, the individual organisation objectives (i.e., profit-making) take precedence over the relational aspect of hybrid relations. However, this strategy did not work in this specific situation, and the CC reaction to that specific person was not very good.

“And then they put the threat on the table at the time, they could potentially walk away from this contract. But we took that with a pinch of salt at the time” (Participant no 15, County Council).

The above quote clearly shows that CC had not taken that threat seriously. Again, this meeting failed to achieve a consensus among all actors regarding what could be done to solve the performance measure issue. Hence, it failed to create an actor network. But the question here arises what happened at the CC level that resulted in "contract renegotiation"? The reasons are unfolded in the next section.

## **6.9 Desire to make PFI relationship work**

“There is an absolute desire for this project, to win, and to be the best project ever” (Participant no 7, Service Provider).

The CC participants mentioned they did not want to withdraw from the contract because it was a well-delivered contract with good value for money.

“We didn’t because it was doing exactly in terms of value for money. So, it was really good value for money for the authority” (Participant no 3, County Council).

As such, in the meeting, when SPV put a threat on the table:

“We knew it was serious for them. So, at that point, we said, okay, well, what's in it for us? You know, why should we renegotiate contract..... what is the benefit to the authority” (Participant no 2, County Council)?

The above quote shows that CC understood that SP and SPV were in a problem, so they took that position as an opportunity to solve CC cost issues. It has been identified from interviews that CC agreed to solve the performance measures issues with the SP and enter into contract modernisation negotiation to deal with funding issues.

“The key thing for us at the time was that we could see a benefit to the authority. Because we had hit the recession at that point. The authority was under pressure to save money. So, at that point we said well, this is a golden opportunity... actually we the authority could benefit from this by reducing the cost of the contract. And you know it’s always come down to money....” (Participant no 2, County Council).



As such, in March 2011, the CC agreed to review performance standard three and proposed 14 other potential energy-saving points<sup>98</sup> (DCC 32, March 2011).

“So, the client took the opportunity to say, we will help you with this issue, we will work with you to resolve this issue, so that you're not detrimentally affected. We want you to continue to deliver this project for us. We would also now because we're going to have to enter the contract renegotiation and look at various clause changes, we would also like to consider lots more things” (Participant no 7, Service Provider).

It is reaffirmed from document analysis that CC explicitly mentioned to the SPV that they want to work with them and are willing to modernise the contract so that both parties get benefits on a fair and equitable basis (DCC 42, May 2011).

So far, it seems that CC has benefited from the situation. Because they were under pressure to achieve cost savings, they agreed to consider the contract changes. However, the SP participant mentioned that both parties have a very good relationship. The understanding and collaborative relationship of the operational staff has already been discussed in the previous section (section 6.1). Moreover, from the review of the independent accounting firm, it is also identified that CC has supported SPV and SP by agreeing to revisit the contract terms. If they (CC) had followed the contractual approach to solve the issue, they would not have decided to review the contract terms and have closed the matter because they wanted to "make this relationship work" (i.e., due to cost-saving pressure from the government), therefore they took the relational mechanism of "reciprocity" to approach the problem.

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<sup>98</sup> As the role of the performance measures are the focus of this study therefore the other 14 energy savings points are not within the scope of the study.

“As far as we're (i.e. operational staff) concerned, contract is in a draw, it is a tool to be understood, and it's a tool to delivery but if you're referring to contract all the time, it means you're either looking for loopholes, or you looking for a way out of it. Therefore, if you're trying to deliver the spirit of the contract, it provides a better relationship” (Participant no 6, Service Provider).

The use of the relational approach is also confirmed when in answer to a question regarding the involvement of lawyers to discuss and resolve the issue, the SP participant mentioned that:

“We don't let the lawyers with us. this is too adversarial. The last thing you want is a lawyer in the room at that point in time. So, we can do that completely. That that really wouldn't work for anybody. And so, we decided to go down the relationship route negotiation. It's so much better, you real people, talking real issues, to real people who understand real issues. It's not about a point of law. It's not about the interpretation of the contract. It's all about how we resolve it, so that we can continue to keep this relationship move forward” (Participant no 6, Service Provider).

The above quote makes it clear that both parties want this contract to work. Due to massive financial pressure<sup>99</sup>, they have to approach this issue that would be of mutual benefit for all parties. The view is further affirmed by participant no 7.

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<sup>99</sup> For County Council financial pressure in terms of cost saving and for Service Provider to avoid loss of £6 million as a result of 50% rule.

“The authority wanted us to consider various other changes to the contract. Not as a negotiated position. I don't want to portray this as they were horse trading with us, and I don't think that's the right way to portray this. That wasn't what they were trying to do. They recognize this issue as being a problem that needed resolving. They had other concerns within the contract about how mechanisms worked, and how they were getting best value out of the contract. And as it's the authorities requirement to undertake Best Value reviews of any contract that they operate, they took the opportunity to review best value as part of this process, which then meant that if we were all good already going to make contract amendments, we could do them all together” (Participant no 7, Service Provider).

Hence, the actors from both parties enrolled and formed an actor-network to renegotiate the contract.

## **6.10 Conclusion**

This Chapter shows the thought process of SP and CC actors toward the sustainability of the PFI relationship. The details of phase three illustrate many varied ways SP and CC connect and mutually reinforce each other. It has been identified that the terms of the contract restricted CC actors despite having a good working relationship with SP actors. SP wanted to save the cost of £9 million, but that would have been possible only when CC agreed to contract renegotiation. The SPV offer of cost savings through contract modernisation attracted the attention of CC, but they agreed to renegotiate only those areas where the contract allows them. However, SP showed their concerns regarding the continuity of the contract if CC won't listen to their

proposal. Finally, CC agreed to contract renegotiation when conditions changed (i.e., after the issuance of government paper regarding making savings in operational PFI contracts) that required CC to achieve cost savings. Hence, CC's desire for cost savings was realised through government pressure of cost savings in operational PFI contracts.

In conclusion, the following analytical theme based upon the ANT concept of boundary objects (Star and Griesemer, 1989, Star, 2010) can be drawn from the above account of how parties achieved cooperation despite having different objectives.

### **6.10.1 Visionary boundary objects: 'desire for a sustainable relationship' and 'making cost savings'**

This phase identified how hybrid actors' "desire for a sustainable relationship" translated through "making cost savings" and align their interest in managing performance measure change. These are elaborated below:

PFI contracts last for 25 to 30 years; therefore, parties are expected to work towards the sustainability of the hybrid relationship. However, in practice, this study has shown that the different groups of actors could have different reasons to stay in a long-term relationship.

The case illustrates that the CC and SP actors exercised that desire in various ways: e.g., through a good working relationship between SP and CC project managers (section 6.1); using performance measure problems by CC as an opportunity to solve other problems (6.2); threats and adversarial ways of bidding team for material interest (section 6.8), and through the search for "making savings" (another visionary boundary object) in PFI project (section 6.3 and 6.5). At the Street Lighting PFI project, this desire was robust enough to bring SP and CC actors

together despite differences. At the same time, it was flexible so that SP and CC could adapt it according to their needs or requirements of the situation (Star and Griesemer, 1989, Star, 2010). It was translated through a series of events at the SP local level and between SP and CC. One crucial outcome of phases one and two was the success of the "forecasted model with a price tag" in forming actor network at the SP local level and between SP and SPV in establishing the existence of the problem (Chapter 5).

The success of this model was highlighted by the previous failed attempt of "qualitative detail of clash between three performance measures". Participant no 7 analysed the cost of the issue, believing that number is a powerful tool to catch attention (Robson, 1992). He calculated cost according to anticipated performance points if they continued working according to current conditions, and the cost did not match with the cost as per contract. 50% rule (as it became known) was identified as the main reason for misalignment. From participant no 7 point of view, the "50% rule" had all attributes to challenge the "sustainability of relationship". The potential financial impact of the "50% rule" was exceptionally high that brought forth various dimensions of "desire for sustainable relation" as interpreted by various actor groups, i.e., senior management, SPV, bidding team, SP operational staff, and CC operational staff. For example, the bidding team denied that participant no 7 working is true and "they should not take any steps"; the legal team said that "he is right" and they might need to terminate the relationship; according to SPV, "relationship can work if we offer something in return to them". As such, this group of actors subsequently challenged his understanding of the PFI contract.

The "forecasted model with price tag" forced the Head of the Legal Department to think about the issue. His immediate reaction was to contact MD to arrange the next meeting and make sure that everyone attended that meeting. He wanted everyone to be there to challenge each

other and justify the continuity of the relationship. Through a series of meetings, it was established that participant understanding is right, and the “50% rule” is the main cause of concern. This was inferred as a threat to the “sustainability of relationship”.

When the "forecasted model" was discussed in a hybrid setting with CC, the "desire for a sustainable relationship" was interpreted in various ways: operational staff had a "natural desire" to work collaboratively with SP to solve the problem, for Senior Management relationship can work as long as contractual requirements are followed "as the problem is one of your own makings", and Legal Team showed interest in SPV "cost-saving" offer.

Following the legal team's suggestion, CC agreed to contract renegotiation based on SPV's offer of "cost savings" through contract modernisation. It connected parties, efforts started to adapt "cost savings" according to local situations, and it worked. So basically, the boundary role of “desire for a sustainable relationship” brought savings and cost matters into the conversation. It allowed the parties to work together despite maintaining diversity of the perspective (Busco et al., 2017, Star and Griesemer, 1989, Star, 2010). This resulted in the emergence of another visionary boundary object, “making cost savings”.

At that point, it seemed that parties started working towards "sustainability of relationship". Unpacking the category of "making cost savings" identified that although SPV offered savings, they were not sure at that time what and how cost savings could be achieved. This offer worked because the ultimate objectives of private sector organisations are cost-saving to earn a profit, while public organisations cost saving to get the best value for money. Therefore, no one can deny its legitimacy and “that makes it difficult for a ‘rational’ person to be against them” (Briers and Chua, 2001 p. 242). However, the precise identity of "making cost savings" depends on

how it was tailored to a specific setting, i.e., at SP and CC individual organisation levels (Star, 2010).

In this regard, the case illustrates that SP made efforts to reduce the impact of the £9 million loss, and CC wants to know if they review the contract, what exactly they would get. Search for exact "cost savings" opened up more dialogues and controversies (Busco and Quattrone, 2015, Busco and Quattrone, 2018). In this respect, the first contract modernisation proposal from SP was totally based on how they could reduce the impact of the 50% performance measure rule, while resultant savings were briefly discussed.

SP expected their proposal to strengthen the ties with CC for amendment of the 50% rule. However, the provision of "diagrammatic details" has provided a basis for CC to raise serious concerns regarding SP's competence and skills at the time of signing the PFI deal and failure to perform due diligence at the time of taking over despite having ample opportunity. They highlighted a lack of understanding of the contract, and PFI contract document requirements were highlighted. Hence, SP attempts to mobilise CC around the "50% rule" failed.

SP provided the initial asset replacement strategy (section 6.4) of the previous Service Provider to see if the problem was inherited from them. The CC analysis of information opened the Pandora box of questions SP did not expect (Briers and Chua, 2001). For example, the validity of data (e.g., "forecasted model with a price tag") provided to date was questioned; why were underage columns replaced when the contract has clearly mentioned the age and number of columns that need replacement? They also showed recent examples where needlessly replacement was carried out. Double replacement could have been avoided if SP had approached CC to retain new assets. They raised concerns regarding the accuracy of 4720

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points above contract points and subsequent calculation of potential impact. Finally, they doubted if the figure of 1438 columns that were replaced more than once is correct as they have not spotted all those assets from the data provided.

On the one hand, CC clearly refused the SP proposal. On the other hand, they agreed to work towards modernisation. They suggested areas, e.g., dimming strategy, that can be used to "make cost savings" and reduce the impact of any financial impact of the 50% rule. Their potential cost-saving proposal to work towards modernisation was to convince SP that they have a "desire for a sustainable relationship", but they are restricted by the terms of the contract (Ring and Van de Ven, 1994).

SP did not officially respond to this proposal. It seemed as if SP's failure to convince CC stalled the contract renegotiation. The independent auditor review further showed that if SP had a "desire for a sustainable relationship", they should look for other ways of savings because the "50% rule" is a contractual requirement. The standardised method of the contract remained the centre of discussion. However, standardised methods are not sufficient for a "sustainable relationship"; boundary objects are needed for cooperation despite divergent actor worlds (Star and Griesemer, 1989). This shows how standardised methods (i.e., the original PFI contract) failed to bring cooperation.

However, the "50% rule" problem refused to die. Heated arguments at the solution development meeting regarding the "50% rule" resulted in some actors placing the threat of contract termination on the table (but not literally). "if an agreement to mitigate predicted £9m loss could not be found". They knew CC was under pressure of "cost-saving" from the government. Therefore, stepping back from the "relationship" was not affordable. Therefore,



they used the CC situation to achieve their objective of "making cost savings". High expenditure and low income of PFI due to austerity increased the pressure on PFI to "make cost savings". At that time government inscription "making savings in operational PFI contracts" played an active role. The quality of mobility, stability and combinability of government paper influenced the CC decision to go ahead with contract modernisation (Latour, 1987, Robson, 1992).

Overall, phase three shows that initially, SP actors had little success in mobilising the interest of CC. However, conditions changed and actors' "desire for sustainable relationship" translated through "making cost savings" to align interest for contract renegotiation.

## Chapter Seven:

### Phase four: Reinforcing change through reciprocity: (From April 2011 – December 2012)

#### 7 Introduction

“It’s a trade-off. So, we might ask for something and get that. But we might have to do something else in to reciprocate to help them with a problem that they've got. So, it's more around reciprocation in negotiation rather than pay more because we don't have any money for it” (Participant no 1, County Council).

“So, the client (CC) took the opportunity to say, we will help you with this issue, we will work with you to resolve this issue, so that you're not detrimentally affected. We want you to continue to deliver this project for us. We would also now because we're going to have to enter the contract renegotiation and look at various clause changes, we would also like to consider lots more things” (Participant no 7, Service Provider).

“The key thing for us at the time was that we could see a benefit to the authority. Because we'd hit the recession big time at that point. We the authority could benefit from this by reducing the cost of the contracts. And actually, just by reducing those costs will be significant benefit to the authority” (Participant no 2, County Council).

The previous Chapter explained the efforts of SPV and SP in convincing CC to agree to contract renegotiation. It has been identified that desire of operational staff to make the PFI relationship work has allowed them to show some flexibility, but the 50% rule (performance measure) that was hurting SP was not actually considered by CC due to contractual requirements. However, when government pressure to make savings on CC increased, they realised that contract termination was not a solution, so they took the SP problem as an opportunity and agreed to contract renegotiation.

This Chapter will take the discussion further and attempts to answer the third research question – How and what method(s) actors in a hybrid organisational setting used to successfully manage the performance measure changes in PFI contract (section 1.4)? In answering this question, this study introduces the concept of reciprocity – a give and get relationship, for the benefit of all parties involved. It shows that parties enter in a relationship for economic gain (i.e., savings or profit). But to achieve this, a desire for a sustainable relationship is required. This desire allows them to design a solution that considers the wishes or interests of all parties involved (i.e., reciprocity).

SP and SPV took around 18 months to convince CC to enter into contract renegotiations. Both parties prepared the list of items, including the '50% rule' they want to consider while making PFI contract changes. This section explains the changes proposed by both parties, how each party reacted to the other party's proposal, and finally, how parties modernise the contract to resolve the long-standing issue of performance measures.

As already explained, both parties offered various areas that could result in energy savings. In this regard, this study briefly describes the other options that both parties provided; however, the main focus remains on the issue of performance measure three and how it was discussed in the wish lists of the parties.

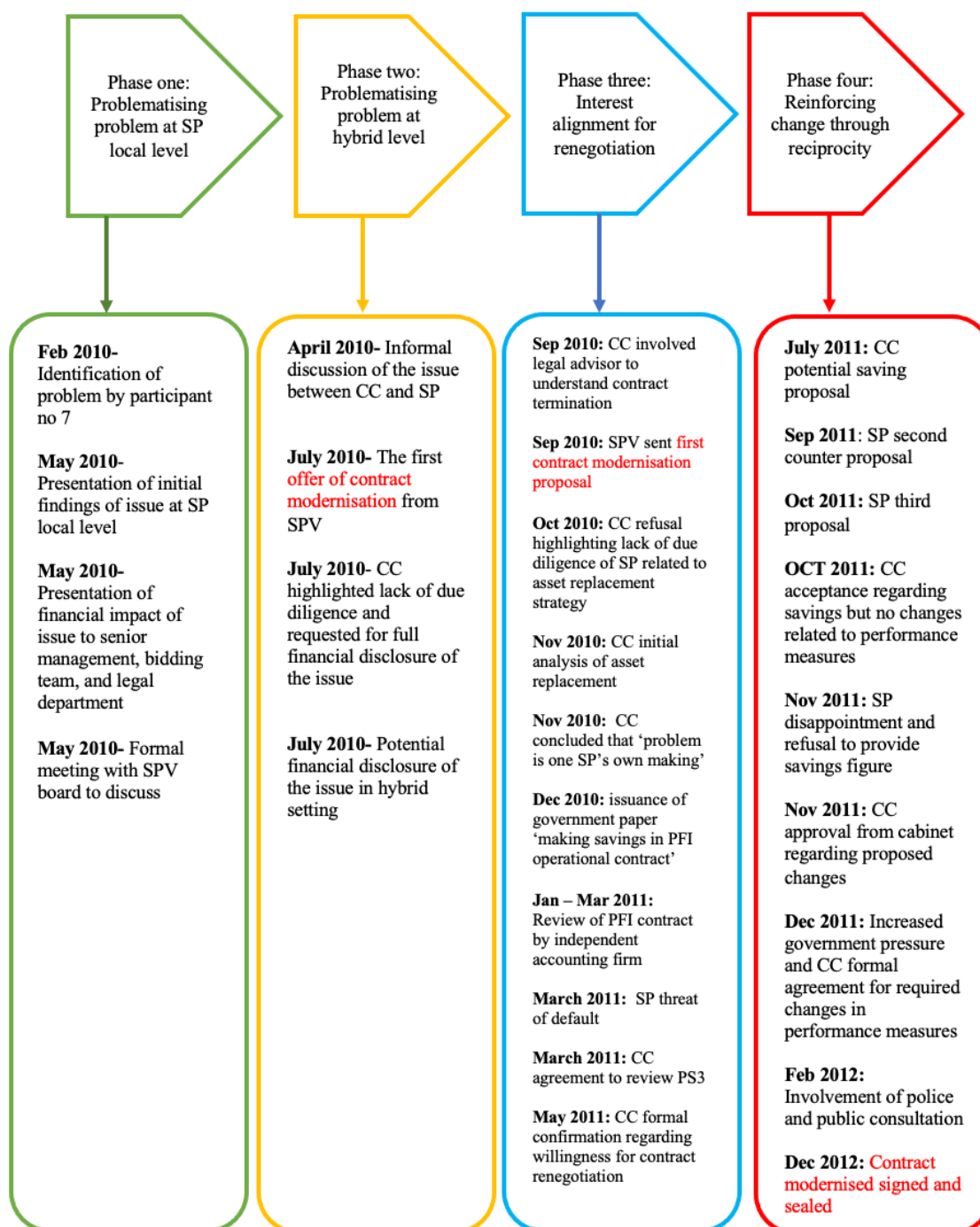
“Well, we had our wish list and they had target what they wanted to achieve. We had the target what we wanted to achieve. And within that wish list we had...Well, let's.... let's just go for everything. And let's try and reduce the cost as hard as we can” (Participant no 4, County Council).

The interviewee mentioned that it was a chance for them to get what they probably would not get. So, based on that, they prepared the list of items that they wanted to get. This Chapter shows how actors managed to solve not only performance measure problems but also brought improvement in contract and the environment at large.

This Chapter is divided into further eight sections. Section 7.1 provides details of the CC's second cost-saving proposal with detail and calculations. CC's third proposal and counter-threat to SP to accept the proposal if they want a review of performance measures is presented in section 7.2. Section 7.3 discusses SP's second counter proposal and request to remove performance measure number three. Section 7.4 presents SP's third counter proposal and a detailed timeline for settling the issue. Section 7.5 presents the SP's disappointment with the way CC approached the performance measure problem. Section 7.6 finalises the performance measures changes. The role of government, police and the general public in PFI contract changes is explained in section 7.7. Expected, unexpected and unintentional consequences of

contract modernisation are explained in section 7.8. Finally, section 7.9 concludes by stating some conclusions with respect to the themes that were introduced in this Chapter.

**Figure 7.1:** Timeline of events (process of contract modernisation)



## 7.1 CC Second Cost Saving Proposal

The CC proposed the following changes after confirming its willingness to work with SP and SPV to modernise the contract (DCC 33, May 2011):

### **List of the changes proposed by the County Council:**

- 1- Reduction in financial cost through:
  - a. 50% reduction in night patrol frequencies.
  - b. 57% reduction in bollard cleaning frequencies.
  - c. 50% reduction in cyclic maintenance visits.
  - d. 27% reduction in lamp change cost through reduced labour and cyclic maintenance over the remaining life of the PFI contract.
  
- 2- To make further savings from reduced energy requirements, they proposed part-night switch-off and part-night dimming, which can also bring further benefits in the form of extended life of lamps.
  
- 3- Review of performance standard three. (It is, however, worth noting that CC had no thoughts even at the time of sending this proposal on how they solve this issue. In other areas, they worked out and found how they could save costs. But, for the 50% rule, they mentioned that they would look at how to bring changes)

**Emphasis on Cost Saving Issues:**

In July 2011, a meeting was then conducted between SP and CC to agree on a way forward to achieve savings for mutual benefit on the PFI contract (DCC 35 July 2011). The document analysis (meeting agenda and minutes) identified the increased pressure on the CC regarding cost savings. As in this meeting, specific attention was given to the government paper "making savings in operational PFI contracts". The meeting agenda and minutes showed that CC was making sure that everything should be in line as suggested by the government paper. For example, it was discussed that all items mentioned in the government paper should be checked to ensure that all items were included in the contract change proposal. However, in this meeting, the review of performance standard three was not discussed. The impact of which is obvious in the CC letter to the internal finance department (DCC 43, July 2011).

On 19th July 2011, the CC PFI team informed the internal finance department about the savings that CC could get as a result of the proposed contract savings areas as discussed above (DCC 43, July 2011). The important observation is that in this letter, the PFI team showed concerns that SP wants them to be flexible regarding performance measure three so that they can save £9 million over the remaining life of the contract. Otherwise, they will pull out of the contract.

**7.2 CC third proposal and counter threat to SP**

It is discussed in the previous section that CC formally showed its readiness to make changes in the contract due to government pressure (section 6.9). However, the document analysis identified that since March 2011, when SP put the threat on the table regarding withdrawal from the contract, they had not sent any document that officially showed that they wanted to continue working with CC. This issue was highlighted by CC on 22nd July 2011. The 15 points

of CC's proposal (see table 7.1) show the pressure on CC to achieve savings in every possible area.

“We and my team, we went through everything, where we think we could make savings. Basically, open up things and try to put a value against it. We prepared a list of 15 items” (Participant no 2, County Council).

As this study focuses on the performance measures change process, not all points of the CC's proposal relate to the primary interest of this study. However, it is very important to present the proposal's details here because it has provided further evidence of why CC agreed to make changes to the PFI contract. Also, it will form the basis of the main argument of the CC perspective towards the contract modernisation agenda.

The details of email showing concerns and possible areas of operational savings (DCC 26, July 2011) are explained below:

The CC in July 2011 had drawn special attention to SPV's lack of formal response regarding willingness to work and potential savings proposed by them (DCC 26, July 2011). They emphasised that the proposed areas accord with the HM Treasury document "Managing Savings in Operational PFI Contracts". But SPV has not provided information on the quantum of potential savings. These savings have been discussed in every meeting, but SPV has not officially responded to CC's proposal. As a result of which, the CC has to estimate the amount of savings in order to move the matter. They estimated £500,000 per annum operational savings that should be released back to the public purse as per the HM Treasury document.



The CC proposed three areas of part-night switching<sup>100</sup> and dimming technology<sup>101</sup> and mentioned that it will reduce the SP liability therefore CC should obtain 100% savings from these initiatives. In terms of funding the dimming technology except on renewed columns the CC showed willingness to fund these initiatives.

**Table 7.1:** County Council 15 points energy saving proposal (Document 26 July 2011)

No.	Proposed Changes
1	Energy saving through introduction of dimming technology in new developments funded by CC. The CC get 100% of the savings due to reduced future liability.
2	Energy savings through introduction of retrofit dimming on selected columns funded by CC. Therefore, the CC get all of the savings.
3	Introduction of dimming on renewal columns. The CC get 100% of savings due to reduction of liability to SP.
4	Reduction in cost by introducing part-night switching on selected developments.
5	Reduction in cost by introducing part-night switching on selected columns going forward.
6	To consider introduction of part-night switching on selected columns. The CC get 100% of savings due to reduction of liability to SP.
7	The back-office savings can be generated by reducing the night-time patrols.
8	The back-office savings can be generated through reduction in bollard cleaning.
9	The back-office savings can be generated through reduction in column maintenance frequencies.
10	The back-office savings can be generated through reduction in lamp change frequencies.
11	£93000 worth of insurance savings. (Details not mentioned in document <sup>102</sup> )
12	£40,000 worth of savings through change of law. (Details not mentioned in document)
13	No cashable benefit through painting of conservation area.
14	Variable savings can be earned through reduced asset replacement requirements for example, the design status should not be affected by preceding intervention work.

<sup>100</sup> 1-) selected developments, 2-) selected columns, 3-) retrofit selected columns

<sup>101</sup> 1-) new developments, 2-) renewal columns, 3-) retrofit on selected columns

<sup>102</sup> The details of these items are not mentioned in the documents provided also these are not related to the primary interest of the study.

15	The energy savings can be earned through review of design standard requirement <sup>103</sup> .
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1. The CC acknowledged that the calculation of energy savings is a complex matter and therefore requested the SP to provide the actual cost of savings on the CC proposal as their confirmation of potential savings will save the CC from HM treasury intervention. Specifically, CC was unsure how the review of performance standard three (point 15 above) brings savings. Therefore, they requested SP to provide details regarding potential savings. This shows the complexity of the 50% rule.
2. The CC explicitly mentioned that if the SP would accept their proposal, only then they could relax the actual asset replacement programme (evidence of reciprocity). Moreover, they could also consider the use of LEDs so that SPV can generate potential savings.
3. In March 2011, the SPV mentioned that if CC did not cooperate in making arrangements to mitigate the SPV predicted loss of £9 million, they would withdraw from the PFI contract. In this letter (i.e., DCC 26, July 2011), through the logic of reputation, the CC emphasised that contract default will not benefit either party. Because this contract is working so well, and if SPV pulls out of the contract, it will affect their reputation. To solve the issue, the CC mentioned a list of options that would effectively reverse the forecasted loss into gain over the remaining life of the contract.

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<sup>103</sup> Due to complexity of calculation this item needed confirmation from the Service Provider.

4. Finally, they concluded the letter by saying that "the problem is not one of our own makings" and that the proposal presented offers a sensible solution to the problem that SPV and SP were facing.

The above details show how both parties were in search of reciprocal advantage, i.e., if you 'GIVE' us savings, you will then 'GET' savings too. For example, as mentioned in the previous section, SP threatened that if "you (CC) will not review the 50% rule, we (SP) pull out of the contract". CC in this section mentioned that they would only review the 50% rule if SP accepted their savings proposal.

After receiving the savings calculations from CC, the SPV replied that they wanted to discuss these points in detail and timetable of events they would like to arrange a meeting (DCC 44, August 2011). Moreover, they officially/formally confirmed their commitment to the process of change (DCC 44, August 2011). They clarified that they have no intentions to default (it was only an inferred threat because they knew that CC would never go for termination due to government pressure of cost savings) and considered the project change agreement a viable option.

### **7.3 SP's second counter proposal with emphasis on review of performance standards**

As mentioned above, in line with the main aims and the interest of the study, other options that both parties offered have been briefly discussed. While the main focus remains on the issue of performance measure number three. As such, on 16th September 2011, the SPV presented their counter proposal to CC (DCC 36, September 2011). Firstly, with regard to confirmation of energy-saving calculations, the SPV mentioned that some of the proposed changes have a

significant impact on the contract payment mechanism; therefore, the impact on service cost requires testing through a financial model. Which they said requires the agreement of all the parties regarding proposed changes.

Their counter-proposal considered the energy base rate (8.24p per unit) and inflation (3%) for the calculation of savings. They identified the type and timing of units that should be dimmed during the night. Retrofitting of smart ballasts was also considered to provide CC with savings beyond 2028. However, savings costs depend on inventory upgrades that exceed the break-even point. They clarified that any changes could only be confirmed after testing through the financial model.

In their counter-proposal, in addition to the calculation of indicative savings through dimming technology, part-night switching and various methods of energy savings, they put forward for consideration that:

- 1- All performance standards should be reviewed in order to avoid any clash with the proposed changes.
- 2- The performance standard number three (i.e., photometric testing) should be completely removed.
- 3- The PFI contract should not operate in different blocks (i.e., removal of block method).

The government paper "making savings in operational PFI contract" also got prominence in the counter-proposal of SPV. They clarified that energy savings offers would help the CC to achieve the cost-saving objectives of HM Treasury.

**County Council feedback on SPV performance measure Proposal**

With regard to the above-mentioned performance measures review proposal, the CC asked for further clarification and provided the following feedback (DCC 37, September 2011).

Following are the details of the proposal:

- 1- The removal of block end dates would bring greater benefit to the SPV; therefore, any additional risk due to revision in accrual rates would be borne by SPV.
- 2- The CC accepted the SPV's offer of a 50:50 share related to energy saving due to asset renewal.
- 3- With regard to retrofit dimming technology, the CC accepted the SP's offer of initial funding for 3 years.
- 4- The CC requested SPV provide more information and calculation regarding part-night switching on selected developments and columns.
- 5- Regarding retrofit part-night switching on selected columns, the CC asked why SP asked for a 50:50 share?
- 6- The CC accepted the savings worth £33,000 due to reduced night patrols but rejected the savings (worth £25,000) SP offered if CC deleted the performance standard three inspection.

- 7- CC requested SPV to provide a calculation of the savings if they reduce bollard cleaning.
- 8- The CC asked why SPV has attached low value to the savings due to the reduction in lamp change frequencies.
- 9- The CC showed their concern regarding share in insurance cost savings and asked them to reconsider their position.
- 10- The CC asked if SPV could confirm that 100% of the energy benefits due to the design review remain with the CC.

Finally, they concluded that the energy savings as per SPV calculation are 50% less than the CC's calculation. They asked for details behind the SPV's calculation to understand the difference.

#### **7.4 SP third counter proposal**

The previous section identified that the CC response did not include the performance measures issue that was the main reason for the contract modernization exercise. This section identifies that once the parties agreed to modernize the contract and discussed the various options that can be done to reduce the impact of cost on the PFI contract, the document analysis showed that from October 2011, they exchanged various documents in order to accomplish the modernization quicker. The interesting finding is that SPV kept the issue of performance measures on the top of the list (DCC 45, October 2011). The SPV on 24th October 2011 divided contract changes into various categories, for example:

- 1- Technical issues
- 2- Commercial issues
- 3- Legal review of contract documents
- 4- Financial modelling
- 5- Legal approvals

Among technical issues, the SPV suggested that performance standard 3 should be reviewed by 31st October 2011, while the remaining technical issues, for instance, dimming and night-time patrolling, by 31st November 2011. This shows the importance of the matter to the SPV as they wanted this issue to be resolved as early as possible, which is also evident from the fact that before sending the timetable, they forwarded their performance standard 3 proposed changes (DCC 47 and 48, October 2011). This shows that SP wanted this matter to be prioritised over the other matters. The CC responded positively with the proposed timetable of SPV (DCC 46, October 2011). Following are the details of the SPV proposal.

### **Review of Performance Standards Three:**

In addition to the 50% modification proposal SPV sent in September 2010, the SPV reviewed performance standard number three and realised that photometric testing measure is also causing cost issues.

“Some of the issues were not realized at the beginning. An example, on month one we completed three lighting schemes, we've got to test 10% of one. Month two we completed another six or seven, now we've completed nearly 2000 schemes. So, the volume of tests is growing to the point but you have to

take more and more employees on and then at the end of the contract, we'd have to lay these people off (Participant no 6, Service Provider).

The above quote shows how the increased number of photometric testing became a real problem with time. That is why when CC did not mention their view regarding removing this standard completely, the SPV came up with their proposal to reduce the negative impact on their finances.

To make sense of SPV's proposal, first of all, the photometric testing requirement according to the original Street Lighting PFI contract (DCC3, Original Contract) is mentioned. The main issue with performance standard three was the number of columns requiring intervention. This issue became significant when the number of columns which have already been replaced failed to meet design criteria. The design criteria explain the photometric requirement of the lighting units. The photometric testing requirement as per the original PFI contract was:

“When PFI contract completes first year the Service Provider/Contractor has to select randomly 10% of new/renewed lighting systems. This sample shall include those columns also that failed photometric testing in the previous period. In addition to this, each item has to be checked to make sure that it complies with the target illuminance” (paragraph 3.3.5, DCC3, March 2003).

The SPV mentioned that one of the interpretations of the above-mentioned requirement could be that it could lead to an uncapped amount of photometric testing. They estimated that it could be 600 testing per month (DCC 48, 24th October 2011).



Now one way to reduce the impact as proposed by SPV is as follows:

- 1- Instead of 10% random testing the number of tests should be limited to 60 tests per month until December 2024.
- 2- From January 2025 until the end of the contract, the number of testing to be increased to 120 per month.
- 3- The photometric test will be carried out on the lamps changed within the last three months. However, where the items are not enough, then the test will be increased to six months.

Furthermore, they mentioned that the dimming strategy (as proposed by CC for energy savings) could impact the photometric performance. Therefore, when the photometric testing operative arrives for reading, the comment "dimmed" should be included. Any reading taken will not count towards any penalties related to photometric testing but should be considered as the number of required tests within the period.

This shows the difficulty in bringing changes in the performance measures as changing one element can impact the other items.

“But if I change that, I have to change that. And if I make a reference to another part of something, then I have to build it in somewhere. So, there are slight tendrils that go out. Once you change that, you just have to make sure that you're not contradicted anywhere else “(participant no 7, Service Provider).

**County Council Response:**

In response to this proposal, the CC, on 1st November 2011, emailed that before the discussion on this issue in the meeting, which was due to be held on 9th November 2011, they wanted SPV to provide calculations related to energy saving proposals of CC that they requested in September 2011. The CC clearly mentioned that they want to look at the amount of savings the County can have due to the contract review exercise. The CC clearly mentioned that they wanted to look at the amount of savings that the County could have as a result of the contract review exercise. They stressed that both parties need to reach an agreement on the basic principles of any changes in order to relax current contract requirements (DCC49, November 2011). One of the interesting observations is that the CC in this letter put the cost of appointing a legal advisor on the SPV.

“You are proposing that local authority appoints its own advisors, could you confirm that Contractor are willing to fund these costs” (DCC49, November 2011).

With regard to SP's proposal, CC only agreed with the above-mentioned point number three of SPV. With regard to points 1 and 2, i.e., a limited number of testing, the CC refused the SPV proposal.

Moreover, this time CC answered SP's all proposals so far. The CC, on 7th November 2011, commented on the SP proposal dated 16th September and 24th October 2011 (DCC 38, November 2011). Their response was as follows:

- 1- With regard to block end dates, the CC accepted the SPV proposal of removing block end dates and confirmed that after the contract is modernised, the whole PFI will be considered as one period rather than different blocks. Therefore, the performance will not be measured in different blocks.

It is already explained above that as per the original contract, the performance targets for each block were set at the time of signing the contract. Therefore, the performance of the contractor (SP) was measured over the period of five-years blocks. This change means that once the block end dates are removed for the purpose of performance measures, the whole PFI contract will be considered as one period. It will allow SP to better manage the contract.

- 2- In September 2011, the CC accepted the SPV's offer of a 50:50 share related to energy saving due to asset renewal. Now after accepting removal of block end dates the CC argued that the ratio of energy saving should be 75:25.

The interview analysis identified that the CC changed this because the removal of block end dates means the removal of the block penalty mechanism, which allows the SP to better risk assess all assets across the County over the project's entire life rather than just focusing on the current 5years block period. Hence, following such an approach allowed the SP to better manage the risk of column failure and reduce the risk of a street hitting the 50% intervention criteria.

- 3- Regarding retrofit dimming technology, the parties became very specific regarding the number of columns needing retrofit dimming technology. The CC accepted the SP's offer of initial funding for 3 years and explained that a 50:50 share would be applicable

up to the point when SPV costs have been recovered. After that, the CC will get the 100% of energy savings.

- 4- The CC accepted the proposal of part-night switching on selected developments.
- 5- With regard to retrofit part-night switching and part-night switching on selected columns, again, they explained that a 50:50 share would be applicable up to the point when SPV costs have been recovered. After that, the CC will get the 100% of energy savings.
- 6- CC accepted the savings of £33000 as a result of the reduced number of night patrols. But previously, in September 2011, the CC rejected the savings related to the removal of performance standard three. Now they mentioned that removal is not possible however agreed to reduce the number of testing to 2% random sample<sup>104</sup> of renewed/new lighting system until December 2024 and 5% random samples after that. The CC expected that reduction in requirement could bring £20,000 of savings to the Council.
- 7- The CC accepted the SPV's proposal design status of the street lighting system that has already been included, and that needs to be included in the replacement programme will not be affected by any previous asset intervention work.
- 8- It was confirmed that the columns that fall outside the age criteria of the PFI contract would be subject to the same design as would be in the event of intervention.

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<sup>104</sup> It is important to mention here that on 24 October 2011 the SPV requested to limit the number of tests to 60 per month rather than 10% random testing. The SPV wants to be sure regarding number of tests that they need to carry out in order to calculate the exact cost.

- 9- Finally, they requested the SPV to confirm in writing that 100% of the energy savings achieved due to any revisions/alterations to the design standards will be realised by the CC.

The CC again reminded the SPV that if they had applied due diligence at the start of the contract, they would not have faced a difficult financial situation. Hence, they requested the SPV to give serious consideration to their offers.

### **7.5 SPV Disappointment Regarding the way CC handled the 50% issue**

In response to the above-mentioned CC's comments regarding the SPV proposal, the SPV showed their disappointment in an email to CC (DCC 52, June 2011). They were displeased as the "50% rule was unpicked at the 11th Hour, as the effect of this rule has been a fundamental cause that brought the need for the modernisation" (P1, DCC 52, December 2011). They clarified that their cost savings calculation was based on pre-determination of the design status of all road headers according to the supplied schedule, which will prevent the unnecessary replacement of assets more than once. They stressed that if this fundamental issue is not resolved, it will again demand the replacement of premature columns. The actual cost of this is unknown until the intervention of the 50% rule. As such, the SPV mentioned their inability to control the risk of duplicate asset replacement. That means that without resolving the 50% rule issue, the best value of the project cannot be achieved.

Therefore, they requested CC to reconsider their insistence in reinstating the 50% rule without SPV's proposed amendments.

## 7.6 Finalising the Performance Measurement changes.

The CC responded by considering the SP concern as appropriate and mentioned to draw this issue to the conclusion in the next meeting (DCC 53, December 2011).

But how and why CC showed their willingness is actually explained by participant no 2 in an interview. He mentioned that:

The authority was under pressure to save money. So, at that point, we said well, this is a golden opportunity, because at that point, we can flip the contract forward, it's not our problem, we can then pull up another contract and carry on delivering something .... but we saw it as an opportunity. Actually, we the authority could benefit from this by reducing the cost of the contracts. And actually, just by reducing those costs will be significant benefit to the authority”.

He mentioned that because they calculated the savings, which were higher than savings to the SPV, it was not an intelligent decision to not listen to their proposal regarding the 50% rule. For CC, the cost of withdrawing from the contract was higher than the benefit of continuing with changes that SPV wanted. The same has been affirmed by participant no 10, County Council.

“We gained quite significantly from renegotiation. Because their benefit was about 9 million pound our benefit was over 11 million. so that's the reason why we renegotiated at that time because the benefits to the authority was great benefits then SPV. The SPV were in the difficult situation” (Participant no 10, County Council)

On 23rd November 2011, both parties met to review the proposals and suggest a future course of action. During this meeting, the proposed changes were finalised. (The details are elaborated in the consequences of contract modernisation section 7.8).

Once these changes were discussed and agreed upon between the parties, the SPV (DCC 41, December 2011) and CC (DCC 55, January 2012) formally sent their written confirmation of acceptance of the changes. Both parties worked with their legal teams to implement these changes. The parties took 12 months to implement the changes finally. The table below clarifies that the contract modernisation has taken a long time and involves lots of effort from the parties involved. The summary of key events from the identification of issues till the ceremonial signing of the modernised contract is as follows:

**Table: 7.2:** Important events of hybrid process of contract modernisation

<b>Dates</b>	<b>Key Events</b>
February 2010	Issue Started
September 2010	Issue Crystallized
May 2011	Both parties' formal acceptance that contract should be renegotiated
January 2012	Agreement over changes
December 2012	Contract modernised

The above table shows that in January 2012, the parties agreed on desired changes, but the contract was signed in December 2012, i.e. almost a year. The reason for such a long time taken to sign the contract is that in hybrid relations where public organisations are involved,

the involvement of other parties, for example, the government and the public, need to be considered before the implementation of changes. This is explained in the below section.

## **7.7 Public-Private Hybrid Relation and Role of Other Parties**

It is very important to discuss that unlike hybrid relations between private-private organisations, the public-private hybrid relation works differently. For public-private hybrid relations, implementing changes is not straightforward, and it requires other parties to be involved, for example, Treasury, the public, the police etc. In this regard, this section briefly explains the extent of involvement of other parties to approve and implement changes successfully.

### **7.7.1 Role of Treasury during the contract modernisation Process**

The Department for Transport provides authorities with financial support. The interview data identified that the CC receives Revenue Support Grant per annum for the Street Lighting PFI contract. The Department for Transport also monitors annual expenditure against all PFI contracts, and CC submit an update annually to assist with monitoring. They also run regular events to get PFI authorities together to discuss specific areas, e.g., promoting 'invest to save initiatives' to reduce ongoing PFI costs.

It has been identified that as parties agreed to enter into contract renegotiation, they reported to the Cabinet the review of the Street Lighting PFI contract. However, the extent of involvement of the Treasury was found to be limited because the interviewee mentioned that once parties agreed on the terms of the renegotiation, they submitted the delegated decision form to the Cabinet. They informed the Cabinet about the reason and purpose of the review and how it will benefit the government.



“No in contracts modernisation... contract clauses changed we modernized it based-upon the operating environment, the energy market etc. and the central government don’t get involved” (Participant no 1, County Council).

The document analysis identified the various correspondence between CC and the team of solicitors showing the completion of forms in order to fulfil the requirement of the constitution. The exchange of documents started in November 2011. For example, participant no 2, on 25th November 2011, sent an email to the Business Support Officer regarding the format of the report to the Cabinet regarding the review of the PFI contract due to SP concerns (DCC 51, November 2011). Participant no 2 mentioned that he was producing a report for the Cabinet and needed a suitable example to seek approval for the changes to the PFI delivery service standards. This means that in terms of operational management of the Street Lighting PFI contract, the CC has independence. Moreover, the interviews identified the minimal role of the Treasury and Department of Transport in the operational aspects of the PFI contract.

The operational independence is evident from the below quote:

“In terms of management of responsibility and statutory duty and any liability for failure to manage is all purely with County Council” (Participant no 2, County Council).

The lack of involvement of top management and Treasury is also evident from the fact that in answer to Treasury's role in the PFI contract, the Assistant Director, County Council said that:

“I am struggling with that question what happened in 2003... but...I think they would have been some engagements with Treasury..... but really.....

No, it's the local highway authority's responsibility it's all delegated from central government that your Local Council"

Even with regard to top management (i.e., County Head of Finance), the interviewee mentioned the arm's length relationship with them.

"We try to keep them at arm's length that's because we know between us, we are the ones who were delivering this" (Participant no 2, County Council).

### **7.7.2 Role of police and public during the contract modernisation process**

As the proposed changes include dimming and part-night switching of streetlights, therefore, the fear of crime was also involved. When the contract modernisation agenda was presented to the Police National Network (DCC 56, February 2012), the police mentioned this change (i.e., dimming and part-night switching) as a "devil in detail". As such, the implementation of performance measures changes could not be applied before all related changes got approval from the police.

To cope with the crime issues, the CC has to get public consultation in areas where they want to introduce the new strategy, which they did through People Penal to gauge the public opinion in respect of their objectives. Moreover, they had to satisfy the police that this strategy will not be introduced in areas with high crime rates.

## **7.8 Consequences of contract modernisation**

In this section, I have presented the performance measure changes introduced due to contract modernisation. Firstly, the expected consequences are presented. This explains the performance measurement problems that parties were facing before the modernisation and the new changes introduced as a result of modernisation. Second, I have explained the unintentional consequences of contract modernisation.

### **7.8.1 Expected consequences**

The whole process of contract modernisation has taken almost three years, and it involves a great deal of effort from the parties to resolve the 50% rule issue. However, as expected, it resulted in a massive cost-benefit for both parties.

To better understand the expected performance measure changes, I have explained below the performance requirements before and after contract modernisation. The final changes are taken from the minutes of the meeting held on 23 November 2011 (DCC 39, November 2011) and cross-verified from the amended contract (DCC 54, December 2012). These are as follows:

- 1- The original intent of the 50% rule was that: what would be equal to or greater than 50% would have a full design and all streetlights replaced or be less than 50%; therefore, only the age-expired columns were replaced.

The SP didn't really consider that ongoing issues would affect the outcomes as dramatically as they eventually did. So, the SP never really foreseen that the consequence of prematurely failing columns and columns damaged in traffic accidents tripping roads from the less than

50% camp into the greater than 50% camp became a much bigger problem. The SP and CC took their thinking back to the start of the contract. Eventually, they agreed that they would undertake a review of all roads as they would have been back in 2003, i.e. ignoring any intervention of column replacement other than by age for anything that had been done in the meantime. What they set out to capture was that every street would be analysed and what would always have been 50% or more of columns requiring to be replaced in a road would be designated as "Requires Design Review". Where there would have been less than 50% but greater than 0%, these roads would be designated as "Expired Column Replacement Only", and where there were no (0%) planned column replacements, these were designated as "No Planned Work".

Each of these three designations was applied as appropriate to every single road on the inventory, and these designations became "Fixed," i.e. would not be changed, so a road over 50% would always have a full design, a road under 50% would only ever have the age expired or failed columns replaced even if this was such that eventually over 50% of the columns were replaced the SP would never be enforced to replace the remainder as a consequence of applying this 50% rule.

As such, the parties kept the intent of the contract but fixed it at a point in time.

- 1- Another issue that SPV was facing and wanted CC to resolve is the increased number of photometric testing with time. The performance standard required 10% of testing on a new/renewed lighting system. Therefore, with new schemes, the number of testing also increased. This has put a strain on the finances of SP. In this regard, CC initially agreed to reduce the percentage from 10 to 2 but then, due to immense funding pressure, accepted the SPV proposal of setting fix number of testing. The CC agreed to remove

the percentage testing of the lighting equipment and set a flat number of tests of 90/month until the last three years of the contract and double afterwards. This has enabled the SP to be more confident in offering cost savings. Parties mutually agreed that setting a flat number of testing will result in a savings of £6000 for 2012-2013 to a maximum of £13000 in the year 2026. But all these savings depend on CC confirming that block end dates will be removed.

### Old Vs New Performance Requirements

**The original intent of the 50% rule was that:** what would be equal to or greater than 50% would have a full design and all streetlights replaced or be less than 50%; therefore, only the age-expired columns were replaced.

**Through contract modernisation:**

50% rule is divided in three categories:

- 1- Where 50% or more of columns requiring to be replaced in a road would be designated as “Requires Design Review”.
- 2- Where there would have been less than 50% but greater than 0% these roads would be designated as “Expired Column Replacement Only”.
- 3- where there were no (0%) planned column replacements these were designated as “No Planned Work”.

In other words, 50% would always have a full design, a road under 50% would only ever have the age expired or failed columns replaced even if this was such that eventually over 50% of the columns were replaced the SP would never be enforced to replace the remainder because of applying this 50% rule.

The above changes show the success of SPV in the convincing CC of the desired changes. However, they were not successful in completely removing performance standard number three. However, they managed to convince the CC to fix the requirements so that they know the expected cost of the performance requirements. On the other hand, the changes in

performance elements helped the CC achieve the government requirements of making savings in operational PFI contracts.

## 7.8.2 Unintended consequences of contract modernisation

### 7.8.2.1 Negative: increase in unplanned visits

In order to reduce the cost of the PFI contract, the parties introduced several other measures, as discussed above (DCC 26, July 2011). So, in addition to measures causing problems, the parties revisited other performance requirements to find ways to reduce costs. In this regard, one of the offers was changes in the maintenance regime (please see below table 7.3).

**Table 7.3:** Measures introduced to reduce the maintenance frequencies.

1	The back-office savings can be generated through reduction in bollard cleaning.
2	The back-office savings can be generated through reduction in column maintenance frequencies.
3	The back-office savings can be generated through reduction in lamp change frequencies.

The unintended consequences of these changes include the increased cost for SP due to the increased number of reactive maintenance visits.

“We did find consequences. The number of unplanned visits gone up”

(Participant no 6, SP).

Before contract modernisation, the SP has to clean streetlights annually. However, they changed cleaning visits to after every three years through modernisation. Consequently, the bushes and trees behind the streetlights and signposts were overgrown. So, the overgrown

vegetation affects the sign plate and streetlights more after three years. The consequence of that has been that they have an increase in reactive maintenance. Which ultimately increased the cost.

### **7.8.2.2 Positive: wider environmental benefits of contract modernisation**

The main reason for contract modernisation was the misalignment between performance measures and the intent of the PFI contract. The misalignment was causing more problems to SP as they had already over-delivered the contract. If they had kept working according to the requirement of the original contract, that would have cost them £9 million. On the other hand, for CC, there was no issue with the PFI contract. Therefore, initially, SP wanted a review of the performance measure to align with the true intent of the contract. CC, due to good working relationships, agreed to show some flexibility regarding design criteria only. They did not agree to change or modify the "50% rule" due to contractual requirements. When parties discussed the issue intention was to review and correct the misalignment. However, afterwards, through reciprocation in negotiation, parties identified various areas where they can work together for mutual benefit. They not only modified the requirements of the "50% rule" for the benefit of SP but also introduced various cost-saving measures. For example, through dimming and part night switching, they shared 50/50 on associated savings, 100% benefit to CC from associated financial savings due to reduced bollard cleaning, column maintenance, electrical testing and lamp change frequency etc.

An interesting observation is that the contract modernisation exercise resulted in benefits to both hybrid actors and the environment at large. The performance measure problem unexpectedly resulted in helping to reduce wider issues, i.e., CO2 emission. The reason this impact has been classed as unintentional is that:

- 1- SP wanted to resolve their issue of performance requirement.
- 2- CC wanted to make savings to meet government requirements of cost savings.
- 3- There was not any point or clause in original contract regarding reduction in CO2 emission.
- 4- None of the email, document and correspondence showed in any shape or form that they also wanted to reduce carbon footprints.
- 5- The government document ‘making cost savings in operational PFI contracts’ was only focused on cost savings.

Various energy conservation measures were adopted for the modernisation of the contract that allowed parties to take benefit of modern energy-saving technologies. Before contract modernisation, the original contract was very strict and written in a prescriptive manner. One of the elements that show the rigidity of the contract is that; it was very exact in terms of the number of streetlights that should be replaced during the set time period. The antiquated style of the contract was to the point where the parties could not embrace the modern way of doing things. For instance, the interviewee mentioned that the original contract was written to the point where a specific type of lighting must be used on certain roads, priority roads, main thoroughfares, etc. And that meant that PFI partners couldn't embrace technological changes. From 2003 to 2010, technology moved considerably, and due to funding pressure on the council, they wanted to achieve energy savings through the use of more efficient LED lights. But they could not take benefit of modern technology due to the strict terms and conditions of the contract.



“The original contract unfortunately didn't allow the use of modern technology”

(Participant no 2, County Council). The view further affirmed by Service

Provider Project Manager: “We couldn't make the energy savings because we

couldn't use the new LED light sources, because the contract prevented us”

(Participant no 6, Service Provider).

Before contract modernisation, the estimated volume of CO<sub>2</sub> emission due to street lighting was 18600 tonnes. That account for 19% of total CC reportable emission. Following energy conservation measures as a result of contract modernisation were expected to reduce CO<sub>2</sub> emission by 3500<sup>105</sup> tonnes:

- 1- Dimming facilities to 41000 streetlights units
- 2- Introduction of part night streetlights of 6400 units
- 3- Introduction of LED technologies for streetlights
- 4- Control to all day burning signs
- 5- Replacing thermal cells
- 6- Conversion of 70w lamps to 50w

In addition to the above-mentioned measures, CO<sub>2</sub> emissions were also reduced through vehicles due to revised maintenance operations, for example, reduction in bollard cleaning and reduction in night patrol frequencies etc.

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<sup>105</sup> Exact figure cannot be disclosed due to confidentiality of data.

The success of this initiative of CO<sub>2</sub> emission reduction is evident from the fact that CC in 2020/21 is working ahead of their CO<sub>2</sub> reduction target (climate change annual report 2020/21).

In this way, the performance measure issue acted in an unexpected way by bringing improvement not only for hybrid organisations but also for the environment, which would not have been possible if that problem would not have raised in the first place.

## 7.9 Conclusion

How do different actor-networks, which have different objectives and are not compatible with one another, manage to arrive at an agreement (Star and Griesemer, 1989, Star, 2010, Busco et al., 2017)? The concept of boundary object (Star and Griesemer, 1989, Star, 2010) in the previous chapter has shed light on this aspect. However, how are these agreements' durable' and 'convergent' (Callon, 1990)? This phase has answered this question. As such, this chapter has answered the third research question, i.e., how PFI actors managed the performance measure problem.

In conclusion following analytical themes can be drawn from the above account of PFI performance measure problem management:

### 7.9.1 Convergence through reciprocity

The process of contract modernisation is a *hybrid process*<sup>106</sup> of managing performance measure change in the operational PFI contract (Miller et al., 2008). The process involves the struggles

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<sup>106</sup>Process of contract modernisation is hybrid in nature due to how they are enacted across PFI partners.

of various actor groups, e.g., CC, SP, forecasted model with a price tag etc., to manage performance measure change for the mutual benefit of hybrid actors. In this regard, this study drawing on ANT concepts (translation, boundary objects and convergence and irreversibility), has focused on the process of contract modernisation in order to understand the contract and incorporated performance measure changes as a process of translation.

The purpose of translation is to create (temporary) stabilised network (Callon, 1986). Successful translation means the network is irreversible and more convergent (Callon, 1990). Under such circumstances, network activities can be predicted and explained by variables (Callon, 1990). On the other hand, failed translation results in a divergent and reversible network (Callon, 1990). This study shows that PFI actors created stabilised network and made it irreversible by creating a standardised document called 'contract modernisation'. But behind that success lies all those situations where parties exchanged proposals and counter-proposals to a possibly stable conclusion through reciprocity. The successful process of translation of performance measure problem generated a shared space and commensurability (Callon, 1990), and it aligned and managed through the relational mechanism of reciprocity.

A robust translation is likely to be influenced by the degree to which the underlying identities of the actors are themselves resistant to erosion (Callon, 1990). It does nothing more than displace the problem (Callon, 1990). Actor-networks as a hybrid group are always in danger of internal conflicts and dissensions (Callon, 1990). Therefore, no strategy can guarantee a victory (Callon, 1990). However, the degree of irreversibility increases when elements, actors/translators and intermediaries are embedded in a network of relationships (Callon, 1990). The above account depicts that through reciprocity, actors are inscribed in a bundle of relationships. Traces of reciprocity can be seen from phase one; when SPV realised that issue was serious, they offered savings through contract modernisation. Initially, CC was looking for

their obligations in case the contract gets terminated. However, the offer of cost savings through modernisation was the main reason for CC not going towards the exit of the hybrid relationship (section 6.2).

The case illustrates how CC answered SP's concern through contractual approaches. They were continuously referring to the contract and highlighting any discrepancy regarding SP's lack of due diligence at the time of signing the contract. Due to the failure of other PFI projects due to poor project governance, it appears CC has become more careful about using contractual controls (NAO, 2010).

The first contract modernisation proposal from SP was based on how the impact of the 50% rule can be reduced, whereas there was a brief discussion of cost-saving areas. Contrary to this, the first proposal from CC was mainly related to various areas, e.g., changes in lighting standards to reduce energy requirements and CO<sub>2</sub> emission etc., to save costs in line with government cost-saving requirements. Meeting minutes also showed that due to massive government cost pressure, CC was fully focused on achieving cost savings. However, due to a lack of expertise in energy conservation measures, CC could not calculate the cost. CC too much focused on their own interest, and SP's threat to terminate the contract if the 50% rule was not reviewed indicated this translation would not be successful.

However, these differences in interest actually found the way for cooperation, if not consensus (Star and Griesemer, 1989, Star, 2010, Busco et al., 2017). Parties attempted to take benefit of others' situations to make translation successful. For example, CC knew that SP was in a problem. They took the benefit of the situation and proposed areas where they could save as much as they could. When SP found that CC was not giving importance to their issues, they threatened to terminate the contract. Hence, it shows how parties are making attempts to make

this relationship work by using adversarial methods. They knew that now taking a step back from the contract was not possible for CC as issuance of the government paper turned the table towards SP.

Although, CC changed the tone and instead of saying what they had been saying since the start of the problem that "problem is one of your makings" to "problem is not one of our own makings", they posed a counter-threat "we will only review 50% rule if you accept our proposal of savings" (i.e., reciprocity). This time SP came up with a counter-proposal with the complete removal of performance measure three (not only one clause that was causing concern but the complete performance measure). Despite heated arguments, as already mentioned, CC came up with another proposal with a specific focus on cost savings calculation and showed no concerns about the performance measure problem. As energy calculation is a complex matter, therefore, CC has to rely on SP for the calculation of potential savings, and at this point, SP mentioned that without amending the performance measure problem, they could not provide calculations. Interview evidence identified that CC agreed to amendments because, from the renegotiation exercise, the benefit to authority was £11 million while £9 million to SP. In this way, through reciprocity, SP and CC are inscribed in a bundle of hybrid relationships and form a convergent network (Callon, 1990).

### **7.9.2 Irreversibility through modernised contract**

The notion of irreversibility helps understand the actors' attempts to make translation less reversible (Callon, 1990). The irreversibility increases when elements, intermediaries and translators are entangled in a web of interrelationships (Callon, 1990). In such a tightly coupled network, any attempt to redefine one element will lead to the retranslation of the whole. In this regard, to make a convergent network tightly coupled, PFI actors amended the contract. The modernised contract replaced the original contract. The extent of the irreversibility of the PFI

contract is great due to the presence of heterogeneous actors (Callon, 1990). As the case illustrates, it took them one year to get approval from the cabinet, police and people penal, reducing the chances of alternative translations (Callon, 1990). As according to Callon (1990), when interrelationships are numerous and heterogeneous, the more likely it is that network coordination takes place and alternative translation will be successfully resisted.

The modernised contract can be seen as a standardised interface between PFI hybrid actors. This means any modifications to any element of a modernised contract mean retranslation (Callon, 1990). As the case depicts, the modernised contract kept the true intent of the contract and fixed the requirements so that SP could calculate the expected cost. For instance, 10% of testing to 90 tests per month assured them of the potential cost. Similarly, clear division regarding gain share from energy-saving mechanisms sets the minimum rules. As such, a modernised contract results in normalisation due to the predictability of requirements and maximum and minimum thresholds (Callon, 1990). Such normalisation may have powerful effects on the formation of systemic effects (Callon, 1990). Hence, strict rules through designing new contractual requirements resulted in the disqualification of alternative translations (Callon, 1990). The Standardised modernised contract interface transforms the PFI actors into docile agents and its intermediaries into a stimulus that elicits certain responses automatically (Callon, 1990). These precise and quantified requirements of the modernised contract make the translation successful and irreversible. The standardised modernised contract bound PFI actors to count and calculate (Callon, 1990).

On the other hand, if the wishes of the parties would not be given the form of a standardised document, it would create problems if a new actor joined, or an actor left. It results in a divergent network hence reversible translation (Callon, 1990). This is because the new actor

would not have a clear understanding of the project's minimal requirements. As such, a written contract using multiple points of view captures all of the relevant details and distributes them across as many voices as there are actors (Callon, 1990). The modernised contract can be viewed as a black box whose behavior is known in advance and predictable regardless of its context (Latour, 1987). Any new actor can then link itself with it and exchange intermediaries. As a result, it is punctualised in these other networks (Callon, 1990).

### **7.9.3 Enabling role of performance measure problem beyond the boundaries of hybrid organisational setting**

This study illustrates various stages where accounting did not simply function as instruments by which rationally acting humans direct the behaviour of others, but instead are actors who influence the behaviour of other parties to behave in particular ways (Hopwood, 1987).

This study identified 'more enabling' features of accounting (Hopwood, 1987). One performance measure clause created both negative and positive effects. In terms of negative, it created a controversial situation and friction among actors (Kastberg, 2014). However, in the long term, the impact was positive as it allowed the actors to solve other issues and improve the PFI contract through energy conservation measures. It allowed both parties to improve the contract according to their wishes, i.e., SP solved cost issues that could arise as a result of the '50% rule' while CC achieved cost savings that would not have been possible because, for them, the contract was working as it should.

Moreover, the energy conservation measures (e.g., dimming facilities to 41000 streetlights units, control of all day burning signs, the introduction of part-night streetlights of 6400 units

etc.) resulted from contract modernisation reduced CO2 emission by 3500<sup>107</sup> tonnes (section 7.8.2.2). In doing so, the performance measure problem created value beyond the boundaries of the PFI hybrid setting through carbon reduction. If that performance measure problem had not happened, CC and SP would have continued working according to the original strict contract specifications, which would have stopped them from creating value that they can generate by adopting modern technology. In this way, the performance measure problem behaved in an unexpected way and generated value (albeit unintentional) beyond the boundaries of the public-private hybrid setting.

**Phase four:**

Accounting problem (performance measure issue) not only brought expected changes but also behaved in an unexpected way by bringing improvement in PFI hybrid contract for the mutual benefit of both parties and environment at large.

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<sup>107</sup> Exact figure cannot be disclosed due to confidentiality of data.



## Chapter Eight: Empirical Discussions

### 8 Introduction

This Chapter attempts to situate research findings (as presented in empirical Chapters 5, 6 and 7) in terms of research questions and relate them to previous studies and literature (as illustrated in Chapters 2 and 3). In doing so, this Chapter justifies the significance of the study as presented in the next Chapter.

This Chapter is divided into seven sections. Section 8.1 presents how the contract modernisation process resonates with Miller et al. (2008) concept of the hybrid process. In section 8.2, I have explained the importance of understanding the problem's crystallisation process. Section 8.3 expands on the original contract's failure that was the basis of hybrid organisational relations between PFI parties. Section 8.4 and 8.5 justify selecting the "desire for a sustainable relationship" and "making cost savings" as a visionary boundary object. Section 8.6 shows the classification of actors and actants identified in this study. In section 8.7, I have presented how the relational mechanism of reciprocity, as specified in this study for the management of performance measure problems, relates to the extant hybrid management control literature findings. The Chapter concludes with a summary.

### 8.1 Contract modernisation process as a hybrid control process

The study has explored the process of changes in performance measures of operational PFI contract under the umbrella of "contract modernisation". The purpose is to understand how PFI hybrid actors manage changes in performance measures of PFI contract (Kastberg and Lagström, 2019). In doing so, this study answers calls for more research (as identified in

Chapter 2, section 2.6) related to the understanding of processes of accounting change in general (Hopwood, 1987, Briers and Chua, 2001, Caglio and Ditillo, 2008) and hybrid control processes in particular (Miller et al., 2008, Kastberg and Lagström, 2019, Thambar et al., 2019, Weichselberger and Lagström, 2021).

The process of contract modernisation involves efforts of the PFI hybrid actors to bring fundamental changes in the original contract after nine years of its implementation (Chapter 4, section 4.3.1). Moreover, to collaboratively set revised performance measures during its operational stage for the control and management of PFI hybrid relation. As such, the process of contract modernization shows changing and recursive nature of contracting (English and Baxter, 2010).

The process of change is a ‘hybrid process’ as it enables lateral communication and collaboration between PFI actors (Miller et al., 2008, Hopwood, 1996). I found key individuals from SP, SPV and CC in joint activities (hybrid control process) to effect control solution. I explained how the contract modernisation process acted as a hybrid control process (Chapter 5), which led to an approach to addressing performance measure issues at the hybrid level (Chapter 6), subsequently leading to the identification of cost-saving methods for reciprocal benefit (Chapter 7). The contract modernisation activity allowed the flow of information beyond the boundaries of CC and SP. Therefore, shows a characteristic of hybrid elements (Kurunmäki and Miller, 2011).

As such, the process of contract modernisation as a hybrid control process contributed to the resolution of the performance measure problem. This is consistent with the study of Kurunmäki and Miller (2011) regarding hybridising of processes and practices as a result of a ‘modernising government reform programme’. The reform process resulted in the administrative redesign

and linked local service delivery through management control practices with larger political culture.

An example of an approach used to address the performance measure problem was the “Asset Management System” (section 5.3.2). This system is used to record performance data, and this helps in deciding the amount of work that has been done and that needs to be done. To address the issue, both parties used this system to identify the areas where SP has gone wrong. The system became the key focus of hybrid organisational actors’ efforts to carry out initial asset replacement analysis (section 6.4). The Asset Management System brought SP and CC actors together to collaborate and identify areas where and why SP has over-delivered the work. On the basis of information provided by the Asset Management System, they amended performance requirements. Lately, such information systems (project management systems) have been found as a hybrid control process in Thambar et al. (2019) study. It is, however, worth noting here that this thesis did not focus on hybrid control practices. There is, in fact, little understanding of the difference between hybrid control practices and hybrid control processes (Miller et al., 2008).

## **8.2 Re-opening the black box of ‘the problem’**

Before looking at the end product of the contract and incorporated performance measures change process, the first question that naturally arises is why is change needed and how parties at the operational stage of the hybrid organisational relationship identified and established the existence of the performance measure problem in original PFI contract (i.e., research question 1 section 1.4)? Findings identified that the original contract needs changing due to

misalignment between one of the performance measures (performance standard three) and the intent of the contract (Chapter 5).

**Table 8.1:** A brief recap of performance measure issue

<p><b>The intent of the original contract:</b></p> <p>To replace columns (lamp post) when they reach the end of serviceable age.</p> <p><b>Performance measure three: 50% rule</b></p> <p>If half of the columns in a streetlight get hit or damaged, Service Provider must redesign the whole street according to the current design and specification. It means Service Provider have to change columns that have not reached their end of serviceable age if the situation requires.</p>
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Indeed, few hybrid management control studies have identified changes in hybrid organisation contracts as a result of issues with performance measures. For example, Ahmad et al. (2020) study provide an understanding of how actors in PFI relation managed inadequate performance measure issue through trust practices. Unlike Ahmad et al. (2020), Minnaar et al. (2017) study showed the performative role of unfair performance measures in generating re-contracting by taking a process approach. However, both studies have started with a well-defined set of problems, i.e., unfair performance measures (Minnaar et al., 2017) and inadequate incentives related to performance measures (Ahmad et al., 2020). This thesis submits that it is a stable and coherent view of the problem and therefore argues that it is not always possible for every translation or change to start with a defined set of ‘the problem’. Such perspective towards ‘the problem’ shows that if all parties are in agreement that change is needed because of : for example, the declining population of scallops(Callon, 1986); inefficient accounting system (Briers and Chua, 2001); high cost that needs to be reduced through introduction of cost-benefit tool (Social Investing Funds) (Kastberg and Lagström, 2019); short-term focus towards performance measures (Stouthuysen et al., 2019); lack of awareness of strategic imperatives (Busco and Quattrone, 2015); unfair performance measures (Minnaar et al., 2017);

warehousing and distribution cost (Mahama and Chua, 2016); inadequate incentives (Ahmad et al., 2020); information gap after outsourcing arrangements (Mouritsen et al., 2001); ‘recalcitrant line personnel engaged in maverick spend’ (Cuganesan and Lee, 2006, p165 ); unequal ownership rights (Thrane, 2007), so on and so forth.

This study has used concepts from ANT (Callon, 1986, Latour, 1987, Star and Griesemer, 1989, Callon, 1990, Star, 2010) to capture the dynamics of a hybrid setting from the identification of the problem to its management. Following SP actors have allowed this thesis to exhibit the peculiar evolution of performance measure problem and depict the problem was translated from non-existence to real existence. However, this does not mean that misalignment did not exist during the first seven<sup>108</sup> years of the operationalisation of the contract, and suddenly it became a real problem, and the main translator (i.e., participant no 7, SP) recognised it as such. He made that issue real by acknowledging its existence (Chapter 5). In doing so, he not only communicated reality to other actors at his organisational level but also constructed interessement devices (Hines, 1988, Callon, 1986). For example, initially, everyone was contented with how the contract worked, and no contractual change was needed. Interpretation of participant no 7 was considered “misinterpretation” and “non-sense” (Chapter 5). At that stage, there was massive complexity at the intra-organisational level as nobody accepted the problem's existence (section 5.2.1). This process of evolution and crystallisation of the problem highlighted the active role of various nonhuman actors (section 5.2.2)). For example, participant no 7 constructed a “forecasted model with a price tag” (section 5.3.3) that augmented the issue by interpreting the PFI hybrid setting as a product of conflict and uncertainty (Busco and Quattrone, 2018). The way he constructed the performance measure problem through a “forecasted model with a price tag”, other actors at the intra-organisational

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<sup>108</sup> Contract signed in 2003, problem identified in 2010, contract renewed in 2012.

level started thinking and acting. By responding to that document, he made it so: the performance measure problem became 'real'. As such, this document played an important role in translating 'problem' from 'non-existence' to 'real existence' (section 5.2.3).

This study, therefore, argue that before 'problematization,' i.e., a moment where the main translators identify the problem, make efforts to inscribe other actors, define their identities, realise them that they have a right solution or definition of problem (Callon, 1986), there is a need to take a step back, re-open black box of problem and see how problem crystallises. Because if too much attention is paid to the 'set' dimension of the problem, we risk ignoring the processes and practices (Miller et al., 2008) those actors (human and nonhuman) has to go through in order to crystallise the problem.

“By taking for granted those things which others take for granted, we fail to understand *how those things arise*, and how they are sustained, through *being taken for granted* and thereby forming the basis for *thought and action*. By taking for granted, and rigorously studying, things as they are, one merely builds on lay conceptions, becoming an expert of description, and a collector of "facts". But too close an attention to the "facts" leaves unquestioned *how the facts arise* - - it leaves us bereft of deep explanation” ( P. 257 Hines, 1988)  
[emphasis added].

### **8.3 Failure of the standardised package: PFI original contract**

From 2003 to 2010 original PFI contract was working as it should<sup>109</sup>. It was the main document and reference point between the parties that took precedence over any other document, for

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<sup>109</sup> In Latour, 1990 terminology it was hybrid actors made durable.

example, the financial model (Chapter 4, section 4.3.1). It involved standards and guidelines for action, for instance, performance measure standards, service specifications and payment mechanisms. These management control procedures provide a means of disciplining hybrid actors to perform as per the requirement of the standards. Any deviation from requirements could have financial consequences, e.g., a penalty. The strength of the contract lies in the fact that it was written in a “prescriptive manner”. It was written to the point where a specific type of lighting must be used on certain roads, priority roads, main thoroughfares, etc. This shows how PFI contract designers design detailed and inclusive contracts due to associated risk (Ding et al., 2013).

However, it failed because of misalignment between incorporated performance measures and the objective of the contract and that was not “picked up” by the SP actors at the time of signing and taking over of the contract (section 5.3.2). This incompleteness of the original PFI contract is consistent with extant hybrid management control literature regarding incomplete contracting (Anderson and Dekker, 2005, Minnaar et al., 2017, Ahmad et al., 2020).

Findings showed that rather than agreeing to renegotiations due to misalignment of performance measures, CC’s continuous reference to ‘contractual requirement’ shows actors’ attempt to keep the original contract alive (Chapter 6). As suggested by other studies, this might be because of pressure from superordinate authority for the use of contractual management controls as a results of failure of PFI projects due to poor governance (Ahmad et al., 2020). Also, it might be to avoid the need for elaborate arbitration systems that generate substantial (unavoidable) costs (Ross and Yan, 2015). However, evidence in this study identified that CC's efforts to keep the original contract alive failed as that was a threat to the "sustainability of relationship" (Chapter 6). The finding of the study (i.e. failure of original contract and re-

contracting) resonates with Ahmad et al. (2020) and Minnaar et al. (2017). In Ahmad et al. (2020) study, PFI actors entered into re-contracting due to reputational risk (p13 ). While in the case of Minnaar et al. (2017), it was legal and economic consequences that stopped the hybrid actors from exiting the relationship (p36).

However, in this study original contract failed not because of reputational, legal and economic consequences. It failed because misaligned performance measure was a threat to survival, and actors in both organisations had a “natural desire” to work (Chapter 6). But various actor groups in each organisation exercised that ‘desire’ in multiple ways. The various interpretation of actors’ “desire for a sustainable relationship” resulted in different reasons over time for the failure of the original contract (Chapter 6). This is elaborated on in the next section.

#### **8.4 Visionary boundary object<sup>110</sup>: desire for a sustainable relationship**

The study shows that the original PFI contract as a ‘standardised package’ was insufficient for a sustainable relationship; boundary objects are needed for cooperation despite divergent actor worlds (Star and Griesemer, 1989, Star, 2010) .

The evidence in empirical chapters (5,6, and 7) shows that contract modernisation in a hybrid setting is a diverse activity. Actors in one organisation portray their role differently according to different circumstances to align their role with the interest of other actors of other organisations in a hybrid relationship given competing institutional logics. Phase three shows

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<sup>110</sup> “Visionary objects are conceptual objects that have high level of legitimacy within a particular community. They can evoke similar emotive and affective responses from a wide spectrum of people; possessing a sacred quality that makes it difficult for a ‘rational’ person to go against them...But the precise identity of these objects is unknown until it is customised and tailored to specific settings” (Briers and Chua, 2001, p242).



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that two concepts, 'desire for a sustainable relationship' and 'making cost savings', played a fundamental role in aligning the interest of the actors and transforming the relationship through contract renegotiation (Chapter 6). Therefore, it answers the second research question, i.e., how the interests of the actors were aligned in the PFI hybrid setting to solve the performance measure problem (Section 1.4).

The term "desire for a sustainable relationship" is used because it emerged from the data. On various occasions, the operational staff of CC and SP expressed their 'desire' for collaborative working. For instance, 'desire to negotiate', 'desire to keep us as service provider', and 'absolute desire for this project' etc. The parties' desire for a long-term relationship shows that they want to carry on a relationship with other hybrid actors. However, having a desire or intent for collaboration does not mean that actors have positive intentions for staying in hybrid relations. The intention could be positive or negative depending upon the context. For example, it could be for material interest, fear and coercion or because of past experience etc. (Nooteboom, 1996). In that sense, it shows various interpretations of term 'desire for a sustainable relationship'.

In hybrid management control literature emphasising operational-design control approaches, the concept of hybrid partners' intention for long-term relationships or cooperation is still evolving (section 2.4.2). The concept has been implicitly discussed in a few studies. For example, in the study of Free (2008) intention for long-term relationship could be for material interest as management accounting practices functioned to hide the self-interested actions of partners in UK retail hybrid relation, in case of Neumann (2010), motivation to cooperate could be 'ethics' due to dominant partner adopting a cooperative strategy for generation of trust.

However, Marques et al. (2011) explicitly explored the extent of the network of organisations' desire for long-term relationships so that appropriate controls can be designed. They found mainly 'material interest' and 'bonding' for parties' intent to collaborate. However, Marques et al. (2011) findings were 'static' in a sense as they failed to capture changes in management control mechanisms in one of the network organisations. In one of the network organisations, behavioural controls were established on the initial assessment of high "motivation to cooperate" and high "contribution to network performance", but no outcome controls were established. Over time situation changed, and due to the opportunistic behaviour of that organisation, Port changed the control package. Social and formal controls are also introduced. However, processes that have led to these changes were not covered in their study.

This study is an attempt to fill this gap. Conceptualising "desire for a sustainable relationship" as a visionary boundary object (section 3.6.3) has shown that the 'intention of parties for long term sustainable relationship' is subject to change and negotiation (Smith et al., 1995) over time among hybrid partners. The visionary boundary object of 'desire for a sustainable relationship' was robust enough to bring SP and CC actors together despite differences. At the same time, it was flexible so that SP and CC could adapt it according to the practicalities of the situation (Chapter 6) (Star and Griesemer, 1989, Star, 2010). In this regard, concepts of boundary objects (Star and Griesemer, 1989, Star, 2010) have facilitated the identification of various actors' thought processes and how they changed over time. As such, this emphasises refraining from considering actors as black boxes. According to Kastberg (2014), treating actors as black boxes ignores the interaction between their inner processes and the dynamics of their relationship.

From SPs' perspective, initially, when a performance measure problem discovered, they want to stay in a long-term relationship because of a 'good working relationship' (section 6.1). When CC refused to change performance measures due to contractual requirements, 'desire' to continue working was simultaneously based on reputational, legal and economic consequences (section 6.8). Finally, they agreed to CC demands because of internal pressure<sup>111</sup> of 'making cost savings'<sup>112</sup> (another boundary object) that they could get as a result of re-contracting (section 6.9). From this, it can be suggested that from SPs' perspective, the 'desire for sustainable relationship' can vary from bonding to internal economic reasons.

From the perspective of CC, when SP communicated performance measure problem, for operational staffs' desire for a sustainable relationship was a "good working relationship" (section 6.2), and for senior management, it was "fear of authority" to go against contractual terms (section 6.6). Afterwards, they agreed to renegotiation due to external pressure<sup>113</sup> of 'making cost savings' (sections 6.6 and 6.7). As such, CCs' perspective seems to vary from bonding to external economic reasons.

Unlike prior studies (see, e.g., Free, 2008, Neumann, 2010, Marques et al., 2011), this study shows various interpretations of actors' 'desire for a sustainable relationship' and how that desire changed over time from bonding to economic reasons i.e., "making cost savings" depending upon the practicalities of the situation.

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<sup>111</sup> Here internal pressure means pressure of profit making from project at intra-organisational level.

<sup>112</sup> 'Making cost savings' emerged from data due to interviewees mentioned at various occasions that they want to make cost savings that could occur as a result of misalignment. Moreover, at CC level since SPV offered them savings through modernisation of contract, this term 'making cost savings' then became the center of discussion in all negotiations. Moreover, the issuance of government paper reaffirmed the use of this term by actors during contract renegotiations.

<sup>113</sup> External pressure means pressure from government for cost savings.

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## 8.5 Visionary boundary object: making cost savings

The previous section identified how actors' 'desire for a sustainable relationship' brought them together around another visionary boundary object, 'making cost savings'. This section shows how the category of 'making cost savings' emerged over time, and it not only aligned the interest of the actors but also transformed them by allowing them to enter into contract negotiation. In this way, 'making cost savings' can be categorised as an actor due to its mediating role (Latour, 2005).

Since the discovery of the performance measure problem, the main issue for the SP was reducing the impact of the potential financial cost of £9 million (Chapter 5). Therefore, the main pressure on SPs' operational staff was to find ways to save that cost. However, the original contract in any shape or form was not a solution. They wanted to 'make cost savings', but that was possible only through contract renegotiation.

For CC, the category of 'making cost savings' emerged over time. For them, there was no financial issue. They were making payment (unitary charge) to the SP for their services. However, generally, CC remains under financial pressure due to a lack of funding from the government (section 6.5). Empirical chapter six has provided detail of how cost management was an issue for the CC that resulted in parties entering into a PFI relationship (section 6.5.1.1).

Although the offer of 'savings' from SPV through contract modernisation attracted the attention of CC (section 5.3.1), it was not taken seriously, and the contractual approach to the SP problem remained the main way of tackling the issue. However, CC started thinking about different areas where they could achieve savings and reduce the impact of SP potential cost of

the issue (section 6.8). But that approach failed to mobilise the interest of SP actors as they wanted to offer savings if CC listened to their demands regarding performance measure review.

It was after the economic crisis of 2008 when the government started forcing local authorities to reduce costs, and CC was no exception (section 6.5.1.2). The credit crises diverted the attention of the government toward cost-cutting in operational PFI contracts (HC, 2010). As a result of that, CC needed to ‘make cost savings’ in the PFI project. The pressure from the government forced them to accept the demands of SP for contract review (section 6.9). It was when the category of ‘making cost savings’ emerged. This shows similarity with the introduction of management accounting in the case of Josiah Wedgwood, the eighteenth English potter (Hopwood, 1987). Before the economic crisis of 1772, cost was rarely used inform prices. The situation changed when the company got caught in the economic crisis of 1772. In this context, his cost accounting was born as Wedgwood began to keep track of production expenses.

In sum, the visionary boundary object of ‘desire for a sustainable relationship’ is translated through ‘making cost savings’ (Briers and Chua, 2001). It moved back and forth between both actor worlds (Star and Griesemer, 1989, Star, 2010). No one can deny its legitimacy because of the ultimate objective of the private organisation (profit-making by saving cost) and public sector organisation (cost-saving for value for money). As a visionary boundary object with the agency, it not only aligned the interest of the actors for contract renegotiation it also transformed their approach from contractual method to relational (it is elaborated in the next section). This finding is similar to Busco et al. (2017), who viewed the mediating role of boundary objects in generating innovation but different from Briers and Chua (2001) who looked at boundary objects as actants without agency. However, this study is different from

Busco et al. (2017) in the sense that they viewed the active role of actual control practices (i.e., business plan and agile-based control system), whereas this study has presented the role of the conceptual object in transforming the hybrid relationship.

## **8.6 Following network of actors and actants**

Identification of actors and actants involved in the process of contract modernisation is important because it provides an understanding and makes sense of the role and combination of actors and actants that made the translation process successful (section 3.3). Based on empirical evidence, actors and actants were identified and classified. Figure 8.1 and 8.2 highlights important actors and their relationship with each other in order to provide a better understanding of the overall network. Thus, one can better understand the impact of these actors on the process of establishment of problem and contract modernisation.

### **8.6.1 Actor and actants at Service Provider intra-organisational level during the process of crystallisation of problem**

The notable actors during the process of crystallisation of the problem were participant no 7 and the legal team. Humans, however, are not necessarily actors (Latour, 2005). The bidding team and senior management were the most distinctive human actants. They were also involved during the whole process. But their presence did not change or modify anything regarding the acceptance of the problem.

Nevertheless, not every nonhuman object is an actant (Latour, 2005, Callon, 1990). This is evident from the fact how ‘original contract and incorporated performance measures’ performed and created instability whereas ‘forecasted model with price tag’ created stability in

a sense that the network started to speak as one. Table 8.2 presents the details of actors and actants and the reason for their classification.

**Table 8.2:** Actors and actants during the process of establishment of problem

<b>Actors</b>	
Main translator (participant no 7)	He identified the issue and prepared the ‘forecasted model with price tag’ to convince other actors.
Legal team	Played an important role in convincing others (senior management and bidding team) that participant no 7 interpretation is correct.
Forecasted model with price tag	Provides in-depth detail of the issue with the help of charts and graphs. Also, shows the monetary value of potential financial impact of the performance measure problem. This document created stability in a sense that network started to speak as one.
Original contract and incorporated performance measures	The incompleteness of the contract and incorporated performance measures created instability at intra-organisational level.
<b>Actants</b>	
Bidding team and senior management	Their presence was necessary but that did not change or modified anything regarding acceptance of the problem. It is when legal team convinced them that problem exist.
Asset management system	This system helped participant no 7 in generating information for forecasted model to proof the existence of the issue with reference to all the work that has been done and that needs to be done.
Financial Model	The Financial Model shows how the project will be delivered in financial terms and takes into account every aspect of the contract in terms of income and expenditure over the life of the project. This model is used throughout the process in order to compare finances required for the project.

### 8.6.2 Actor and actants during the process of contract modernisation

The ANT concepts facilitated locating interdependent actors and actants that co-produced the relationship and made a successful translation of the performance measure problem (Callon, 1986, Latour, 1987). While CC and SP played the role of main actors, the role of SPV cannot be denied because the original PFI contract was between CC and SPV. However, evidence from the field study identified that issue was mainly discussed and negotiated between SP and CC. But proposals and counter-proposals are forwarded by SPV as SP cannot make any major

changes without SPV approval. In this specific case main reason for classifying SPV as an actor is because of their cost-saving offer to CC through contract modernisation.

Regarding nonhuman actors, the “forecasted model with a price tag” was a portable tool. It was easily moved back and forth between the SP actors as a main point of reference to establish the existence of the problem and then between hybrid actors for contract renegotiation. It was ‘combinable’ as it aggregated information of ‘columns<sup>114</sup>’ replacement from the start of the contract, i.e., from 2003 to 2010 (Latour, 1987). That information was taken from various sources, e.g., Asset Management System, PFI original contract and financial model. Moreover, it is also ‘combinable’ in the sense that it includes qualitative and quantitative information of the performance measure problem (Latour, 1987, Robson, 1992). It was ‘stable’ in the sense that once the document was established, it was used by participant no. 7 in various meetings for the crystallisation of the problem (Latour, 1987). It was considered a primary instrument between hybrid actors for convincing them to contract renegotiation. However, the ‘diagrammatic detail’ of the issue caused concerns regarding the information provided in the ‘forecasted model with price tag’. The CC again took U-turn and refused to review performance measures. Another inscription, ‘making cost savings in operational PFI contracts’, then came forward and forced the CC to form an actor network for the modernisation of the contract. This finding is consistent with Zawawi and Hoque (2020) in showing the role of an external control mechanism (government paper) created a new inscription, i.e., a modernised contract. Therefore, shows the operationalisation of external expectations locally (Zawawi and Hoque, 2020). The government paper has exerted power from a distance and influenced the performance measure change process.

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<sup>114</sup> In Street Lighting PFI contract word ‘column’ is used for lamp post.



**Table 8.3:** Actors and actants during the process of contract modernisation

<b>Actors</b>	
Service Provider	SP is a main actor as they initiated the issue at hybrid level.
County Council	CC is main actor because without their acceptance network could not be formed.
Special Purpose Vehicle	SPV played main role as it is their offer of savings that resulted in CC thinking and revisiting the issue. Otherwise, they were strictly following contractual methods.
Forecasted model with price tag	This document played a partial role at hybrid level. As CC agreed to review some but all performance measure after looking at the potential financial impact of the issue.
Original contract and incorporated performance measures	The incompleteness of the contract and incorporated performance measures created instability at hybrid level too. But it created positive impact by brining improvement in contract through re-contracting. That subsequently unexpectedly had extra-organisational effects.
Diagrammatic detail	This document created instability by highlighting issues in CC calculations.
Making cost savings	A visionary boundary object with agency <sup>115</sup> that transformed the CC contractual approach to relational.
Government white paper	This paper played an active role by controlling hybrid relation from distance. CC agreed for renegotiation due to government pressure of making cost savings.
<b>Actants</b>	
Proposals and counter proposals, accounting report, and asset management system	The presence of these documents was important; however, these documents did not modify or transformed the will of other.
Desire for sustainable relationship	A visionary boundary object with no agency

Among nonhuman actors most distinctive role in both processes (i.e., crystallisation of problem and contract modernisation) is of “contract and incorporated performance measures”. Similar to Minnaar et al. (2017), this study shows a performative role of the original contract and incorporated performance measures. They performed in a way that generated modernisation of the contract with intra, inter and extra-organisational effects. Unlike, Zawawi and Hoque

<sup>115</sup> In this thesis, the concept of agency is used to show the mediating role of humans and nonhumans (section 3.3).

(2020) study, which showed how various performance management inscriptions created order and control in hybrid relations, this study shows how performance measures of hybrid relations became a source of controversy with both positive and negative effects. Negative in a sense that initially, it created instability not only at SP local level (i.e., intra-organisational level) but also at a hybrid level between SP and CC (i.e., inter-organisational level). However, the effect was positive in a way that it ended up changing lots of other areas in the contract for the mutual benefit of the PFI actors and the environment at large. The role of accounting in creating stabilisation and destabilisation is consistent with Kastberg (2014).

With regard to environmental effects, the original contract did not include any clause/information related to a reduction in carbon emission. When the performance measure issue started, the intention was to solve that issue that brought cost savings for both organisations. The unintentional<sup>116</sup> impact of the re-contracting exercise was that it introduced cost-saving measures that reduced carbon emissions.

This study, using ANT concepts, has exhibited the peculiar evolution of the performance measure problem and how it generated intra and inter-organisational effects (Caglio and Ditillo, 2008, Mouritsen et al., 2001). The misaligned performance measure problem not only created instability between actors at the hybrid level but also has intra-organisational effects. These findings strengthen Mouritsen et al. (2001) idea that inter-organisational controls also have intra-organisational effects. Nevertheless, accounting practices as a generating entity is not a new concept in accounting literature (Ezzamel, 1994, Boedker and Chua, 2013, Ahrens and

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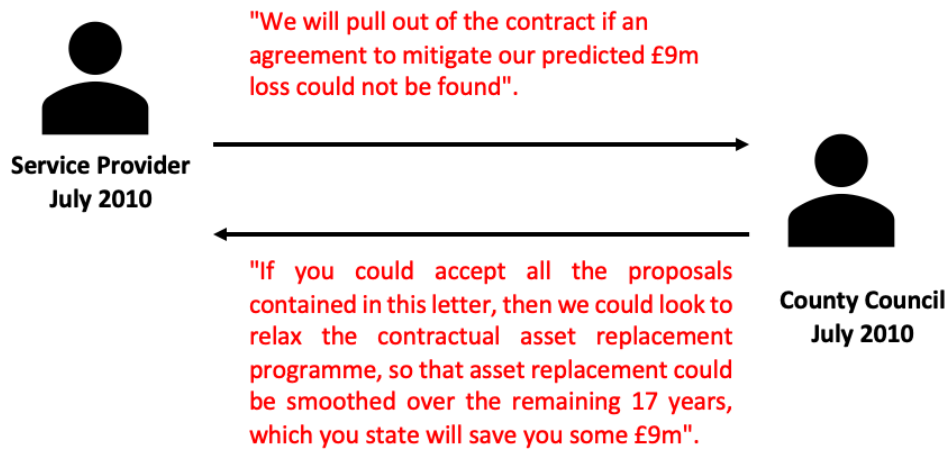
<sup>116</sup> I contend that expectations and intentions do not match. In this study, of course, it was expected that the energy saving measures introduced as part of contract modernisation would lead to reduction in carbon emissions, but this was not the intention of the parties when entering into renegotiations. The contract was amended for economic reasons (sections 6.5, 8.4 and 8.5). There were no intentions of improving environmental conditions through a reduction in carbon emissions.

Chapman, 2006, Jordan and Messner, 2012, Qu and Cooper, 2011). However, this study, by presenting the enabling role of misaligned performance measure problem beyond the boundaries of a hybrid setting, shows ‘more enabling properties’ of accounting (Hopwood, 1987). This is evident from the extra-organisational effects of the ‘misaligned performance measure problem’. Lately, Thambar et al. (2019) presented the “intentional efforts” of hybrid organisational forms in the cotton industry to manage systemic uncertainty. Similarly, Dudau et al. (2020) showed the role of trust and control in relation to child victims in Wales and England. This study, however, shows the *unintentional* consequences of the performance measure changes in reducing carbon footprints as a result of PFI contract review activities.

### **8.7 Reciprocity: A Mechanism to Manage Hybrid Organisational Relationship**

“Hybrid relations are ‘a matter of exhortation, explication, persuasion, *give and take*’”(Bardach, 1998 p. 238) [emphasis added].

This section answers the third and final research question; how partners in hybrid relations manage performance measure problems (section 1.4). The findings identified that PFI partners used the relational mechanism of reciprocity to solve the performance measure problem (Chapter 7). The evidence from document analysis identified (please see figure 8.1) that if SP wants modification in performance measures, they have to accept the CC proposal of potential cost savings (section 7.4). On a similar note, if CC wants potential cost savings as required by the government, they must accept the SP proposal of ‘50% rule’ modifications (section 7.5). Which illustrates a case of direct reciprocity, i.e., an action performed by one party requires a repayment from another (Meeker, 1984).

**Figure 8.1:** An example of application of reciprocity in PFI contract

The role of reciprocity as a relational mechanism for managing performance measure change is contradictory to the previous work that mainly stated the role of trust in managing hybrid relations (e.g. Ahmad et al., 2020, Mahama and Chua, 2016, Minnaar et al., 2017, Abdullah and Khadaroo, 2020, Dudau et al., 2020, ter Bogt and Tillema, 2016). Because in this study each party (CC and SP) in their capacity of organisational agents could not take decisions solely based on good working relationship (despite highlighting in interviews) (Chapter 6), organisational objectives (profit making and cost savings) mitigate their ability to prioritise trust based on good working relationship (Ring and Van de Ven, 1994). The difference in findings with previous literature could be because, in extant hybrid management control literature the term trust might be used to refer to reciprocity (section 2.4.2). According to Free (2008) “much of the work uses the term trust when referring to related concepts such as cooperation, reciprocity or stability” (p635). The reason it is mistaken as a sign of trust might be because reciprocity is a ‘glue that binds parties where friendships or other social dimensions are not evident’ (Pervan et al., 2009, P.67).

Moreover, a review of literature in Chapter 2 shows that some studies have acknowledged the role of reciprocity during negotiation stages. However, they did not explore it in detail. For instance, Kastberg and Lagström (2019), using Callon (1998) terminology, showed that framing activities could occur in two different types of situations. The first is a ‘hot’ and the second is a ‘cold’ situation. In ‘hot’ situations knowing the cause and effect of events is limited or non-existent, and identifying effective measures is challenging. In the case of a ‘cold’ situation, actors come to an agreement about the problem and the solution to it. During this, when parties disagree, they negotiate solutions via *reciprocity*, facilitated by measurability. However, they did not explain how reciprocity actually works and how disagreements during ‘cold’ situations are settled.

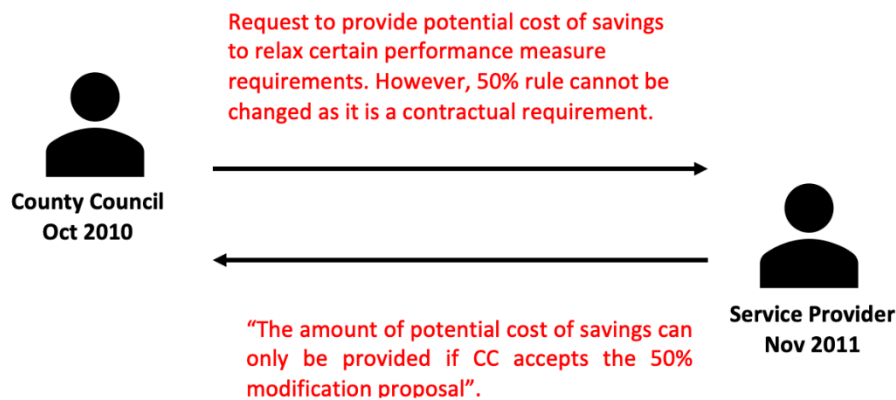
While in other studies, the role of reciprocity is implicit. For instance, Ahmad et al. (2020) study showed an interactive review of the PFI contract based on ‘*mutual understanding and needs of the partners*’ [emphasis added]. Their study showed that mutual understanding resulted in the development of ‘trust practices<sup>117</sup>’. However, how that ‘*mutual understanding*’ and ‘*partners needs*’ was developed and discussed during contract review; is not captured in their study [emphasis added]. Stouthuysen et al. (2019) showed the inclusion of ‘*gain sharing*’ during contract renegotiation so that supplier remain motivated more towards innovation and less towards short-term performance measures [emphasis added]. How that ‘*gain sharing*’ worked, whether parties agreed or there were disagreements in deciding who would get what remains to be known [emphasis added]. Similarly, in the case of Minnaar et al. (2017) study, they presented that for suppliers performance measures was unfair. That resulted in re-contracting. Their study showed that during contract review, performance measures were discussed between actors in the relational network. During that process, conflicts and

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<sup>117</sup> An umbrella term to show collaborative approaches.

disagreements have arisen. However, their study provides a limited understanding of how those disagreements are managed. The concept of reciprocity is implicit in their study which is evident from the fact that they showed, *parties' awareness about each other needs* and how one party helped other party while other party negotiated for that, for example, new activities without additional funding etc.

Lately, Guven-Uslu et al. (2020) introduced the concept of reciprocity in hybrid accounting literature. They showed that reciprocity indicates that calculative practices (e.g., budgeting and transfer pricing etc.) are intended to meet the performance goals of government programmes. These practices provide insight into how financial information shapes economic and social relations. This shows that reciprocity allows the operationalisation of government programmes through accounting practices. That would not be possible on their own. This, however, could also be a case of indirect reciprocity, where calculative practices help the operationalisation of government programmes. These programmes then manage social and economic relations (Nowak and Sigmund, 2005). Unlike Guven-Uslu et al. (2020), this thesis shows how actors managed performance measure issues through direct reciprocity, i.e., 'give and get' situation. For example, see figure 8.2. Hence, this study shows how reciprocity works in practice in hybrid organisational relationships.

**Figure 8.2:** An example of application of reciprocity

In this study, the interview data coupled with document analysis helped in reaching this conclusion. Because interviewees mainly highlighted collaborative and good working relationships with each other (section 6.1). Participants mentioned their approach toward a solution for the mutual benefit of each party. However, one of the drawbacks of the interview method is that interviewees know how to portray themselves. This weakness of the interview method is mitigated through document analysis, and that method revealed the complete process of how performance measure issue was actually discussed and resolved in a hybrid setting. The details in proposals and counter-proposals, threats and counter-threats highlighted the role of direct reciprocity in managing the PFI relationship (see table 8.4).

Overall, this thesis shows that to solve misalignment between performance measures and contract objectives, parties' desire for sustainable relationship is required. The sustainability of the relationship in this study is achieved through reciprocity because parties enter in the hybrid relation for economic reasons, i.e., public organisation (CC) for cost savings and private organisation (SP) for profit-making through cost savings.

## **8.8 Summary**

In this Chapter, the research findings are discussed in terms of research questions and in relation to previous studies. This has highlighted areas where the findings of this study are different from extant hybrid management control literature and the ANT-inspired accounting studies. In this regard, the next Chapter presents the specific theoretical and empirical contributions of this study.



**Table 8.4:** Timeline of events highlighting role of reciprocity.

<p>SP: July 2010: emailed detailed issue without financial figure. They knew the impact (although not disclosed here) therefore offered:</p> <p>“Modernisation of the Contract Documentation may yield substantial benefits to all parties.”</p> <p>CC: July 2010: “This is a contractual requirement (50% rule) and again ample opportunity was provided to ascertain the condition of the lighting stock pre-award of contract. Therefore, SP and their predecessor ABC accepted this level of risk during contract acceptance”.</p> <p>SP: Aug 2010: Financial Disclosure</p> <p>CC: Sep 2010: Legal team advice to <b>consider saving offer</b>.</p> <p>SP: Sep 2010: First contract modernisation proposal with <b>focus on performance measure review while little attention to potential savings</b>.</p> <p>CC: Sep 2010: <b>I am not currently convinced that this is the answer to your perceived problem, and it is a contractual requirement of the contract</b>. However, in same letter showed interest in savings.</p> <p><b>I believe that we now need to put some pace into agreeing a way forward on reduced lighting standards, dimming and trimming, part night switching and LED lighting. All of these will require a collaborative approach to ensure successful delivery but could, I believe, yield significant cost savings to both parties.</b></p> <p>SP: Oct 2010: diagrammatic detail of issue provided</p> <p>CC: Nov 2010: <b>Problem is one of your own makings</b></p> <p>SP: Dec 2010: Threat to pull out of the contract “<b>if an agreement to mitigate our predicted £9m loss could not be found</b>”.</p> <p>(Meanwhile, government paper issued)</p> <p>CC: July 2011: <b>If you could accept all the proposals contained in this letter then we could look to relax the contractual asset replacement programme so that asset replacement could be smoothed over the remaining 17 years which you state will save you some £9m.</b></p> <p>SP: Sep 2011: Second counter proposal, request for review of performance measures including removal of block end dates.</p> <p>CC: Sep 2011: Removal of block end dates accepted; <b>no response related to performance measure review</b>.</p> <p>SP: Oct 2011: Third proposal. Request to fix number of photometric testing and <b>removal of 50% rule</b>.</p> <p>CC: Oct 2011: <b>Request to provide potential cost of savings to relax certain performance measure requirements. However, 50% rule cannot be changed as it is a contractual requirement.</b></p> <p>SP: Nov 2011: Disappointment with the way CC handled performance measure issue. “<b>The amount of potential cost of savings can only be provided if CC accepts the 50% modification proposal</b>”.</p> <p>CC: Dec 2011: Increased government pressure, acceptance to work for mutual benefit, changes to performance measures accepted. “<b>The authority was under pressure to save money. so that's the reason why we renegotiated at that time. Also, the benefits to the authority were greater then SPV</b>” (CC Participant no 2).</p>
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## **Chapter Nine: Conclusions and Contributions**

### **9 Introduction**

This final Chapter of this thesis presents how ANT concepts as a methodological tool enlightened my empirical findings. It then presents the summary of empirical evidence provided in chapters 5, 6 and 7 and demonstrates the contribution of the study. This study aims to extend the hybrid management control literature by adding new theoretical and empirical insights to the understanding of the ‘process of management control changes’ in the operational phase of public and private hybrid organisational (PFI) contract. The study examines how PFI hybrid partners manage management control changes during the operational stage of hybrid relations. In doing so, the study highlights the importance of interactions and interrelation between various actors (human and nonhuman) during the hybrid process of contract modernisation. Tracing the interpretations of hybrid relations, in turn, facilitates the understanding of key dynamics of hybrid relations and how actors manage them in practice.

The Chapter will proceed as follows.

Firstly, a brief recap of voids in hybrid management control literature is presented in section 9.1. followed by an outline of the case study context and research questions in sections 9.2 and 9.3, respectively. Section 9.4 presents how ANT concepts helped my empirical findings. Section 9.5 provides a summary of findings in relation to research questions set in chapter one. The contributions of the study are presented in section 9.6. Limitations of the study and future recommendations are presented in section 9.7. The thesis ends with concluding remarks in section 9.8.

## 9.1 Recap of gaps in hybrid management control literature

A detailed review and analysis of hybrid management control literature in Chapter 2 identified the following four gaps:

**Firstly**, there has been an extensive focus on the relationship between management controls and trust (see, e.g., Vélez et al., 2008, Langfield-Smith, 2008, Ditillo et al., 2015, ter Bogt and Tillema, 2016, Kastberg, 2016, Dudau et al., 2020, Reusen and Stouthuysen, 2020, Krause and Swiateczak, 2020), while lack of attention has been paid to ‘other relational mechanisms’ that can play important role in the management of hybrid relations (Grafton and Mundy, 2017). Free (2008) argued, and my observation<sup>118</sup> that in extant hybrid management control literature the concept of trust had been used in reference to other concepts such as reciprocity (this has been explained with reference to some recent examples of studies in Chapter 2 section 2.4.1). However, little is known about how reciprocity is practiced in hybrid organisational relationships.

**Secondly**, in hybrid organisational relationships, it is an implicit assumption that parties will work together for a long-term sustainable relationship<sup>119</sup>. Discussion in Chapter 2, section 2.3 clearly identifies that contribution in this area is mainly quantitative in nature, whereas in practice there could be various reasons or motives<sup>120</sup> to stay in a long-term relationship and that too change over time (please see section 2.4.2). The controls that hybrid actors design while entering in hybrid relationship may not be sufficient or appropriate for the sustainability of the relationship. Therefore, there is a need to understand how actors deals with such

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<sup>118</sup> This observation is based on studies published after 2008 (please see section 2.5.1).

<sup>119</sup> PFI contracts usually last for 25 to 30 years.

<sup>120</sup> For instance, good working relationship, fear, trust, ethics, and material interest.

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situations for the successful management of hybrid organisational relationship. Specifically in the context of differences in institutional logics of PFI hybrid organisational setting there is a need to understand how these organisations reconcile differences.

**Thirdly**, the purpose of hybrid organisational arrangements is to mobilise more resources and people to address the complex challenges our society faces (Koppenjan et al., 2019b). However, in practice, hybrids are created to tackle problems in society sometime, they fail to generate value (Madhok and Tallman, 1998). The extant literature has identified that the significant contributing factor to this failure is actually the way such arrangements are controlled and managed in practice (e.g., Anderson and Sedatole, 2003, Chua and Mahama, 2007, Mahama and Chua, 2016). Consequently, hybrid management control scholars remained focused on the control and management of hybrid forms with too much focus within the boundaries of hybrid organisational settings (please see section 2.4.3 Chapter 2). While with the exception of a few recent studies (Thambar et al., 2019, Dudau et al., 2020), gap<sup>121</sup> exists with regard to how hybrid organisational management controls *create value beyond the boundaries of a hybrid setting*.

**Finally**, drawing on Miller et al. (2008) definition of hybrids<sup>122</sup>, the review and analysis of hybrid management control literature for the last 14 years paid inadequate attention towards *hybrid processes* that enable the lateral flow of information.

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<sup>121</sup> The review of ANT-inspired management control literature in section 3.7 also identified similar gap. ANT-inspired has looked at intra and inter organisational level, how accounting perform at extra-organisational level remains to be known.

<sup>122</sup> "Hybrids can take the form of organisational arrangements that do not readily fit traditional models of hierarchies or markets, they can also take the form of hybrid processes, practices or expertise" Miller et al., (2008, p943), As such, hybridization can happen "whenever two or more elements normally found separately are combined to create something new" Miller et al., (2008, p961).

Moreover, from a review of ANT inspired accounting studies in the Chapter 3 section 3.6.2.1, it has been identified that much of the accounting change studies (see e.g., Mouritsen et al., 2001, Cuganesan and Lee, 2006, Mahama and Chua, 2016, Minnaar et al., 2017) have looked at the process of change that started with well-defined set of problem while the *process of crystallisation of the problem* remains to be known.

## 9.2 Recap of case study context

In response to repeated calls regarding more research on the control and management of public and private hybrid organisational relationships (see, e.g., Miller et al., 2008, Andon, 2012, Grossi et al., 2019, Ahmad et al., 2020, Caglio and Ditillo, 2021), the empirical setting of this study is Street Lighting PFI<sup>123</sup> project UK.

The 25 years Street Lighting PFI contract was majorly revised in 2012. The private sector actor (i.e., SP) identified misalignment between the intent of the original PFI contract and incorporated performance measures in 2010. The existence of the performance measure misalignment issue was initially discussed at SP intra-organisational level. The empirical evidence from this thesis shows how identification of the main problem and establishing its existence at the intra-organisational level was a complicated and complex procedure.

Afterwards, when this issue was communicated to public sector actors (i.e., CC), it created controversies and disagreements. This thesis provides empirical details of how public and private hybrid organisational actors dealt with controversies, how interests are aligned and how

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<sup>123</sup> It is important to re-emphasise here that *this is not PFI thesis*. It has used PFI relation to show complexity of public and private sector hybrid organisational relationships due to presence of different objectives and long-term nature of the relationship.

and what techniques they used to manage the performance measure changes in PFI contract for long-term sustainable relationship (summary of findings are presented in section 8.5).

The whole process of performance measures changes (the process of performance measure changes is called the ‘process of contract modernisation’) took three years. It started in February 2010, and a revised contract (i.e., a modernised contract) was signed in December 2012. Therefore, this thesis has focused on how actors in public-private hybrid organisational relations manage performance measure changes.

### **9.3 Recap of research questions**

To address the gaps in the literature, this study has explored at the hybrid process<sup>124</sup> of changes in performance measures of operational PFI contract under the umbrella of ‘contract modernisation’ to understand how public and private sector actors in hybrid relations managed those changes.

To achieve the aims of the study, I presented the following three research questions in Chapter 1, section 1.4:

Research question 1: How parties at the operational stage of a hybrid organisational relationship identified and established the existence of the performance measure problem in the original PFI contract?

Research question 2: How interests of the actors in hybrid relation are aligned to manage performance measure changes?

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<sup>124</sup> The process of change is hybrid control process as it enabled lateral communication and collaboration between PFI actors.

Research question 3: How and what method(s) actors in a hybrid organisational setting used to successfully manage the performance measure changes in the PFI contract?

Overall, the findings of the study identified that the Streetlighting PFI contract and incorporated performance measures needed a change due to misalignment between performance measures and contract objectives. The parties' desire for a sustainable relationship is required to solve this misalignment. The sustainability of the relationship in this study is achieved through "reciprocity" because parties enter in hybrid relations for economic reasons, i.e., public organisation (CC) for cost-savings and private organisation (SP) for profit-making through cost savings.

#### **9.4 Insights from using ANT concepts**

To understand the process of performance measure changes in PFI contract, this thesis has relied heavily on ANT concepts, i.e., translation (Callon, 1986, Latour, 1987), boundary objects (Star and Griesemer, 1989, Star, 2010), and convergence and irreversibility (Callon, 1990). These concepts have been applied to the stories that emerged from the empirical investigation (Chapters 5, 6 and 7).

This study has travelled back to when the modernised contract (or in other words, performance measure changes in the PFI contract) was reviewed as a possibility instead of a certainty (Chapters 5 and 6) and when the renegotiation of the original PFI contract was contested and controversial (Chapter 7). This study focused on re-opening the black box of the modernised contract to observe its emergence. As mentioned in section 4.1 that, the concept or metaphor of "attachments are first, actors are second" (Latour, 2005, p217) provides the researcher with methodological guidance for following actors and actants. Moreover, it presents a challenge to the ANT-inspired researchers to follow the actors no matter what direction they take

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(Justesen and Mouritsen, 2011). Therefore, the first step for data collection involved was a selection of main actor(s)<sup>125</sup>. Keeping in view the purpose of this study (section 1.4), I followed CC and SP<sup>126</sup>.

With regard to how ANT concepts (translation, boundary objects, and convergence and irreversibility) enlightened the analysis of empirical data, firstly, the notion of translation<sup>127</sup> as transformations and displacements (Callon, 1986, Latour, 1987) has been emphasised throughout this thesis. The concept is important to this thesis because it allowed this study to capture precise details of the process of contract modernisation. This would not have been possible using other theoretical approaches (section 3.8).

The transformation was especially witnessed from the identification of the performance measure problems to its crystallisation (Phase one, Chapter 5); and from the communication of the issues to CC to convincing them for contract renegotiation (Phase two, Chapter 5 and Phase three, Chapter 6); then from the renegotiation of the contract to sign the modernised contract (Phase four, Chapter 7). The process of contract modernisation was indeed a process of transformation. Callon (1986) suggested that the process of translation can cover all four moments or some of them, as translation can fail at any point in time. In this regard, this thesis has explicitly used the moment of problematisation, while intersement, enrolment and

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<sup>125</sup> “If socio-technical systems were the creation of heroic actors this choice would be vital; if networks were all that mattered, it would be trivial—any actor in the network would (eventually) lead us to all other actors and their intermediaries. Since actors and networks are mutually constructed the choice is constrained by the *focus of study*” (Jones and Dugdale, 2002, p125).

<sup>126</sup> Rather than focussing on individual actors, similar to Skærbæk, P. 2009 study, which considered ministers and parliament department as an actor, in this study, CC and SP are considered ‘main actors’.

<sup>127</sup> The concept of translation has been loosely defined by Latour (1999a, p179) as “displacement, drift, invention, mediation, the creation a link that did not exist before and through which things that were previously different are made equivalent”. This is then simplified by Latour (2005) to include any movement by an actor in space and or time, which is visible through attachments that lead an actor in whichever direction is desired.



mobilisation (Callon, 1986) are implicit in the discussion of boundary objects (Star and Griesemer, 1989, Star, 2010) and convergence and irreversibility (Callon, 1990). These are elaborated below:

This study consists of a series of problematisation (Callon, 1980), and the critical starting point was '*establishing the existence of the performance measure problem*' at SP intra-organisational level (Chapter 5). Following actors, no matter what direction they take, allowed this study to identify that, unlike other studies (see, e.g., Mouritsen et al., 2001, Cuganesan and Lee, 2006, Mahama and Chua, 2016, Minnaar et al., 2017), that looked at the process of change with a well-defined set of problem, establishing the 'existence of the problem' itself was not an easy task. Unpacking the process using the lens of ANT highlighted the lack of understanding of various actors involved in bidding on the contract (Chapter 5). As a result, those actors did not accept that problem existed. This finding allowed contribution to theory (please see section 8.7.4). The study provides some interesting new characteristics to the understanding of 'problematisation'.

For this reason (misaligned performance measure problem), 'modernised contract' was then problematised as a solution for the performance measure problem (Chapter 5). However, unlike Callon (1986) study, where three researchers were could successfully establish themselves as obligatory passage points given the technology was used successfully in breeding scallops in Japan, the SP could not establish itself as the obligatory passage point due to many uncertainties, in particular the contractual terms of the PFI contract (Chapter 6).

To persuade CC for contract renegotiation, SP offered savings through contract modernisation (Chapter 5, section 5.3.1). The concept of boundary objects (Star and Griesemer, 1989, Star,

2010), in particular, the notion of visionary boundary objects (Briers and Chua, 2001) played an important role here in understanding how actors from two different organisations with different objectives and thought process achieved reconciliation of interest for sustainable relationship (Chapter 6).

The concept of boundary objects allowed comparing various actors' thought processes and how it changed over time. As visionary boundary objects are 'conceptual objects' that give rise to 'emotive' and 'affective' responses..... (Briers and Chua, 2001, p242). Considering SP and CC actors as black boxes showed how various actors, even as a part of the same organisation, can have diverse reasons for staying in a long-term relationship, which also changes with time and the practicalities of the situation. For instance, the case illustrates that actors exercised their desire for a sustainable PFI relationship in various ways: e.g., through a good working relationship between SP and CC project managers (section 6.1); using performance measure problems by CC as an opportunity to solve other problems (section 6.2); threats and negative ways of bidding team for material interest (section 6.8), and through the search for "making cost savings" (another visionary boundary object) in PFI project (Section 6.6).

The concept of 'convergence and irreversibility' in Chapter 7 captured the precise mechanism that PFI actors used to create 'durable', 'stable' and 'irreversible' contract (Callon, 1990). The notion of 'convergence' facilitated understanding of the role of reciprocity in forming a convergent network. Sections 7.1 to 7.6 depicts that through reciprocity, actors were enrolled in a bundle of relationships. Unlike prior studies that identified the role of trust in the management of hybrid organisational relations, the concept of 'convergence' showed how, without a 'give and get' situation, there was a significant threat to the sustainability of the PFI relationship. In the absence of such an approach, one can fall into the trap of, e.g., trust, which

has also been identified as ex-post labelling of personal effects by the actors involved in hybrid organisational relations (Grafton and Mundy, 2017).

Once the convergent network is formed through reciprocity, the notion of ‘irreversibility’ helped in understanding the creation of ‘durable’, ‘stable’ and ‘irreversible’ contract (Callon, 1990). This allowed me to focus on a variety of actors (e.g., public and police etc.) whose involvement can contribute to irreversibility (section 7.7). According to Callon (1990), the extent of irreversibility depends on the presence of heterogeneous actors. Moreover, the notion of ‘irreversibility’ also facilitated the understanding of how actors normalised the modernised contract through predictability of requirements and maximum and minimum thresholds (section 7.6) and how strict rules through designing new contractual requirements resulted in the disqualification of alternative translation (section 7.6).

The reflection on data collected from interviews and document analysis allowed this study to divide the whole process of contract modernisation into four phases (Chapters 5, 6 and 7). It is also important to mention that in this study, the four phases are not divided according to Callon (1986) four moments. Phases one and two are relation to the problematisation at SP intra and hybrid levels, respectively (Chapter 5). Phase two is about the role of boundary objects in interest alignment (Chapter 6), and the final phase is about how actors were enrolled to form a convergent network and create the irreversible contract. A summary of the four phases is presented in the next section.

## **9.5 Summary of findings**

This section summarises the findings of the three empirical chapters, 5, 6 and 7, as well as provides a deeper understanding of them. The section highlights the findings of the study that

the Streetlighting PFI contract and incorporated performance measures needed a change due to misalignment between performance measures and contract objectives. To solve this misalignment, joint desire for a sustainable relationship is required. The sustainability of the relationship in this study is achieved through reciprocity because parties enter in hybrid relations for economic reasons, i.e., public organisation (CC) for cost savings and private organisation (SP) for profit-making through cost savings.

The methodological approach of “we follow the controversies that reopen them” (Latour, 1987, p258) resulted in following CC and SP actors no matter what direction they take. As such, this study that started with understanding management of management control change at the *hybrid level* has to take a step back and look at *SP local level* because it has been identified that initially, nobody was accepting that any problem existed that required re-contracting.

In chapter 5, interview evidence together with document data sources is used to understand the process of crystallisation of the problem in order to identify why the Streetlighting PFI contract needed a change after nine years of implementation. The story moves from the historical origin of the problem, where none of the actors was accepting it as a problem, to its eventual acceptance as a problem at the end of phase one.

Phase one provides an understanding of how misaligned performance measures manage to engage the actors around the establishment of the problem in a PFI hybrid setting. The misalignment of performance measures with the intent of the contract was not a pre-existing category waiting to be discovered by the actors; rather, the issue crystallised through an elaborate process of efforts of various actor groups.

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As such, phase one is about the struggles of how the main translator (participant no 7) gained acceptance from other actors that the problem existed. This phase also presents different shapes and forms of the performance measure problem until it is well-defined at SP intra-organisational level. Initially, he identified the difference between a number of columns that require replacement according to the original contract and a number of columns that actually needs replacing due to condition and age. He identified a massive difference between both. He communicated the difference to his 'boss', who immediately responded, 'we are working fine'. He then prepared a document explaining the qualitative details of the issue. But that document failed to mobilise the interest of the actors that the problem existed. The bidding team, senior management, and the legal team questioned his understanding of the contract. At that point, he was not confident and started questioning his own interpretation of the issue. The original contract and performance measures thus created instability at SP local level.

Therefore, he (participant no 7) constructed a performance measure problem through another document called the 'forecasted model'. But this time, he put the 'price tag' of £9 million as a potential financial impact of the issue in that document. The difference between the first and second documents was that the former included the qualitative detail of the issue. That document explained the difference between work required as per contract and work required in practice. It showed that the main reason is due to a clash between three performance measures (one, three and five). The second document, through graphs, charts and price tag of £9 million, explained how one clause '50% rule' of 'performance measure three', was causing all problems. Moreover, participant no 7 also showed how the '50% rule' could cost £9 million to the SP if they continued working under the performance requirement of the original contract. This document attracted the attention of the legal team, and it was the 'dawning realisation' that problem existed. The legal team then convinced senior management and the bidding team

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that ‘yes’, his (participant no 7) interpretation was correct, and the problem exists. It shows that numerical inscription was more convincing than qualitative inscription at the intra-organisational level.

Phase two involves the communication of the performance measure problem to CC. Findings identified that initially, SP sent the first document, i.e., ‘qualitative details of the issue’. SPV<sup>128</sup> knew that it was a serious issue. Therefore, they problematised contract modernisation as a solution to the performance measure problem (Callon, 1986). They offered some savings if CC agreed to renegotiate the contract (this shows the first evidence of reciprocity) (see table 9.1). However, CC refused to enter into contract renegotiations and blamed SP for their lack of due diligence at the time of signing the contract despite having ample opportunity.

At the end of Phase two, SP forwarded financial details of the issue through the ‘forecasted model with price tag’ document to show CC how serious the issue was. Phase three showed that the potential impact of a £9 million loss as a result of the ‘50% rule’ was considered a threat to long-term sustainable PFI relationship. Different actors at both organisational levels showed that desire in various ways ranging from ‘good working relationship’ and ‘economic reasons’ to ‘adversarial methods’ in order to keep the relationship going. At the Street Lighting PFI project, this desire was robust enough to bring SP and CC actors together despite differences. At the same time, it was flexible so that SP and CC could adapt it according to their needs or requirements of the situation (Star and Griesemer, 1989, Star, 2010). It was translated through a series of events at the SP local level and between SP and CC.

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<sup>128</sup> Document analysis showed that nearly all formal documentation is forwarded by SPV. For example, forecasted model was produced on letter head of SP. But when forwarded to CC, the covering letter was from SPV.

For instance, CC legal team convinced them that rather than terminating the contract, they should investigate at what SPV could offer them under contract modernisation. So, the boundary role of ‘desire for sustainable relation’ brought cost-saving matters into the conversation. It seemed as if two parties started working towards a ‘sustainable relationship’ through renegotiations. The case illustrated that SP made efforts to reduce the impact of the £9 million loss and CC wanted to know how much they would get if they amended the contract (second evidence of the reciprocity).

The first contract modernisation proposal showed SP interest in reducing the impact of the ‘50% rule’, and less attention was given to resultant savings. The CC wanted to know their share of savings, so they wanted to see through ‘diagrammatic details’ how SP has calculated the cost and how amendments can result in savings. Based on the information provided, CC did their work and raised questions regarding the validity of the data provided by SP. Hence, it refused to amend the ‘50% rule’. However, they agreed to work towards modernisation and recommended areas that can be used to ‘make cost savings’ and to reduce the impact of £9 million for SP. Hence, showed that they have a ‘desire for a sustainable relationship’. The independent accounting firm further affirmed this response of CC that if SP has a ‘desire for a sustainable relationship’, they should find alternative ways of reducing the impact as ‘50% rule’ is a contractual requirement.

SP’s response was quite intense as they informed CC that they would withdraw from the contract ‘if an agreement to mitigate predicted £9 million loss could not be found’ (third evidence of reciprocity). They knew that CC was under pressure of ‘cost saving’ from the government and stepping back from the ‘relationship’ was not affordable. Therefore, they used the CC situation as an opportunity to achieve their objective of ‘making cost savings’. High

expenditure and low income of PFI due to austerity increased the pressure on PFI to ‘make cost savings’. At that time government inscription ‘making savings in operational PFI contracts’ played an active role. The quality of mobility, stability and combinability of government paper (section 8.6) influenced the CC decision to go ahead with contract modernisation at the end of phase three (Latour, 1987, Robson, 1992).

Empirical chapter 7 presents details of Phase four. This phase is all about proposals and counter-proposals until both parties agreed upon changes in the original contract. This phase has highlighted the fundamental role of the relational mechanism of reciprocity in managing the performance measure issue. However, reciprocity did not emerge during this phase as I have already provided evidence of its emergence during phases one and two. Phase four sheds further light on how without a ‘give and get’ situation, management of performance measure issues was impossible.

At the start of Phase four, CC officially confirmed SP about their willingness toward contract renegotiations, followed by a second cost saving proposal in May 2011. Similar to SP, whose proposal was mainly to review the performance measures, CC emphasised more cost savings issues and how government requirements should be met. They proposed areas like dimming and reduction in nighttime patrols etc. The purpose was that these energy-saving measures would reduce energy costs and bring cost savings. But SP did not respond to this proposal. In July, CC sent its third cost-saving proposal. In this proposal, they focused on how SP and CC both can get benefit through, for example, gain sharing in various areas. Since SP did not reply to the second proposal and legal team also informed CC about SP's intention of contract termination. This time CC mentioned that through the logic of reputation, contract termination



would not bring any benefit. They agreed to review performance measures if SP accepted their cost-saving proposal (fourth evidence of reciprocity).

In September 2011, SP showed their agreement towards renegotiation, followed by a second counter-proposal. In addition to the review of all performance measures, they requested the removal of the '50% rule' completely and block end dates. In response to the SP counter-proposal, CC accepted the removal of block end dates, but there was no response regarding performance measures. In October 2011, SP sent a third proposal and asked for changes related to specific performance measures, for example, requested to fix a number of photometric testing and 50% rule modifications. In response to this, CC requested potential cost of savings from the modernisation exercise so that they can relax certain performance measures (fifth evidence of reciprocity). In November 2011, CC sent their fourth proposal. As they accepted block end dates, they increased the percentage of their share in savings due to a reduction in SP liability. They refused to change the '50% rule', by claiming that it was a contractual requirement.

SP was really disappointed with the way CC handled their problem and clearly mentioned that potential cost of savings can only be provided if CC accepted their 50% modification proposal (sixth evidence of reciprocity). The document analysis identified that the calculation of savings is a complex area, and CC could not calculate it due to lack of expertise in the area. Therefore, CC afterwards agreed to the changes. Moreover, due to contract modernisation, different benefits were received by the two parties, for instance, £11 million for CC but £9 million for SP. This was another reason why CC agreed for '50% rule' modifications. Hence, both parties officially agreed to changes. '50% rule' was modified according to the requirements of the SP. The modernised contract not only brought cost-saving benefits to both parties, but the

unintentional impact was that it resulted in wider environmental benefits through a reduction in CO<sub>2</sub> emission. The reason is that SP intended to amend the '50% rule' to avoid the potential cost of £9 million. CC entered into renegotiation due to massive government pressure followed by the credit crisis of 2008. Through reciprocity, both parties achieved what they wanted. However, the measures they introduced for cost savings, for example, dimming technology, modern LED technology, reduction in nighttime patrols and maintenance visits, reduced the CO<sub>2</sub> emission. Therefore, the modernisation of contract proved to be beneficial for the environment at large.

This section has summarised the findings of the thesis. The following section presents how the results of this study fill gaps in hybrid management control literature as identified in Chapters 2 and 3 of this thesis and contribute to the literature.

## **9.6 Contribution of the Study**

In the previous section, I have located this study in wider hybrid management control literature. This section presents briefly and clearly the contribution of the study.

This thesis responds to the continuous calls for more research to explore the process of accounting change (Hopwood, 1987, Briers and Chua, 2001, Weichselberger and Lagström, 2021, Grossi et al., 2019, Andon et al., 2007, Caglio and Ditillo, 2008), specifically hybrid process (Miller et al., 2008, Thambar et al., 2019) in the context of public-private sector hybrid setting (Miller et al., 2008, Caglio and Ditillo, 2021, Kurunmäki and Miller, 2011, Ahmad et al., 2020, Grossi et al., 2019, Andon, 2012) in order to understand techniques/method/approach that actors use to successfully manage management control change for sustainable long term

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hybrid organisational relationship (Kastberg and Lagström, 2019). In this respect, this study makes several contributions to the hybrid management control literature<sup>129</sup>.

### **9.6.1 Enabling role of management control beyond the boundaries of hybrid organisational setting**

Enabling role of management controls has been extensively explored in hybrid management control literature (Busco et al., 2017, Kastberg, 2014, Kastberg and Lagström, 2019, Kurunmäki, 2004, Kurunmäki and Miller, 2006, Kurunmäki and Miller, 2011, Mahama and Chua, 2016, Miller et al., 2008, Mouritsen et al., 2001, Minnaar et al., 2017). Previous studies have shown that hybrid management controls have intra-organisational effects and vice versa (see, e.g., Mouritsen et al., 2001, Cuganesan and Lee, 2006, Zawawi and Hoque, 2020) (section 2.4.3). In a similar vein, this study shows how enabling power of SPs' problem (i.e., intra-organisational management control problem) brought benefits for both parties in a hybrid organisational setting in terms of cost savings.

ANT principle of generalised symmetry enabled me as a researcher to follow humans and nonhumans, keeping in mind that everything is capable of exerting force<sup>130</sup>. Empirical chapter 5 presents that misalignment of performance measures with the intent of the original contract could have resulted in a financial impact of £9 million for SP. However, for CC contract was working as it should. The 'performance measure problem' behaved in an unexpected way and generated hybrid organisational effects. Both parties, while reviewing the contract, identified

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<sup>129</sup> Hybrid management control literature is also termed as interfirm management control literature and inter-organisational management control literature.

<sup>130</sup> "To insist on symmetry is to assert that everything deserves explanation and, more particularly, that everything that you seek to explain or describe should be approached in the same way" (Law 1994, pp9-10).

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areas that not only reduced the impact of £9 million for SP but also created cost savings opportunities (approx. £11 million) for CC through using modern LED technology, dimming facilities, replacement of thermal cells, and introduction of part-night streetlights etc. (section 7.6). As such, the intra-organisational management control problem created hybrid organisational effects in the form of cost savings for both organisations.

In addition to enabling role of management controls in creating intra and inter organisational effects, recently, few hybrid management control studies (Thambar et al., 2019, Dudau et al., 2020) empirically showed how hybrid organisational controls can create value beyond the boundaries of hybrid setting (section 2.4.3). Moreover, Vakkuri et al. (2021) and Grossi et al. (2021) provided theoretical insights related to the value-creation role of hybrids (section 2.4.3). Similarly, this study made an interesting observation that the performance measure problem performed and resulted not only in generating benefits to hybrid organisations (i.e., SP and CC) but also to the environment at large (section 7.8.2.2).

The energy conservation measures (e.g., dimming facilities to 41000 streetlights units, control of all day burning signs, the introduction of part-night streetlights of 6400 units etc.) as a result of contract modernisation reduced CO<sub>2</sub> emission by 3500<sup>131</sup> tonnes (section 7.8.2.2). The original PFI contract was written in a very prescriptive manner that did not allow parties to take benefit of modern technology. The contract was very specific in certain features, e.g., the type and resolution of bulbs that they are allowed to use. Unlike private-private hybrid relations, where parties can amend contracts keeping in view the practicalities of the situation (see e.g., Minnaar et al., 2017), changes in PFI contracts are complicated affairs due to the involvement of heterogeneous actors (Demirag and Khadaroo, 2011).

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<sup>131</sup> Exact figure cannot be disclosed due to confidentiality of data.

Moreover, my argument of the value creation role of the performance measure problem (i.e., accounting problem) is based on the fact that, if that problem had not happened, parties in hybrid relations would have continued working according to the original strict contract specifications. Consequently, they would not be able to create the value they could generate by adopting modern technology. In this way, the performance measure problem behaved unexpectedly and generated value beyond the boundaries of the public-private hybrid setting. As such, this study contributes to ANT-inspired accounting research by showing active role of “management control problem” in generating extra-organisational effects (see section 3.7 for gaps in ANT-inspired accounting research).

It can be argued that modern technology will undoubtedly reduce energy consumption. However, I contend that expectations and intentions do not match. In this study, of course, it was expected that the energy-saving measures introduced as part of contract modernisation would lead to a reduction in carbon emissions, but this was not the intention of the parties when entering into renegotiations. The contract was amended for economic reasons (sections 6.5, 8.6.4 and 8.6.5). There were no intentions of improving environmental conditions through a reduction in carbon emissions. The impact has been classed as unintentional because:

- 1- SP wanted to resolve their issue of performance requirements.
- 2- CC wanted to make savings to meet government requirements of cost savings.
- 3- There was not any point or clause in the original contract regarding the reduction in CO<sub>2</sub> emission.
- 4- None of the emails, documents and correspondence showed in any shape or form that they also wanted to reduce carbon footprints.

Therefore, unlike Thambar et al. (2019) and Dudau et al. (2020), in this study, the way parties designed the solution to the performance measure problem *unintentionally*<sup>132</sup> resulted in wider environmental benefits in terms of reduction in carbon emission. As such, this study shows how hybrid organisational ‘management controls problem’ created value beyond the boundaries of the hybrid setting, albeit unintentionally. In this regard, this study extends the research on enabling role of accounting by showing ‘more enabling’ properties (Hopwood, 1987) of management controls beyond the boundaries of a hybrid organisational setting. In doing so, it responds to calls of Dekker et al. (2016) and Thambar et al. (2019) regarding the role of management controls beyond the boundaries of a hybrid organisational setting. More broadly, it also responds to recent calls regarding the implication of accounting for addressing wicked problems (Jacobs and Cuganesan, 2014, Steccolini, 2019, Thomasson et al., 2020).

This contribution has practical implications for the designer of the contracts as well. On the one hand, designing specific contracts can provide clear guidelines regarding expected performance. On the other hand, it does not allow organisations to create the value that society expects from them.

### **9.6.2 Various interpretations of actors’ ‘desire for sustainable relationship’ over time**

In PFI hybrid organisational setting the combination of commercial imperatives with public values makes such relationships complex (see, e.g., Grossi et al., 2021, Vakkuri et al., 2021). The differences in these logics affect the way organisational actors behave and take decisions (Dunn and Jones, 2010). This means that organisational actors could have different perceptions

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<sup>132</sup> In accounting research, the concept of “unintended consequences” has widely been discussed, for instance, in the context of performance measures, see, e.g., Demirag, (2004), Mannion and Braithwaite, (2012) etc.

regarding what is an appropriate solution to a problem. Conflicts and disagreements could occur due to different thought processes. The review and analysis of literature (please see chapter 2) has identified that the scholars (Dekker, 2008, Ditillo et al., 2015, Krause and Swiateczak, 2020) have shown that to reconcile these differences actors in hybrid organisational settings design various controls while entering in relationship, e.g., designing detailed contracts, trust-based controls and selection of good partner. These controls allow them to take a long-term perspective towards the sustainability of the relationship (Cristofoli et al., 2010, Ditillo et al., 2015). However, having a desire or intent for collaboration does not mean that actors have positive intentions for staying in hybrid relations. The intention could be positive or negative depending upon the context. For example, it could be for material interest, fear and coercion or because of past experience etc. (Nooteboom, 1996). In that sense, it shows various interpretations of term ‘desire for a sustainable relationship’.

For instance, Marques et al. (2011) empirically demonstrated that actors can behave opportunistically at any stage of the relationship. As a result, ex-ante designed management controls may not be appropriate. Moreover, there are always loopholes in contracts, no matter how detailed they are (see. e.g., Minnaar et al. (2017) and Ahmad et al. (2020)). Which means long-term perspective as claimed by quantitative contributions might not be workable during the life of hybrid organisation relationship. Similarly, in case of trust-based controls<sup>133</sup>, how actors act in practice given they are organisational agents whose responsibility is to act in best interest of the organisation despite having confidence and trust in other party (inter-personal trust). How hybrid organisational relationship continues in a situation of ‘trust Vs

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<sup>133</sup> Trust-based controls are characterised by long-term non-specific contract, supported by personal consultation and continuous communication to ensure that other party will not behave opportunistically (Langfield-Smith and Smith 2003).

organisational duties’? What are the reasons or motives that help hybrid organisational actors to take a long-term perspective? This highlights that the complexity and fluidity of the reality which may have been neglected by scholars assuming linear perspective.

This thesis using concepts of boundary objects (Star and Griesemer, 1989, Star, 2010), contributes to hybrid management control literature by presenting various shades of actors desire for staying in relationship and how those desires changed over time and aligned the interest of the actors to resolve performance measure problem. Hence answers the second research question, i.e., how the interests of the actors were aligned in the PFI hybrid setting to solve the performance measure problem (Section 1.4).

The findings show how SP and CC actors had different reasons for staying in the long-term sustainable relationship, which also changed over time. Chapter 6 illustrated how both parties cooperated to solve the problem despite having different logics of staying in a PFI relationship. For instance, from SPs’ perspective, the ‘desire for a sustainable relationship’ varied from bonding to internal economic reasons, while for CC, it varied from bonding to external economic reasons.

For instance, from SP’s perspective, upon discovering the performance measure problem, the operational staff wanted to stay in a long-term relationship because of a ‘good working relationship’ (section 6.1). When CC refused to change performance measures due to contractual requirements, ‘desire’ to continue working was simultaneously based on reputational, legal and economic consequences (section 6.8). Finally, they agreed to CC



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demands because of internal pressure<sup>134</sup> of ‘making cost savings’<sup>135</sup> that they could get as a result of re-contracting (section 6.9).

From the perspective of CC, when SP communicated performance measure problems, for operational staff, the desire for a sustainable relationship was a “good working relationship” (section 6.2); for senior management, it was a “fear of authority” to go against contractual terms (section 6.6). Afterwards, they agreed to renegotiate due to external pressure<sup>136</sup> of ‘making cost savings’ (section 6.6 and 6.7).

On account of the above illustrations, this thesis contributes to hybrid management control literature by identifying various interpretations of parties’ ‘desire for a sustainable relationship’ and how that desire changed over time from ‘bonding’ to ‘economic reasons’ depending upon the practicalities of the situation (Chapter 6).

### **9.6.3 Relational mechanism of ‘RECIPROCITY’ for the management of hybrid organisational relations**

The previous section clearly shows that hybrid organisational actors could have different reasons for staying in long-term sustainable relationship i.e., from good working relationship to economic reasons. When referring to collaborative or good working relationships, the term trust has often been used in hybrid management control literature (Free, 2008) (chapter 2). This is due to the development of emotional attachment and mutual interpersonal concerns over time

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<sup>134</sup> Here internal pressure means pressure of profit making from project at intra-organisational level.

<sup>135</sup> ‘Making cost savings’ emerged from data due to interviewees mentioned at various occasions that they want to make cost savings that could occur as a result of misalignment. Moreover, at CC level since SPV offered them savings through modernisation of contract, this term ‘making cost savings’ then became the center of discussion in all negotiations. Moreover, the issuance of government paper reaffirmed the use of this term by actors during contract renegotiations.

<sup>136</sup> External pressure means pressure from government for cost savings.

(i.e., affective-based trust) (please see section 2.4.1). In this regard, studies has promoted that these trust practices allow the actors to resolve issues that occur during the life of relationship (see, e.g., Ahmad et al., 2020). However, it is evident from the findings that when performance measure issue identified PFI partners has good working relationship<sup>137</sup> as project has been operating successfully for the last 7 years. This shows that contrary to hybrid management control literature, as an organisational agent CC actors could not renegotiate the contract despite having strong connection and established relationship with SP actors.

Therefore, this thesis argues that when it comes to organisational duties, the roles and responsibilities of actors takes precedence over interpersonal trust or good working relationships. In response to this argument one can claim that the literature also highlights the cognition-based trust perspective, i.e., selection of competent partner and designing detailed contract provides long term perspective and contribute towards sustainable relationship. However, scholars have also argued that the opportunistic behaviour of hybrid organisational partner and loopholes in contract during the operational stage of relationship cannot be ignored (see, e.g., Marques et al., 2011, Ahmad et al., 2020). Which means that ex-ante designed controls might not be appropriate during the operational stages of the hybrid relationship. In this regards, these studies provide limited understanding of how actors deal with changes in management controls in case any issue arises. Moreover, when the hybrid relation is between public and private sector organisation how actors respond to multiple logics (i.e., public value Vs profit making)? This is because either scholars have taken a quantitative perspective and collected data at one point in time (Dekker, 2008, Ditillo et al., 2015) or have not taken a

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<sup>137</sup> It is important to re-emphasize here that in this thesis I have used phrase “good working relationship” and not “trust” because none of the interviewee said or used the word “trust” to define the relationship.

process-based approach to capture how exactly hybrid organisational actors deal with management control changes in practice (Minnaar et al., 2017, Ahmad et al., 2020)?

Through the lens of the ANT concept of convergence and irreversibility (Callon, 1990), this study followed the actors as they circulated intermediaries (i.e., proposals and counter-proposals) (Chapter 7). This approach allowed capturing precise mechanisms that have so far received limited attention (e.g., Ahmad et al., 2020). Findings identified that both parties were involved continuously in the 'give and get' situation. The strict contractual terms of original PFI contract restricted ability of CC actors to enter in contract renegotiations in spite of having good working relationship. However, when government pressurised councils to make savings in operational PFI contract, CC actors enrolled and changed their contractual approach to the relational approach and formed a convergent network through reciprocity.

The concept of reciprocity is different from traditional perspective on trust and long-term perspective. While trust is an emotional value attached to actor/multiple actors (Minnaar et al., 2017) reciprocity, “specifies that one should repay help with help, or at least not repay help with harm” (Meeker, 1984 P.227). That shows reciprocity is logical and requires understanding something without involving emotions and addressing an issue with proof.

With regard to contractual or long-term perspective one can argue that hybrid organisational contracts are logical as they are formed between mutually agreeing parties, so that rights and obligations of each party are related. Therefore, the existence of contract allows the parties to take long-term perspective towards the relationship. However, the literature provides limited understanding regarding how these contracts are designed (either at the start of relationship or after renegotiation) and the negotiation phase involved during that process. The studies that

have focused on renegotiation phase implicitly acknowledged the role of reciprocity<sup>138</sup> (see, e.g., Ahmad et al., 2020, Minnaar et al., 2017). In this regard, gap exists how reciprocity works in practice.

This study provides a thick evidence by showing a detailed contract renegotiation phase where parties were continuously involved in the ‘give and get’ situation through proposals and counter-proposals (please see table 9.1).

**Table 9.1:** empirical evidence of role of reciprocity during the process of contract modernisation

<p><b><u>First evidence:</u></b></p> <p>SP offered some savings through modernisation if CC agree for renegotiation (Chapter 5).</p> <p><b><u>Second evidence:</u></b></p> <p>SP made efforts to reduce the impact of £9 million loss and CC wanted to know how much they get if they amend the contract (Chapter 6).</p> <p><b><u>Third evidence:</u></b></p> <p>SP informed CC that they will withdraw from contract ‘if an agreement to mitigate predicted £9 million loss could not be found’ (Chapter 6).</p> <p><b><u>Fourth evidence:</u></b></p> <p>CC showed agreement to review performance measures but only if SP accept their cost saving proposal (Chapter 7).</p> <p><b><u>Fifth evidence:</u></b></p> <p>CC requested potential cost of savings from modernisation exercise so that they can relax certain performance measures (Chapter 7).</p> <p><b><u>Sixth evidence:</u></b></p> <p>SP clearly mentioned that potential cost of savings can only be provided if CC accept their 50% modification proposal (Chapter 7).</p>
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As such, this study empirically (chapter 5, 6, 7) presents how reciprocity works in practice in public and private hybrid relationships during the process of contract modernisation. Table 9.1

<sup>138</sup> For details, please see section 2.4.1 and 8.7.

presents the six pieces of evidence of reciprocity identified in the management of performance measure change in the Street Lighting PFI contract. This study, therefore, contributes to hybrid management control literature by empirically showing the fundamental role of the relational mechanism of reciprocity in enabling a complex set of PFI actors to reduce the complexity of hybrid relations and allow an action for the management of performance measure change.

Overall, the study shows that hybridity influence reciprocity because of competing logics between public and private sector organisations that resulted in actors having different motives towards long-term sustainable relationship.

#### 9.6.4 Re-opening the black box of ‘THE PROBLEM’

This study has used Callon (1986) concept of translation<sup>139</sup>, to understand the contract and incorporated performance measure changes as a process of translation. Callon (1986) defines the first moment of translation as ‘problematization’:

“The researchers sought to become indispensable to other actors in the drama by defining the nature and the problems of the latter and then suggesting that these would be resolved if the actors negotiated the ‘obligatory passage point’ of the researchers’ programme of investigation” (Callon, 1986, p196).

In other words, during problematization, the main translators identify the problem, seek to include other actors, define their roles and realise that they have a viable solution or definition for the problem. In the context of Callon’s study, the scientists initially problematised the fishermen’s issues and offered a possible solution. Scientists problematised because they were seeking to advance knowledge regarding scallops and fishing. The issue of depleting fishing stock was a problem of fishermen. Therefore, the scientist took this opportunity for positioning themselves as indispensable and proposed the domestication of scallops as a solution. In his study, translation started with a well-defined problem, i.e., the declining population of scallops. Similarly, hybrid management control scholars followed Callon’s footsteps by starting the translation process with a defined set of ‘problems’, e.g., unfair performance measures (Minnaar et al., 2017), warehousing and distribution costs (Mahama and Chua, 2016) (section 8.2) etc.

However, no previous study, to the best of my knowledge and through extensive literature review, has empirically explored the process of crystallisation of ‘the problem’. We do not

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<sup>139</sup> In this study the concept of translation is not used in chronological sequence, rather as a continuity of displacements.

know how the black box of ‘the problem’ is assembled. This study has shown how the performance measure problem became real and translated from ‘non-existence’ to ‘real existence’ (Chapter 5). This is important as, in this study, the process of understanding the problem's existence showed the lack of understanding of the actors who played a critical role in bidding the contract. That is why they were not accepting that problem existed (5.2.2). This highlights that not every translation/change needs to start with a well-defined set of problems, where all the actors show agreement regarding the existence of ‘the problem’. Hence, establishing the existence of the performance measure problem adds to the theoretical development of the translation concept of ANT.

This contribution has practical implications, specifically in public and private hybrid relations where contracts are very specific and lack flexibility. Bank loans for financing typically have a long payback period, which may result in a long service contract that is difficult to amend. Here the skills and capabilities of actors play an important role—for instance, the actor who places a bid for a particular contract. Therefore, it highlights the importance of carrying out due diligence when bidding and signing the contract.

## **9.7 Limitations and future research**

As with all studies, this thesis is not without limitations, and however, it does highlight several promising avenues for further research.

Firstly, there is a limitation regarding the reliability of interview data. As in-depth interviews were conducted with operational staff of CC and SP, one issue with using this method is that human actors know how to portray themselves. To keep the organisation's image, it is possible that they have said what they believe and not actually what they do or have done in practice. However, I asked for concrete examples and descriptions of actual situations to deal with this

issue. Moreover, by triangulating, the bias could have been alleviated, and interviewees' answers validated. For example, documents (emails and letters) used during the contract modernisation helped deal with this limitation.

Second, the evidence for this research has been gathered using a qualitative methodology. This is appropriate given the research question and a review of existing hybrid management control literature. It is, however, possible that the findings might not be generalisable based on the research methodology. A major criticism of qualitative research methods has been the inability to generalise results, especially with the single case study approach employed in this study. However, the case study approach considers the context of the study, which is critical in this study. It has also been argued that the knowledge generated by qualitative research has considerable value on its own. Hence, a problem related to generalisability is likely to have little relevance to the research goals and the reality of the situation (Myers, 2000). Moreover, it is believed that the first and second limitations can be overcome by adopting an ethnographic perspective to get an in-depth understanding of the process of change management.

Thirdly, SPV plays a fundamental role in the PFI contract. I could only collect interview data from CC and SP. However, analysis of emails between SPV and CC has presented their role and perspective on the performance measure issue and helped overcome this limitation. It would be beneficial to include their view in future studies.

Finally, in this study, CC, on various occasions, raised concerns regarding the due diligence of SP at the time of signing the contract and at the time of takeover (section 4.3). It is argued that if SP had done due diligence, they would have analysed this issue earlier. Also, from the literature review, it has been identified that re-contracting happens in hybrid relations where suppliers find issues related to performance measures during operational stages (e.g. Ahmad et al., 2020, Minnaar et al., 2017). Moreover, from the literature review, I identified that most of



the literature had remained focused on the buyer's perspective regarding selecting a partner. A promising area for future exploration could be why suppliers select particular hybrid relations. What control system do they use before analysing whether they should enter into a relationship or not? How do they do due diligence to avoid future re-contracting?

## **9.8 Concluding remarks**

This study is concerned with understanding the process of performance measure changes in the public-private hybrid organisational contracts. Motivated by controversial public and private sector hybrid organisational relationships and, more broadly, by repeated calls regarding control and management of hybrid organisational relationships, this study has made an effort to make some broad contributions in addition to a specific one. The theoretical framework for this study was drawn broadly on the sociology of science and technology literature and is specifically grounded in translation, boundary objects, and convergence and irreversibility concepts of ANT. These ANT concepts directed the focus of enquiry on the process of contract modernisation in order to understand the contract and incorporated performance measure changes as a process of translation. I followed CC and SP actors to understand the construction of the durable and irreversible contract. Finally, drawing on interviews and documents' data and informed by ANT concepts, I identified the further contributions of this study. By doing so, this study has aimed to contribute theoretically and empirically to the extant hybrid management control literature.



## Appendices

### Appendix 1

**Table 1.2: Studies emphasising stable-design controls**

Article Details	Focus	Findings	Contribution	Theoretical basis and methods
<b>(Krause and Swiatczak, 2020)</b>	To explore formal control configuration in municipally owned corporations (MOCs) and how are they related to trust and interdependence.	<ol style="list-style-type: none"> <li>1- Revealed four distinct clusters of MOCs control a- input dominated b- outcome dominated c- mixed d- neglect of formal controls</li> <li>2- The complementary relationship between trust and control</li> <li>3- Simultaneous use of output and input controls.</li> </ol>	Various formal controls can be used simultaneously and in supplementary ways, while trust complements outcome controls.	Survey
<b>(Reusen and Stouthuysen, 2020)</b>	To explore the impact of third parties on trust formation and partner selection in HOR.	Where the 3 <sup>rd</sup> party has relatively neutral information about the supplier is sufficient for competency trust. While goodwill trust relates to specific information.	The information from third party shapes the trust that a buyer has in a supplier.	An experimental study from students of management
<b>(Dekker et al., 2019)</b>	To examine the relationship between management accounting information and IOR contract design.	More comprehensive management accounting information results in inclusive and detailed contracts.	Complete supplier contracts are supported by comprehensive management accounting information.	survey
<b>(Reusen and Stouthuysen, 2017)</b>	To understand the reason for misalignment between control and transaction context	When firms imitate, they might not be able to choose MCS that matches the transaction conditions and hence give rise to misalignment.	When buyers control upstream suppliers using the same strategies as their downstream buyer controls them, results in misalignment due to differences in context.	Quantitative literature driven study/ survey and data analysed using statistical methods
<b>(Stouthuysen et al., 2017)</b>	To understand how alliance performance is effected by different alliance motivation	The (mis)alignment between different alliance motivations and formal controls are related to increasing/decreasing alliance performance.	Informal controls can be used to increase the effectiveness of formal controls depending on the alliance motivation and how formal controls are configured.	Quantitative literature has driven/ survey method
<b>(Christ and Nicolaou, 2016)</b>	To examine the relationship between integrated information systems, formal controls, and information exchange risk.	Formal controls implemented within an integrated information system play a fundamental role in reducing information exchange risk.	Relationship between integrated information system and information exchange risk and mediated by formal controls	Surveys

<b>(Dekker et al., 2016)</b>	To understand the influence of IOR objectives on performance management in IOR.	There is a relationship between collaboration and transaction characteristics and this relationship mediates the influence of interfirm objectives on performance measurement practices.	Collaborative objectives of IOR are related with performance measurement practices while this relationship is mediated by transaction characteristics.	Surveys
<b>(Johansson et al., 2016)</b>	To understand how public sector contracted services are controlled.	Legitimacy seeking one of the main factors underlying the intensity of controls in the public sector contracting out. However, coordination requirement doesn't affect control structure design in public sector cases.	legitimacy seeking is one of the critical drivers in the design of control structure	Institutional theory/ Survey method
<b>(Ditillo et al., 2015)</b>	To determine the variables that affect the choice of control mechanisms for the provision of public services.	Market-based controls, hierarchy-based controls, and trust-based controls in contracting out public service variables can exist in harmony and explained with different variables.	Trust-based controls are more common in public organizations due to the nature of the services they provide.	Surveys
<b>(Anderson et al., 2014)</b>	To explore the "relationship between the IOR risk environment and control system".	There is a relationship between: 1- "Performance risk, partner selection, and contractual agreement". 2- The relational risk with explicit exit agreement. 3- "Compliance and regulatory risk with informal controls".	The study provides the relationship between specific risks and controls used to mitigate those risks.	surveys
<b>(Ding et al., 2013)</b>	To investigate the impact of transaction characteristics on different selection criteria used for the choice of partner and complexity related to the contract.	Firms design detailed and complex contracts where transaction risk is high. Common culture get preference where transaction scope is broad.	The conceptualization of partner selection about actual criteria is used for partner selection rather than selection time and effort.	questionnaire
<b>(Fayard et al., 2012)</b>	A model development that predicts interrelated resources to allow companies better interorganisational cost management.	"Internal and external electronic integration", "internal cost management", and "absorption capacity" enable interorganisational cost management and these resources are interrelated.	The combination of specific resources helps manage inter-organizational costs.	Resource-based/ survey
<b>(Masschele in et al., 2012)</b>	To investigate the impact of ABC information in addressing the supply chain inefficiencies.	Buyer-induced inefficiency leads to the seller believing that buyer argument for contract modification is fair, in contrast to seller-caused inefficiency.	The focus on seller perception regarding fairness of the buyer argument helps in understanding which precise ABC info improves or impedes negotiations.	Experimental study
<b>(Windolph and Moeller, 2012)</b>	To examine the impact of OBA on supplier satisfaction.	OBA can be considered as a sign of distrust, on the other hand, interorganisational cost management positively affect supplier satisfaction. There is a negative relationship	One-sided OBA is affective where it is vital for the implementation of IOCM and when it has been established that relational social norm exists.	TCE and contingency theory/ questionnaire
<b>(Caglio and Ditillo, 2012)</b>	To understand the reasons of why firms in HOR share management	"Individual tasks and relationship variables" plays an important role in explaining the actors' participation	Boundary spanners play a vital role in determining the amount of management accounting	LR driven/ questionnaires

	accounting information by opening their books.	for the maintenance of the relationship.	information that can be used for effective collaboration.	
<b>(Marques et al., 2011)</b>	To investigate the nature and use of control mechanisms when public organization exercises their coordinating role.	The tension between the “usual bureaucratic behaviour of public organizations and the practicalities of the situation” required the Port authority to make flexible use of MC mechanisms “for the achievement of network and public objectives”.	A public organization is usually considered as following bureaucratic and legalistic mechanisms, in practice more flexible use of MC helped in the achievement of objectives.	LR driven Case study/documents, interviews
<b>(Van den Abbeele et al., 2009)</b>	To understand when negotiating with suppliers, can buyers use “total cost of ownership”.	Less powerful buyers gather detailed cost info while more powerful use distributive bargaining techniques.  In the case of both high and low power, TCO has a moderating effect on buyer’s profit.	TCO moderates the relationship between power and buyer individual profit and this moderation effect is mediated by buyer bargaining power.	Experimental study
<b>(Lamminmaki, 2008)</b>	To understand the nature and role of management accounting involvement in hotel outsourcing decision-making with a specific focus on nature and factors affecting accounting department involvement.	There is a cross-hotel variation about the extent of accounting involvement. The other identified variables include performance, hotel quality, etc.	“Cost arising from failed outsourcing arrangement” factor to be considered while making an outsourcing decision.	Contingency theory/ Interview and questionnaire
<b>(Dekker, 2008)</b>	How firms in HOR cope with control problems taking into account partner selection and governance arrangements.	Appropriation concerns, coordination, an increase in transaction size, specificity, and interdependence require more extensive governance structures. However, prior ties have both substitution and complementary relationships with “governance arrangements depending upon the control problem”. Finally, the study found the moderating effect of “partner experience on governance design and partner selection effort”.	1-The prior ties with inter-firm partners have a moderating effect on control problems 2-complimentary relationship between selection efforts and governance to cope with inter-firm control problems	survey

**Table 1.3: Studies emphasising operational-design controls**

Article Details	Focus	Findings	Contribution	Theoretical basis and methods
<b>(Weichselberger and Lagström, 2021)</b>	An account of entangling and disentangling of accounting in hybrid setting.	By focusing on introduction of social investment in Swedish Region to improve conditions for children and young people. Analysing the relationship between translation points and maintaining traceability is the focus of the study. Therefore, they looked at various translation points that achieved temporary stabilisation. The translation points are not compartmentalised rather semi-integrated and linked through active mediation	Hybrid accounting setting often feature multiple stabilised hybridisation that evolve because of disentanglements.	Actor Network theory/ interviews and observations
<b>(Rozenfeld and</b>	Impact of institutional logic on the formation	Individual organizational actors’ societal logics due to kinship and	The formation of IOR and management controls are shaped	

<b>Scapens, 2021)</b>	of IOR and ex-ante inter-organizational management controls	political connection affect the organizational practices e.g., IOR management controls (impede in this case).	by complex institutional environments and purposeful actions of individual actors.	Institutional logic perspective/case study using interviews and observations.
<b>(Zawawi and Hoque, 2020)</b>	To examine the role of management control inscriptions in aligning the interest of actors in hybrid setting.	Balance score card as hybrid controls mechanism became internal control mechanism for provider organisations due to its ability to function as inscription.	Public-private hybrid organisation established, “mobilised, and institutionalised management control mechanisms to ensure that the activities of one party were consistent with those of the other parties within a network”.	Actor Network theory/ interviews and document analysis
<b>(Ahmad et al., 2020)</b>	To determine the operationalization of the MC system in the PFI project and its impact on contractor performance.	Initially set MC was perceived inadequate and unfair by contractors. Enactment of trust practices as a result of revisiting certain MC elements played an important role in creating long-term sustainable relationships.	Government power to govern PFI contracts through MC may not help in the achievement of objectives, the enabling mechanism of trust practices is fundamental.	LR driven/ case study using documents and interviews
<b>(Abdullah and Khadaroo, 2020)</b>	To understand the trust-control nexus in PPP contracts.	More emphasis on formal controls during pre-implementation of PPP contract while the development of goodwill trust during the implementation phase.	Trust and mistrust in HOR have cost implications.	LR driven/ case study using documents and interviews
<b>(Agndal and Nilsson, 2019)</b>	To explore the effect of entrainment on controlled relationship transformation.	There is an inherent tension concerning the speed, order, and timing of intervention mechanisms.	When any change is introduced the pace, sequence, and timing of intervention mechanisms play a central role in the development of a trusting atmosphere and integration of activities.	Theories of relational exchange and strategic change (longitudinal study using interviews)
<b>(Stouthuysen et al., 2019)</b>	To understand the design of the MC system over time.	Various learning mechanisms were identified in addition to trial and error e.g., advice from a third-party, experimentations across-level learning.	The “corporate boundary spanners” learn from “operating boundary spanners” in addition to experimentation and trial and error.	Organizational learning theory (longitudinal study using interviews and documents)
<b>(Kastberg and Lagström, 2019)</b>	To understand the process of hybridizing and de-hybridization.	Various situations are identified due to high complexity of task e.g., hot hybrid (i.e. conflicts), rehybridization (i.e. framing of activities), disciplined hybridized (i.e. reduction of complexity), and finally de-hybridization (i.e. return to the single-purpose organization).	The concept of hybridization cannot be understood without considering de-hybridization.	ANT A longitudinal case study using documents, observations.
<b>(Gebreiter and Hidayah, 2019)</b>	How frontline individuals in hybrid public sector organizations respond to conflicting institutional demand.	The individual responses of lecturers indicated the strong emphasis on customer accountability. However, there are cases where lecturers blend two logics to partly satisfy them.	The frontline lecturers overcome conflicting demands through careful trade-offs and by explaining the long-term interest to customer students.	LR driven study/ interviews

<b>(Thambar et al., 2019)</b>	How do firms in parity-based relationships collaborate to manage industry-level uncertainty?	Individual firms lack financial and intellectual resources to deal with the issue of cotton pests. Which resulted in a hybrid collaborative relationship between firms in the cotton industry.	Multi-firm hybrid control processes developed due to lack of resources and low tension among boundary spanners.	Resource dependence theory/ interviews, observations, and documents.
<b>(Agyenim-Boateng et al., 2017)</b>	To investigate the accounting and governance structure of the PPP joint venture partnership structure.	The complexity of the structure of the LIFT scheme e.g., use of expertise to create a structure that benefits financial capital and the secret scheme driven by commercial confidentiality has undermined transparency and public accountability.	The deliberately constructed complex PPP joint venture structures act as a barrier to the transparency of public expenditures.	Structuration theory/ interviews and documents
<b>(Minnaar et al., 2017)</b>	To understand “contract-control-trust nexus in interfirm relationships”.	Parties in the relationship failed to assign trust to the original contract due to the lack of involvement of operational staff and forced the top management to enter into the re-contracting process. KPIs were shaped by actors involved in day-to-day operations. Hence, acted as a mediator in understanding relational networks.	Contract and control structures are active actors, they are performative. Trust, however, is a quasi-actor.	LR has driven (mainly ANT)/ semi-structured interviews
<b>(Grafton and Mundy, 2017)</b>	To determine the role of relational and formal controls in co-operative alliance risk management	Alliance risk can be managed using “informal self-enforcing agreements”. Which can be substituted with formal contracting. In hybrid settings, it is not trust but enlightened self-interest that regulates the behaviour of those involved in interfirm relations.	In HOR enlightened self-interest regulates the behaviour of parties. Because parties enter in economic exchange for expected gain or loss.	Economic perspective case study/interviews
<b>(Mahama and Chua, 2016)</b>	To investigate the processes and practices through which relationships are formed, sustained, or destroyed and changing connection between trust and accounting.	Initially, “trustworthiness was considered a necessary condition for participation in alliances”. After those other elements are added e.g., competent and to open their cost books etc. Accounting was embedded in trials of trust and even after selection of supplier through performance monitoring. Finally, pieces of evidence of distrust and subsequent repair work to rebuild the relation show the nature of trust as a continuous process.	Accounting controls play an important role in shaping, formation, and operation of alliances. Through trials of trust, the trust emerged over time with diverse meanings and through different routines.	the three-stage model of Callon (2009) /semi-structured interviews, field observations, and archival sources
<b>(Gooneratne and Hoque, 2016)</b>	To understand the role of agents and external institutions in the institutionalization of budgeting system in State-Owned Entity	Government control from a distance by making these entities subject to government pressure while, institutional agents who instigated improvements in the budgetary system, held different meanings for different managers.	Complimentary use of institutional structure and agency and that external institution does not necessarily constrain agency rather may serve to explore entrepreneurial activities.	Traditional Institutional Theory /interviews, documents, and archival documents
<b>(Zahir-ul-Hassan et al., 2016)</b>	How governance and control structure mediate in an interfirm relationship.	Due to changes in boundary spanners, governance and control perform differently i.e., from	“Governance, accounting, and control as relational ontologies and not system ontologies”	Qualitative literature review study using interviews.

		socialising governance to complementary governance.		
<b>(Kastberg, 2016)</b>	To understand the role of trust and control concerning where several parties are involved.	Same control initiatives/mechanisms have different meanings for different parties, for some given initiatives signal trust worthiness while for others they might use it to reduce trust between other two parties.	In public sector networks trust is a riskier option.  Relationship between trust and controls changes due to the existence of various parties.	Luhmann's conceptual framework/ Observation, documents, and interviews
<b>(Kastberg, 2014)</b>	To understand a relationship between control problems and control initiatives	To pull actors together accounting devices acted as mediating techniques to facilitate coordination and reduce risk. To make interfirm relation denser resulted in disentanglement.	"Accounting and control not only work as framing devices" but also how the same devices become a source of destabilization.	Callon's (1998b) concepts of framing and overflow (longitudinal case study/ meetings, interview, and documents)
<b>(Longo and Barbieri, 2013)</b>	To understand how PPPs are managed using transactional and relational approaches	The balance between government accountability and reaction to the political environment requires the integration of transactional and relational MC systems.	Managing public outcomes will be easier when transactional and relational mechanisms complement each other to cope with environmental uncertainty.	LR driven/ interview and documents.
<b>(Kraus, 2012)</b>	To explore the effects of accountingisation <sup>140</sup> on inter-organizational cooperation between health care and social care.	Before accounting-induced disturbances focus was on pensioners' core values and less on responsibilities of respective units. Home care and social care worked together to provide care to pensioners. After accountingisation standardisation was emphasized, the core values shrunk back to the boundaries of the organizations.	Heterogeneous accountingisation high in HOR and low in the internal domain	LR driven study/ case study/ interviews
<b>(Demirag et al., 2012)</b>	To understand how and why risk diffusion by financiers in PPP.	Various strategies, such as hedging and insurance, are used to diffuse risk through network of companies because of complex structure of PPPs. Consequently, the government's economic argument about risk transfer is compromised by the complexity of the process.	How and why of risk diffusion in PPP deals the study raises a question regarding inherent expectations associated with PPP deals i.e. "that the private sector will better manage those risks allocated to it and because private capital is at risk, financiers will perform due diligence with the outcome that only viable projects will proceed" (p, 1317).	LR driven/ Interviews
<b>(Kurunmäki and Miller, 2011)</b>	To understand MCS in the public sector HOR	The MC practices emerge as a mediating instrument by bringing the aspirations of policy reformers in contact with organization and professional boundaries. However, inter-professional encounters highlighted tensions inherent in cooperative ideals.	MC practices and processes as mediating instruments in the enactment of large-scale policy reforms but professional disagreements.	Governmentality/ interviews, and observations
<b>(Phua et al., 2011)</b>	To explore the influence of initial	The difficulty of switching suppliers in case of trust-based	Investment in controls acts as a barrier while switching suppliers	TCE/ semi-structured interviews

<sup>140</sup> Displacement of core values as a result of influence of financial measures.



	control choices on the ease with which buyers can switch supplier	control however eases when controls are market-based. Therefore, investment in controls give rise to switching cost, reduce the ease with which buyer can switch supplier. While in extreme situations it acts as a barrier.		
<b>(Cäker and Siverbo, 2011)</b>	To determine the dynamics that affect the horizontal and vertical control practices in joint ventures.	More emphasis on trust leaves the controls underdeveloped and hence deviates the organization from the main objective of the Joint venture.	The public sector joint venture organizations that use the trust to manage activities may not take benefit from economies of scale	Multiple case studies/ Interview and documents
<b>(Neumann, 2010)</b>	To understand preliminary governance decisions in the airline industry and determining their ex-post impact on trust and relational mechanism through an analysis of opportunism.	For bargaining power of partners “cooperative strategy used by an ex-ante dominant partner to motivate weaker partner to cooperate and to create trust”.	The study contributes by considering a “comprehensive explanation of opportunism” and at the same time, it looks at the “asymmetric bargaining power” while making ex-ante governance decisions.	LR driven Interview and documents
<b>(Agndal and Nilsson, 2010)</b>	To determine whether OBA is practiced differently when buyer adopt different purchasing strategies.	Where organization adopts transactional purchasing strategy data disclosure is limited. While in the case of relational purchasing strategy data disclosure is found to be comprehensive due to incentives associated with LT collaboration.	In case of relational purchasing strategy context incentives such as, chances of future collaboration, learning practices that improve organization’s overall competitiveness, etc.	LR driven / case study/ semi-structured interviews
<b>(Hodges and Grubnic, 2010)</b>	To understand the role of accounting and performance measurement in facilitating/promoting and inhibiting the collaboration in E-Government partnership.	The financial issues of government control through economies of scale and performance measures have not inhibited the collaborative working due to common institutional pressure and internal measures subject to dialogue. Factors threatening the partnership include the local government's actual or potential reorganization and changes in policies that can change interest.	Due to the same institutional pressure, the performance targets have not inhibited collaborative working.	LR-driven longitudinal case study/ interviews and documents.
<b>English and Baxter (2010)</b>	To determine how contractual practices impact or are impacted by the trust.	In the case of pre-2000 due to broader objectives emphasis was on contractual and competence trust. Such forms of trust have been limited to the “construction of prison facilities and non-core services in post-2000”. Moreover, due to blanket risk allocation procedures adopted in pre-2000 PSA, contracting practices have hindered the emergence of goodwill trust. While in post-2000 FSA redefinition of contractual objectives can anticipate the development of goodwill trust. post-2000 involve solving risk-sharing and the promotion of a more collaborative approach.	In addition to re-contracting, the contact s is an ongoing process. Require parties to continuous engagement with areas that are poorly specified in contracts specifically about qualitative objectives and changing transaction environment.	Primary and secondary documents.
<b>(Richardson and Kilfoyle, 2009)</b>	To explore how use of accounting is affected by changes in governance structure.	Mail moved across the world like single jurisdiction through standardization of currency and weight. “This standardization	When governance structure changes it resulted in the disappearing role of accounting	Case study /documents

		removed much of accounting for mail flows”.	through standardisation of currency and weight	
<b>(Boland Jr et al., 2008)</b>	To understand the issues in the design of the IOR management control system.	The purpose of contracting arrangements is to reduce overall risk but in this study path creation and morphogenesis to cope with changes in technology and environment rather than mimicry.	For the management of hybrid organizations path creation and morphogenesis play an important role.	Institutional theory.
<b>(Free, 2008)</b>	To understand “how accounting is implicated in the constitution of trust” in the UK retail sector	Trust talks as highlighted in trade press was not present in practice. Despite these talks, the punitive of the power suppliers against weak partners indicate the role of power structure rather than mutual trust.	How accounting and related practices “incorporate or are perceived to incorporate” trustworthy methods of “organizing and monitoring activities”.	Structuration theory/ Archival data /Interview s /non-participant observations
<b>(Vélez et al., 2008)</b>	To understand the effect of MCS development on already established trust in evolving HOR.	The use of non-coercive tactics has shown to other members monitoring as a method for overall inter-firm improvement and a recognition of their work.	In evolving HOR when trust is already established any new MCS fosters trust. Specifically, formal control is due to greater the appearance of objectivity.	LR driven/ case study /documents /Interview
<b>Langfield-Smith (2008)</b>	To determine managers' perception towards trust and risk a start-up stage of collaboration affects control mechanism and governance structure.	The pre-alliance period allowed the partners to work closely with each other and resulted in the development of trust and established a form of social control.	Trust in all develop over time than a rough ongoing process of interaction.	TCE/ case study/interviews/ documents.
<b>(Broadbent et al., 2008)</b>	To decision-making on the process in PFI a with a specific focus on risks and uncertainties.	At the pre-decision stage risk, uncertainties, and system risk is identified however, only some of the elements that can be quantified played a pivotal role in proceeding with procurement decision.	Deep embeddedness of accounting logic in risk and uncertainty recognition in PFI decision-making criteria.	Documents/ interviews/ LR driven.

## Theoretical studies

Article Details	Focus	Findings	Contribution	Theoretical basis and methods
<b>(Vakkuri et al., 2021)</b>	To provide an understanding of challenges and opportunities presented by various contexts of hybridity and hybrid organizations.	Ownership, institutional logic, bases of funding, and social and institutional control dimensions of hybridity and their approaches towards “value creation (mixing, compromising, and legitimising)” can be used to understand hybrid organizations.	The study presents a framework that shows that hybrid not only combines various institutions but also a “variety of value creation processes”.	Theoretical reflection of special issue articles.
<b>(Grossi et al., 2021)</b>	To advance the understanding of performance and accountability in hybrid organizations from a value creation perspective.	Mixing, compromising, and legitimising approaches to value creation can be used to conceptualise hybrid organizations.	Value creation approaches show that different hybrid organization e.g., PPP, SOE create and enact multiple values.	Theoretical reflection of special issue articles.

<p><b>(Miller et al., 2008)</b></p>	<p>To understand how accounting and hybrids are related to the management of risk.</p>	<p>They found different modes of hybridising under various conditions and its implication for risk. In the microprocessor industry, the mediating role of the technology roadmap can reduce risk by facilitating coordination among sub-units. In Finnish Health care reform, the hybridization of medical and financial expertise can reduce risk by lessening the new form of uncertainty that can arise from quasi-market/market-based resource allocation method.</p>	<p>Hybrid is not just about organizational forms, but it extends to include hybrid practices, expertise, and processes, which plays a central role in managing uncertainty.</p>	<p>Theoretical study</p>
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Ethical Approval: *(Appendix II)*



16-October-2018

Dear Ume Farwah

**PI: Ume Farwah Zaidi**  
**Title: Role of accounting in PPP UK**  
**Ref: ERP2410**

Thank you for submitting your application for review. The proposal was reviewed by the Panel Chair. I am pleased to inform you that your application has been approved by the Ethics Review Panel subject to the below identified revisions:

<b>General</b>	The Panel thank the Applicant for submitting a well written and considered application.  The Panel recommended storage of consent forms be clarified and modified within the application.
<b>ACTION</b>	The Panel confirms immediate ethical approval subject to the above request being addressed.

If the fieldwork goes beyond the date stated in your application, or there are any amendments to your study you must submit an 'application to amend study' form to the ERP administrator at [research.governance@keele.ac.uk](mailto:research.governance@keele.ac.uk). This form is available via <http://www.keele.ac.uk/researchsupport/researchethics/>

If you have any queries please do not hesitate to contact me, in writing, via the ERP administrator, at [research.governance@keele.ac.uk](mailto:research.governance@keele.ac.uk) stating **ERP2410** in the subject line of the e-mail.

Yours sincerely  
PP.

**Dr Colin Rigby**  
**Chair – Ethical Review Panel**

**From:** [a.mcaloon@keele.ac.uk](mailto:a.mcaloon@keele.ac.uk) <[a.mcaloon@keele.ac.uk](mailto:a.mcaloon@keele.ac.uk)> on behalf of Governance Research <[research.governance@keele.ac.uk](mailto:research.governance@keele.ac.uk)>  
**Sent:** Tuesday, October 23, 2018 10:00:54 AM  
**To:** Ume Farwah Zaidi <[u.zaidi@keele.ac.uk](mailto:u.zaidi@keele.ac.uk)>  
**Subject:** Re: ERP2410

Hi Ume,

I can confirm that we have received your revisions. As per the letter you have received, your application has been approved.

Kind Regards

**Amy McAloon**  
Research Funding Assistant (FMHS)

Research, Innovation and Engagement

Innovation Centre 2 | Keele University Science & Innovation Park | Keele University | Staffordshire | ST5 5NH / UK / [www.keele.ac.uk](http://www.keele.ac.uk)

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## INFORMATION SHEET

**Study Title:** *Role of accounting in hybrid organisational contracts*

### **Invitation**

You are being invited to consider taking part in the research study which forms a part of my PhD research. This project is being undertaken by *Ume Zaidi*

Before you decide whether or not you wish to take part, it is important for you to understand why this research is being done and what it will involve. Please take time to read this information carefully and discuss it with friends and relatives if you wish. Ask us if there is anything that is unclear or if you would like more information.

### **Aims of the Research**

The study aims to explore the role of accounting in hybrid organisational contracts between public and private sector organisations. Improvement of operational efficiency through collaboration of organizations are a fact of life in business world today. Studies have highlighted that many of these hybrid organisational relations fails or stopped after some time due to numerous reason. Research indicates that main factor for this failure is the manner in which such collaborations are controlled and managed. As hybrid organisational relations are difficult to manage using traditional forms of control due to involvement of multiple firms in such relationship. These issues of control have aroused my interest to investigate how these complex network of organisations are managed in practice.

### **Conduct of Data Collection:**

For the purpose of data collection un-structured interviews will be used. Audio recorder will be used for recording the interviews. It is important to consider that any matters that arise after interviews will be followed up by email or telephone.

### **Confidentiality and Anonymity:**

Identity of cases and participants will not be revealed. Data obtained through interviews will not be accessed by anyone without prior consent from participants and researcher.

### **Right to Withdraw from Research:**

Participants have a right to withdraw from interview totally or withdraw from certain questions at any point by informing the researcher.

### **What if there is a problem?**

If you have a concern about any aspect of this study, you may wish to speak to the researcher who will do her best to answer your questions. You should contact *Ume Zaidi* on [u.zaidi@keele.ac.uk](mailto:u.zaidi@keele.ac.uk). Alternatively, if you do not wish to contact the researcher you may contact *Professor Istemi Demirag* on [i.demirag@keele.ac.uk](mailto:i.demirag@keele.ac.uk).

If you remain unhappy about the research and/or wish to raise a complaint about any aspect of the way that you have been approached or treated during the course of the study please write to Nicola Leighton who is the University's contact for complaints regarding research at the following address: -

Nicola Leighton  
Research Governance Officer  
Directorate of Engagement and Partnerships

IC2 Building  
Keele University  
ST5 5NH  
E-mail: [n.leighton@ keele.ac.uk](mailto:n.leighton@keele.ac.uk)  
Tel: 01782 733306



**CONSENT FORM  
(For use of quotes)**

**Title of Project:** *Role of accounting in hybrid organisational contracts*

Name and contact details of Principal Investigator:

*Ume Zaidi*

*5 Leason Street*

*Stoke on Trent*

*ST4 IPP*

*Contact Mobile: 07757679786*

*Email: u.zaidi@keele.ac.uk*

**Please initial box if you  
agree with the statement**

1. I agree for my quotes to be used

2. I do not agree for my quotes to be used

\_\_\_\_\_  
Name of participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature





**CONSENT FORM  
(For use of quotes)**

**Title of Project:** *Role of accounting in hybrid organisational contracts*

Name and contact details of Principal Investigator:

*Ume Zaidi*

*5 Leason Street*

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*ST4 1PP*

*Contact Mobile: 07757679786*

*Email: u.zaidi@keele.ac.uk*

**Please initial box if you  
agree with the statement**

1. I agree for my quotes to be used

2. I do not agree for my quotes to be used

\_\_\_\_\_  
Name of participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

**Interview guidance<sup>141</sup>**

- 1- What is your role in Streetlighting PFI project?
- 2- How come a County council entered into a Streetlighting PFI?
- 3- What would be alternative financing?
- 4- How Street lighting PFI performance is measured, monitored and reported? Could you please give me an example of control measures that you have in place?
- 5- In your recent review how you discuss the performance measures?
- 6- What exactly happened how you identified (performance measure issue)?
- 7- Who were involved in discussion in terms of e.g., Private provider, banks etc.
- 8- So problem was identified after signing the contract?
- 9- What exactly happened, how you identified it and what was the discussion and how the other parties reacted to it?
- 10- Were there any options, any proposal from your side?
- 11- In your view what do you think of, all the negotiation like you explained everything went smoothly. What could be the reason for that?
- 12- You just mentioned about professional disagreements towards the issue, can you give me an example of it please?
- 13- Once you identified and then I mean, how did you resolve it then and who were involved?
- 14- In your view, what actually contract modernizations is, what is your view? how it is different from the previous contract?

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<sup>141</sup> As data has been collected through unstructured interviews, therefore, guidance provides examples of the some of the questions that has been asked from participants.

15- You said that after contract modernization the performance measures are now more flexible. Can you please give me an example?

16- What are some of the intended and unintended impacts of contract modernisation?

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