

An investigation into the micro-dynamics of routine flexibility

A thesis

by

ANDI ROSSI A. RAZAK

This thesis is submitted in partial fulfilment of the requirements for the degree of
DOCTOR OF PHILOSOPHY (MANAGEMENT)

Lancaster University Management School, UK

AUGUST 2017

ABSTRACT

Organisations are expected to possess the ability to adapt in order to sustain themselves in the ever-changing markets. Routines, which have traditionally been viewed as a source of stability, have recently been conceptualised as a source for organisational flexibility, having the capability to significantly determine whether an organisation can survive. This study contributes to this discussion by showing that the internal dynamics of routines, which comprise of ostensive and performative aspects, play a significant role in the emergence of endogenous routine flexibility. Insights into the ostensive-to-performative relationship have been gathered by studying a temporary project team over 18 months. Specifically, there are three insights: (1) routine actors' pursuit to embrace the tacitness of routines promotes the emergence of ostensive routine change that is temporarily disengaged from the performative aspect, (2) the emergence of options at the ostensive level, act as a mechanism to legitimise the performative aspect, and (3) decoupling forms a mechanism for performative flexibility to accommodate the changing ostensives in the form of targeted outcomes. These insights lead to further understanding of the different types of relationships that exist within the internal dynamics of a routine i.e. disengaged, legitimation, and accommodating relationship. These ostensive-to-performative relationships exist due to the collective effort of the temporary team.

Key words: *Organisational routines, routine flexibility, ostensive-to-performative relationship, tacit, legitimacy, decoupling, temporary team*

TABLE OF CONTENTS

ABSTRACT.....	II
LIST OF FIGURES, TABLES AND ABBREVIATIONS	VIII
ACKNOWLEDGEMENTS	XI
CHAPTER 1 : INTRODUCTION.....	1
CHAPTER 2 : FLEXIBILITY IN ORGANISATIONAL ROUTINES.....	6
2.1 Classical view of organisational routines	6
2.2 The evolution of the organisational routines literature	8
2.2.1 Behavioural theory perspective.....	10
2.2.1.1 Conceptualisation of organisational routines	10
2.2.1.2 Understanding of routine flexibility.....	12
2.2.2 Evolutionary economics perspective	13
2.2.2.1 Conceptualisation of organisational routines	13
2.2.2.2 Understanding of routine flexibility.....	15
2.2.3 Practice perspective.....	16
2.2.3.1 Introduction to practice theory	17
2.2.3.2 Conceptualisation of organisational routines	20
2.2.3.3 Understanding of routine flexibility.....	23
2.2.4 Comparisons of theoretical perspectives.....	24
2.3 Routine dynamics	26
2.3.1 History.....	26
2.3.2 Ostensive aspect.....	27
2.3.3 Performative aspect.....	30
2.3.4 Routine dynamics and artefacts	31
2.3.5 Ostensive-performative relationship.....	34
2.4 Routine flexibility: Sources and their impact on the internal dynamics of routines.....	35
2.4.1 Exogenous-ostensive flexibility	38
2.4.2 Exogenous-performative flexibility	39
2.4.3 Endogenous-ostensive flexibility	40

2.4.4 Endogenous-performative flexibility	41
2.5 Summary and research gaps	43
CHAPTER 3 : METHODOLOGY.....	47
3.1 Research philosophy	47
3.1.1 Ontological assumptions	48
3.1.2 Epistemological assumptions	50
3.2 General research settings	51
3.3 Case construction	55
3.3.1 Sub-case 1: Emergent routine change	56
3.3.2 Sub-case 2: Options emerging during routine enactment	59
3.3.3 Sub-case 3: Novel actions in routine performance	62
3.4 Data collection	63
3.4.1 Observation	66
3.4.2 Interviews	72
3.4.3 Artefacts	74
3.4.4 Summary of data collection	77
3.5 Data analysis	77
3.5.1 The fundamentals of my analysis.....	77
3.5.2 Sub-case 1: Emergent routine change	83
3.5.3 Sub-case 2: Routine flexibility through options	87
3.5.4 Sub-case 3: Novel actions in routine performance	92
3.6 Summary	95
CHAPTER 4 : OSTENSIVE FLEXIBILITY THAT IS DISENGAGED FROM THE PERFORMATIVE.....	96
4.1 Introduction and overview	96
4.2 Ambiguities and uncertainties	97
4.2.1 Resolving perceived uncertainties	98
4.2.2 Resolving boundary ambiguities.....	102
4.2.3 Summary of dealing with ambiguities among routine actors	104

4.3 The emergence of ostensive routine change	105
4.3.1 Routine definition	106
4.3.2 Routine scoping	108
4.3.3 Routine enactment	110
4.3.4 Summary of the emergence of ostensive routine change.....	111
4.4 Enforcement of the new routine.....	112
4.4.1 Legitimising the routine	114
4.4.2 Projecting information	116
4.4.3 Summary of enforcement of the new routine	117
4.5 Conceptual interpretation.....	118
CHAPTER 5 : OSTENSIVE AND PERFORMATIVE FLEXIBILITY VIA LEGITIMATION	125
5.1 Introduction and overview	125
5.2 Sourcing of print specialists.....	127
5.2.1 Overview of the case.....	127
5.2.2 How the options emerged	128
5.2.3 The outcome.....	132
5.3 Sourcing of print software	134
5.3.1 Overview of the case.....	134
5.3.2 How the options emerged	135
5.3.3 The outcome.....	140
5.4 Sourcing of print hardware	143
5.4.1 Overview of the case.....	143
5.4.2 How the options emerged	144
5.4.3 The outcome.....	150
5.5 Conceptual interpretation.....	153
CHAPTER 6 : PERFORMATIVE FLEXIBILITY TO ACCOMMODATE THE OSTENSIVE.....	160
6.1 Introduction and overview	160

6.2 Decoupling in the software sourcing routine performance.....	161
6.2.1 Overview	161
6.2.2 Sources of decoupling.....	162
6.2.3 Decoupling activities.....	166
6.2.4 Summary	174
6.3 Decoupling in the hardware sourcing routine performance.....	175
6.3.1 Overview	175
6.3.2 Sources of decoupling.....	176
6.3.3 Decoupling activities.....	177
6.3.4 Summary	185
6.4 Conceptual interpretation.....	186
CHAPTER 7 : DISCUSSION	193
7.1 Emergent routine change: The role of routine actors in ostensive flexibility.....	195
7.1.1 Actors as the source of ostensive exploration.....	195
7.1.2 Ostensive change decoupled from the performative.....	202
7.1.3 Summary	204
7.2 Legitimising routine performances: The emergence of options as a mechanism.....	205
7.2.1 The emergence of options	205
7.2.2 Legitimising actions.....	208
7.2.3 Summary	211
7.3 Novel actions for a targeted outcome: Decoupling as a mechanism	211
7.3.1 The emergence of targeted outcomes	212
7.3.2 Decoupling as a mechanism for performative flexibility.....	214
7.3.3 Summary	216
7.4 Routine flexibility: The role of the ostensive-to-performative relationship.....	217
7.4.1 Disengaged relationship.....	217
7.4.2 Legitimation relationship	218
7.4.3 Accommodating relationship.....	219
7.4.4 Summary of the ostensive-to-performative relationships	220

CHAPTER 8 : CONCLUSION.....	221
8.1 Limitations	224
8.1.1 Observation of organisational routines	224
8.1.2 Limitations regarding data analysis	226
8.2. Future research.....	228
8.2.1 Enacting routines in a temporary setting.....	229
8.2.2 Performative-to-ostensive relationship	230
REFERENCES.....	231
APPENDICES	242
Appendices for chapter 4	242
Appendices for chapter 5	244

LIST OF FIGURES, TABLES AND ABBREVIATIONS

LIST OF TABLES

Table 2.1 – Summary of the three perspectives in relation to routine flexibility	25
Table 2.2 – Summary of ostensive and performative flexibilities based on the source of flexibility	37
Table 3.1 – Summary of the key participants of this study	53
Table 3.2 – List of activities and the corresponding opportunities for data collection.....	65
Table 3.3 – Examples of the first round of coding for emergent routine change	84
Table 3.4 – Examples of the second round of coding for emergent routine change.....	85
Table 3.5 – Summary of differences in routine enactment.....	89
Table 3.6 – Examples of the first round of coding for the emergence of options	90
Table 3.7 – Examples of the second round of coding for the emergence of options.....	90
Table 3.8 – Examples of the first round of coding for novel actions in routine performance.....	93
Table 3.9 – Examples of the second round of coding for novel actions in routine performance .	93
Table 4.1 – Summary of the sources for routine change	105
Table 4.2 – Summary of how the ostensive change emerged.....	112
Table 4.3 – Summary of how the new routine was embedded	118
Table 4.4 – Evidence of the theoretical constructs for the emergence of ostensive change.....	120
Table 5.1 – Summary of the emerged options in the print specialists’ sourcing exercise.....	134
Table 5.2 – Summary of the emerged options in the print software sourcing exercise	142
Table 5.3 – Summary of the options that emerged in the print hardware sourcing exercise.....	152
Table 5.4 – Evidence of the theoretical constructs for the emergence of options as a legitimation mechanism	156
Table 6.1 – Summary of the various suppliers and their products.....	160
Table 6.2 – Summary of decoupling sources and activities to accomplish the targeted software supplier.....	174
Table 6.3 – Summary of decoupling sources and activities to accomplish the targeted hardware supplier.....	185
Table 6.4 – Evidence of theoretical constructs for novel actions in accomplishing targeted outcomes	188
Table 7.1 – Contribution of this study	194

LIST OF FIGURES

Figure 1.1 - A roadmap of the chapters in this thesis	5
Figure 2.1 – Organisational routines as generative systems (Pentland and Feldman 2005).....	34
Figure 3.1 – The existing request routine	57
Figure 3.2 – Sourcing routine activities as listed in the Procurement portal	60
Figure 3.3 – The observed performative of the sourcing routine	60
Figure 3.4 – The beginning and end of the three separate sourcing routines	62
Figure 3.5 – Observation of the routine enactment that formed sub-case 3	63
Figure 3.6 – Timeline of data collection activities	64
Figure 3.7 – User request made through the service desk	75
Figure 3.8 – Final response from an IT service desk personnel	75
Figure 3.9 – Interim arrangement policy announcement on PublicCo’s internal webpage.....	76
Figure 3.10 – Example 1 of linking the first-order narratives to the second- and third-order codes	79
Figure 3.11 – Example 2 of linking the first-order narratives to the second- and third-order codes	80
Figure 3.12 – Example of the second-order construct lifting the first-order concepts to a conceptual level for emergent routine change.....	86
Figure 3.13 – Theoretical constructs derived from sub-case 1	87
Figure 3.14 – Timeline showing the three sourcing routines from start to finish.....	88
Figure 3.15 – Example of the second-order constructs lifting the first-order concepts to a conceptual level for the emergence of options	91
Figure 3.16 – The theoretical constructs derived from sub-case 2	92
Figure 3.17 – Example of the second-order construct lifting the first-order concepts to a conceptual level for novel actions in routine performance	94
Figure 3.18 – The theoretical constructs derived from sub-case 3	94
Figure 4.1 – Existing request routine	97
Figure 4.2 – Revised request routine	113
Figure 4.3 – Interim arrangement policy announcement on PublicCo’s internal webpage.....	115
Figure 4.4 – Theoretical constructs for the emergence of ostensive change	120
Figure 5.1 – The stages of the sourcing routine.....	126

Figure 5.2 – Options that emerge during the print specialists’ sourcing routine	133
Figure 5.3 – Options that emerge during the print software sourcing routine	141
Figure 5.4 – Options that emerged during the print hardware sourcing routine.....	151
Figure 5.5 – Theoretical constructs for the emergence of options as a legitimation mechanism	154
Figure 6.1 – Theoretical constructs for novel actions in accomplishing targeted outcomes	187

LIST OF ABBREVIATIONS

DPC	Delta Purchasing Consortium
e.g.	for example, for instance (Latin: <i>exempli gratia</i>)
<i>et al.</i>	and others (Latin: <i>et alii/alia</i>)
EU	European Union
i.e.	that is to say; in other words (Latin: <i>id est</i>)
IT	Information technology
ITT	Invitation to tender
LPP	London procurement partnership
MFD	Multi-functional devices
NPA	National Procurement Agreement
POC	Proof of concept
PP	Public procurement
PQQ	Pre-qualification questionnaire
R&D	Research and development
Rep	Representative
RFP	Request for proposal
WC	Working committee

ACKNOWLEDGEMENTS

Life is not all about you. It is about what you can share with others.

After a long, 10-year journey in industry, I came to realise that I needed to start giving back, using what I already have. I needed to be involved in something that could be shared and provide benefit to mankind. I then came across others who supported the notion of sharing knowledge. Specifically, two very special people; my in-laws, who gave me the confidence and encouragement to explore knowledge at the highest level, which led me to this PhD. And for that, I owe my deepest gratitude to them.

Also to my dearest wife, Hamadah, her uncountable sacrifices will always be the fortress behind my success, for always being there when I needed support the most, and taking good care of our precious Sophia. To my beloved parents and my close family members, I appreciate your constant prayers as part of my spiritual strength. Without them, I would not have survived the past three years.

I would also like to extend my gratitude to my former Master's Degree supervisors and mentors in Sydney. Without their references and support, I may not have been able to be here in Lancaster and meeting many wonderful people in this special School.

Last but not least, to my PhD supervisors; Professor Martin Spring, and Dr Martin Friesl, I am grateful to have had both of you to guide me throughout this PhD journey. Indeed this PhD is not only about this thesis, but the journey itself. Both of you have helped to shape me into a better person intellectually and let me see knowledge in a new light. I hope I can continue to share this new knowledge with others in the future.

Thank you.

Danke.

Terima kasih.

CHAPTER 1 : INTRODUCTION

What makes routines flexible? Routine flexibility refers to the ability of a routine to adapt according to changing contexts. Organisational life consists of pressures, which force organisations¹ to change and evolve rapidly to maintain a competitive advantage that yields superior economic performance. Without the ability to adapt, organisations will fall behind their competitors, unable to sustain themselves. Feldman and Pentland (2003) were among the first researchers to explicitly conceptualise routines as a source for organisational flexibility and change. Routines have the capability to provide significant impact on whether an organisation can sustain itself in the ever-changing markets. This is because routines themselves are, flexible. Feldman *et al.* (2016) point out that routines are dynamic because they are repeated patterns of actions, and thus are bound to change from one performance to another through the ongoing effort of actors. The overall aim of this study is to provide further insight into the occurrence of routine flexibility.

The classical view on organisational routines recognises them as a ‘black box’ (e.g. Cyert and March 1963; Nelson and Winter 1982) to understand the purpose of or motivations for routines, and how they affect organisations (Pentland and Feldman 2005; Parmigiani and Howard-Grenville 2011). For instance, routines are seen as a source of regularity or stability (Stinchcombe 1959; Crozier 1964), inflexibility (Weiss and Ilgen 1985; Gersick and Hackman 1990), and optimising cognitive effort due to their mindless characteristic (Cyert and March 1963). In these earlier studies, because routines were often examined as a whole unit (Parmigiani and Howard-Grenville 2011), they were used in a “highly flexible way” (Nelson and Winter 1982, p.97). This meant that a routine could refer to an organisational operation, or an individual skill. Although there are many benefits of this approach to viewing routines, such as being able to examine their inputs and outputs without having to map out their internal structure, it can also result in a narrow understanding of them (Pentland and Feldman 2005). To compensate for this limitation and to move away from the conceptual view of “routines as things” (Feldman *et al.* 2016, p.505), a new theoretical model was introduced by Feldman and Pentland (2003) based on structuration theory (Giddens 1984). The model suggests routines can be broken down into their internal dynamics,

¹ Organisations here refer to commercial organisations only i.e. organisations with resources and priorities that aim towards turning a profit

known as ostensive and performative aspects, which are interrelated with one another as a generative cycle (Pentland and Feldman 2005). The ostensive aspect represents actors' abstract understanding of the routine, while the performative aspect represents the actual routine performance. By breaking down a routine into its internal dynamics, researchers are able to understand further how a routine is enacted in different contexts. This leads to recent studies that view routines as flexible, as opposed to being static and unable to change.

As past studies have shown, routine flexibility can be apparent in either the ostensive or the performative aspect. In the former, it can be intentional (Short and Toffel 2010) or unintentional (Reynaud 2005), driven through trial and error (Rerup and Feldman 2011) or having spontaneous variations (Bucher and Langley 2016) from the actors' own initiatives (Burgelman 1994). Flexibility in the routine performance either occurs over a certain period of time (Beckman and Haunschild 2002), or in real time (Turner and Fern 2012), which can be accomplished through exerting power (Howard-Grenville 2005), setting priorities (Bruns 2009), and the use of experience (Feldman 2000; Dittrich *et al.* 2016). Although these past studies have focused on individual aspects of a routine, it is also important to acknowledge both in understanding routine flexibility. As pointed out by Feldman and Pentland (2003), the ostensive-performative relationship itself provides a continuous opportunity to produce different routine outcomes. Thus this study argues that both the ostensive and performative aspects are necessary for routine flexibility to occur. However, there has been little research that examines how the relationship between these two aspects plays a role in routine flexibility. Some of the studies that have tried to address this gap include Bucher and Langley (2016) on interacting spaces for reflection (ostensive) and experimentation (performative), and LeBaron *et al.* (2016) on how the ostensive is created, maintained, and repaired through performative flexibility. Whereas the focus of the first study was on *spaces*, the second focused on *coordination*, leaving many areas unexplored on the ostensive-performative relationship. This study aims to close this gap by primarily focusing on the relationship between the ostensive and performative aspects in routine flexibility.

Routine flexibility has often been associated with change based on reflection on past performances (e.g. Feldman 2000; Rerup and Feldman 2011; Dittrich *et al.* 2016), and with the use of artefacts that exist to provide predetermined options on how to perform the routine in different scenarios (e.g. Pentland and Rueter 1994; Turner and Rindova 2012). Thus the

mechanism for routine flexibility has always been linked to dependence on specific influences (e.g. past performance, predetermined options). This study disagrees with this notion by providing insight into routine flexibility that is not dependent on past performance and the use of artefacts, but is emergent and occurs through the routine actors' own pursuit to gain better understanding of the routine. The performative aspect, for example, has been discussed as theoretically having the ability to be flexible based on how the ostensive provides guidance, accountability, and reference (Feldman and Pentland 2003). However, a routine's performance will always have some form of novelty compared to the intended routine design i.e. the ostensive (Pentland and Feldman 2005). So, even though it is understood that the ostensive does not necessarily determine the routine's performance, less is understood about whether ostensive flexibility results in performative flexibility. This provides a gap in the literature in terms of understanding the ostensive-to-performative relationship in routine flexibility.

Additionally, understanding the sources for routine flexibility can give insight into the characteristics and mechanisms of the occurrence. Sources that are external to the routine (i.e. exogenous) are likely to trigger controlled flexibility through use of structure (e.g. Reynaud 2005), or due to routine changes in response to the sources (e.g. Turner and Rindova 2012). On the other hand, sources that come from within the routine (i.e. endogenous) are likely to trigger changes that are either emergent (e.g. Whitford and Zirpoli 2014), or impromptu (e.g. Bruns 2009), which are dependent on the situation. This is particularly evident if the routine is part of an organisation's norm (e.g. Howard-Grenville 2005) as it relies on tacit knowledge and thus is not bound to any explicit rules. This means that the characteristics and mechanisms for routine flexibility triggered by endogenous sources are endless, as no exact situation is likely to repeat itself. Thus this study intends to provide insight into the largely unexplored subject of endogenous routine flexibility. To address these gaps in the literature, this study aims to provide answers to the over-arching research question: *How does the ostensive-to-performative relationship affect the emergence of endogenous routine flexibility?*

A longitudinal study was conducted on a public organisation that employs around 14,500 staff, undergoing a major print service upgrade. The primary aim was to gain insight into how the sourcing routine (the process to procure the new print hardware and software) could be enacted flexibly. I carried out the initial phase of my analysis while I was still conducting my data

gathering, to identify three significant sub-cases that were prominent. Each sub-case provides insight into different aspects of routine flexibility that address the gaps described earlier. Grounded analysis was conducted to establish theoretical constructs that led to four contributions to the organisational routines research.

Firstly, my analysis points out the important role of actors in routine flexibility. Their pursuit of trying to understand the tacit component of the routine give rise to change in the ostensive aspect of the routine, i.e. there is a change in the actors' abstract understanding of the routine, while the performative aspect, the routine performance, remains constant during this phase. Secondly, the emergence of options, ostensibly during routine enactment, provides a mechanism to legitimise the routine performances via referring, guiding, and accounting actions. Thirdly, decoupling forms a mechanism for novel actions to accomplish a targeted outcome in the routine performance. Lastly, different relationships between the ostensive and performative aspects (i.e. disconnected, legitimisation, accommodating) play a significant role in enabling emergent routine flexibility.

Following this introductory chapter, the second chapter provides a review of the literature on organisational routines and routine flexibility and builds on the research gap that I aim to address. I then discuss the methodologies used to provide answers to the research question constructed in the previous chapter. This is followed by three empirical chapters that correspond to the three sub-cases identified in the initial stage of the analysis. In each of these chapters, comprehensive narratives are provided relating to the sub-case, followed by a summary of the findings, and a presentation of the theoretical constructs. After the empirical chapters, there is a discussion chapter, which provides further arguments and insights into the findings. This chapter contains a sub-section for each of the empirical chapters and an additional section that discusses the overall insight gained from the study. Lastly, I end with a conclusion that summarises this whole thesis along with its limitations, implications for routines literature and managerial practices, as well as suggestions for future work. *Figure 1.1* illustrates the roadmap of all subsequent chapters.

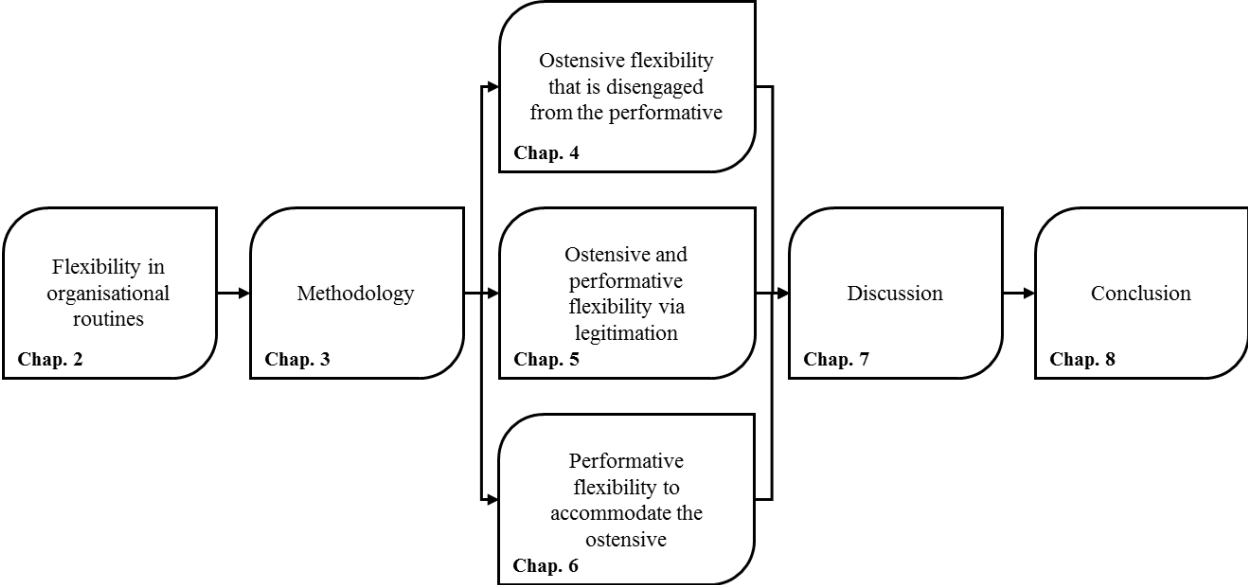
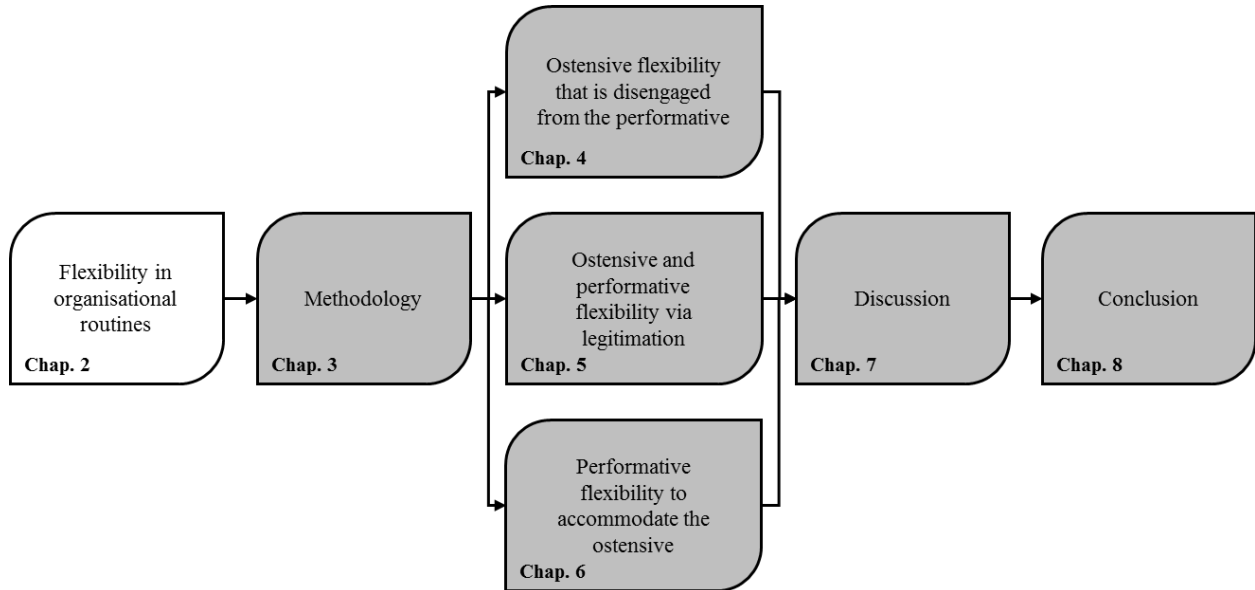


Figure 1.1 - A roadmap of the chapters in this thesis

CHAPTER 2 : FLEXIBILITY IN ORGANISATIONAL ROUTINES



2.1 Classical view of organisational routines

The concept of organisational routines was first introduced by Stene (1940) in his study about the science of administration, in which organisational routines are defined as part of an organisational activity which has become a habit of the organisation due to regular repetition without much consciousness. Any process or norm within an organisation that is carried out mindlessly is considered a routine, e.g. morning exercises as often seen in Japanese companies, or the daily five-minute meeting on the production floor in an automotive company. In subsequent work, organisational routines have been seen as a vital aspect of how organisations operate (March and Simon 1958; Cyert and March 1963), and play an important role in innovation through planned and unplanned changes. Overall, there are three consistent characteristics that were discussed in early studies of routines: (1) mindlessness, (2) regularity, and (3) inflexibility.

Mindlessness. The first characteristic refers to routines as mindless accomplishments, which means that actors carrying them out are expected to perform them with little consciousness. Cyert and March (1963) describe routines as mindless, and rarely questioned. Similarly, according to Cohen (1991), when a person identifies an activity as a routine, that person will automatically carry it out without much “consultation of the higher faculties” (p.63). The lack of thinking when involved in routine activities means that mental resources can be used for other non-routine activities, thus allowing routines to be a saver of both time and effort (Weiss and Ilgen 1985).

However, when routines are comfortably accepted as mindless accomplishments, this can also be a drawback in terms of performance if subtle (but important) changes are passed off as normal (Weiss and Ilgen 1985; Gersick and Hackman 1990). A good example, as presented by Gersick and Hackman (1990), is the Air Florida crash where the pilots overlooked the need to switch on the anti-ice system (because in normal circumstances the system is always off as ice build-up is unusual) while going through the take-off checklists. This resulted in not enough power during take-off because of the ice build-up. Thus, there appear to be some discrepancies with viewing routines as mindless actions. For instance, while the mindlessness of routines can be an advantage in terms of reserving cognitive effort for other organisational activities, it can also be a disadvantage in unique, or abnormal situations.

Regularity. Another characteristic of routines in classic literature is their regularity. When a routine is created, it goes through an adaptation (Cyert and March 1963) or an evolution process (Nelson and Winter 1982) until it reaches a point where it is considered stabilised. From this point on, it is expected to be enacted without any change and thus becomes a regular process. This stability of workflow, or regularity of routines, is a key feature in bureaucratic administrations (Stinchcombe 1959; Crozier 1964). According to Crozier (1964), bureaucracies are built to avoid situations that would involve personal relationships which could form the basis of resistance to the organisation's agenda. By having rules and routines that indirectly support the bureaucratic style of an organisation, members of the organisation willingly accept situations without much interference. Thus routines are seen as supporting bureaucratic administrations because of their regularity and stability.

Inflexibility. Inflexibility is the third characteristic of routines often discussed in classical literature. According to Gersick and Hackman (1990), change in routines rarely happens due to the many factors, such as resistance, that are encountered when actors are told to give up a process or habit that they are used to. In support of this, Weiss and Ilgen (1985) suggest that believing organisation members to be open and responsive to change is a naïve assumption. Once routines are established in a group, they are continuously enacted with high automaticity and under pressure to adhere to the group norms. This inevitably makes them self-maintaining as members of the group feel the need to 'fit in' by sticking to the same routines (Gersick and Hackman 1990). In

other words, routines are expected to be enacted with little change, and thus maintain their inflexibility.

2.2 The evolution of the organisational routines literature

In contrast to mindlessness, regularity and inflexibility as presented in early research on routines, organisational routines can also be flexible (Giddens 1984; Pentland and Rueter 1994; Feldman 2000; Orlikowski 2000; 2002). Although early researchers have acknowledged this characteristic in the form of adaptation (Cyert and March 1963), and evolution (Nelson and Winter 1982), the focus on the ability of routines to change is more apparent in recent studies. Classical studies have focused on understanding how organisations accomplish much of what they do through organisational routines (Feldman and Pentland 2003). For instance, Cyert and March (1963) aimed at understanding economic decision-making through examining the internal operations of an organisation. They developed a model that represented the choice process (in decision-making) based on standard operating procedures (SOPs) and rules of thumb. Thus their interest was in how the process was carried out from a macro point of view, or as a single phenomenon. Similarly, the work by Nelson and Winter (1982) aimed at understanding economic changes by examining capabilities and decision rules in an organisation. Those that are regular and predictable are referred to as 'routines' and carry the same characteristics as genes in biological evolutionary theory, such as the ability to be inherited (Nelson and Winter 1982).

Both Cyert and March (1963) and Nelson and Winter (1982) studied the role of routines as part of a bigger intellectual project, i.e. economic decision-making. For this reason, these studies were not interested in the inner workings of the routines (Pentland and Feldman 2005). In later studies such as those by Pentland and Rueter (1994) and Feldman (2000), a focus on routines began to provide deeper insight, in which routines were more than just 'black boxes' (Pentland and Feldman 2005). But it was the theoretical model proposed by Feldman and Pentland (2003) that invited more researchers to study organisational routines. Their model provided insight into the internal dynamics of routines, which allowed a better understanding of them. This changed how routines were viewed from being stable and inflexible to being flexible and a source for continuous change (Feldman 2000).

Although routines remain within the control of their initiators, for example, policy makers, SOPs authors, and organisation vision and mission creators (i.e. higher management), they are naturally flexible in the sense that they evolve as the business of an organisation grows and changes (Perren and Grant 2000). Additionally, how a routine is enacted depends on the specific person and the timing (i.e. context) of its enactment, which means that the performance of a specific routine may be different every time. Routine actors have the ability to determine how a routine is enacted, according to different contexts. For instance, in the study by Orlikowski (2000), even though the routine was embedded in an online form, users drew on their own personal experience and understanding of their tax rights to complete the routine, thus leading to varying outcomes. When routines are seen as a source of flexibility and change, it indicates that they are not mindless, but effortful accomplishments (Pentland and Rueter 1994; Becker 2004). One of the first researchers to identify routines as effortful is Giddens (1984), who states that the concept of routine is “grounded in practical consciousness²” (p.60), which consists of everything actors know about dealing with different social contexts, but not including “direct discursive expression” (p.xxiii). Thus it would be a huge mistake to assume routines are repetitive patterns that are carried out mindlessly. Furthermore, routines are said to grow along with the organisation’s growth and therefore are subjected to many challenges (Perren and Grant 2000), which undoubtedly require a good deal of effort to overcome. Similarly, in an organisation that carries out product development work, routines are explained as the boundaries that shape the work and which are constantly subjected to various challenges that can only be overcome by knowing how to navigate and negotiate through them (Orlikowski 2002).

In summary, although routines were initially viewed as sources of stability, inertia and inflexibility, they are now more commonly viewed as flexible and continuously changing. Besides the evolution of views on routines in general, the extension of research based on Cyert and March (1963) and Nelson and Winter’s (1982) fundamental views on routines has also evolved. Because of this, I find it necessary to examine in detail these various perspectives and how they theorise routine flexibility. The following sections provide a review of the literature on routines by focusing on three different perspectives: (1) behavioural theory, (2) evolutionary economics, and (3)

² Practical consciousness is the fundamental concept of Giddens’ (1984) structuration theory in routinisation. Structuration theory refers to the duality of structure (i.e. rules and resources recursively implicated in social reproduction) and agency (i.e. the ability to make a difference through exercise of power), which are constantly recreated in day-to-day social activity i.e. routines.

practice. The three perspectives are differentiated in terms of how they define routines, and specifically, how they view routine flexibility. Each view or idea is supported by various examples from both theoretical and empirical research.

2.2.1 Behavioural theory perspective

2.2.1.1 *Conceptualisation of organisational routines*

The behavioural theory perspective originates from the study of rules relating to economic decision-making as one of the internal operations of an organisation (Cyert and March 1963). Routines are defined as norms and expectations that “regulate the behaviour of individuals and interactions among them” (March *et al.* 2000, p.5). Cyert and March (1963) observed that general procedures (i.e. routines) can be summarised in terms of three rudimentary principles: (1) organisations look for procedures that minimise the need for predicting uncertain future events, (2) once a routine is set, changing or abandoning it will only happen under pressure, and (3) only simple rules are used as organisations rely on individual ‘judgement’ to provide flexibility.

Non-effortful. From the definition and the three principles described above, there are three concepts of routines associated with this perspective. Firstly, routines are expected to be non-effortful due to the minimal cognitive effort involved. A routine is likened to an array of habits where the execution of one habit triggers the next, resulting in a group of individuals acting in a particular way in specific situations (Knudsen 2008). Hence, routines appear as mindless feats when alternative responses to a given stimuli are ignored while using minimal information processing (Weiss and Ilgen 1985; Gersick and Hackman 1990). This is supported by Obstfeld (2012) who views organisational routines as activities that require the least conscious effort or deliberation in order to optimise cognitive effort. According to Obstfeld (2012), routines have largely constrained responses to certain stimuli, whereas activities that involve searching for responses outside of the norm are referred to as creative projects. In addition to this, the study by Brauer and Laamanen (2014) reveals that the amount of cognitive effort in creating a routine also determines the effort in re-creating that routine in the event of an environmental factor such as downsizing. This means that if routines were created with the intention of enacting them using minimal cognitive effort, the same minimal effort will be used to maintain them.

Stability. Secondly, because minimal cognitive effort is involved, routines provide stability to an organisation by operating through control, i.e. managing the actions of its staff. Thus bureaucracy is highly associated with routines especially in ensuring that they thrive within the organisation (March *et al.* 2000). The view that routines are enacted without much consciousness denotes that they are used as a source of stability and become a prototypical mechanism of managing organisations (March *et al.* 2000). However, routines must go through a journey of adaptation before they finally reach a state of stability and settle down. The existence of routines themselves is the result of organisations having to solve ad-hoc problems and learn as they gain new knowledge. Once a routine is set, it is expected to persist without much opposition or pressure to change because it has already been designed to minimise any uncertainties. Therefore routines become the ideal tool for controlling how an organisation operates through bureaucracy (March and Simon 1958; Cyert and March 1963; March *et al.* 2000).

Procedural memory. Lastly, routines are embodied and carried out based on procedural memory from learnt behaviour (Cohen and Bacdayan 1994). According to Knudsen (2008), ready-made resolutions to issues that frequently arise while enacting a routine are stored in an actor's memory, similar to a script. In this case, routine behaviour is a form of scripted action. In Cohen and Bacdayan's (1994) study, they observe how a routine is adapted over time based on learning from past performances, making the latest enactment more efficient than the previous. This continues until the routine reaches its maximum efficiency, i.e. least effort. Their study also observed that a time lapse between routine enactments does not alter their performance, which means that knowing how to perform a routine is stored as procedural memory and thus requires minimal cognitive effort. Based on the study by Bresman (2013), learning a routine may also depend on the experience of others. For instance, actors observe lessons learnt from other actors in their routine enactment, in order to incorporate them into their own routines. This *vicarious learning*³ (see Levitt and March 1988) can be adopted across different contexts and requires the commitment to learn from both the experienced actors and the actors learning the routine (Bresman 2013). This means that a particular routine can be adapted from another routine from a different context as long as it is learnt from the experience of the other routine actors.

³ A vicarious learning process is when a group of routine actors changes a routine, drawing on the experience of others (Levitt and March 1988)

The behavioural theory perspective is derived from Cyert and March's (1963) study on the behavioural theory of the firm and previously has not played a major role in influencing the direction of routine studies compared to the work by Nelson and Winter (1982) and Feldman and Pentland (Feldman 2000; Feldman and Pentland 2003; Pentland and Feldman 2005). Cyert and March's (1963) views on routines tend to resonate with earlier research relating to routines, such as bureaucracy (Weber 1947; Crozier 1964) and mindless rules (Stene 1940) rather than more recent themes such as effortful accomplishments and flexibility (Becker 2004). Nonetheless, there has been an increase in studies that view routines from a behavioural perspective. Although the discussions in these studies may not be exactly the same as the original views set by Cyert and March (1963), the fundamentals, such as learning, cognitive effort, and routine adaptation have evolved in recent studies.

2.2.1.2 Understanding of routine flexibility

Routines from the behavioural theory perspective are viewed as mindless rules (Cyert and March 1963), acted without much consciousness (March *et al.* 2000) and expected to be simple enough that minimal need for change is required (Cyert and March 1963). These characteristics point to an assumption that routines cannot change and thus flexibility is non-existent. However, routine change is acknowledged in the form of adaptation, meaning that for a routine to be established, it first goes through an adaptation process until it stabilises (March *et al.* 2000). Once established, as Cyert and March (1963) suggest, only under certain pressures can a routine be changed or discarded altogether. Furthermore, slight (simple) changes in an established routine can only occur through individual 'judgement' (Cyert and March 1963), meaning the changes would be so subtle that they would be unnoticeable. So, the only mention of routine flexibility from this perspective is the adaptation of routines before reaching stability, and the pressures that can cause an established routine to change.

2.2.2 Evolutionary economics perspective

2.2.2.1 *Conceptualisation of organisational routines*

This second perspective of routines is derived from the work by Nelson and Winter (1982): *An evolutionary theory of economic change*. This book has been acknowledged by many as a pioneering piece of academic writing on the concept of routines for researchers (Becker 2004). The term ‘evolutionary’ originates from the ideas of biology, which feature the “ability to survive and grow” (Nelson and Winter 1982, p.9). Their attention on routines is focused on characteristics, or influences that enable routines to persist, as well as evolve. Understanding of routines based on these characteristics is achieved by treating routines as a ‘black box’ to understand why they exist (Pentland and Feldman 2005; Parmigiani and Howard-Grenville 2011). Evolutionary economists study routines to understand the input and output channels of the black box, i.e. what affects, and is affected by, routines. For instance, in the study by Miner *et al.* (2008), they examine sources (input channels) that affect the variation, selection and retention (output channels) of routines. Nelson and Winter (1982) state that their interest lies in the analysis of the “larger systems”, i.e. the functional role of organisations, rather than on individuals (actors) (p.51), which is the reason why this perspective only views routines as black boxes without going into their micro dynamics. Because of this, the word routine is used in a “highly flexible way” covering all organisational activities that have repetitive patterns to individual skill, or merely as an adjective for some uneventful effective performance both at an organisational as well as individual level (Nelson and Winter 1982, p.97). There are three concepts related to the evolutionary economics perspective on routines: (1) organisational memory, (2) truce, and (3) inertia.

Organisational memory. Nelson and Winter (1982) claim that organisations “remember by doing” (p.99), which is an important form of storage for their operational knowledge. Thus organisations continue to operate by relying on their members to “know their jobs” (Nelson and Winter 1982, p.100). This is because once a routine is established, it is stored in the memories of the actors and repeated mindlessly just like a habit. Knowledge of the routine is tacit knowledge in the sense that it cannot be encoded because only human actors know exactly how to carry out the routine. Thus artefacts, such as written records, or formal filing devices that store knowledge on how enact a routine, merely function as archives. Additionally, a routine is described as something that is inherited and genetically passed down through organisational memory like genes

(Knudsen 2008). Knudsen (2008) states that there are two main factors involved in transferring this experience or memory to others. First is knowledge of the habit (routine) itself, and second is the capacity to develop the habit. According to Winter (2003), a routine can be persistently maintained if the knowledge and capability related to it are continuously exercised. Thus the survival of routines is dependent on their continuous enactment.

Truce. Nelson and Winter (1982) characterise a routine as a truce, which implies it is a “resolution to conflict” (Zbaracki and Bergen 2010, p.955). While it is recognised that there are differences in interests among routine actors, truce allows a routine to still function without it being obvious that many actors are involved (Nelson and Winter 1982). Nelson and Winter (1982) view truce as an important characteristic of routines because it signifies the control of organisation members through routines. Truce enforces actors to reject actions that could be interpreted as provocative, and also to be prepared to give an abrupt rejection to actions by others that threaten their rights under the truce. According to Becker (2004), truce applies to the relationship between actor and principal (e.g. workers and managers, managers and shareholders) as well as between peers (e.g. among workers, among managers). In the study by Zbaracki and Bergen (2010) on price adjustment routines, it was observed that small price adjustments have little impact on the truce between routine actors, whereas the opposite was observed when a large price adjustment is involved. This example shows that routines can only be characterised as a truce in certain contexts, i.e. where no big issues involving the routine are expected. This could also be the reason why the replication of routines in different contexts would yield a negative outcome (Gupta *et al.* 2015). According to Gupta *et al.* (2015), redesigning a routine in a new context requires investing in communication and incentives. What they are implying is that when the context of a routine changes significantly, effort is required to maintain the truce because it will not just automatically be renewed.

Inertia. Routines are also seen as a source of inertia (Yi *et al.* 2016). Nelson and Winter (1982) term all activities that have “predictable behavioural patterns” as routines (p.14). This may include very specific technical guidelines, hiring procedures, policies on investment, as well as business strategies. Therefore, routines are viewed as stable and unchanging, making them a source of inertia (Becker 2004). As pointed out by Feldman and Pentland (2003), earlier studies have linked the inertia of routines to the ability of organisations to exercise power efficiently through

bureaucracies. However, inertia can also cause routines to persist even if the feedback from the routine performance is negative, when it is ignored (Becker 2004). This is because the inertia of routines allows them to be controlled even if they are threatened by disruptions (Nelson and Winter 1982). According to Nelson and Winter (1982), organisations are expected to conform to routines even if they encounter difficulties with enacting them, and inertia ensures that this is achievable. Recent studies have also provided insight into how inertia can affect organisations in other ways. For instance, in the study by Yi *et al.* (2016), they found that the inertia of routines may give rise to variations that could potentially be valuable for organisational adaptation. If the implementation of a planned routine change is delayed, this may result in unintended variation in terms of the routine's sequence and pace. For example, an organisation may be forced to relocate its resources according to exploitation and exploration activities to achieve both efficiency and flexibility (Yi *et al.* 2016). In other words, if a certain routine cannot be changed, then the organisation needs to adapt their resources to fit the changing environments.

2.2.2.2 *Understanding of routine flexibility*

Routine studies from the evolutionary economics perspective do not explicitly reference the flexibility of routines. Some indirect acknowledgment of routine flexibility comes in the form of: (1) evolving through learning, and (2) acceptance of slippage in routine enactment (i.e. *truce*).

One of the main views of routines from this perspective is of their evolution. The study by Zollo and Winter (2002) introduces a framework of the knowledge evolution cycle, which illustrates how diverse information is provided through promoting new ideas of performing a routine. Additionally, routines evolve through a learning cycle that involves creating variation, selecting which to enact, and retaining a new mix (Miner *et al.* 2008). Throughout the cycle, the routines themselves are stable and will only go through variation, selection or retention when faced with internal or external pressures. The new way of performing the routine then evolves until it becomes an automatic response, becoming tacit knowledge embedded in the actors' memories or codified in the form of artefacts. Organisations have a tendency to copy established practices that have a proven track record (Nelson and Winter 1982), which includes the transferring of tacit knowledge between actors. Due to the tacit nature of routines, transferring knowledge would be difficult, thus limiting routine replication. Therefore, although the learning evolution of routines

may occur in a single organisation, this flexibility is not shared inter-organisationally because what works well in one context cannot be enacted successfully in another (Gupta *et al.* 2015).

From Nelson and Winter's (1982) study, the concept of *truce* in routines is an acceptance that not all actors would perform the routine according to the nominal standards of the organisation. They acknowledge that some slippage in routine performance is acceptable as long as it does not violate the expectations of the routine's outcome. For example, if a procurement routine that normally takes 12 weeks to complete is completed in 13 weeks, it can still be acceptable depending on the organisation's range of nominal standards. Thus routines are allowed some flexibility in the sense that actors are rarely surprised by these small slippages (Nelson and Winter 1982).

Much like the behavioural theory perspective, research based on the evolutionary economics perspective sees organisational routines as 'black boxes' to understand their roles in organisations (Pentland and Feldman 2005). Although there are many benefits of this, Pentland and Feldman (2005) point out that this view of routines is not accurate and "could lead to a narrow understanding of organisational routines" (p.801). What is limited by the research from these first two perspectives is addressed by the next perspective, the practice perspective.

2.2.3 Practice perspective

Early research on routines is limited due to the lack of empirical studies that could give insight into how to conceptualise organisational routines (Feldman and Pentland 2003). One of the first notable routine studies that based its findings on observations was the study by Feldman (2000) who observed routines involved in a university campus accommodation. Since then, the use of empirical studies through a practice lens (Feldman and Orlikowski 2011) has been widely adopted in routine studies. Empirical studies provide an avenue for understanding the internal dynamics of routines or how they are enacted, produced and changed (Feldman and Orlikowski 2011; Parmigiani and Howard-Grenville 2011). By focusing on everyday activities including routines, specific explanations of these activities in different contexts and over different periods of time provide valuable insight into routines (Feldman and Orlikowski 2011). For example, a longitudinal study enables researchers to observe multiple routine enactments within daily organisational life, thus allowing access to insights into routines in actual practice.

2.2.3.1 Introduction to practice theory

Practice theory was first used as an approach to studying organisational routines by Feldman (2000). Practice-based research is strongly associated with the French sociologist Pierre Bourdieu who called for research that highlights the importance of the relationship between actors and the field⁴ (Martin 2003; Gomez 2010). According to Bourdieu (1990), practice is the ‘doing’ by social agents which gives meaning to a particular context or happening. His work on practice has contributed towards many *strategy as practice* studies such as Jarzabkowski (2003) and Whittington (2006). Other notable practice theorists besides Bourdieu include Michel de Certeau, Michel Foucault and Anthony Giddens who all share the ambition to overcome social theory’s ancient dualism between individualism and societism (Schatzki 2005; Whittington 2006). This study correlates with this ambition because it aims to investigate the duality of the two aspects of routines to gain an understanding of the relationship between the ostensive and the performative. In his book, Giddens (1984) states that practices are “considered to be at the root of the constitution of both subject and social object” (p.xxii). Many research disciplines have emerged in the practice literature including philosophy, sociology and culture, as well as science and technology (Schatzki 2001). By studying all these disciplines from a practice perspective, important insights into present-day understandings are gained, which also oppose the traditional ways of thinking. Practice-based research shifts the focus from theory to an in-depth analysis of what is actually happening in practice, thus encouraging direct engagement with practitioners (Golsorkhi *et al.* 2010). This allows theoretical understanding that has more practical relevance for managers. Furthermore, practice theory, which is focused on dynamics, relations, and enactment, offers a powerful tool to analyse organisations that are understood to be complex, dynamic, and unprecedented (Feldman and Orlikowski 2011).

There is no single, universal approach to practice research, yet there is common agreement about what phenomena involve practices, including knowledge, human activity, science, power, social institutions, and historical transformation (Schatzki 2001). Within the practice perspective, there exist various terms that have different implications for how studies are understood and

⁴ ‘Field’ refer to a number of different theories that have evolved and developed over time. Field theory provides “social scientists a combination of analytical insight [...] and the implicit definition of “explanation” that [...] is internally consistent and in accord with everyday usage” (Martin 2003, p.1). See Martin (2003) for more information regarding field theory.

undertaken, thus providing different contributions to knowledge (Orlikowski 2010). As Orlikowski (2010) explains, there are three modes of engaging practice in research: (1) practice as a phenomenon, (2) practice as a perspective, and (3) practice as a philosophy.

Practice as a phenomenon. The first mode focuses on understanding what happens in practice as opposed to what researchers claim in their theories, frameworks, or models. Researchers in this group recognise that there is a big gap between scientific knowledge and actual reality. Reasons why this gap exists are due to knowledge transfer difficulties, treating theory and practice as distinct kinds of research, and knowledge production problems (Van De Ven and Johnson 2006). Thus Van de Ven and Johnson (2006) suggest ‘engaged scholarship’, a collaborative form of inquiry between researchers and practitioners where both sides have leverage on their different perspectives to co-produce knowledge about a certain phenomenon. Action research is one example of engaged scholarship that uses intervention in a social situation as a way to develop new knowledge (Iversen *et al.* 2004). In their study on software process improvement (SPI), Iversen *et al.* (2004) involved 10 researchers and 30 SPI practitioners in four software organisations. The researchers’ role was to facilitate the adoption of risk management by the SPI practitioners where the outcome of this research was a risk management framework. So by engaging in action research, practical knowledge on the routine of SPI was created.

Practice as a perspective. The second mode of research focuses on articulating the value of practice theories by giving attention to everyday activities as objects of analysis. This type of research is theoretically grounded in understanding the relationship between people, actions, artefacts, and contexts. Its main contribution to research is showing that practices shape organisational reality (Orlikowski 2010). Therefore, it treats practices as the focal lens for gaining insight into social reality. For example, knowledge on the dynamics and changing characteristics of routines was obtained through an empirical study of observing the housing routines involved in a student accommodation (Feldman 2000). Her study brought insight into how routines can be a source of change in organisations, thus demonstrating how the practice of routines can help shape how organisations operate.

Giddens’ (1984) structuration theory is an example of practice as a perspective and involves ‘duality of structure’ where structure, the rules and resources recursively implicated in social reproduction (Giddens 1984, p.23), and agency, the capability of an actor to “make a difference”

by exercising power (p.14), depend on one another in a continuous social action. Structuration theory aims to end traditional social science perspectives on the concepts of action, meaning and subjectivity. It suggests that it is neither the experience of actors nor the existence of societal structure but social practices over time and space that are central to perspectives in social science. Giddens (1984) proposes that the concept of routinisation itself is “vital to the theory of structuration” because of its significant use of practical consciousness (p.60). Routines go through social change which transcends time and space, and therefore plays a key role in clarifying how the theory of structuration comes about as routines are integral to both the agent’s personality and the institutions of society (Giddens 1984). Pentland and Rueter (1994) supports this in saying that routines present a crucial connection between the “organisation as an object” (structure) and “organising as a process” (action) (p.484). What this means is that structures allow agents to use appropriate resources and act according to a situation in order to produce the anticipated array of action or in other words, routine (Pentland and Rueter 1994; Orlikowski 2000). More recently, Feldman and her colleagues (Feldman 2000; Feldman and Pentland 2003; Pentland and Feldman 2005) have adapted structuration theory using the terms ‘ostensive’ and ‘performative’ in relation to routines.

Practice as a philosophy. The third mode of research (practice as a philosophy) understands that social reality is established through practices, and therefore studies under this mode must be ontologically, theoretically, and empirically grounded in lived practice (Orlikowski 2010). Furthermore, according to Orlikowski (2010), practice as a philosophy claims that all social life, and not just specific phenomena, is founded in ongoing practices. In her study, Schatzki (2005) demonstrates how alternative ontologies divide social theory into two contrasting principles, individualism and societism.⁵ Individualists maintain that social phenomena are constructed of individual people and their relations. On the other hand, societists deny this view of social phenomena, but claim that they are beyond individuals and inherently tied to the context from which they transpire (Schatzki 2005). Schatzki (2001) argues that both these ontologies are problematic and thus proposes an alternative approach that “steers a path between individualism and societism” (Orlikowski 2010, p.27).

⁵ Societism holds that there are social phenomena. Thus analyzing and explaining social affairs relates to phenomena, and not just the features of individual people or groups (Schatzki 2005).

Whereas the first and second mode state that practices matter and shape reality, the third claims that practices constitute social reality. The mode of research that is adopted for this thesis is practice as a perspective, which is used as the lens to study organisational routines.

2.2.3.2 Conceptualisation of organisational routines

Pentland and Rueter (1994) were the first to demonstrate that routines were not mindless, but were effortful accomplishments where change was possible by choosing from a repertoire of responses. Their study found that individuals are involved in mindful acts of choosing from a range of possible actions to achieve their desired performances. The support staff went through significant efforts to resolve their customers' software issues while keeping to the structural pattern of the routine involving opening a case, followed by searching for a solution, and ending with closing the case officially. Thus the enactment of the support routine is far from being mindless. However, Feldman (2000) pointed out that the repertoires themselves, and the rules that enable the choosing to take place, can also change. The outcome of the chosen action could then be undesirable and subsequently lead to a different action being chosen. So different outcomes can generate multiple new ideas which lead to the understanding of the organisation as an ongoing accomplishment (Feldman 2000).

Humans use knowledge gained from their ongoing interactions with the world to create meanings for their actions (Orlikowski 1992). Knowledge is used to interpret the different outcomes of actions in order to decide on the next course of action. Furthermore, these actions are performed by people who think, feel and care, and are motivated by will and intention (Feldman 2000). The subjective interpretations are what bind actions into patterns that are recognised as a routine (Feldman and Pentland 2003). This human interaction is known as agency. The importance of agency is highlighted in the definition of routine from the practice perspective as: "repetitive, recognizable patterns of interdependent action, carried out by multiple actors" (Feldman and Pentland 2003, p.96). Besides providing an "easily applicable test" to see whether a certain phenomenon can be considered as an organisational routine (Pentland 2011, p.281), this definition includes the word 'actors'. This denotes that agency holds a significant importance in the theory of routines from the practice perspective (Feldman and Orlikowski 2011) and can involve both human and non-humans (Pentland 2011). Additionally, the rules or structure that enable actors to

choose their actions are more of a process, rather than static, as they can also change (Feldman 2000). Structure is made up of inconsistent patterns (Manning 1982), i.e. varying rules to allow different practices to exist across varying spans of time and space (Giddens 1984). So human agency and changeable structures enable routine enactment to be a continuous ongoing accomplishment.

Thus routines from the practice perspective are based on three fundamentals: (1) routines are ongoing accomplishments, (2) agency is a vital aspect, and (3) structure is seen as a process rather than an entity.

Ongoing accomplishments. Ongoing accomplishments mean that “there can be no single, invariant, or final” way of enacting a routine, “just multiple, recurrent, and situated enactments” (Orlikowski 2000, p.412). One of the first empirical studies that highlighted routines as ongoing accomplishments was Feldman (2000) who proposed routines were a source for continuous organisational change. Feldman (2000) describes routines as a flow⁶ involving a wide range of thoughts, feelings and actions, which opposes the earlier perspectives which state that the enactment of routines does not require much thinking. In addition, Orlikowski (2002) states that routines are ongoing flows of activities that are full of purpose, and are knowledgeable acts. When knowledge is involved, the enactment of routines is not passive but rather a continuous social achievement (Orlikowski 2002). The term ‘continuous’ refers to knowledge that is still evolving rather than static (e.g. how to drive a car), which is why the knowledge involved in routines is considered an ongoing accomplishment.

Agency. Emirbayer and Mische (1998) conceptualise agency as:

A temporally embedded process of social engagement, informed by the past (in its habitual aspect), but also oriented toward the future (as a capacity to imagine alternative possibilities) and toward the present (as a capacity to contextualize past habits and future projects within the contingencies of the moment) (p.963).

Thus, the temporal nature of human experience enables the variable orientations of agency (p.1012). Agency is the capability to carry out actions and make a difference (Giddens 1984) which is influenced by actors’ experiences. The emphasis on the importance of agency in routines is most

⁶ Feldman (2000) referred to unpublished work by Pentland *et al.* (1994) and (1996) regarding routines as a flow. In a later published work (Malone et al 1999), they describe *flow dependencies* that occurs when “one activity produces a resource that is used by another activity” and is present in almost all types of processes (p.429).

evident in the routine dynamics theoretical framework proposed by Feldman and Pentland (2003). This framework is built on Giddens' (1984) structuration theory and Latour's (1986) analysis of power, but has been adapted specifically for routines. According to Feldman and Pentland (2003), routines are more than just structure. They emphasise the role of agency in routines and hence relate routines to subjectivity and power. For instance, a set of rules or procedures on a piece of paper alone does not guarantee that a routine exists. Those rules could have been written down by an administrator to fulfil a request by their superior, based on their understanding of a certain activity. Actors need to enact what they understand about the rules to make up a routine. For instance, the road-mapping routine (Howard-Grenville 2005), a decision-making practice, is fully dependent on human actors. Although the routine itself is not codified anywhere, it still persists as it is embedded in the employees. What the employee understands, intends, and is interested in, is what makes up the performance of the routine.

Structure. A structure is a patterned arrangement that is recurrent with the purpose of influencing or restricting the available choices and opportunities (Barker 2000). Structure can refer to a variety of facets: organisational, social, physical, and cognitive (Sewell 1992; Pentland and Rueter 1994). Structure is most commonly understood as 'structuring' some aspect of social life (Sewell 1992), or principles for generating practices which can be objectively regulated (Bourdieu 1977). For example, class structures politics, and gender structures job opportunities. However, the most fundamental problem as pointed out by Sewell (1992) is that structure has been assumed to be rigid and immutable. Rather, structures are "multiple, contingent, and fractured" and can enable changes to occur (p. 16). For example, in Feldman's (2000) study, an equilibrium was not observed even though the intended outcomes of the routines were accomplished. This was because a manager's interpretations of how effective an action is to an outcome could be different from a subordinate's interpretation. Thus their schemata⁷ that form the basis of the routine enactment (i.e. the routine's structure) are constantly changing. This is in line with the first fundamental for routines, that organising is an ongoing accomplishment. Structure is also an ongoing accomplishment that changes with time and thus structure is a process, rather than a monolithic entity (Feldman 2000). According to Pentland and Rueter (1994), there are two elements that constitute the structure that enables and constrains actions in a routine: rules about how to put parts

⁷ Organisational schemata are "a set of shared assumptions, values, and frames of reference that give meaning to everyday activities and guide how organization members think and act" (Rerup and Feldman 2011, p.578)

of a repertoire of actions together, and the repertoire itself. So the rules and the collection of rules are ever-changing with varying contexts (Becker 2004) leading to multiple ways of enacting a routine.

Overall, the three fundamentals – ongoing accomplishments, agency, and structure – are key to the theoretical model proposed by Feldman and Pentland (2003) which is central to the practice perspective of routines. The model is made up of the ostensive aspect and the performative aspect. The ostensive aspect is the abstract understanding of the routine and “shapes our perception” of it (Feldman and Pentland 2003, p.101). It may exist explicitly in the form of regulations that are encoded in artefacts (e.g. Turner and Rindova 2012), or implicitly as the tacit knowledge of an organisation (e.g. Howard-Grenville 2005). The performative aspects are “specific actions taken by specific people at specific times” (Feldman and Pentland 2003, p.101). This study will have a specific focus on these aspects individually as well as their relationship with one another. Thus more in-depth discussion of the ostensive and performative aspects is covered in Section 2.3.

2.2.3.3 Understanding of routine flexibility

The focus on the internal dynamics of routines in practice-based research has led to various insights into routine flexibility. The ostensive-performative framework shifts the focus of routines to the role of actors involved, and how human agency brings subjectivity into the theory of routines (Feldman and Pentland 2003). The features of the ostensive and performative aspects all link to the role of actors in driving routine flexibility. For example, the ostensive relies on the perception of individuals, i.e. how they interpret phenomena and can be developed over time (Pentland and Feldman 2008a). Therefore, the ostensive is not expected to be fixed at all times. In the study by D’Adderio (2003), she observed the enactment of a routine that involved actors from different departments within the organisation. When a new initiative was put forward to technologically embed the routine into a system, it created a problem with the routine enactment because the new system made it difficult to communicate and carry out the inter-dependent activities effectively. Furthermore, as the actors were used to enacting the routine flexibly, based on different situations, forcefully embedding the routine into an artefact hindered their ability to do this because the ostensive was forced to be fixed. Thus, this example demonstrates the need for the ostensive to be flexible for routine enactment.

Besides being flexible ostensibly, routines may also be flexible in the performative aspect because they are inherently improvisational (Feldman and Pentland 2003). The performances of routines are somewhat novel because they involve actors engaging in reflexive self-monitoring (Giddens 1984) to make sense of what they are doing and their choice of actions in specific contexts (Feldman and Pentland 2003; Becker 2004). In Bruns' (2009) study, even though significant training was provided on how to enact the routine, on several occasions the routine actors were more prone to enacting the routine according to how they thought it should be enacted as opposed to what they had been taught during the training sessions. This illustrated a deviation from the expected routine performance set by the organisation, caused by the different intentions of the organisation (routine owners) and the routine actors. Another example of performative flexibility could be seen in the towel-changing routine in the study by Bapuji *et al.* (2012). Although the intention of the hotel was put in writing for all the hotel guests to see, the outcome was always different with each guest, i.e. some would put their towel in a place other than what was stated in the instructions, which made it difficult for the housekeepers to determine whether the guests wanted their towel changed or not. This issue was later rectified by the use of specific objects (i.e. hook on door, and a basket) to ensure the intentions of the hotel were clearly passed on to the hotel guests. In both these examples, the actors themselves improvised on the routine performance according to how they perceived the current context and interpreted what actions should be taken.

2.2.4 Comparisons of theoretical perspectives

Table 2.1 is a summary of the three perspectives and their view of routine flexibility. It was observed that whereas the behavioural theory and evolutionary economics perspectives have quite similar views, the practice perspective provides an alternative view.

Researchers from the behavioural theory perspective view routines as mindless and if changes are involved, they are so minor that only one person's judgement is enough (Cyert and March 1963; March *et al.* 2000; Obstfeld 2012). So once a routine is established, it is not meant to change and thus routines are not meant to be flexible. The evolutionary economics perspective, which originates from Nelson and Winter's (1982) study, views routines as "predictable behavioural patterns" (p.14). If a routine is predictable, then it is expected that the routine is

performed in the same way each time, thus it is expected to have no flexibility. However, this perspective does acknowledge that for a routine to be established, it must go through an evolutionary process in which it changes until it stabilises (Nelson and Winter 1982; Zollo and Winter 2002; Miner *et al.* 2008). The limitation from these first two perspectives due to their black box approach (Pentland and Feldman 2005) is addressed by the practice perspective, which focuses on the internal dynamics of organisational routines. Feldman and Pentland’s (2003) framework allows researchers to investigate how routines change according to their ostensive and performative aspects.

	Behavioural theory	Evolutionary economics	Practice
Definition or organisational routine	Norms and expectations that “regulate the behaviour of individuals and interactions among them” (March <i>et al.</i> 2000, p.5)	All organisational activities or individual skills that have repetitive patterns, thus the word <i>routine</i> is used in a “highly flexible way” (Nelson and Winter 1982, p.97)	“Repetitive, recognizable patterns of interdependent action, carried out by multiple actors” (Feldman and Pentland 2003, p.96)
View on routine flexibility	<ul style="list-style-type: none"> • Changes that are minor enough that only one person’s judgement is enough i.e. least cognitive effort • When first created, routines go through an adaptation process until they reach stability, at which point no more changes are expected 	<ul style="list-style-type: none"> • Predictable behavioural patterns i.e. mindless • Routines are a source of inertia • Go through an evolution process involving variation, selection and retention • Adapting routines in new contexts requires dynamic capabilities 	<ul style="list-style-type: none"> • Go through continuous change • Changes occur at both the ostensive and performative aspects • Change is driven by the routine actors i.e. endogenous change
Examples of empirical papers	Cohen and Bacdayan 1994 – Role of procedural memory in routine adaptation Brauer and Laamanen 2014 – Routine actors invest in different amounts of cognitive effort in repairing routines due to the magnitude of the organisational downsizing Bresman 2013 – Routine change through adaptation from other routines through vicarious learning requires commitment from both groups i.e. learners and experienced	Yi <i>et al.</i> 2016 – Inertia of routines stimulates variation that is useful for organisational adaptation Gupta <i>et al.</i> 2015 – Routines cannot be replicated in different contexts Zollo and Winter 2002 – Dynamic capabilities allow the development and adaptation of routines	Feldman 2000 – Past routine performances create the drive for continuous change Howard-Grenville 2005 – Routine actors can enact the routine flexibly by exerting power Turner and Rindova 2012 – Routine consistency is achieved while facing performance variation through use of artefacts

Table 2.1 – Summary of the three perspectives in relation to routine flexibility

Whichever perspective is taken, routine flexibility has been repeatedly mentioned in various studies and appears in many forms, such as adaptation (Cyert and March 1963), evolution (Nelson and Winter 1982), and continuous change (Feldman 2000). Routines are more than just a

prescribed set of actions (Howard-Grenville 2005), and are generative systems (Pentland and Feldman 2005; 2008a). Their ability to be adapted between different situations allows organisations to respond to competing objectives (Aroles and McLean 2016), generate learning (Miner *et al.* 2008), and produce innovative outcomes (Sele and Grand 2016). The very repetition of routines requires them to have a certain degree of adaptation as well as the ability to be innovated via novel actions within different settings (Aroles and McLean 2016, p.12). Conversely, the flexibility of routine itself allows it to persist over time (Howard-Grenville 2005). Yet there are still many unanswered questions about how routines are changed, or even resist change (Cohen 2007). This study examines routine flexibility from the practice perspective to fill a gap in the literature on how the ostensive-to-performative relationship affects routine flexibility. Routine flexibility in this study is used to refer to routine enactment that differs from the conventional way, or the expectation of how it should be enacted. This includes any changes and deviations that can be either explicit, or implicit. Before going further, I think it is necessary to discuss routine flexibility by breaking it down into smaller categories. Specifically, the following section discusses the sources of routine flexibility and how they affect the different aspects of routines.

2.3 Routine dynamics

This section provides detailed explanations of the two aspects of the routine's internal dynamics based on the aforementioned ostensive and performative framework by Feldman and Pentland (2003), which has become the main reference point for studies on routines from the practice perspective.

2.3.1 History

It is important to recognise the intellectual history behind the ostensive-performative relationship to fully understand the rationale behind these concepts. In his study of power, Latour (1986) used the words ostensive and performative to discuss the problems of power and its functioning in society (Simpson and Lorino 2016). The ostensive was used to describe power in principle. According to Latour (1986), actors are only part of a society and thus should not be relied on too much as they do not know the whole picture. Actors' opinions, beliefs and behaviour are analysed

using an appropriate methodology to piece together the whole picture of the properties of society. On the other hand, performative was used to describe power in practice. According to Latour (1986), actors define what society is and it does not matter whether one knows more or less than another. The whole picture is established by finding the different practical ways actors define society. Although he noted that power can exist both in principle and practice, based on their definition, both these ideas (ostensive and performative) only exist as a duality; i.e. they cannot be blended together (Latour 1986; Simpson and Lorino 2016).

Feldman and Pentland (2003) adopted the ostensive and performative concepts from Latour (1986); ostensive refers to the principle of a phenomenon, and performative refers to the practical aspect of a phenomenon. However, they did not adopt the understanding of the concepts' dualism. Rather, the routine dynamics model favours the notion of duality as presented by Giddens (1984). His work on structuration theory transcends the dualism of structure and agency as they constitute one another and are not independent phenomena. So, like mind and body which cannot be separated, the ostensive and performative aspects cannot exist without the other (Feldman and Orlikowski 2011). The ostensive aspect is the abstract idea of the routine, and the performative aspect is the acting out of the routine. For a routine to exist, there needs to be both the ostensive and performative aspects as "both aspects are necessary to constitute what we understand to be the routine" (Feldman and Pentland 2003, p. 102). Furthermore, these aspects are always relating to one another. Feldman and Pentland (2003) state that the ostensive aspect is used to guide, account for, and refer to a set of performances, whereas the performative aspect is essential for the creation, maintenance and modification of the ostensive aspect. The characteristics of both aspects are described further in the following sections.

2.3.2 Ostensive aspect

The ostensive aspect is the "abstract patterns that participants use to guide, account for and refer to specific performances of a routine" (Pentland and Feldman 2005, p.795). The ostensive can take two forms: explicitly embedded in the form of an artefact such as a standard operating procedure (SOP), and/or as a taken-for-granted norm such as tacit knowledge or individual understanding (Feldman and Pentland 2003).

For most routines, it is normal practice that the rules or guidelines on how to perform them are codified in artefacts such as SOPs and software systems. Thus the artefacts serve as a proxy for the ostensive (Pentland and Feldman 2005). In Turner and Rindova's (2012) study, artefacts were used to support the ostensive by promoting standardised actions for the routine enactment. For example, there were written rules on how actors should cope with sudden events that would affect the routine's performance, and the enforcement of these artefacts strengthened the actors' ostensive that resulted in a standardised performance across all routine actors. Embedding the ostensive in artefacts could also be a way to make routine enactment more efficient. For instance, in the study by Goh *et al.* (2011), hospital routines were embedded into a new software system in a strategic move by management. The ostensive of the routines was codified into the system in order to increase the efficiency of how the routines were enacted. Although it is tempting to equate these artefacts with the ostensive aspect, it is inappropriate to do so as artefacts are merely indicators of the ostensive (Pentland and Feldman 2005). This is evident in Goh *et al.*'s (2011) example where the routine actors still had control over how the routine was performed when they discovered that the new system did not align with their understanding of how the routine should be enacted. In turn, the system was updated to align with the routine actors' ostensive. Similar incidents occurred in Whitford and Zirpoli's (2014) study where the boundary artefact that was used to communicate between two organisations was changed to adapt to the latest ostensive change. Thus artefacts may embed the ostensive, but are not the same as the ostensive.

While in some cases the ostensive can exist in the form of artefacts, in other cases, it exists as a norm⁸ that is accepted as part of the organisation. For example, in the study by Howard-Grenville (2005), the routine that was observed existed in the form of organisational memory because it had been performed long enough within the organisation that it had become tacitly embedded in the minds of its members. The ostensive was developed over time through the repeated enactment of the routine until it became a norm. These norms exist and are shaped by an individual's perception, which is affected by different contexts, according to Emirbayer and Mische (1998) who conceptualise agency as a "temporarily embedded process of social

⁸ Social norms are when human behaviour is greatly influenced by the behaviour of others (Aarts and Dijksterhuis 2003). Giddens (1984) on the other hand, describe norms as being associated with the "relations between the rights and obligations 'expected' of those participating in a range of interaction contexts" (p.30). In this study, I refer to norms as the normal way of practice that is accepted by organisational members and tacitly embedded in their minds. Thus members are able to carry out these practices without the need to refer to artefactual guidelines such as SOPs.

engagement” (p.962). Thus the individual’s perception varies with time and context. For example, in an attempt to enforce the Clean Air Act, which is a US environmental regulation to manage air pollutant emissions from industries (Short and Toffel 2010), the Audit Policy was introduced. Organisations’ perception on air pollutants was influenced by the Clean Air Act, which led to self-regulating through the Audit Policy, making it a norm and part of their production routines. Perceptions can also be developed to fit certain needs. Pentland and Feldman (2008a) propose to invest in the ostensive when designing live routines. Routine actors are trained, they perform the routine together, and get feedback on the collective performance. By doing this, they inevitably build up patterns that they can identify even from different perspectives (Pentland and Feldman 2008a). For example, in Reynaud’s (2005) study, it was observed how the organisation changed the routine’s ostensive via new employees who had been trained to possess the desired ostensive. As the new employees worked alongside the existing, more experienced employees, over time this ostensive was naturally “passed on” to the existing employees and translated into the routine’s performance (p.864).

Besides the different forms of ostensive (i.e. embedded or existing as a norm), another important characteristic is that it does not determine specific performances. For instance in a cancer research laboratory study by Bruns (2009), the safety regulations and training provided were aimed at preventing damaging effects of hazardous materials on the scientists. In other words, the scientists were being trained to capture the ostensive aspect of the safety routines. However, it was observed that the scientists were more compelled to practise the safety regulations that safeguarded their experiments than those that would protect themselves. While the organisation’s intention was the well-being of both the scientists and the experiments, the scientists were merely concerned to ensure that their experiments were not contaminated. In this case, the different ostensive views (between organisation and scientists) resulted in different outcomes of the safety routines. In another example, the study by D’Adderio (2003) gave insight on how embedding the ostensive in the form of technological artefact can still yield undesired performances. The enactment of the routine showed a divergence from the ostensive that was embedded in a software system. However, similar to Bruns’ (2009) case, due to conflicting objectives between the routine actors and the organisation, the software was bypassed so that the actors could perform the routine according to how they preferred. Both these examples illustrate that having a specific ostensive does not determine specific performances.

2.3.3 Performative aspect

The performative aspect consists of two main characteristics: it is improvisatory, and an effortful accomplishment.

Firstly, the performative can be described as inherently improvisatory (Bourdieu 1977; Feldman and Pentland 2003; Pentland and Feldman 2005). This is because even though practices are carried out based on rules and expectations (Orlikowski 2000), the actions taken are always, to a certain extent, novel (Feldman and Pentland 2003). For example, in a waste collection routine (Turner and Fern 2012), the driver faces an unscheduled road block forcing him to take a turn to the quickest re-route based on his experience so that the waste collection routine can be successfully performed. His act is considered spontaneous as he has to make a fast decision based on his knowledge of the roads, and is performed only at that particular time. Even if routines are carried out by the same people, the performative aspect will always vary depending on different contexts. For example, in the study by Howard-Grenville (2005), different parts of the routine were enacted based on the situation. In one scenario, actors chose to stick to the routine defensively when management called for a particular change in the process. However, in another, actors agreed with creating a different option within the routine enactment to cater for a certain issue that was brought up by a senior executive. In a more recent study, Dittrich *et al.* (2016) observed how actors used talk to support the enactment of reflection in seeking opportunities for routine change. This “reflective talk” (Dittrich *et al.* 2016) establishes that routine change is accomplished due to improvisations based on present situations. What supports the improvisatory characteristic of the performative aspect is the significantly tacit component involved in a routine’s performance (Pentland and Feldman 2005). For instance, Cohen and Bacdayan (1994) observed routine actors performing the routine with more ease the more they performed it i.e. the actors were able to improvise their actions more efficiently over time. However the more easier it became, the harder it was for actors to verbalise their actions proving there is tacitness involved.

Secondly, the performative aspect involves effort. Routines are performed against a background of rules, but the actions are based on the actors’ interpretation of the rules. So routines are not performed mindlessly, but using effort. For instance, Pentland and Rueter (1994) show that individuals are involved in mindful acts of choosing from a range of possible actions to achieve

their desired performances. The support staff went through significant efforts to resolve their customers' software issues while keeping to the structural pattern of the routine for opening a case, followed by searching for a solution, and ending with closing the case officially. Thus the enactment of the support routine is far from being mindless. Routines are seen as a source for continuous change due to their ability to be flexible (Feldman 2000). The ability for routines to be performed flexibly is due to the effort of their actors. For instance, Bucher and Langley's (2016) study observed how actors actively engaged in repetitive reflection and experimentation to accomplish new, revised routines. In another study, Deken *et al.* (2016) observed routine actors conduct novel routine performances through flexing, stretching, and inventing actions, to attain novel routine outcomes. Thus these effortful accomplishments enable routines to be flexible.

2.3.4 Routine dynamics and artefacts

As discussed earlier, artefacts can be physical indicators of the ostensive, so embedding the ostensive is one of the roles of artefacts. However, artefacts can also come in many forms and have different roles in routine enactment. Pentland and Feldman (2005) define artefacts as "physical manifestations of the organisational routine" and they can either enable or constrain the routine (p.797). This is because the way in which artefacts are associated with the routine depends on the actors' interpretation of them (Pentland and Feldman 2008a). Most artefacts are open to interpretation, and those that influence actions are often incorporated into the ostensive aspect. In the example used in Goh *et al.*'s (2011) study, the software system which was incorporated into the routine enactment was eventually accepted and incorporated ostensively.

The ostensive and performative aspects differ regarding the extent to which they involve, or are represented by material artefacts. The role of artefacts can be described according to two ways: firstly is in how it relates to the ostensive and performative aspects, and secondly is in how it represents the two aspects.

Artefact-performative association

In terms of the relationship between artefacts and the performative aspect, it is more about the control of behaviour (Pentland and Feldman 2005). For example, in Bapuji *et al.*'s (2012) study on hotel towel-changing routines, the information card provided the instructions for hotel guests,

while other artefacts in the bathroom (i.e. basket, door hook) guided them in following the instructions. In this case, all the artefacts involved in the routine controlled how the routine was enacted, whether by enabling it via the instructions, or constraining it via the basket and door hook. In a more recent study, Berente *et al.* (2016) observed how the implementation of an integrated software system stabilised to enable control of routine actors at the organisational level. Through continued enactment of the routines, the actors' ostensive eventually aligned with the integration of the new software which was then translated to the performative. All these examples show how the use of artefacts can control the performative aspect of the routine. Nonetheless, even though artefacts do guide actions through control either via lists of conformed actions, or specific objects, how these artefacts are used or interpreted still leaves a lot of possibilities for the routine's enactment (D'Adderio 2008).

Artefacts can also be physical representations of the performative aspect (Pentland and Feldman 2005). One obvious type of artefact are physical documents such as tender proposals, and system databases such as an IT helpdesk log report. For example, in Pentland and Rueter's (1994) study, they collected data from work logs and databases which represent archival traces of the performative aspect i.e. how the software support routine was enacted. Referring to a different set of artefacts, Bapuji *et al.*'s (2012) study on the other hand looked at the location of the towels as part of the routine's performance. So in their study, the towel location is an artefactual representation of performative aspect as it provides evidence of whether the routine has been enacted accordingly or not.

Artefact-Ostensive association

The relationship between artefacts and the ostensive relates to the alignment of these artefacts with the actors' understanding of what they are supposed to do (Pentland and Feldman 2005). This relationship is particularly evident when there is a divergence between the two. For example, in Bruns' (2009) study, the rules of the safety routines were embedded in the training materials. However actors still held on to ostensives that conflicted with what was embedded in the artefact. Similarly, Reynaud (2005) observed actors diverging from the ostensive that was represented by the new written rules. In both these examples, the misalignment between what was embedded in the artefact, and the ostensive of routine actors, was only made apparent through their actions. On the other hand, alignment between artefacts and the ostensive can provide multiple benefits. For

example, Turner and Rindova (2012) used artefacts to balance conflicting ostensives of maintaining consistency and standardisation with flexibility. This was evident as, although the routine could be performed flexibly, the outcome was still maintained as consistent across different routine actors. Berente *et al.*(2016) observed how the organisation aligned its new integrated system to the actors' ostensive through continuous enactment of the routine. With the alignment between the technological artefact and the ostensive, the organisation was able to have control of its operations at the enterprise level. Therefore, while the relationship between artefacts and the ostensive relates to the alignment between the two, it is only apparent through the enactment of the routine itself (i.e. performative).

Artefacts can also serve as a proxy for the ostensive aspect of a routine (Pentland and Feldman 2005). For instance in the study by Whitford and Zirpoli (2014), an artefact was used to embed the ostensive understanding of several different organisations in a supplier-manufacturer relationship for better coordination between all parties in enacting the production routines. Similarly in Bapuji *et al.*'s (2012) study, an instruction card was left in the bathroom to communicate the hotel management's expectations (i.e. ostensive understanding) of the towel changing routine to the hotel guests. In both example, artefacts functioned as a proxy for the routine's ostensive aspect. However this does not necessarily mean that routine actors will possess the same ostensive as per the artefacts as proven in several studies where actors still exercised their agency when enacting routines even with artefacts such as SOP's and rules available (D'Adderio 2008; Bruns 2009; Whitford and Zirpoli 2014).

In summary, artefacts come in many forms and hold many roles in routines. But their relation to the routine dynamics are specific to each aspect of the routine. The artefact-performative relationship is about the control of behaviour, whereas the artefact-ostensive relationship is about the alignment between the two. Additionally, artefacts can also serve as a representation of either the ostensive, or performative aspects.

2.3.5 Ostensive-performative relationship

Feldman and Pentland's (2003) framework views routines as made up of the ostensive and the performative aspects, which are inter-related. Both these aspects are necessary in order to establish a routine. They are interdependent in a cyclical way known as a generative cycle (see *Figure 2.1*) where performances create and recreate actors' perceptions (of a routine) and the ostensive aspect both constrains and enables the performances (Feldman and Pentland 2003; 2005). It is worth noting that this idea is a similar version to Giddens' (1984) duality theory about structure and agency, in which both of these aspects depend on one another in a continuous social action. For example, in an engineering company that was going through a major restructuring, coordinating the changes in the multiple routines affected was only successful after numerous iterations of the ostensive-performative cycle (Jarzabkowski *et al.* 2012). The changes also affected the multiple actors involved in the routines. In Jarzabkowski *et al.*'s (2012) observation of a routine for scheduling engineering visits, actors from a certain division no longer had the power to do so and therefore had to rely on others to perform this routine. The routine change was the result of multiple overlapping cycles of the ostensive and performative that formed a coordinating system to make the changes. As each cycle is performed, a new ostensive is achieved and continues to evolve until it stabilises in the final cycle where all actors commit to the same ostensive pattern for the routine (Jarzabkowski *et al.* 2012).

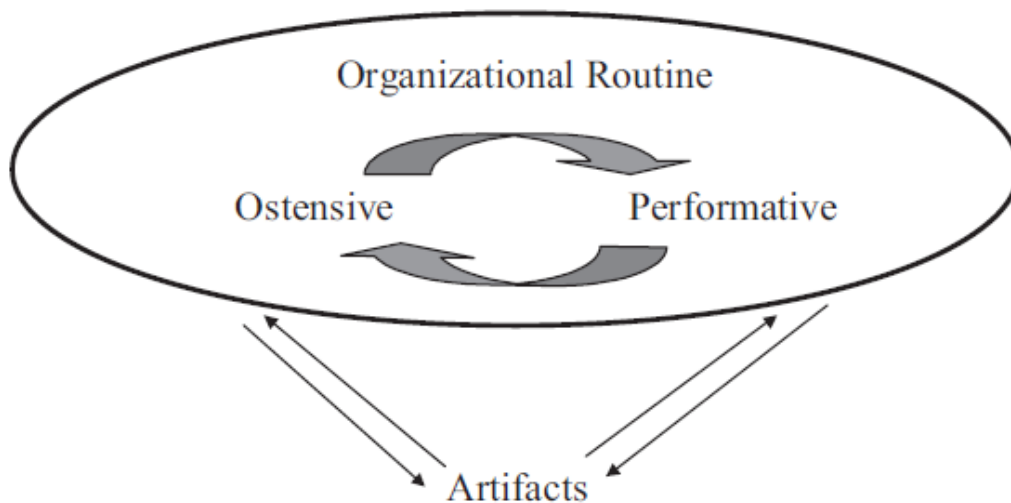


Figure 2.1 – Organisational routines as generative systems (Pentland and Feldman 2005)

Although some studies only focus on one aspect of the routine in terms of flexibility, it is also important to acknowledge both aspects. As Feldman and Pentland (2003) pointed out, the relationship between the ostensive and performative aspects provides a continuous opportunity to produce many different routine outcomes. Furthermore, routine actors make use of social “spaces”, bounded social settings in which interactions among actors are organised in distinctive ways with actors using different types of spaces to deliberately alter both the ostensive and performative aspects (Bucher and Langley 2016). The work by LeBaron *et al.* (2016) is one of the few studies that explicitly discusses the relationship between the performative and ostensive in routine flexibility. Their study observed how the ostensive (which they refer to as mutual intelligibility) is created, maintained and repaired by the flexible performance of the routine as actors constantly coordinate their actions.

2.4 Routine flexibility: Sources and their impact on the internal dynamics of routines

This section provides an overview of the different classifications of routine flexibility according to its source and impact.

Miner *et al.* (2008) classify routine change as either pre-planned or emergent, that can be triggered internally, within the organisation, as well as externally, outside the organisation. However, because I intend to examine the internal dynamics of routines, it is more appropriate to classify routine flexibility sources according to whether they come from within or outside the routine itself. Thus the source of a routine flexibility can be either exogenous or endogenous (Feldman and Pentland 2003). Exogenous sources are events, issues, or sources that originate from outside a routine (Feldman and Pentland 2003), meaning it cannot be part of the routine to begin with. Exogenous sources work by significantly altering the context in which the routines operate (Feldman and Orlikowski 2011). The natural tendency for the surrounding environment to constantly fluctuate provides a high probability that routine performances would vary in response to change in the environment (Cohen 2007). For instance, loss of staff through downsizing activities due to changes in the environmental demands has a direct impact on existing organisational routines in addition to forming new ones (Miller *et al.* 2012).

Conversely, endogenous sources originate from within the routine through its enactment, which is influenced by actors and artefacts. Studies focusing on this type of routine flexibility examine the micro-dynamics of the routine to understand what actually occurs for a routine to change. For endogenous routine changes, the main focus is the routine actors themselves. Being different individuals, routine actors have heterogeneous objectives, capabilities, preferences, perceptions and interpretations (Cohen and Bacdayan 1994; Feldman and Pentland 2003; Howard-Grenville 2005). Due to these differences, it is important that actors possess a shared understanding of the objectives of a routine in order to determine what actions should be taken when there are several options on how to perform it (Feldman and Rafaeli 2002). Furthermore, according to Feldman and Rafaeli (2002), connections between actors affect the ability of organisations to adapt to changing circumstances, which includes adapting routines. Additionally, the differences in the relative power of these actors themselves allow them to determine how to enact a routine depending on the situation (Howard-Grenville 2005). Another example of actors exercising their agency for routine flexibility is when a certain outcome of a routine performance enables new opportunities, which push them to change the routine to gain advantage (Feldman 2000).

Besides the actors, artefacts and physical indicators of a routine may also be an endogenous source of routine flexibility (Pentland and Feldman 2005). They can come in the form of explicit codification of the routine such as SOPs or formal rules, or may be implicitly connected to a routine such as the physical layout of an office that has a reception area for enabling the routine of welcoming visitors. Artefacts such as rules are important as they provide resources for actors, yet they do not determine the performances of a routine (Giddens 1984). According to Feldman (2000), artefacts lead to actions and reactions from actors, thus the perception that artefacts are static structures is unfounded. They can either directly guide how actors enact a routine (e.g. Turner and Rindova 2012), or they can invite actors to question their actions (e.g. D'Adderio 2003). As a result, the role of artefacts will also evolve based on how they are being used by certain actors in specific contexts (D'Adderio 2011). On the other hand, although artefacts such as SOPs are meant to provide an image of stability, they could also be viewed as a source of various concerns and problematic issues (Aroles and McLean 2016). For example, if there are two or more SOPs that have competing objectives, complying with one particular SOP may mean having to diverge from the objectives of the other SOPs. Thus enacting a certain routine in compliance with a specific artefact may lead to problematic outcomes for other routines. Thus the use of artefacts can create

the need for routine flexibility. In summary, both actors and artefacts are endogenous sources that have the potential to modify routine performances due to their generative agency (Sele and Grand 2016).

	Ostensive flexibility	Performative flexibility
Exogenous source	<p><u>Emergent change (in response)</u> <i>Reynaud (2005)</i> Routine – Paris Metro maintenance routines Contribution - Introduction of new rules cause actors to revisit their understanding of the routine</p> <p><u>Planned change (in response)</u> <i>Bucher and Langley (2016)</i> Routine - Patient related routines at a hospital Contribution - The role of experimental and reflective spaces in intentional routine change</p> <p><i>Short and Toffel (2010)</i> Routine – Production processes Contribution – Introduction of new legislation change how organisations manage production routines</p>	<p><u>Guided emergent change</u> <i>Beckman and Haunschild (2002)</i> Routine – General organisational routines Contribution – Adopt practices from network partners</p> <p><u>Guided instantaneous change</u> <i>Turner and Rindova (2012)</i> Routine – Waste collection routines Contribution – Environmental factors e.g. road closures, events force routine actors to adapt using artefacts as their guide to maintain consistency</p> <p><i>Pentland and Rueter (1994)</i> Routine – Software support routines Contribution – Complexity of the problems means that frequent 'search and deliberation' is required</p> <p><i>Turner and Fern (2012)</i> Routine – Waste collection routines Contribution – Experience of past routine performances shapes the variability of the current routine performance</p>
Endogenous source	<p><u>Planned change</u> <i>Rerup and Feldman (2011)</i> Routine – General organisational routines in a research institution Contribution – Modify routines through trial and error (spontaneous variations)</p> <p><u>Emergent change</u> <i>Aroles and McLean (2016)</i> Routine – Newspaper printing routines Contribution – Meetings used as a space to question routines by highlighting concerns and raising controversies</p> <p><i>Whitford and Zirpoli (2014)</i> Routine – Operational routines in an automotive organisation that involve inter-organisational effort Contribution – An undesired routine performance lead to the current ostensive being challenged and adapted</p>	<p><u>Planned change</u> <i>Feldman (2000)</i> Routine – University accommodation routines Contribution – Routines are changed based on past performances in order to repair, expand and strive to achieve better performances</p> <p><u>Instantaneous change</u> <i>Bapuji et al. (2012)</i> Routine – Towel changing routine in hotel Contribution – The role of intermediaries in creating routine variation</p> <p><i>Bruns (2009)</i> Routine – Lab safety routines Contribution – Different objectives between actors and the organisation (routine owners) lead to routine performance variation</p> <p><i>Howard-Grenville (2005)</i> Routine – Road-mapping routine Contribution – Routine actors use their power depending on context to determine which parts of the routine to enact</p>

Table 2.2 – Summary of ostensive and performative flexibilities based on the source of flexibility

Whether a source is exogenous or endogenous, the impact on the internal dynamics of a routine can affect either the ostensive or performative aspect, or both. Therefore, I have divided routine flexibility into four distinct categories according to its source (i.e. whether endogenous or exogenous), and within which aspect the routine flexibility occurs (i.e. whether ostensive or performative). *Table 2.2* summarises the literature according to the different categories.

2.4.1 Exogenous-ostensive flexibility

Exogenous-ostensive flexibility occurs when the change in the routine primarily affects the ostensive aspect and is triggered by a source external to the routine. Such changes may be either: (1) emergent, or (2) planned, in response to certain triggers.

Emergent change. An example of emergent ostensive change is demonstrated in the study by Reynaud (2005) on Paris Metro maintenance routines. In her study, she observed the management introducing a new bonus scheme (as the source) that changed how its workers performed their maintenance routine. The newly introduced rule led the actors to develop new interpretations of the routine which resulted in a change in the ostensive and, consequently, in how the routine was enacted. The objective of the new rule was to encourage workers to perform more efficiently. Instead, they responded by completing tasks that benefited only themselves. For instance, they focused on doing tasks that were easier to complete and thus allowed them to receive more bonus. This in turn resulted in huge delays for other tasks. The change caused by the new rule was not what was expected and so it is seen as an emergent change.

Planned change. For planned ostensive changes, Short and Toffel (2010) studied the effects of the introduction of new legislation from the US Government, known as the Clean Air Act, to production companies. However, unlike the Paris Metro example which demonstrated unintentional routine change, this new legislation was meant to encourage organisations to change their production routines to reduce air pollutants. This was evident as the organisation being observed enforced an Audit Policy which changed how the organisation viewed the importance of managing their air emissions, which indirectly affected their production routines. Thus this change in ostensive was intentional. In another example, Bucher and Langley's (2016) study of patient-related routines in a hospital observed how intentional routine changes can be achieved through

experimentation and reflection. In their study, the source of the routine changes came from the vision of the chief surgeon and his deputy, whom Bucher and Langley (2016) identified as the management team. Thus they were exogenous to the routines as they were not the main actors of them. During reflection, new concepts of the routine (ostensive) were developed, while in the experimental space, the routine was modified, guided by the new concepts. The actors alternated between the reflective and experimental spaces until they acquired a routine that performed to their expectations. Both these examples demonstrate how external sources lead to planned changes in the routine ostensive.

2.4.2 Exogenous-performative flexibility

Exogenous-performative flexibility occurs when the change in the routine primarily affects the performative aspect and is triggered by a source external to the routine. Such changes can be categorised as either: (1) emergent changes, or (2) instantaneous changes, which are guided by some form of structure such as artefacts and proven practices.

Emergent change. Routine changes that are emergent refer to changes that do not happen instantaneously, but over time. For instance, Beckman and Haunschild's (2002) study on corporate acquisitions observed that organisations valued heterogeneous experiences by adopting proven practices from their network partners to improve their own practices. In this instance, the change was triggered by the experience of other organisations. Actors make use of the experiences of others in terms of cultural models, systems of rules and assumptions, to implement changes to their own organisational routines (Beckman and Haunschild 2002), which occurs over time. Social networks drawn from exogenous sources form an important source of performative flexibility (Miner *et al.* 2008). For example, as routine actors move through different social networks (such as changing workplaces), knowledge on certain practices is picked up and adapted in their current organisation (Miner and Raghavan 1999). Therefore, exogenous sources can result in gradual changes in the routine's performance.

Instantaneous change. In the case of instantaneous changes, the waste collection routine in the studies by Turner and Fern (2012) and Turner and Rindova (2012) faced various real-time situations, such as accidents and events that resulted in road closures, which forced its drivers to

adapt and change their routes. Thus, external sources force routine actors to adapt by referring to artefacts as their guide (Turner and Rindova 2012) and using their own experience from past performances (Turner and Fern 2012) to determine the best action to take at that particular time. In another example, Pentland and Rueter's (1994) study on software support routines observed that the complexity of the problems meant that frequent search and deliberation was required by the routine actors. In this case, the complex software problems raised by clients were the reason for the need to constantly vary their performance. The performance flexibility was made possible by referring to a database that guided the actors on what actions to take, which allowed the routine to have a consistent outcome. Therefore, exogenous sources can result in immediate changes in a routine's performance.

2.4.3 Endogenous-ostensive flexibility

Endogenous-ostensive flexibility occurs when the change in the routine primarily affects the ostensive aspect and is triggered from within the routine itself. According to Pentland and Feldman (2005), the ostensive aspect of a routine should not be assumed to be a single, unified entity, but should be expected to differ between people, and in different times. Changes in the ostensive that are triggered endogenously can be categorised into: (1) planned changes, (2) emergent changes.

Planned change. Endogenous ostensive changes may occur due to the initiatives of the routine actors which are planned ahead. In the study by Rerup and Feldman (2011) on organisational schemata, they observed how the ostensive was changed through a trial and error process. Organisational schemata is defined as “a set of shared assumptions, values, and frames of reference that give meaning to everyday activities and guide how organization members think and act” (p.578). Their study suggests that if an organisation recognises the relationship between routines and organisational schemata, it will manage change more effectively. This is because “routines and schemata are interactively co-constituted” where either one can influence the other (p.578). For instance, while solving problems related to a certain routine, the actions of the routine actors may also resolve any questions about schemata. Actors vary their ostensive to align their routines with the organisation's schemata through a learning process using trial and error, or as Bucher and Langley (2016) term it, “spontaneous variations” (p.594). The trial and error process

of achieving the desired ostensive (and hence schemata) was consciously carried out, thus it was a planned ostensive change.

Emergent change. On the other hand, ostensive changes that are triggered endogenously may also be emergent. For example, in Whitford and Zirpoli's (2014) study of an automotive organisation involved in inter-organisational routines, they observed how an ostensive change became necessary following an undesired routine performance. The organisation faced ostensive breakdowns with one of its main sub-contractors as the result of a particular performance of one of their joint activities (i.e. crash test). The incident led to them re-establishing and agreeing on a new ostensive among all routine actors. In another example, Aroles and McLean (2016) observed how meetings were used as a space to challenge existing routines by raising concerns or controversies based on performances. The repetition of routine performances and discussions from the meetings led to changes in the ostensive that were emergent (Aroles and McLean 2016).

2.4.4 Endogenous-performative flexibility

Endogenous-performative flexibility occurs when the change in the routine primarily affects the performative aspect and is triggered from within the routine itself. Such changes can be either: (1) planned changes, or (2) instantaneous changes.

Planned changes. Planned performative changes may occur as actors choose their actions depending on a specific context as well as what they have experienced in past routine performances (Dittrich *et al.* 2016). In the study by Feldman (2000) on university accommodation routines, she suggested that if a routine performance provides advancement opportunities (such as a more desirable outcome) then routine actors may choose to adapt the routine to take advantage of this opportunity. She refers to this as "striving", which could be one of many ways in which routine actors use their experience to change how they perform a routine. Unlike the example in Whitford and Zirpoli's (2014) study, in Feldman's (2000) study the ostensive still remained. What changed was how the actors performed the routine. Thus the impact of past routine performances enabled actors to plan for changes in future performances. On the other hand, changes in the performative aspect that are triggered endogenously mostly occur instantaneously. Pentland and Rueter (1994) suggest that routines are "effortful accomplishments" that actors construct based on a repertoire of

possibilities. Evidence of this was clearly shown in Pentland *et al.*'s (2010) study in which a simple invoice-processing routine was observed being performed with significant differences each time, even when there was no apparent intervention from external sources (Pentland *et al.* 2011).

Instantaneous changes. Instantaneous performative changes are triggered by various factors. Firstly, different intentions between routine actors and the routine owners can cause performance deviation. For instance, in the study by Bruns (2009), she observed that due to different professional concerns, the routines were not performed according to the rules set by the organisation as the routine actors picked and chose whichever routines they deemed suitable to be applied according to the situation. Similarly, Bapuji *et al.* (2012) in their study on towel-changing routines in a hotel observed that the incorrect use of artefacts resulted in the intentions of the hotel not being clearly transferred to the hotel guests. The impact of this was a variety of routine performances (i.e. towels were left all over the place) which made the work of the housekeepers more difficult. Secondly, power can influence how a routine is performed. For example, in Howard-Grenville's (2005) study, a senior executive, because of his position, was able to influence a change in how the routine was enacted. Alternatively, even if an individual is a regular employee, they can still determine the routine's enactment. For instance, in D'Adderio's (2003) study, even though the organisation had implemented a new software system to be part of the routine, routine actors decided to bypass the system when enacting the routine because they viewed it as a hindrance. Thus, they had the power to determine how the routine should be performed. Lastly, performance flexibility can be triggered by the actors' experiences. For instance, the study by Narduzzo *et al.* (2000) observed how technicians varied the sequence of activities while performing their installation and repair routines based on their own experiences. Although the sequence of activities was not exactly the same each time they performed the routines, the final outcome, i.e. to repair or install the equipment, was always achieved.

In summary, although performative changes that are endogenously triggered can be planned ahead, most of the changes occur instantaneously due to conflicting intentions, use of power, and relying on experience.

2.5 Summary and research gaps

Routine flexibility has been examined in various studies ranging from adaptation and evolution from a black-box perspective (Cyert and March 1963; Nelson and Winter 1982), to ostensive and performative flexibility from a practice perspective (Feldman and Pentland 2003). A shift in how routines are theorised has led to the practice approach of studying routines, which provides new insight into their micro-dynamics. Feldman and Pentland (2003) proposed that routines consist of the ostensive and performative aspects, which are interlinked as generative systems (Pentland and Feldman 2005). This means that both aspects of the routine are continuously changing with time. By understanding these aspects and how they are exerted, organisations can learn to manage their operations better. For instance, by understanding that routine performance is driven by the agentic role of its actors, organisations can plan for investing in the actors' ostensive, such as by providing training and seeking constant feedback (Pentland and Feldman 2008a).

Empirical studies have provided evidence of routine flexibility occurring in both the ostensive and the performative aspects. Ostensive flexibility occurs through many mechanisms, such as: planned or purposeful experimentation (Bucher and Langley 2016), conducting a trial and error process (Rerup and Feldman 2011), redesigning the artefact that represents the ostensive (Whitford and Zirpoli 2014), and anticipating reactions or effects of certain actions (Short and Toffel 2010). Alternatively, flexibility in the performative aspect can occur through mechanisms including: use of power (Howard-Grenville 2005) or experience (Turner and Fern 2012), referring to artefacts as a guide (Pentland and Rueter 1994; Turner and Rindova 2012), and articulating personal objectives (Bruns 2009). However, is it true that routine flexibility involves only one aspect at a time? Pentland and Feldman (2005) suggests that both the ostensive and performative form the generative properties of routines, and that without these two aspects, routines cannot exist. Furthermore, similar to structure and agency (Giddens 1984), the ostensive and performative are mutually constitutive of one another, i.e. their relationship is a two-way occurrence. Thus, these two aspects form an integral part in the existence of routines, which also allows them to both change and stabilise (Feldman and Pentland 2003; Feldman *et al.* 2016). This suggests that flexibility in routines involves both aspects. However little is known about how the relationship between ostensive and performative aspects affects routine flexibility.

Some relationships have been explicitly acknowledged, such as how the ostensive-to-performative relationship exists through guiding, accounting and referring (Feldman and Pentland 2003). The flexibility of the performative aspect is dependent on how the ostensive provides guidance and accountability as well as reference. Although this has been discussed theoretically, there have been few empirically based studies that support these relationships. Additionally, there are relationships that have been implied in previous studies. For example, one of the characteristics of the ostensive is that it does not determine the routine's performance (e.g. D'Adderio 2003; Bruns 2009). The performative aspect will often have some form of novelty compared to the intended routine design (i.e. the ostensive) even if it has been encoded in an artefact such as a standard operating procedure (Pentland and Feldman 2005). Thus performative flexibility occurs independently from the ostensive aspect. Although there has been some research that supports this (D'Adderio 2003; Bruns 2009), the role of the ostensive-to-performative relationship in routine flexibility is still unclear. For instance, why does the ostensive not determine the performative? Is this only true if the ostensive is fixed? It has been established that the ostensive can also change and differ with each individual due to the tacit aspect of routines (Emirbayer and Mische 1998; Howard-Grenville 2005). Therefore, if the ostensive is always flexible, will the performative also be flexible in relation to the ostensive?

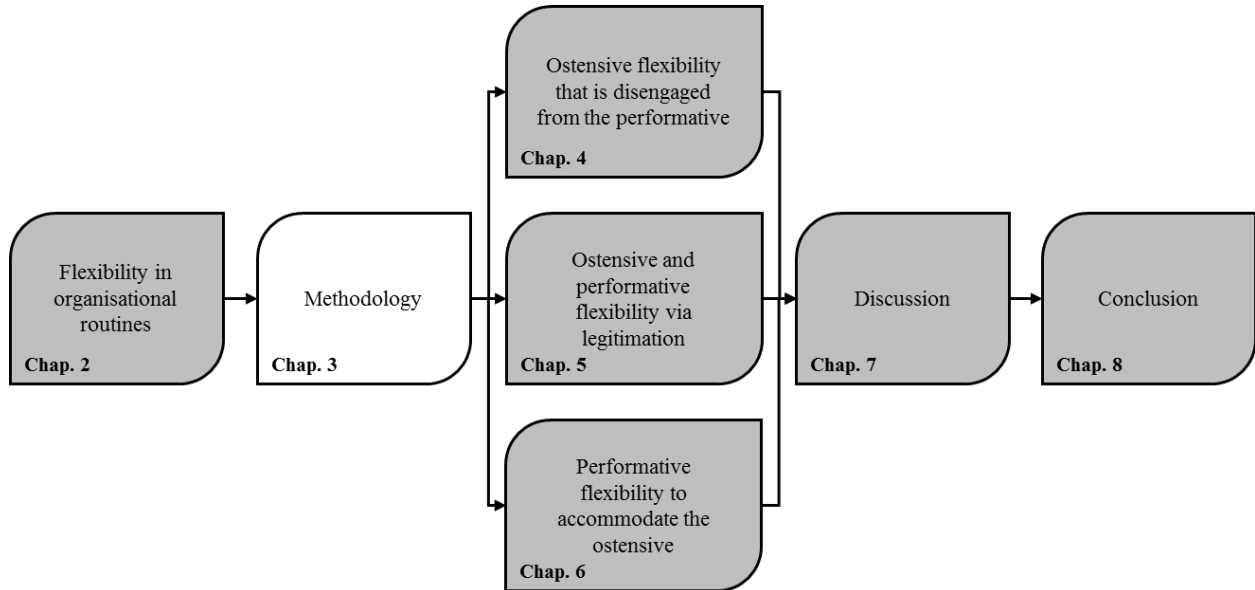
Recent studies have attempted to address this gap by including both the ostensive and performative aspects in their discussions on routine flexibility. For instance, Bucher and Langley (2016) state that routines continuously evolve as local performances of the routine are adapted to ongoing circumstances, but at the same time still retain selected adaptations from the overall routine's concept. Reflective spaces allow actors to develop new concepts of the routine (i.e. ostensive), whereas experimental spaces allow actors to test out (i.e. performative) these concepts (Bucher and Langley 2016). Thus the role of spaces and boundaries are central to their findings. In another example, LeBaron *et al.* (2016) observed how mutual intelligibility (i.e. ostensive) is created, maintained, and repaired through performative flexibility. The sequential features of a routine commonly understood between actors became a source for how they negotiated changes in the sequence via coordination, thus allowing flexibility in the routine's performance (LeBaron *et al.* 2016). Their study focused on the coordination between actors that enabled performative flexibility. In both these studies, the ostensive-performative relationships were not explicitly discussed, i.e. the studies' main focus were on other aspects. Whereas the first study focused on

the roles of spaces in routine change, the second focused on coordination in performative flexibility. This leaves many more areas unexplored on the ostensive-performative relationship, which is why this study aims to primarily focus on the relationship of the two routine aspects in routine flexibility.

Another common theme in past studies on routine flexibility is the examination of sources. Different sources trigger different aspects of the routine. According to Feldman and Pentland (2003), routine flexibility can be triggered by sources from within (endogenous) or external (exogenous) to the routine. Exogenous sources may include: introduction of a new structure (Reynaud 2005), changing market and technical realities (Burgelman 1994), implementation of new legislation (Short and Toffel 2010), environmental changes (Turner and Rindova 2012), and the introduction of technological artefacts (D'Adderio 2003; 2008; Goh *et al.* 2011). On the other hand, endogenous sources may include: undesirable routine performances (Feldman 2000; Whitford and Zirpoli 2014), contradiction in organisational schemata (Rerup and Feldman 2011), and having different objectives (D'Adderio 2003; Bruns 2009) or intentions (Bapuji *et al.* 2012). Understanding the sources of routine flexibility can provide insight into the characteristics and mechanisms of how routines are flexible. Referring to *Table 2.2*, it can be observed that there are different characteristics associated with different sources. For instance, exogenous sources are likely to trigger changes in the routines that are a direct response to the sources, or involve some form of structure (e.g. artefacts, proven practices) to guide the routine enactment. Therefore, in a way, routine flexibility that is exogenously triggered is a form of controlled flexibility. On the other hand, endogenous sources are likely to trigger emergent or impromptu changes in a routine that are different every time the routine is enacted. I believe that the characteristics and mechanisms for routine flexibility triggered by endogenous sources are endless as no exact situation is likely to repeat itself. This can be observed when the routine's ostensive is part of a norm, such as in Howard-Grenville's (2005) case, rather than embedded in an artefact. This is because total reliance on actors' tacit knowledge for routine enactment provides the avenue for endless flexibility to emerge because the actors are not bound by any explicit rules. Thus the mechanisms for this type of routine flexibility are still largely unexplored, which is why this study aims to examine routine flexibility that emerges endogenously.

In summary, although some research studies have acknowledged the relationship between the ostensive and performative in routine change, such as Bucher and Langley's (2016) reflective and experimentation spaces, and Rerup and Feldman's (2011) trial and error process, there is still limited understanding on this relationship. For this research, the over-arching research question is: *How does the ostensive-to-performative relationship affect the emergence of endogenous routine flexibility?* To address this question, the aim is to focus on the ostensive and performative aspects individually during observation. The epistemological approach is discussed further in the following chapter and provides details on the methodologies used to accomplish this. These include establishing clear ontological and epistemological assumptions, selecting the appropriate case as the study, collecting multiple data types from multiple sources, and using a suitable analysis to establish relevant theory.

CHAPTER 3 : METHODOLOGY



In this study, a practice approach using an abductive method is adopted as the overarching methodology. This chapter provides an overview of the research philosophy in Section 3.1, followed by a description of the general setting of the study in Section 3.2 followed by Section 3.3 which describes the three sub-cases that emerged during the study. Section 3.4 then provides details of the data collection. Finally, Section 3.5 ends with an elaboration on how the data analysis is conducted.

3.1 Research philosophy

In this section, two key arguments are presented that are the foundations for the methodology approach of this study:

- (1) Ontological assumptions: Practice lens and structuration theory
- (2) Epistemological assumptions: Abduction of an empirical study

3.1.1 Ontological assumptions

There are two parts relating to the ontological assumptions: practice lens and structuration theory.

Practice lens. The practice lens views social life as an ongoing production that emerges through the recurrent actions of people (Feldman and Orlikowski 2011). Practices are “embodied, materially mediated arrays of human activity” that are organised around common practical understandings (Schatzki 2001, p.11). According to Feldman and Pentland (2003), the study of organisational routines has deep roots in social theory. A routine consists of the ostensive aspect, the abstract idea of it, and the performative aspect, the actual performance of it (Feldman and Pentland 2003; Pentland and Feldman 2005). Both aspects are not static structures, but are constantly changing depending on individual and context (e.g. Howard-Grenville 2005; Bruns 2009). Thus practice theory focuses on dynamics, relations and enactment, and provides a powerful analytical tool to understand the emergence and flexibility of routines that are equally complex and dynamic (Feldman and Orlikowski 2011). Specifically, this study adopts the *theoretical* approach of the practice lens, which strives to find a specific explanation for an activity that answers the “how” (Orlikowski 2010; Feldman and Orlikowski 2011). Thus in studying routines, a practice lens evaluates how routines are generated and operated in different contexts and over time.

Practice theorists argue that everyday actions and practices are consequential, and that practices are strongly associated with the foregrounding of human agency (Schatzki 2002; Feldman and Orlikowski 2011). The theoretical framework of the routine dynamics from Feldman and Pentland (2003) is built on the foundation that agency plays an important role through the subjectivity that actors bring into routines. For example, actors have the power to influence how a routine is performed (Howard-Grenville 2005), or the ability to adapt routines based on experience (Turner and Fern 2012). Thus, they have the ability to “make a difference” in routine enactment (Giddens 1984, p.14). This supports the notion that routines are not inflexible, but are susceptible to change because of the actors involved. Agency in routines is part of a duality derived from structuration theory.

The practice lens has been the primary influence in this study’s overall methodology. Its focus on agency means that it aims at understanding how participants interact with one another, and how they respond to and change the nature of the environment they are in (Wadham and

Warren 2014). Therefore during observations it was important to note down the context of the conversations in my field notes so this could be taken into account when the transcript was analysed. Additionally, the practice lens guiding the overall purpose of this study forces me to focus on the core logic of how the routines are produced and changed, along with the consequences whether intentional or not (Feldman and Orlikowski 2011). In other words, the practice lens allows me to understand more about the flexibility of routines. With this in mind, the routines chosen to be examined should be complex enough to exhibit significant changes that are identifiable as the result of multiple participants responding to the environment. For example, operational routines that have quick cycles such as invoice-processing would not be suitable for this study as not enough observation can be made as to how the routine is changed. The word ‘how’ itself denotes that the observed routine change should occur over time, thus more complex routines are more suited to this study.

Structuration theory. The ostensive-performative relationship is in line with the duality of structure and agency where the abstract idea of the routine (ostensive) is the structure, and the action performances (performative) represent agency (Giddens 1984; Feldman and Pentland 2003). These two aspects are not individual parts, but exist together as “generative systems with internal structures and dynamics” (Pentland and Feldman 2005, p.793). Thus neither aspect on its own is sufficient to describe the properties of routines (Feldman and Pentland 2003). In understanding routine flexibility, this study focuses on how actors enact routines in various settings that result in changes in the performances, while not putting a specific focus on either aspect. By doing this, I will be able to gain insight into the relationship between the ostensive and performative aspects through the detailed empirical observations of the flexibility in routine enactment (Deken *et al.* 2016). In summary, this study uses the theoretical approach of the practice lens to examine the duality of the ostensive and performative aspects on routine flexibility.

3.1.2 Epistemological assumptions

This section discusses the main epistemological approach, which is through abduction, and the overall methodological design using the Gioia method (Langley and Abdallah 2011).

Drawing on a practice-based approach to routines, I used an abductive approach (Dubois and Gadde 2002; Van Maanen *et al.* 2007) to construct theory relating to routine flexibility. This means that themes and concepts were systematically extracted from the data gathered (Berg 2009) and refined based on theoretical concepts as the data analysis progressed. Abduction is viewed as a mode of theorising based on explanations for unusual phenomena (Paavola 2004), doubt (Locke *et al.* 2008), and speculation (Weick 2005). According to Paavola (2004), a theory can be further strengthened if attention is paid to the relationship between phenomena and background information rather than just explaining a specific phenomenon. An example of this is the relationship between organisational routines and how they can be flexible in different contexts. Van Maanen *et al.* (2007) view the abductive approach as a path of critical reasoning rather than pure logic. For instance, discrepancies can be evaluated in terms of location (where it happened), timing (when it happened), frequency (how often it happens), and magnitude (the importance of the discrepancy) (Van Maanen *et al.* 2007).

This study on routines contributes to what Edmondson and McManus (2007) refer to as 'intermediate theory', which is research that draws on prior work to propose new constructs and relationships. According to them, past studies in this category (i.e. intermediate theory) are usually carried out by alternating between inductive and deductive approaches. This makes abduction a suitable approach for this type of study because it makes use of the benefits of both approaches. Langley *et al.* (2013) proposed that abduction addresses the challenges in unravelling processes as they happen by connecting empirical observations to extant theoretical ideas. So using the abductive approach to study routines seems an appropriate choice compared to other reasoning forms (e.g. induction and deduction) because it focuses on the generation of novel insights by assessing plausibility instead of assuming something is unreasonable (Locke *et al.* 2008). In other words, abduction offers a vast potential for creating new insights into routine flexibility. Furthermore, Edmondson and McManus (2007) demonstrated that past studies in intermediate theory mostly created new constructs to add to an existing model of the theory. This study establishes three new constructs that relate to the ostensive-performative routine dynamics model.

While abduction is the epistemological approach, the overall research design resembles the Gioia method (Langley and Abdallah 2011) based on the research methods used by Dennis Gioia and his colleagues. There are two aspects of this method: firstly the analysis strategy, and secondly, how the data is presented. For the analysis, the Gioia method aims at making sense of the experience researchers gain from observing organisations. The initial stage involves writing descriptive narratives around salient themes which at the same time provide closeness to first-order participant perspectives (Langley and Abdallah 2011). From these narratives, themes are extracted based on the second-order interpretations which are then grouped into interrelated overarching categories that show a connection to the overarching research gap. For the presentation, the key output of the analysis is a data structure, usually in the form of a horizontal tree-shape (for examples see Corley and Gioia 2004; Mantere *et al.* 2012; Turner and Rindova 2012). This final output is achieved through iterations back and forth between theory-driven themes and data, where the emerging ideas lead to additional data collection and analysis to fill in the gaps in the data structure as research progresses (Langley and Abdallah 2011). Therefore, the Gioia method resonates with the abductive approach and has been used in past studies (e.g. Martins 2013; Monin *et al.* 2013; Schweisfurth and Herstatt 2016) who all used abduction as their analytical approach.

3.2 General research settings

A single organisation (PublicCo) was referred to as a revelatory case (Yin 2009) for developing new insights into routine flexibility. This particular organisation was chosen to uncover insights that were not previously available elsewhere, i.e. in other contexts or empirical settings. Case studies have the potential to provide a more compelling contribution by promoting a great depth of rich empirical data in developing theories (Eisenhardt and Graebner 2007). Consideration has to be given to case selection as it greatly affects the validity of the theories that are drawn on (Curtis *et al.* 2000; Konisky and Reenock 2012). Besides, to provide rich information that addresses the research questions, cases are selected because they will provide valuable insight rather than because of their uniqueness. PublicCo provided an attractive setting for studying routine flexibility because of: (1) the infrequent occurrence of the Print Project that was observed, (2) the existing uncertainties relating to the Print Project, (3) the mixture of key participants in terms of experience and background, and (4) the possibility of mixed responses based on historical

events. Therefore this study is based on a single case, which is the selected organisation, (PublicCo), with multiple sub-cases. Sub-cases are specific, refined cases that were identified within the organisation during the initial round of analyses to enable specific theory contribution. Extensive access was provided at PublicCo, a public organisation that has multiple departments and buildings in close proximity. This meant that I was free to come and go into any of the offices within PublicCo and was invited to all related meetings.

Printing in PublicCo is a vital part of its operations as its 14,500 staff use the print devices on a daily basis. The print jobs range from personal printing to big A0-size poster prints, and to large scale printing jobs such as booklets and flyers. The existing fleet was made up of around 360 personal printers, 420 large printers, and 60 multi-functional devices. Management of the printing service is shared between the IT department, the Print Room, and SupplierD, their main print device supplier. Thus the existing print service was made up of multiple types of print devices, and managed by a decentralised management system. There had been several attempts to upgrade the entire printer fleet and its services, but due to uncertainties on who should take ownership of the initiative, they were put aside.

When the IT department received a new Head, one of his initiatives was to create a project team to revamp the existing printing service. This was factored by many reasons. For instance, a survey and review of the existing print services that had been carried out the previous year showed that there were many parts of the service that users were unhappy about. In addition to that, the contract with SupplierD, their main printer supplier with whom they had had a ten-year relationship, was coming to an end. Therefore, it was time to review this relationship and explore other suppliers or options. Furthermore, there were also issues with regard to the existing print management software. A number of the devices were managed by software that was designed in-house. Since the original programmer had left PublicCo, this meant that upgrading the service using the current software was unlikely to happen. Some of the other print devices were managed by SoftwareS, tied to SupplierD's devices, which had its own set of problems in terms of management and licences. The combination of all these factors encouraged the Print Project to be initiated. The new service upgrade was aimed at having a unified and efficient service.

Key participant	Background	Role in the project
Project Manager	Uses PRINCE2 ⁹ as his project management tool, so how he manages the Print Project is based on achieving deliverables specified by PRINCE2	Responsible for managing the entire project in terms of its timeline, deliverables, and bridging between different parties
Procurement Head	Has recently transferred from another public organisation. Brings her experience in print services based on a similar project she was previously involved in	Responsible for the procurement processes, such as communicating with potential suppliers and contract negotiation
Technical Head	From the IT department. Has been with PublicCo for over 15 years. Brings his expertise in terms of the technicalities of the products being sourced.	Responsible for designing and configuring the new print service, which includes interfacing between the hardware and software
Print room Head	Has been in charge of the organisation's print room for over 20 years, so is able to provide input on user trends in terms of print volumes and also details on the current print fleet	Having had a long working relationship with SupplierD, he provides assistance in terms of negotiations and getting data from them
Communication Representative	From the IT department assigned to assist with the Print Project's communications' needs	Responsible for disseminating information to all users around PublicCo about the changes that would occur during the project phase, as well as when the new print service is in place
Project Executive	Part of higher management	Chairs all the Board meetings and steers important decision-making
IT Director	Is the head of the IT department and was the key person in initiating this Print Project. He is fairly new to PublicCo having joined only a year before the project started	A Board member. Also responsible for ensuring that the budget for the Print Project is approved by the steering committee
Commercial Head	Has been with PublicCo for over 30 years, and is currently the head of the facilities and commercial division. He has a good grasp of how the organisation operates and the cultures that exist e.g. acceptance to change	A Board member. Provides input and ideas based on his experience of the organisation
Finance Head	Head of the Finance department	A Board member and directly takes part in some of the routine activities that relate to finance issues

Table 3.1 – Summary of the key participants of this study

To start off the project, representatives from the IT department, Procurement, and Commercial team gathered for a kick-off meeting which also marked my very first involvement in this Print Project. These representatives formed a Working Committee which comprised of five main members: (1) Project Manager, (2) Procurement Head, (3) Technical Head, (4) Print room

⁹ Projects In Controlled Environments (PRINCE2) is a process-based method for effective project management used extensively by the UK Government

Head, and (5) Communication representative. The Committee met at least once a week to discuss and update each other on the progress of the Print Project, discuss pending issues, and also to make decisions. I sat and observed all these meetings as a passive observer. Their backgrounds and roles are explained in *Table 3.1*.

Prior to the Print Project, none of the committee members had worked together before as they all came from different divisions within PublicCo. The Procurement Head was also new to the organisation having just transferred from another public organisation in a different city. However, the new team was expected to work together to achieve the objectives of the Print Project. Besides the weekly meetings, the Committee members were also expected to be involved in other project-related meetings such as supplier presentations, workshops, and site visits. For the Project Manager and Procurement Head, there were also the Board meetings. The project Board was headed by the Project Executive and several representatives from various parts of the organisation. The board met every two months to ensure that the Print Project was on track, and was responsible for giving direction to the working committee. Some of the notable Board members that played a significant role in the routines observed include the: (1) Project Executive, (2) IT Director, (3) Commercial Head, and (4) Finance Head.

PublicCo and the Print Project provides an attractive setting for studying routine flexibility for multiple reasons. Firstly, it is an exercise that only occurs once every 10-15 years, making it a fairly unique setting. The scarcity of this type of project means that there is little likelihood of being able to gather similar data from other settings. The printing service in PublicCo involves multiple departments within the organisation, which allowed me to gather data from a variety of sources. Secondly, prior to this, similar initiatives had been proposed over the past few years but did not materialise. By the time the project was initiated, there were already many uncertainties that had been the deterring factors for previous initiatives. This opened up opportunities for new ideas to be explored and implemented. Thirdly, the IT Director and Procurement Head, who were central members of the project team, were new to the organisation. When coupled with a group of people from various backgrounds who are required to work together for the first time, they could offer new and fresh ideas to the company. Lastly, there was the possibility of multiple types of responses to the Print Project, such as resistance. Since PublicCo is considered an established organisation with a strong organisational culture, it was most likely that implementing change

would be a challenging process, as it had been with previous changes, such as when the organisation changed its official logo. Because of this, the Print Project could be full of challenges, which would provide an attractive setting for observation.

3.3 Case construction

This section explains how three sub-cases were extracted from the main case (organisation), i.e. PublicCo.

This study started off with a general interest in routine flexibility, which is anything connected with how routines change. One of the first tasks was to identify and confirm the existence of routines and any related phenomena (Pentland and Feldman 2008b). Routines were identified based on the definition of a routine by Feldman and Pentland (2003), which means that for a phenomenon to be identified as a routine, it has to: (1) be a process that is carried out repetitively, (2) have recognisable patterns of interdependent actions, and (3) involve multiple actors. For instance, in Feldman's (2000) study, she concentrated on observing routines that were repeated annually, involved many participants, and were identified by the participants themselves, thus were recognised patterns. On the other hand, Dittrich *et al.* (2016) followed the characteristics defined by Feldman and Pentland (2003) as above to identify the shipping of products as the routine to be observed. Shipping involved one to five shipments per week, required interaction between several actors from the CEO to lab employees, and followed distinct, recognisable patterns of action (Dittrich *et al.* 2016).

In this study, there were two routines I focused on: firstly, the *request* routine – a process for requesting new print devices, and secondly, the *sourcing* routine – a process for procuring a product or service. The request routine is an ongoing process to cater for user needs (i.e. requesting new print devices), and will always be initiated by the user, handled by the IT Department, and end with the Procurement Department (henceforth Procurement) making the purchase. Similarly, the sourcing routine is initiated every time a purchase for a product or service is needed, and it is well understood that the routine involves a request being made by different parties and processed by Procurement which then deals with multiple suppliers. Thus both routines have all the three characteristics of a routine as proposed by Feldman and Pentland (2003). Initially, the main

attention of this study was on the sourcing routine as the initial understanding was that the Print Project would eventually end with the purchase of a new set of print devices, management software, and associated services, so sourcing would definitely be one of the main activities during the project. The request routine, on the other hand, became an interest because it was directly affected by the Print Project and was forced to undergo some changes. Specific details on both these routines are discussed in the sub-cases.

While observation progressed concurrently with the analysis, it was discovered that there were three significant sub-cases that were prominent due to the existence of flexible routines being enacted, and how they contributed to answering the research question: *how does the ostensive-to-performative relationship affect the emergence of endogenous routine flexibility?* These sub-cases were chosen because they each provided insight into different types of routine flexibility. For example: sub-case 1 demonstrated routine flexibility that occurred only in the ostensive aspect, sub-case 2 demonstrated three performances of the same routine being enacted differently each time, and sub-case 3 demonstrated flexibility in routine performances that seemed unconventional. Also observed was that all three sub-cases revealed the different roles of the ostensive and performative aspects. The next sections provide brief descriptions of the sub-cases; however, details on how these sub-cases emerged are described further in the analysis section.

3.3.1 Sub-case 1: Emergent routine change

During the first few months of the study, one of the major events that occurred was the establishment of an *interim arrangement*. This was a temporary measure to manage the purchase of new print devices for the duration of the Print Project. This interim arrangement addressed the changes to the *request routine*.

The request routine

The request routine is a process for employees of PublicCo to request new print devices. There are two ways employees can make a request: first, through the IT service-desk system, or, second, by contacting the Print Room. The latter option is usually for multi-functional devices supplied by SupplierD, while the first option is for personal printers and other types of printers. If the request is approved, then Procurement proceeds with purchasing the print device. The main actors

involved in the performance of this routine are: (1) the requestor (user), (2) IT personnel, (3) Print Room personnel, and (4) Procurement personnel. *Figure 3.1* is a diagram¹⁰ representing the process of the request routine. I created this diagram (for the purpose of this study) based on observational data of conversations amongst the Project Manager, Technical Head, Print Room Head, and Procurement Head. In order to verify that this diagram is a correct representation of the request routine, I consulted with the Procurement Head who stated the following;

“So the user contacts the service-desk, service-desk then advise what printer they should buy and then tell them whether it’s not an MFD or an MFD...so they probably advise which device to buy...and then the same with MFD, it goes to [SupplierD] ...and then if it’s not MFD then raise a Purchase Request for Procurement”

Her statement corresponded to my diagram apart from the line showing the users requesting straight from the Print Room. From one of my informal discussions with the Print Room Head, he mentioned that some users who had MFD requests would go directly to the Print Room personnel who manages more than 60 MFD’s throughout PublicCo.

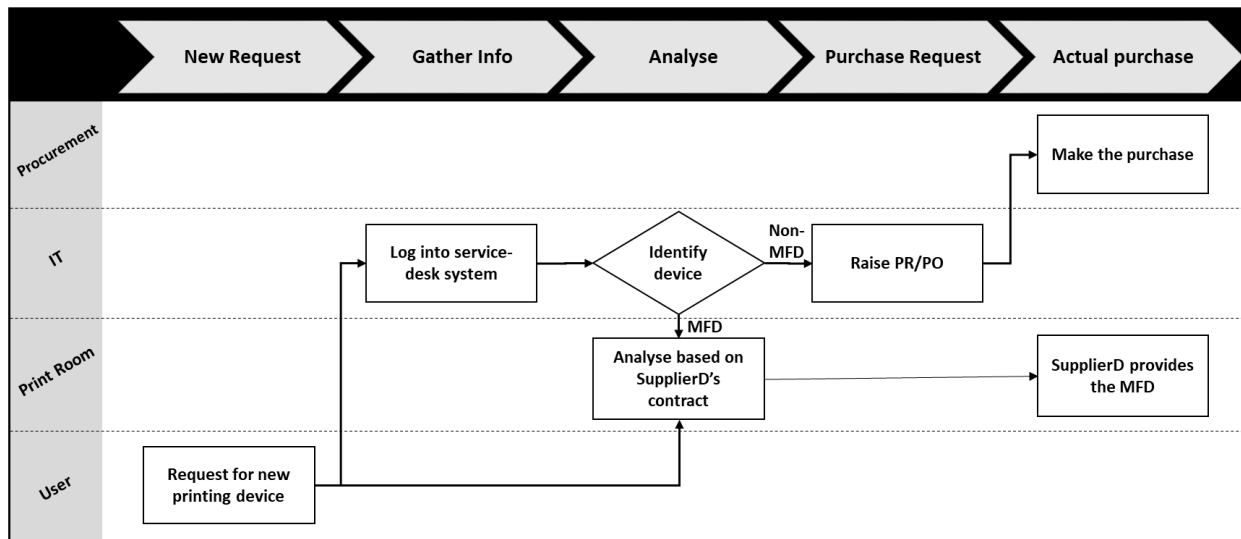


Figure 3.1 – The existing request routine

The request routine is usually enacted when individual employees require a personal printer, when a department is expanding, or a new building is completed. There are also certain times when a request is made for print devices to be used for special events. Generally, new requests are sent

¹⁰ For both routines, the diagrams shown to illustrate the routines are my own representation based on what was observed and input gathered from the participants. The diagrams are only included in this thesis to provide a clearer understanding to the reader, and are not the official artefactual representation of the routines.

to the IT service desk where a ticket is issued. Any MFD requests are sent straight to the Print Room as they oversee the SupplierD contract for all MFDs. Other print devices go through the normal purchase request process until the actual purchase is completed by Procurement. So the routine starts when a request for a new print device is made, and ends when a new device is obtained (either from a new purchase or through SupplierD's contract). The boundary for the start of the routine is determined mainly by the IT department as they receive the requests from users, and for the end of the routine by the Procurement and the Print Room as they provide the requested device. Because this routine is not embedded in an artefact, the IT department plays a major role in determining what is considered part of the request routine as they are involved in many activities within the routine.

In normal circumstances, if a request comes through and the budget is available, the print device will be procured or leased based on the requestor's requirements. However due to the Print Project, as one of its objectives is to standardise print devices all over PublicCo, the Committee realised that it was best if they reviewed this request routine.

The case: Emergent routine change

The change in the request routine was not deliberately planned, but rather emerged over time through the many discussions that unfolded between the Committee members. The interest in this case was to gain insight into how the change occurred and what was involved. The request routine, which involves multiple actors from various departments, had to be changed in order to meet the objectives of the Print Project. Additionally, this routine change was only meant to be temporary because it would most likely face another readjustment once the new print service began. This factor could mean that the process of establishing the routine change may be different to the process of establishing a permanent routine change. Thus this sub-case provides an opportunity to gain exclusive insight into how the ostensive-to-performative relationship plays a role in the emergence of a temporary routine change.

3.3.2 Sub-case 2: Options emerging during routine enactment

Throughout observations, it was realised that one of the mechanisms that enabled routines to be enacted flexibly was the different options that the actors could choose from. In order to distinguish which routine activity involved a new option or a conventional one, I compared the enactment of three complete iterations of the *sourcing routine*, which is made up of several key activities that lead to the purchase of a product or service.

The sourcing routine

In PublicCo, the procurement of products or services follow a process made up of a series of activities that starts when a request for a product or service is sent to Procurement, followed by some sourcing activities and ends when the product is procured. Similar to the software support routine studied by Pentland and Rueter's (1994) which had many steps but could be simplified to just three main activities, the Procurement process can be represented by 3 main steps: (1) Product/service request, (2) sourcing, and (3) procure. This is confirmed by the various participants that I interviewed at the initial stages of my study where I asked each interviewee to explain the procurement process in PublicCo. These steps were consistently mentioned by actors in procurement as well as technical and management roles. They all iterated similar activities involved in procuring a product/service which can be simplified into the three steps above. For non-complex requests such as to procure furniture for a new office, or to request cleaning services for a special event, the sourcing activity only involves the Procurement team gathering a few quotations. However, if the request is more complex such as procuring of the entire print device fleet for the organisation, the three activities become much more complex. So the ostensive understanding is similar for any type of sourcing exercise (i.e. whether complex or non-complex), but the performative aspect changes depending on the complexity of the sourcing routine. PublicCo makes use of an online portal to track complex sourcing exercises. On the system, the Procurement process is made up of 9 main activities as seen in *figure 3.2*. 'Product creation' is when Procurement receives a request for a product/service (step 1), and 'Award project' is when the product/service is finally procured (step 3). So all the activities in between are sourcing activities (step 2).

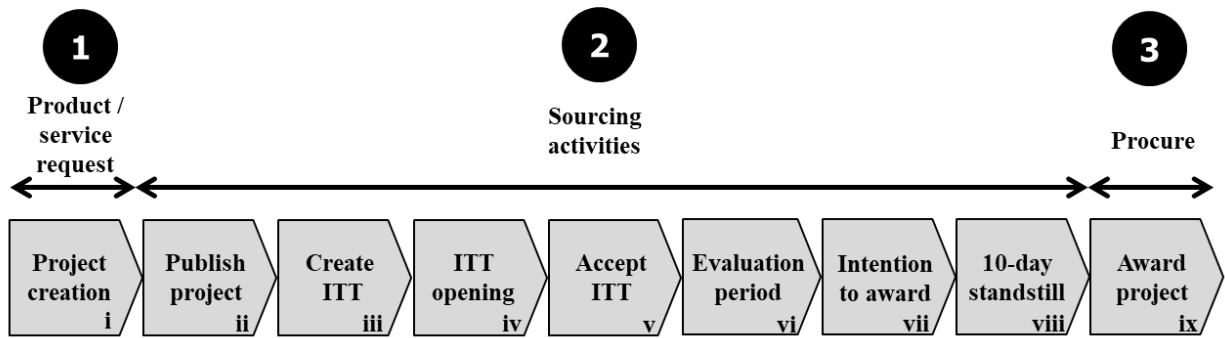


Figure 3.2 – Sourcing routine activities as listed in the Procurement portal

Although the portal is used to manage the Procurement process, the activities listed in the portal do not dictate or manage the actual routine. It only acts as a means of communication and to record the activities completed. In my study, only activities i (Project creation), iii (Create ITT), iv (Accept ITT), vi (Evaluation period), and v (Award project) were observed. So for the purpose of this study, the sourcing routine is represented by the five activities seen in *figure 3.3* below.

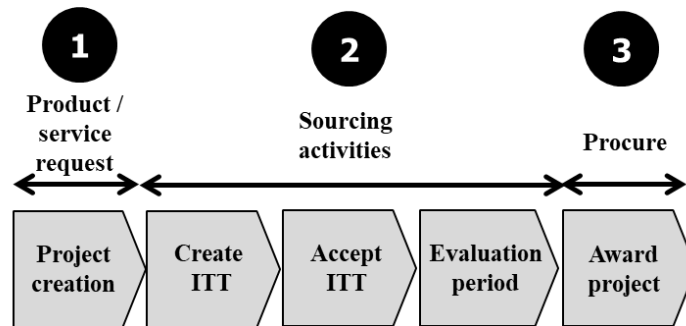


Figure 3.3 – The observed performative of the sourcing routine

The case: The emergence of options in routine enactment

Three complete iterations of the sourcing routine were observed during the observation period: (1) buying the services of print specialists, (2) purchasing of print software, and (3) purchasing of print hardware. Although there were three iterations, some of the activities ran concurrently with each other, so it was important that I was able to identify and distinguish the beginning and ends of the three routine iterations as they are not often very obvious (Pentland and Feldman 2005).

As described earlier, the sourcing routine is made up of three main steps. The start of the routine is when the request for a product or service is put forward. In this Print Project, this was not always an obvious point in the project as the meetings and discussions were rather fluid and occurred in a back-and-forth manner. Because of this, I chose the first instance where a participant

mentioned about the procuring of the product or service as the starting point of the routine. For the procuring of Print Specialists, the need for their service was initially mentioned in the very first Board meeting as suggested by the Project Manager:

“We found we didn’t really know enough about it and what our future demand would be in sort of going into a full tender requirements at the moment...so I’m suggesting that we get, we procure some help from some print specialists who will...there’s a couple of key examples of companies that do this to actually help us flash out what our requirements would be for the tender”

For the procuring of the print software as an individual product, it was also mentioned in this Board Meeting when the Project Manager stated that:

“I think the preference would be to purchase that software as an independent activity because it releases from sort of entanglement between different printer types and different suppliers and their relationships with the different printer suppliers and so forth”

Subsequently, the procurement of the hardware as an individual product was also first mentioned in the same meeting by the Project Manager when he asked whether there should be a separate business case for all three products, therefore legitimising the thought that they would be procuring the print hardware on its own i.e. separate from the software:

“Can I ask a question? Do we need a business case where all the components captures the whole requirements of the project? Should it be a business case as a whole, or should it be if you like...almost separate projects? So we’ve got the software, we’ve got the print specialists and we got the devices [print hardware] themselves for example. They’re probably the three main parts.”

As seen in *figure 3.4*, the beginning of all three iterations of the sourcing routine occurred at the same point in time which was during Board Meeting 0. However the end of each routine iteration was significantly different. Each routine iteration ends when the contract is awarded to the winning supplier. This supports Pentland and Feldman’s (2005) statement that not all routines will begin and end at the same time as the exact replication of a routine performance is impossible. The activities between the beginning and end of the routine are all ‘sourcing activities’ which include all activities relating to the ITT and the evaluation of the supplier responses.

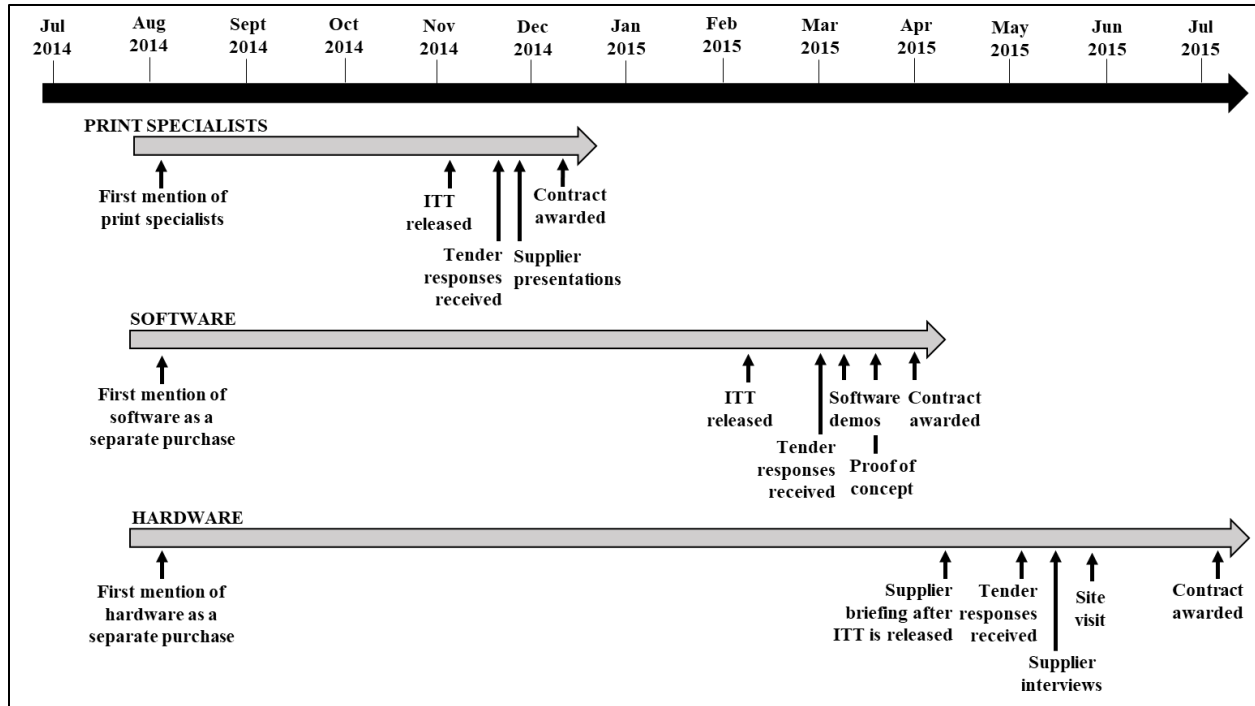


Figure 3.4 – The beginning and end of the three separate sourcing routines

By comparing the enactment of the three sourcing routines, it can be identified where options appear (i.e. at what particular activity), and what they are. Thus, this sub-case has the potential to provide insight into a new mechanism of routine flexibility, through the emergence of options.

3.3.3 Sub-case 3: Novel actions in routine performance

While conducting the comparison of the sourcing routines, I noticed that on several occasions that the working committee had a predetermined outcome that they would like to achieve. A sourcing routine is normally an open-ended exercise, meaning that any company could be the possible supplier. However, in two of the routine performances, the Committee was enacting the routine in order to achieve certain targeted outcomes. I identified this occurrence as having potential to providing insight into: (1) how these targeted outcomes emerged, and (2) how the routines were performed flexibly using unconventional activities to accomplish the targeted outcomes, yet still maintain legitimacy. *Figure 3.3* represents the observation of the routine enactment that led to the establishment of sub-case 3. This sub-case has the potential to provide insight into how the performative can be flexible.

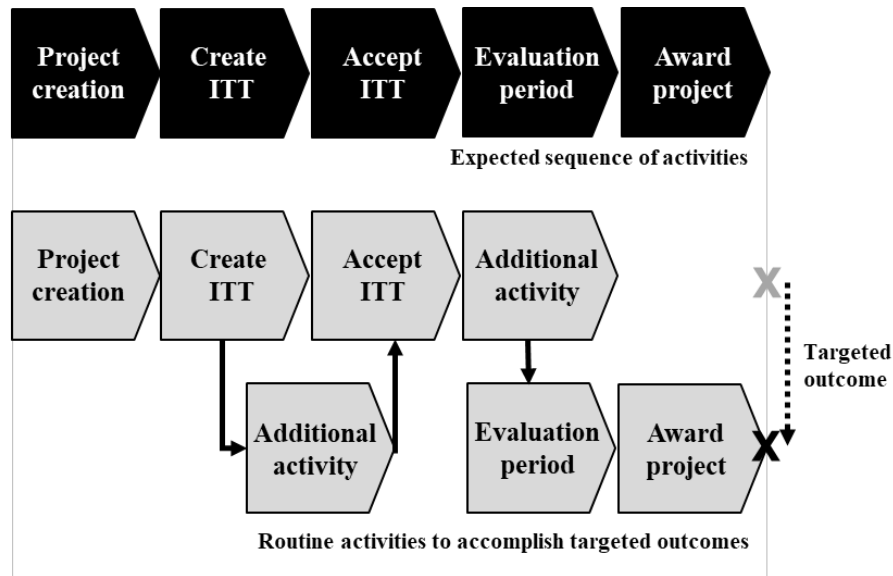


Figure 3.5 – Observation of the routine enactment that formed sub-case 3

3.4 Data collection

There are two aspects to the data collection method. Firstly, a longitudinal approach was used, and secondly, I took part as a passive observer.

I collected longitudinal data over 18 months, which meant that I followed the project in real time by attending every single meeting and presentation that was held, and recording all the sessions. These recordings were then transcribed for the analysis. Since the aim of this study is to observe emergent routine flexibility, a longitudinal approach provides the avenue to accomplish this. Some occurrences of routine flexibility can appear in a short period of time (e.g. Cohen and Bacdayan 1994; Turner and Rindova 2012), whereas some can occur over a long period (e.g. Rerup and Feldman 2011; Bucher and Langley 2016). Hence, to be able to fully capture this phenomenon, observations of routine enactment need to be carried out longitudinally. As seen in *Figure 3.6*, the bulk of the data gathering occurred during the second half of the study as the Print Project was at its peak. The dark shades within a row represent more than one occurrence in a single week. For instance, in the second week of May 2015, there were more external meetings taking place than in the third week of May 2015.

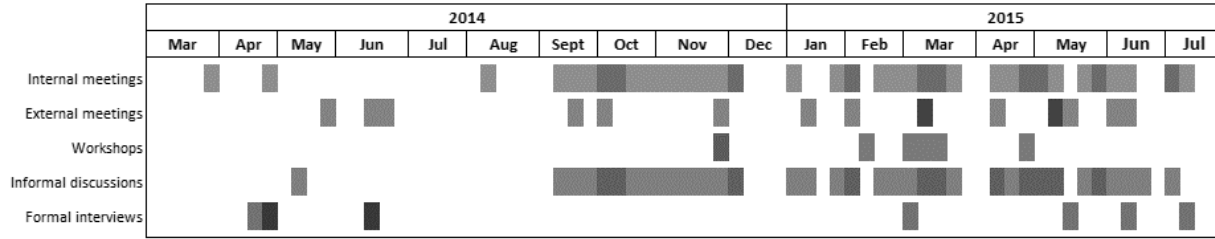


Figure 3.6 – Timeline of data collection activities

I took part in the Print Project as a passive observer, maintaining distance from the routine actors and only interacting occasionally. This means that during meetings, observation was done without interfering with the discussions that would affect the final decisions or outcome. However, interaction with the project members occurred on several occasions whether through formal interviews, or informal discussions. Part of this study is to understand the ostensive-to-performative relationship, thus the routine actors played an important role in providing me with this insight. I depended on their transparency and truthfulness during routine enactment, and that they would act and talk naturally as if I was not present. By maintaining a role as a passive observer, I ensured that there was no unusual interference that would affect how they perceived things (ostensive), and how they acted (performative).

In order to obtain a convincing and accurate collection of data (Yin 2009), various sources of data using multiple techniques were collected. This helped to avoid biased assumptions that focus on certain perspectives of reality (Berg 2009). If one source of data was chosen over other types, certain insights that could have been provided by the other data sources may have been overlooked. *Table 3.2* lists all the activities that were involved during the data collection. Each activity is labelled according to the data type then grouped into three main sources of data: (1) observation, (2) interviews, and (3) artefacts, which are discussed further in this section.

Table 3.2 – List of activities and the corresponding opportunities for data collection

Date	Activity	Data collection opportunities				
		Formal interview	Informal discussion	Internal meeting	External meeting	Workshop
31-Mar-14	Meeting 0			/		
28-Apr-14	Meeting 1			/		
11-May-14	Discussion with DP		/			
23-May-14	Interview with Procurement Head	/				
27-May-14	Vendor RFI session				/	
28-May-14	Interview with former Project Manager	/				
29-May-14	Interview with Commercial Head	/				
29-May-14	Interview with Project Manager	/				
16-May-14	Interview with Head of Library	/				
17-May-14	Interview with procurement portal expert	/				
17-Jun-14	Conference call with PublicCoM				/	
19-Jun-14	Interview with Technical Head	/				
27-Jun-14	Conference call with PublicCoN				/	
14-Aug-14	Board meeting 0			/		
18-Sep-14	Working Committee 1		/	/		
23-Sep-14	SupplierD Meeting 1				/	
23-Sep-14	Working Committee 2		/	/		
29-Sep-14	Working Committee 3		/	/		
7-Oct-14	SupplierD Meeting 2		/		/	
7-Oct-14	Working Committee 4		/	/		
9-Oct-14	Financial model with Finance Head		/	/		
13-Oct-14	Board meeting 1		/	/		
16-Oct-14	Working Committee 5		/	/		
23-Oct-14	Working Committee 6		/	/		
30-Oct-14	Working Committee 7		/	/		
6-Nov-14	Working Committee 8		/	/		
13-Nov-14	Discussion with Technical Head		/			
14-Nov-14	Working Committee 9		/	/		
14-Nov-14	Discussion with Procurement Head		/			
20-Nov-14	Working Committee 10		/	/		
27-Nov-14	Working Committee 11		/	/		
1-Dec-14	Discussion with Project Manager		/			
2-Dec-14	Software requirements meeting 1					/
4-Dec-14	Working Committee 12		/	/		
4-Dec-14	Print specialists presentations				/	
4-Dec-14	Software requirements meeting 2					/
10-Dec-14	Board meeting 2		/	/		
12-Dec-14	Working Committee 13		/	/		
8-Jan-15	Working Committee 14		/	/		
14-Jan-15	Site visit to ShefCo		/		/	
20-Jan-15	Chat with Project Manager		/			
29-Jan-15	Working Committee 15		/	/		
3-Feb-15	Board meeting 3		/	/		
5-Feb-15	Working Committee 16		/	/		
6-Feb-15	WEBEX meeting with SupplierE				/	
13-Feb-15	Print specification workshop 1					/
19-Feb-15	Working Committee 17		/	/		
26-Feb-15	Working Committee 18		/	/		
3-Mar-15	Print specification workshop 2					/
3-Mar-15	Interview with hired Consultant	/				
6-Mar-15	Print software tender evaluation		/	/		
10-Mar-15	Print strategy workshop					/
Total for each type of data:		11	57	45	17	7

Table 3.2 – List of activities and the corresponding opportunities for data collection (cont.)

Date	Activity	Data collection opportunities				
		Formal interview	Informal discussion	Internal meeting	External meeting	Workshop
13-Mar-15	Print software demonstration- SupplierI		/		/	
13-Mar-15	Print software demonstration- SupplierT		/		/	
13-Mar-15	Debrief on software presentations			/		
13-Mar-15	Software evaluation discussion		/	/		
16-Mar-15	Board meeting 4		/	/		
17-Mar-15	Hardware ITT workshop					/
19-Mar-15	Working Committee 19		/	/		
26-Mar-15	Working Committee 20		/	/		
16-Apr-15	Technical meeting - infrastructure		/	/		
17-Apr-15	Hardware supplier presentation		/		/	
23-Apr-15	Working Committee 21		/	/		
27-Apr-15	Service design workshop					/
28-Apr-15	Board meeting 5		/	/		
28-Apr-15	Cost modelling meeting		/	/		
30-Apr-15	Working Committee 22		/	/		
7-May-15	Hardware financial scoring 1		/	/		
7-May-15	Working Committee 23		/	/		
13-May-15	Hardware interview day - SupplierK		/		/	
14-May-15	Hardware interview day - SupplierT		/		/	
14-May-15	Hardware interview day - SupplierP		/		/	
14-May-15	Hardware financial scoring 2		/	/		
21-May-15	Meeting with SupplierI (software)				/	
21-May-15	Interview with technical advisor from SupplierI	/				
28-May-15	Working Committee 24		/	/		
4-Jun-15	Working Committee 25		/	/		
5-Jun-15	Board meeting 6		/	/		
11-Jun-15	Meeting with SupplierK 1 (hardware)				/	
11-Jun-15	Working Committee 26		/	/		
18-Jun-15	Working Committee 27		/	/		
19-Jun-15	Meeting with SupplierK 2 (hardware)				/	
19-Jun-15	Interview with PM1 from SupplierK	/				
27-Jun-16	Site survey for print locations		/			
8-Jul-15	Board Meeting 7		/	/		
9-Jul-15	Working Committee 28		/	/		
9-Jul-15	Chat with Technical Head		/			
13-Jul-15	Interview with PM2 from SupplierK	/				
Total for each type of data:		11	57	45	17	7

3.4.1 Observation

Organisational routines are not widely documented in studies because routines are difficult for actors to verbalise (Cohen and Bacdayan 1994). Furthermore, the distinction between the ostensive and performative aspects can be challenging as neither is a single, specific phenomenon (Feldman and Pentland 2003). Each aspect and its relationship with the other is always changing depending on the context and the diversity of routine actors (Pentland and Feldman 2005). Therefore, according to Cohen and Bacdayan (1994), observations are necessary to study routines. In this

study, they are the primary data source because they can uncover insights that may not be gained through formal methods such as interviews (Anderson 2008). They provide rich information, as the actions observed include both verbal and non-verbal conduct (Yamauchi and Hiramoto 2016). For instance, regardless of what is being said, an angry intonation might suggest that a particular individual does not fully agree with a particular issue, which in turn provides insight into the individual's true ostensive of the routine. The excerpt below is an example of a field note written based on this non-verbal conduct:

Commercial Head shows a lot of concern. The Finance Head seems not to comment much, probably because he is a Finance person. The Project Executive seems open, but always refers back to the Finance Head for reassurance.

Field notes during Board meeting 0

The above field note was an observation on how the different Board members reacted to the idea of extending SupplierD's contract. Although the exact non-verbal conduct observed was not noted down, the notes were based on my interpretation of the research subjects' conduct at that particular time. Furthermore, according to Yamauchi and Hiramoto (2016), in order to comprehend a particular action, it needs to be connected to the context at that particular time. For instance, to understand why a particular part of the routine is enacted in such a way at a particular moment, observation was done on the whole situation of that context, such as the sudden challenge by another routine actor, or the new suggestion that was made. Thus observations focus not only on the conversations, but also on the actual social interactions (Miettinen *et al.* 2009) within the Print Project.

All observations from the meetings and small discussions were aimed at focusing on changes that occur from within the routine itself, i.e. endogenous changes. The broad interest was on how routines are enacted, and identifying parts of the routine that showed a variation from the usual enactment. What was observed in this study was the enactment of the routines through the actions of the participants (i.e. working committee [WC] and the Board members).

For the sourcing routine, I observed participants talking about the routine (thus representing their ostensive understanding) as well as talking during the routine enactment (i.e. the performative aspect). So their "talk" (Dittrich *et al.* 2016) and "sayings" (Schatzki 2012) can represent either the ostensive, or the performative, or both aspects of the routine. Below, I have divided the observations into two parts: (1) observation of the performative, and (2) observation of the

ostensive. According to Feldman and Pentland (2003), it is important to distinguish between the two aspects in order to explore the relationship between them. The following sections provide more detail on how the individual aspects were identified and observed.

Observation of the performative

The first part was observing the performative aspect of the routine, which is the patterns of actions performed by specific people, for specific reasons, and at specific times (Pentland and Feldman 2005). The performative aspect is my direct observation of the project members' actions relating to the routines. For example in their study, Dittrich *et al.* (2016) focused on “envisaging and evaluating alternative situated actions” in the form of talk, against the background of the established ostensive (p.679). They evaluated the participants' actions (via talk) against the ostensive to identify the performative aspect. Nonetheless, as Pentland and Feldman (2008b) point out, some performances are difficult to observe as they are distributed over time, and thus, in this case, were hidden from my point of view. Point of view has a significant impact on determining the meaning of a certain performance and can enhance the observation (Pentland and Feldman 2008b). To ensure that the data was of high quality, I needed to physically observe these routine performances as much as I could and ensured that I was familiar with the routine activities as part of my background expectancies¹¹.

Meetings became the most important data source as they enabled me to observe the Committee involved in discussions that were part of the sourcing routine itself. The following examples are a clear indication of a participant talking during routine enactment:

- While choosing a framework to use for the sourcing of print specialists, the Procurement Head said, “I have spoken to quite a few of them [print specialists] that are already on the framework, I’m not actually sure if I’ll go through with the framework because...the other thing is it’s quite specific in the buyer’s guide for the framework, it’s about audit...and I’m not sure that we need the audit right now, it doesn’t really fit the scope”.
- When discussing on the progress of the print software ITT, the Project Manager said, “The one thing we haven’t made quite so much progress on is the print software. And that’s for a couple of reasons really, [Technical Head’s] availability has not been great before Christmas,

¹¹ Background expectancies are knowledge of the organisation’s settings and culture (Cicourel 1967, Garfinkel 1967)

he has always said that he would have greater availability after Christmas, so we expected that”.

- At one of the Board meetings, the Project Executive commented on the validity of the print hardware ITT, “You’ve had these discussions about the print [hardware] specifications, but I would have thought this group needs to be sure it’s the right specifications, because I kind of thought we’ve already got to one...so this is maybe refining the details of what we’ve already agreed isn’t it?”.
- During the evaluation of the print software proposals, after the first round of scoring (which was also filled with discussions that I observed) the Project Manager said, “*I’m just slightly worried because we are rushing this as well...we might not be able to check our working out, then we can easily make a mistake and that could be a bit embarrassing couldn’t it?... And we’ve got all three in, if we invite all three in...then we’re covering our [backs]*”.

The use of present tense expressions such as, “we are”, “right now”, “we haven’t” and “I kind of thought”, denotes that the participants are talking about real-time issues i.e. issues that are part of the sourcing routine enactment. Therefore these talk relate to the performative aspect of the routine. Furthermore, the constant use of “we” when talking about the activities indicates that the Committee and Board members are indeed enacting the sourcing routine together.

According to Pentland and Feldman (2005), any changes or variation can be identified by comparing different performances, especially when there is a specific change in the context, as documented in my field notes, for example:

IT Representative asked a question about invoicing to SupplierI, but the Technical Head was the one who answered on their behalf. The SupplierI representatives looked a bit surprised (but pleased) and thanked the Technical Head for answering the question for them.

(Field notes for SupplierI interview)

The field notes demonstrated that I identified what had just occurred as something out of the norm, thus was a deviation from the expectations of how the routine should be performed.

Observation of the ostensive

The second part of the observation was the ostensive aspect, which is the understanding of the routine that is usually communicated in the narrative form, which can neither be coherent nor consensual (Pentland and Feldman 2008b), meaning I expect that different routine actors would not have a common ostensive and that if there appears to be one, not everyone would agree to it. Furthermore there are two aspects to the ostensive: how actors understand different parts of the routine, and their ideas on how to perform it (Pentland and Feldman 2008b). Observing the ostensive is more challenging than observing the performative aspect because the ostensive is not directly visible. Similar to how Bucher and Langley (2016) observed the ostensive aspect in their study, I drew on the participants' accounts of the routines during the observations. This was done by evaluating alternative patterns of the routine through their conversations (i.e. talk) against the background of envisaged performances (Dittrich *et al.* 2016). Similarly in my study, I identify the ostensive aspect by focusing on participants' talk regarding the routine activities such as discussing different options of enacting the routine, or notifying their expectations on how the activity should be enacted. So they are essentially talking about alternative patterns of the routine. For example during the 'Create ITT' activity for the sourcing of Print Specialists, the Committee talked about how they should carry out this activity as they had no prior experience sourcing for this service. During their talk, the Procurement Head suggested the following:

"I could speak to them [print specialists] over the phone, and see if we put that [Service Design as a deliverable] in the ITT is everybody going to go up and go, 'what, what are you talking about?' ...but you know I did go on Wikipedia to check what my perception was, and it's basically just bringing the operational side of things and the technical side things. So it's not...they may not come across that wording"

The suggestion to engage with potential print specialists to get their feedback was a new option, or an alternative way of enacting the routine. Similarly, for the request routine, when the Committee was talking about exceptional cases to the routine enactment, the Procurement Head said:

"For me, there'll be some cases where we actually want to tell people just to go buy a stand-alone printer for a year, and it would be the cheapest option [...]. If it's not on the network, then it's better for them to just go and buy a stand-alone [printer]"

As their objective of the request routine is to reduce new purchases (hence they should only be doing a ‘break, fix or defer’), the Procurement Head is envisaging an alternative scenario that would not enable them to stick to their objective.

Furthermore, having multiple participants enabled me to observe multiple ostensives. For example, Turner and Rindova (2012) analysed multiple ostensives to examine how different views vary across a hierarchical level. In this study, I was able to observe what were initially multiple ostensives, merging into a collective ostensive over time. Similar to how I identified the routine variation while observing the performative aspect, in order for me to detect these differences or changes in the ostensive, I ensured that I was acquainted with the general or common understanding of the particular routines, thus creating a clear definition of them from an outsider’s perspective (Pentland and Feldman 2008b).

I identified variation in the ostensive by comparing observations on the different routine actors (Adler *et al.* 1999; Feldman 2003). For example, I would pick a particular topic (e.g. project objective) and note how each of the committee members related to it. Their views were often not obvious and needed to be extracted from the conversations that I observed, which Dittrich *et al.* (2016) refer to as talk, which is a form of social action (Austin 1975). If there appeared to be conflicts between routine actors through the words and tone used, I examined whether these conflicts were the result of differing ostensives. Observations relating to the ostensive were documented in the field notes, which were then used during the transcription and analysis activities.

3.4.2 Interviews

I also drew on semi-structured interviews and constant informal discussions as part of my data collection.

Semi-structured interviews

Semi-structured interviews are useful to promote a two-way communication driven by the use of some prepared questions as a guide, followed by other questions depending on what the interviewee answers. It is a fluid process rather than a rigid one (Rubin and Rubin 1995). By following this technique, information regarding a certain subject (such as understanding of the routine) can be obtained while not limiting the answers to a specific area only. The advantage of a normal structured interview (i.e. a set of specific questions for a focused topic) can still be maintained while avoiding the possibility of the interviewee providing answers based on what they think the interviewer wants to hear. The flexibility of the semi-structured questions allows a variety of information to be gained without straying too far from the subject. Although most of the interviews start off with similar generic questions, other questions depended on the role/s of the actor and which part of the routine they were involved in. For example, the Procurement Head was asked questions related to contracts and the general sourcing process whereas the Technical Head was asked questions related to print product details.

A total of seven formal semi-structured interviews were conducted at the early stage of the observation with the project members, and four were conducted in later stages, lasting 30-60 minutes each. Most of the formal interviews were carried out at the beginning of the data collection period because, as the observations progressed, it became clear that informal discussions were more effective in adding to existing understanding. Because of this, focus was shifted to the latter method of collecting data. The purpose of the initial interviews was to get to know the individual key actors and to gain their understanding of the purpose of the Print Project. The interviews allowed the project members to reveal their perceptions (Beech 2011) concerning the project as a whole as well as the related routines. There were two basic questions that I asked all the interviewees. These questions were used as a starting point and were followed by several others, depending on what was being said. The first question was to understand how the interviewees perceived the Print Project: for example, did they agree with it, or how important was this project? The second questions aimed at understanding what the interviewees knew about the sourcing

routine, which was to be the main focus of observation. For complex routines such as the sourcing routine, actors may not be able to describe in detail all the activities involved in the routine (Bucher and Langley 2016). Nonetheless, similar to the participants in Bucher and Langley's (2016) study, the participants I observed have a basic understanding of the overall routine and the sequence of activities i.e. the actors have similar ostensive understandings. For instance, during my initial interviews with the participants, when asked what they understood about the procurement process in PublicCo, the majority of them started by mentioning the use of procurement frameworks. In all three iterations of the sourcing routine, I observed the participants engaging in a framework selection process as part of the Project Creation activity which corresponds to my understanding of the sourcing routine.

By gaining these insights, I was able to make a profile of each member so that I could better understand why certain actions were taken, or what was talked about in subsequent observations.

Informal discussions

In addition to formal interviews, approximately 57 informal discussions (that were explicitly documented) took place, often post-meeting, during a walk-around, or when I casually dropped by at a Committee member's office to discuss certain things. These informal discussions complemented the data obtained from interviews and observations from meetings (Dittrich *et al.* 2016) by providing further opportunities to gain insight into the problems, tensions and controversies emerging throughout the Print Project (Aroles and McLean 2016). In most instances, I found that the informal setting, i.e. without the voice recorder, enabled the project members to talk more candidly (Maitlis 2005) as compared to formal settings. From the observations of routine performance, actors involved may or may not have been consciously involved in actions that diverged from how the routine was supposed to be performed. In order to clarify these situations, initiating informal discussions allowed the viewpoints and justifications from the actors to be taken into account for the analysis. For instance, I observed that the Technical Head frequently challenged the way decisions were made, but upon getting to know him through informal conversations, I discovered that he would often take the role of devil's advocate to ensure that the Committee had a check and balance. This insight was useful because it allowed me to understand the Technical Head's ostensive by taking into account that his challenges were only to create debate. Furthermore, these informal discussions allowed me to clarify events that had just occurred

during a meeting, and even a two-minute informal discussion could provide ample insight. These often related to new terms or phrases that I was unfamiliar with. It was important for me to resolve these uncertainties as soon as possible so that I could evaluate whether certain discussions related to the routine enactment, or a different issue altogether. Thus, informal discussions enabled me to identify which discussions were part of the routine performance, and which were not.

3.4.3 Artefacts

In order to analyse routine flexibility, I also drew on a number of artefacts. There were two types used as a data source: (1) artefacts not related to the routine, and (2) artefacts directly related to the routine.

The first type of artefact involved general documentation that was not directly associated with either of the routines that I observed. These included: (1) websites, (2) handbooks, and (3) email communications. Supplier websites provided me with insight into their profiles, which enabled me to better understand their responses and how they dealt with PublicCo. For example, a small, local supplier was expected to be more flexible and able to customise their products to suit PublicCo's requirements, whereas a large, international supplier would be more rigid. This gave me a better understanding of why certain suppliers were preferred over others. Similarly, a handbook of the procurement system that is used by PublicCo provided me with an understanding of its capabilities and its role in the overall sourcing process. Besides that, email communication was also referred to as part of the triangulation method as some of the discussions were not done in person. By referring to the email communications, I was able to put together a more complete narrative of the ongoing routines in real time.

The second type of artefacts are those that are directly related to the routine. These were the main artefact source collected during data gathering. According to Pentland and Feldman (2005), artefacts are the "physical manifestations" of a routine (p.797). They can either reflect: (1) the ostensive aspect (e.g. written procedure), or (2) the performative aspect (e.g. tracking database) (Pentland and Feldman 2008b). For example, in the first case study artefacts were an integral part of request routine's enactment. In this routine, almost all the actions occurred electronically e.g. via emails. While I did not observe actors typing the emails, or service desk requests, these

artefacts themselves “provide a convenient archival trace of the performative aspect” (Pentland and Feldman 2005, p.796). For instance, a request routine starts when a user makes a request for a new print device. An example of such a request is shown below in *figure 3.7*.

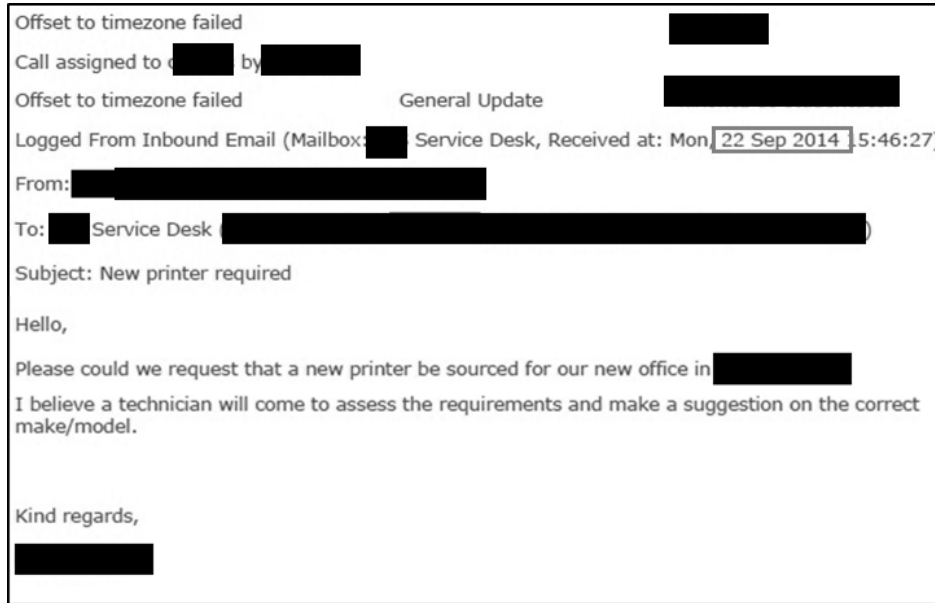


Figure 3.7 – User request made through the service desk

Figure 3.8 on the other hand shows the final response from an IT service desk personnel in response to the user’s request. This marks the end of the request routine as the new printer has been procured.

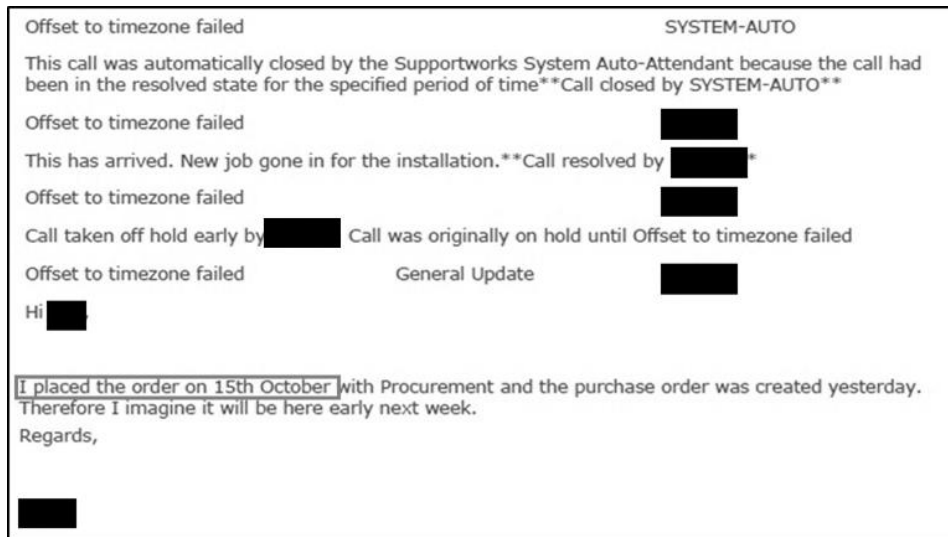


Figure 3.8 – Final response from an IT service desk personnel

Over the observation period I noticed that actors' ostensive understanding of the request routine changed over time. This was because the existing understanding of the request routine did not align with the Print Project's objectives, and thus a change was needed to adapt to the Print Project. This new ostensive understanding was embedded in an artefact in the form of an internal policy document (see *figure 3.9*). Drawing on Pentland and Feldman (2005) I use the policy document "as a proxy for the ostensive aspect" of the request routine (p. 796). Besides serving as a proxy for the new ostensive, this policy also aimed to enforce the new ostensive and thus control the behaviour of other routine actors through their performance (e.g. Bapuji *et al.* 2012; Berente *et al.* 2016). So the role of this policy as an artefact is twofold: firstly to represent the ostensive aspect, and secondly to control the performative aspect.



Figure 3.9 – Interim arrangement policy announcement on PublicCo's internal webpage

In this study, the procurement portal provided the only reflection of the ostensive for the sourcing routine. However, as I got to understand the system and how the routine was enacted, I found that this portal played little significance in the routine enactment. Many artefacts such as the supplier contract, ITT document, and supplier proposals provided physical evidence of the routine performance. In other words, they represented the performative aspect of the routine. Although the interest was in how these documents were prepared, the finished product (i.e. ITT, evaluation scoring sheet) provided a concrete representation of the final decision made. Since this method is passive and non-responsive, it could be compared to the interview and observation data to avoid biases and provide a conflict-free relationship with PublicCo as the research organisation (Burgelman 2002; Anteby 2010). What this means is that if the artefacts reviewed appeared to

contain highly sensitive or debatable data such as the proposal evaluation, I resolved any bias in my point of view by further interviewing (either formally or informally) the routine actors.

3.4.4 Summary of data collection

Each of these sources provided a different line of sight of the social reality. A combination or triangulation of all of them generated a richer and more substantive view of reality (Berg 2009). For instance, whereas observations provide an avenue for the researcher to become familiar with the situation, they can also help to verify actual happenings as compared to what is being said in interviews (Anteby 2010). Conversely, interviews may also help to clarify the observations made. The use of all three data sources simultaneously is not unusual for qualitative research on routines. For instance, in Bruns' (2009) study on lab safety rules, she shadowed and observed 10 lab members, conducted interviews at the end of her observation period, and attended online and class safety training, which presumably included access to safety manuals (i.e. documents). Similarly, in Feldman's (2000) study of university housing routines, she held unstructured interviews in various stages of her study, made observations over four years through various formal and informal activities, and kept documents such as meeting agendas, newsletters and emails.

3.5 Data analysis

3.5.1 The fundamentals of my analysis

Narratives

Data analysis involves taking the raw data and transforming it into a conceptual level (Corbin and Strauss 2008). According to Langley (1999), the complexity of the data is also a reflection of the complexity of the organisational phenomenon, which in this case is organisational routines. It is difficult to distinguish what should or should not be included when analysing a vast set of data. Simplifying complex data into a theoretical model, concept or format that is accepted by others is no easy task and requires a process that can be described explicitly (Weick 1989; Locke *et al.* 2008), which is what I aim to accomplish in this section. The over-arching approach that was used for the analysis was abduction as the form of reasoning (Dubois and Gadde 2002; Van Maanen *et*

al. 2007). Unlike other forms of reasoning such as induction and deduction, abduction is based on possible explanations, and uses doubt as a motivator to search for understanding (Locke *et al.* 2008). Abductive reasoning welcomes speculation and assessment to seek possible explanations, rather than exploring “known rules” to identify explanations that are the “best fit” (Weick 2005, p.433). In this study, I adopted a combination of narrative building (Langley 1999; Maitlis 2005), and the general procedures for building grounded theory, based on Glaser and Strauss’ (1967) method in generating novel outcomes (Deken *et al.* 2016).

The purpose of the narratives was to cope with the enormous amount of data in the early stages (Eisenhardt 1989), and to identify and specify the dimensions or directions of the study. These narratives are not based on my own account, but are thick descriptions based on the language of the participants. The narratives include several direct quotes and are organised in a thematic way as presented in chapters 4 to 6. Building narratives allowed me to explore multiple areas within the data to single out possible areas to focus on. This initial analysis was aimed at identifying the sub-cases, followed by the construction of detailed descriptions for subsequent analysis (Langley 1999). The identification of sub-cases is part of a ‘systematic combining’ where theory, empirical fieldwork, and case analysis evolve simultaneously (Dubois and Gadde 2002). In this study, the sub-cases emerged while data collection and analysis was taking place, and was guided by existing theory on routines. The grounded theory strategy was used for later stages of the analysis where the end products were theoretical constructs that tie back to the organisational routines theory. The abduction approach fits in with traditional grounded theory as it encourages the process of double-checking inferences with more data, thus moving back and forth between data and theory iteratively (Timmermans and Tavory 2012; Dougherty 2015).

Since abduction is about linking empirical observations to extant theoretical ideas in order to create novel conceptual insights (Langley *et al.* 2013), it requires bridging several argumentative concepts that are essential to the coding process, such as between engagement with data and detachment from it, and between social connection and self-expression (Klag and Langley 2013), or between knowing and not knowing (Locke *et al.* 2008). One of the ways of achieving this bridging as proposed by Locke *et al.* (2008) is by the use of doubt. Doubt energises and enhances the quality of abduction by generating possibilities, trying them and re-trying them until the doubt is satisfied by the new concepts that are generated. Thus doubt is a positive attribute as it stimulates

abductive reasoning through creativity (Locke et al. 2008). In this study, doubt is used in the coding process (i.e. grounded theory). When the first round of coding was conducted, I placed doubt on myself by asking questions like, “So what?” and “What is new here?”. From there, it opens up other perspectives for analysing the data and another iteration of coding is conducted. For example, in the analysis for sub-case 1, initial coding included separate themes for the ostensive and performative. But upon further inspection and realising that the conversations did not reflect the actual doing of the routine, the performative themes were removed.

Figures 3.10 and 3.11 illustrate how the narratives are linked to the theoretical constructs. The narrative on the left hand side is a screenshot from Chapter 6. These narratives are first-order participant perspectives, and hence contain many direct quotes. These quotes are given first-order themes that describe the event/issue from the participants’ perspectives. From these first-order themes, similar themes are then grouped to form second-order themes that represent my own interpretation of the perspectives in relation to the research question. Lastly, groups of second-order themes make up the third-order theoretical construct, which is the new insight gained that answers part of the over-arching research question.

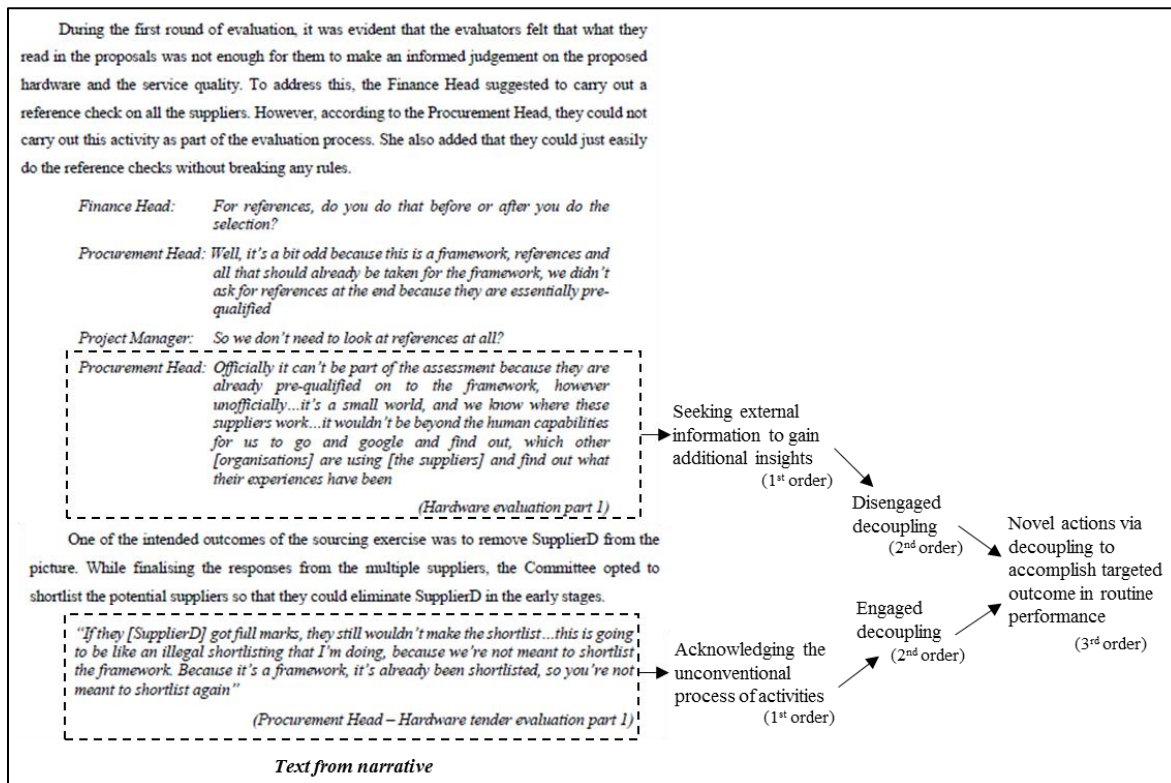


Figure 3.10 – Example 1 of linking the first-order narratives to the second- and third-order codes

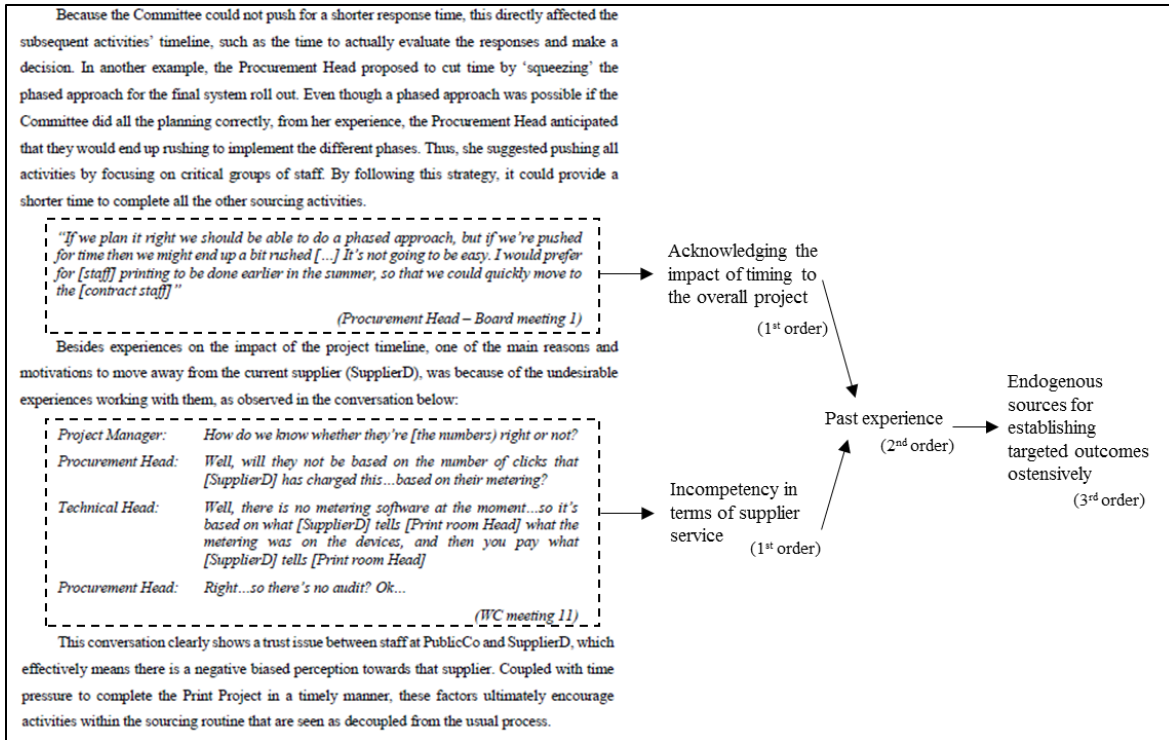


Figure 3.11 – Example 2 of linking the first-order narratives to the second- and third-order codes

Talk and background expectancies

As explained earlier, I observed many meetings and discussions, therefore the majority of the data I collected was talk-based. In order to understand the routines and the activities relating to it, I needed to rely on data that is grounded upon what participants have to say regarding the activities and what they mean to them (Van Maanen 1979b). These conversations occurred independently of my intervention and thus are known as “naturally occurring talk” (Silverman 2001, p.159). One of the advantages of naturally occurring talk is that the data is not constructed by me (as the researcher), but is “recovered’ from the context in which it was employed” (Golant *et al.* 2015, p.615). This means that I have access to data that is very much grounded in the actual words of the participants (Silverman 2001) which are fundamental to the establishment of my first order concepts. However, these naturally occurring talk, or “facts” of my ethnographic study need to be interpreted based on the situation, history, biography as used by the participants (Van Maanen 1979b).

This analysis was supported by my awareness of the “background expectancies” which is knowledge of the organisation’s setting and culture (Cicourel 1967; Garfinkel 1967), and an

understanding of behaviour from the participants' perspective (Van Maanen 1979a). Background expectancies allowed me "to construct 'valid', explanations of what 'really' happened" (Gidlow 1972, p.397). Although being a passive observer did not allow me to participate in the routine activities which would be beneficial to my background expectancies, I compensated for this via other methods. For example, I asked questions during meetings to get clarification from the participants. My questioning did not interfere with the routine enactment, thus I remained as a passive observer.

Analysis of the ostensive and performative aspects

My study is focused on the internal dynamics of routines which is why I have differentiated the ostensive and performative aspects for analysis purposes. Throughout my study, I acknowledge that each aspect depends on the other and the whole purpose of this thesis is to understand the ostensive-to-performative relationship. Similar to how I identified the first and second order concepts during analysis, the ability to identify the ostensive and performative aspects was supported by my understanding of the organisation's culture (Van Maanen 1979b). Therefore, once I had a grasp of the background expectancies, I was able to lay some ground assumptions (Gioia *et al.* 2012) that were imperative for my analysis:

Firstly, I had to keep an open mind that the participants may not always be able to explicitly convey their thoughts through their talk (Pentland and Feldman 2005; Bucher and Langley 2016). Analysing their ostensive understanding was not purely based on the words spoken at a particular time but needed more 'digging' into other conversations or data sources to familiarise myself with the setting and participants' behaviour. Secondly, I have to assume that I am knowledgeable enough (due to my awareness of the background expectancies) so that I can extract the patterns from the data to come up with concepts and relationships that may otherwise not be evident from the participants' point of view (Gioia *et al.* 2012).

This study is unlike normal circumstances because the routine actors have no prior experience working together as a group in enacting the sourcing routine. Thus they did not have a collective ostensive at the beginning of the project. Acknowledging this was very important for my analysis. Being aware that different participants may have different ostensive understandings (Feldman and Pentland 2003), I realised that I had to understand their individual behaviour in order to properly analyse their ostensive. Besides that, I also involved in informal chats with the

participants to create a bond and understanding of each of their character. For example, in one of the meetings where the Committee were discussing on the print hardware, the Technical Head had this to say:

“Well it depends... let’s say we chuck away the old fleet and buy a big chunk of new MFD’s, so why are we interested in leasing?”

At the first instance, it looks as if he is against leasing the print hardware. However, because I have had time to get to know the Technical Head (e.g. through informal conversations outside the meetings), I knew that he was only playing the role of the devil’s advocate to balance the discussion. This knowledge is important on how I understand his expectations and intentions in the routine enactment which then relates to his ostensive.

During analysis, I also found that there is talk that can represent either the ostensive, or performative aspect, or both. For example, following the interview session with SupplierK for the print hardware, the Committee had a debriefing session which is still part of the evaluation activity. During the discussion, the Technical Head had this to say:

“I would be more interested to see more of this tomorrow...but remember what as we said originally, this [SupplierK] is basically our number 1 if you look at the green sheet, and the others were 2 and 3...so they have more to do to get our favour”

In this statement, he is saying that he believes that SupplierK seems to be the leading supplier but at the same time, he expects that the interview session with the other two suppliers to be more challenging for the suppliers as they have more to prove themselves. This in turn sets the tone and anticipation of the upcoming interviews which is still part of the evaluation activity. So, while performing the evaluation activity, the Technical Head is also sharing his expectation of how the rest of the evaluation activity should be enacted.

The following sections provides an in-depth discussion on the coding strategies for each sub-case as all three had different approaches to identifying the themes.

3.5.2 Sub-case 1: Emergent routine change

The data analysis for this sub-case was conducted in three phases: (1) narrative building, (2) axial coding, and (3) selective coding.

Phase 1: Narrative building. During the initial stages, I was not yet familiar with the project or what to expect during my observations. I started my analysis while I was still collecting data. By skimming through the transcriptions of the data and field notes that I had collected so far, I began by making a list of recurrent issues that were discussed during the project meetings. I found that the three most discussed issues were: (1) use of ***frameworks*** including PRINCE2 (a project management tool), and procurement frameworks, (2) ***interim arrangement*** for managing existing operational processes during the project period, and (3) whether or not to engage with ***print specialists***. Once these issues were identified, I once again went back to the transcriptions and my field notes to specifically search for quotes and descriptions relating to these issues to start building detailed narratives. The transcriptions provided exact quotes from the research subjects whereas the field notes provided details that could not be obtained from the quotes alone, such as the non-verbal conduct. These field notes were used to make sense of the transcriptions to enable a more realistic account in the narratives. For the second narrative, I also referred to incident reports relating to the request routine, which are logged in a system by members of the IT support team whenever a request is forwarded for a new print device. The report includes details of when the request came in, how it was resolved, and when it was closed. I analysed these reports to compare the routine performances during the period of my observation and included them in the narrative for interim arrangement.

At this time, I realised that the narrative for framework issues was not substantive as there were not as many discussions on the issue as initially thought. As for the print specialist narrative, although it was quite substantive, it was only part of a bigger narrative about the whole process of sourcing for the print specialists. Therefore, at that particular time, this narrative was considered incomplete. This left me with the interim arrangement narrative, which was more complete than the other two in the sense that the chronological events were comprehensive, starting from the early discussions until an interim arrangement was actually put into place. Furthermore, because it offered a complete account of the issue, I was able to clearly see that a routine change had

emerged throughout the events described in the narrative. Thus I began my next phase of analysis based on the interim arrangement narrative.

Phase 2: Axial coding. Since I initiated my analysis using the narrative strategy, I therefore skipped the open coding process as suggested by Strauss and Corbin (1998) and proceeded with axial coding based on specified dimensions. Based on the narrative compiled in phase 1, I discovered that a change for the request routine had emerged during the initial stages of the project that led to an official interim arrangement. This emergent change is similar to what Feldman and Pentland (2003) refer to as endogenous change, which relates to change that comes from within the routine itself. Endogenous changes are observed through either the ostensive or the performative aspect, which make up the internal dynamics of routines (Pentland and Feldman 2005). In the first round of coding, I used the narrative to identify excerpts that demonstrated: (1) a trigger or source for the routine change to support the endogenous change, and (2) the routine actors' ostensive or the performative of the request routine. I did this by conducting a content analysis (Krippendorff 2004) using the 'search' function in Microsoft Word for words such as *influence, exploration, devil's advocate, expectation, perception* etc. The identified sections or excerpts were then transferred onto Microsoft Excel and labelled according to some initial codes. Examples of the first round of codes are listed in *Table 3.3*.

Codes relating to source of change	Codes relating to actors' ostensive	Codes relating to the routine's performative
Resistance from print users Lack of interest from users Getting clarification by repeating Functional constraints Time pressure	Using experience Confusion on type of print devices Misunderstanding of print functions Exceptional cases	Coordinate with departments Request for new buildings Request for new MFDs

Table 3.3 – Examples of the first round of coding for emergent routine change

In the second iteration of coding, I repeated the content analysis by referring back to all transcriptions and field notes to identify additional excerpts that related to these codes. New excerpts were added to the earlier Excel file and codes were either renamed or added. As I reanalysed the data, I realised that there was also discussion regarding communicating the interim arrangement in the form of a memo. As this relates to the embedding of routines (e.g. D'Adderio 2003; Goh *et al.* 2011; Whitford and Zirpoli 2014), I decided to look further into identifying excerpts that related to this. A sample of the second round of first-order codes are listed in *Table 3.4*.

Source of change	Actors' ostensive	Routine's performative	Routine embedding
Acknowledging possible user resistance, Lack of interest from users, Repeating information to get clarification, Overcoming functional constraints, Setting a boundary based on time factor	Using experience to relay possible limitations, Agreeing on the definition of print devices, Agreeing on type of print devices according to functions	Coordinate with departments, Dealing with request for new buildings, Dealing with request for new MFDs, Acknowledging that there would be exceptional cases	Lack of documentation as a back-up Usefulness of a policy Making use of technology

Table 3.4 – Examples of the second round of coding for emergent routine change

Phase 3: Selective coding. From the initial round of coding analysis, I discovered that in fact it was the routine actor's ostensive that was changing. Even though there were discussions on the performative aspect of the routine, the actual performance did not occur. The performance of the request routine remained constant before the interim arrangement memo was released and while the Committee members were discussing changing the routine. So, only the ostensive aspect of the emergent routine changed. Furthermore, I learnt that the temporary setting of the Print Project and the meetings contributed to the emergent change. These analyses helped me develop a data structure based on the *Gioia method* as described by Langley and Abdallah (2011), which consists of first-order concepts, second-order constructs, and aggregate themes (Corley and Gioia 2004). I built the data structure by focusing on three questions:

- (1) How do multiple sources contribute to the emergent routine change?
- (2) How does the ostensive change while being independent from the performative?
- (3) How is the new ostensive shared with the other routine actors?

Building the data structure was an iterative process carried out by grouping the first-order concepts and using the 'sort' function in Excel. Once sorted, I analysed whether these second-order constructs lifted the first-order concepts to a conceptual level (Suddaby 2006). Suddaby (2006) adds that the second level of coding should be more abstract and theoretical compared to the first level of codes, which are superficial observations. For example, in *Figure 3.12*, the codes in the left-hand box are first-order concepts, which are descriptions that relate directly to the data. The right-hand box is the code used to group these concepts in relation to the first question on how the temporary project space contributes to the routine change. In this case, the abstract category (second-order construct) that developed the core dimensions (first-order concepts) to capture the actors' pursuit of understanding the tacitness of the routine (Maitlis 2005, p.29), is by resolving

perceived uncertainties between them. In other words, the first-order concepts such as ‘acknowledging possible user resistance’, or ‘suggesting further discussion to get clarification’ relate to the resolving of the perceived uncertainties that arose due to the temporary project space.

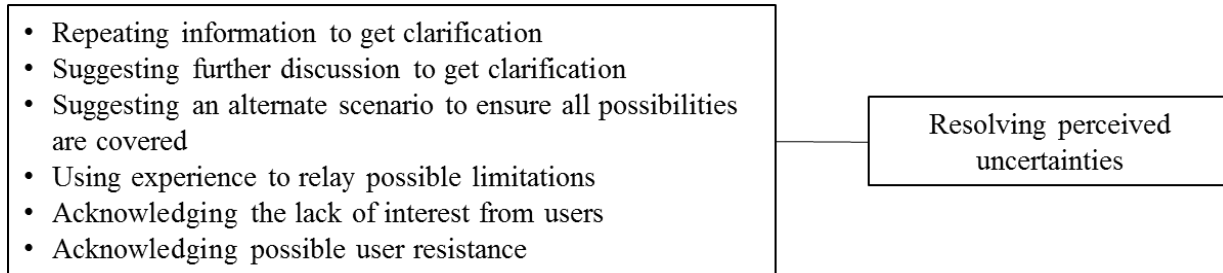


Figure 3.12 – Example of the second-order construct lifting the first-order concepts to a conceptual level for emergent routine change

If I discovered that the second level of coding did not lift the first-level codes conceptually, I revisited the codes and my data for another round of iteration. This final part of analysis involved refining the abstract (second-order) themes until I could develop theoretical constructs (i.e. third-order aggregate themes) that corresponded to the three questions earlier, as seen in *Figure 3.13*. Thus the three aggregate themes identified are:

- (1) Dealing with ambiguities within routine actors
- (2) Evolution of the routine’s ostensive
- (3) Enforcement of a new routine

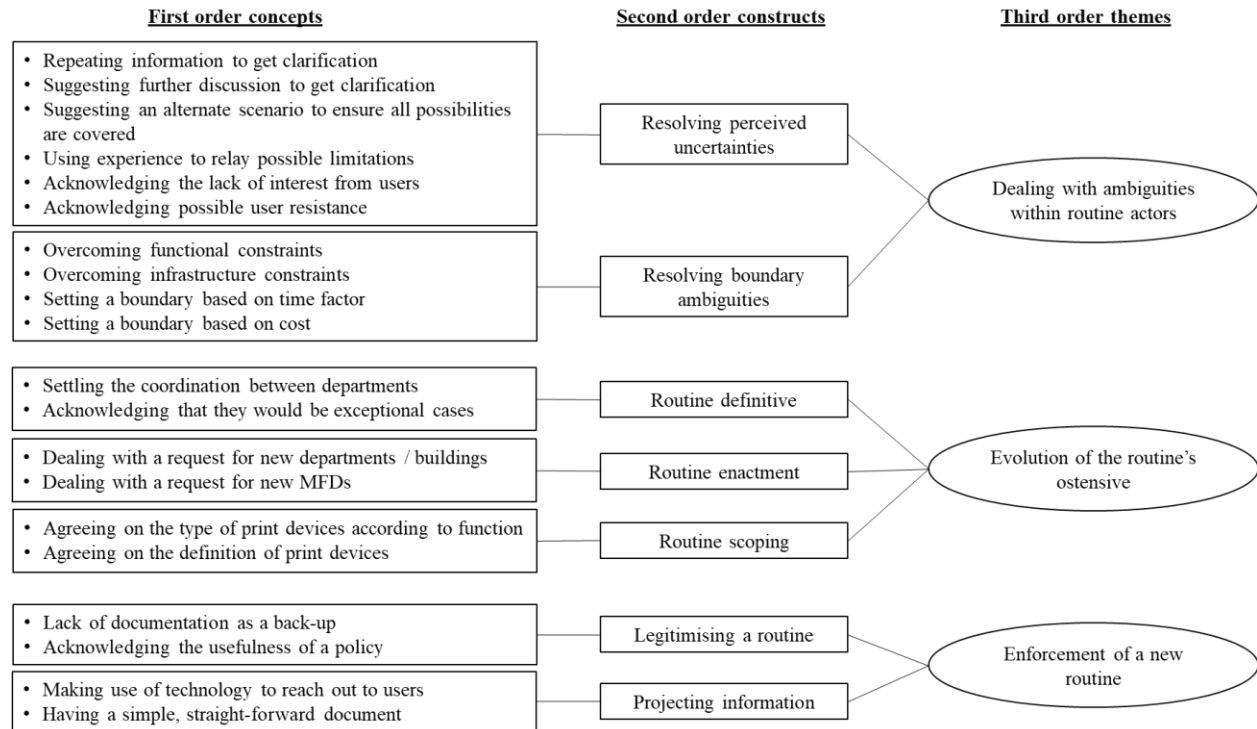


Figure 3.13 – Theoretical constructs derived from sub-case 1

3.5.3 Sub-case 2: Routine flexibility through options

As with sub-case 1, the data analysis for this sub-case was conducted in three phases: (1) narrative building, (2) axial coding, and (3) selective coding.

Phase 1: Narrative building. When I began collecting data from the Print Project, the initial idea was to focus on the procurement process, which I later identified as the *sourcing* routine. I assumed that there would be one big procurement exercise where the end result would be a new fleet of print devices ready for the new print management system. Hence the initial assumption was that I would be observing the performance of just one sourcing routine. However, from the early stages of the project, the need for print specialists (i.e. consultants who are experts in managed print systems) was agreed and thus the sourcing routine for print specialists commenced. During the first half of the project, there was also a constant debate on whether to procure the print software and print hardware as a whole, or as separate purchases. The decision was to procure them separately, thus allowing me to observe two separate sourcing routines instead of one. Thus

a total of three sourcing routines was observed, which is illustrated in *Figure 3.14* representing the timeline of all activities within sourcing routine enactments.

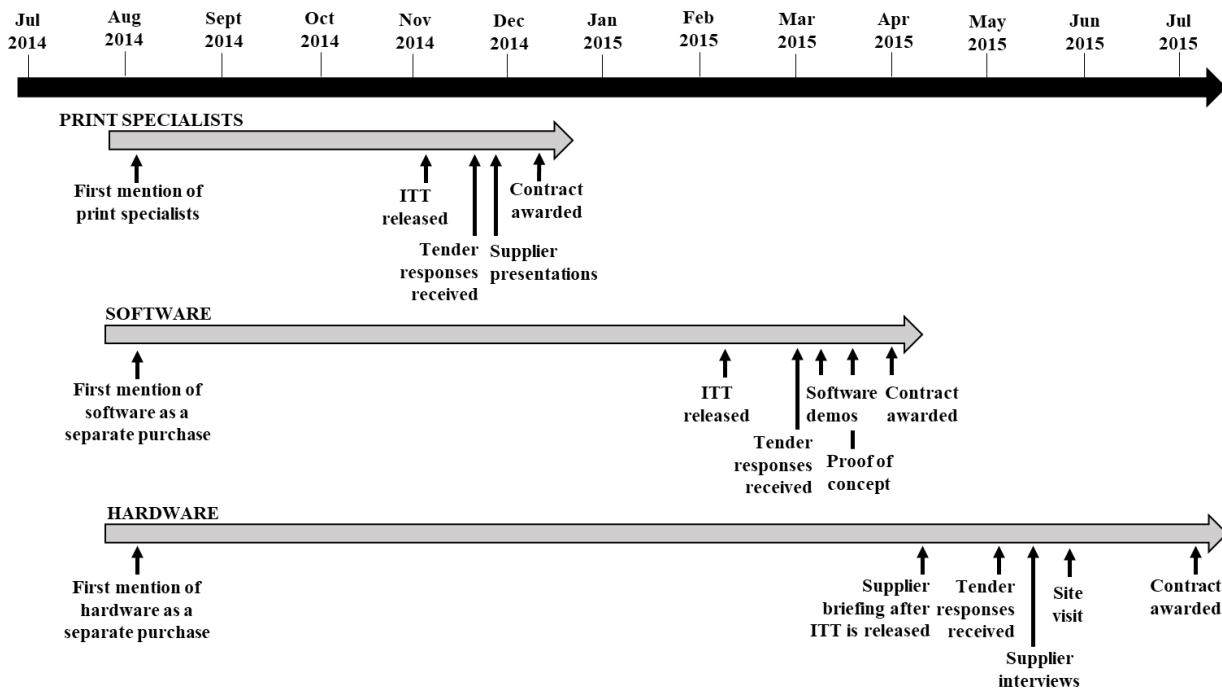


Figure 3.14 – Timeline showing the three sourcing routines from start to finish

Although the objective was to investigate routine flexibility, I did not have specific areas that I wanted to focus on. I started writing chronological narratives for each of the sourcing routines based on transcriptions from meetings and interviews, and also field notes. Exact quotes from the key participants were provided by the transcriptions, whereas field notes were used to obtain additional details such as the non-verbal conduct. Thus a more realistic account in the narratives were written with the use of these field notes as they helped to make sense of the participants’ quotes. The narratives detailed all activities carried out by the Committee, starting from the first mention of the particular service or product, up until the contract was signed by both PublicCo and the winning supplier. From the narratives, I then proceeded to make comparisons between the three sourcing routines identifying differences between them on how the routine was enacted. The outcome of my comparisons showed that there were many distinct differences between the routine performances as shown in *Table 3.5*. Upon further investigating these specific activities within each routine performance, I realised that before arriving at the final decision on how the routine was enacted, the Committee encountered several other options. Thus I decided to narrow my focus

to these different options within each routine, which formed the direction of the next phase of my analysis.

	Print specialists	Software	Hardware
Framework	Initially Public Procurement (PP) framework, decided not to use framework	Initially National Printer Agreement (NPA) framework, decided not to use framework	Combination of Delta Purchasing Consortium (DPC) and NPA frameworks
ITT preparation	Totally PublicCo	PublicCo prepare with some feedback from Consultant	Joint effort led by the Consultant
ITT approval		Board approve specifications	Goes through IT Director, then the board
Supplier presentation	No specific format, supplier present and questions asked as they go along	Demonstration style format, questions asked at the end	Brief general presentation by supplier, then questions asked
Tender scoring (who)	Project Manager, Procurement Head, Technical Head, Print room Head	Project Manager and Technical Head	Project Manager, Technical Head, IT Representative, Consultant, Procurement Head, Finance Head
Tender scoring (how)	Score individually, but scores not calibrated as no shortlist needed	Calibrate individual scores between the two to shortlist	More in-depth and lengthy discussion. Split between costing and quality scoring

Table 3.5 – Summary of differences in routine enactment

Phase 2: Axial coding. Since I initiated my analysis using the narrative strategy, I directly proceeded with the axial coding, based on specified dimensions, thus skipping the open coding process which Strauss and Corbin (1998) suggest is the first step of coding. Based on the findings from phase 1, I began by identifying themes that might describe how and why these options emerged. The initial themes included single words, such as: ambiguity, tacitness, power, objectives, and flexibility. Various quotes were labelled according to these themes and arranged in a tabular format in Microsoft Excel. However, I recognised that these themes did not offer specific insights, or rather, they were still too broad. Upon reanalysing the events surrounding the options that emerged, I realised that the options only arose during routine enactment, meaning they were not pre-determined. Therefore the options were the result of endogenous sources because they emerged from within the routine itself (Feldman and Pentland 2003). Based on this discovery, I identified excerpts that demonstrated either: (1) a trigger or source that led the Committee to finding alternative methods of carrying out the routine activities, or (2) how the individual options emerged, i.e. what activity was involved. A content analysis (Krippendorff 2004) was carried out

via the ‘search’ function in Microsoft Word for words such as *framework*, *ITT*, *print specialists*, *evaluate* etc. By searching through the transcriptions and narratives using these words, I was able to identify sections or quotes relating to how options emerged. The identified sections or excerpts were then transferred onto Microsoft Excel and given codes. Examples of the first round of codes are listed in *Table 3.6*.

Codes relating to triggers to why options emerged	Codes relating to how the options emerged
Aiming for a more preferable solution Dependence on third parties Looking for a balanced outcome Finding means to legitimise a document Finding means to meet the project’s requirements	Challenging because of rising concerns Questioning and countering ideas Making suggestions based on gathered information Making rationalised suggestions Anticipating based on past experiences Evaluating based on objectives Being practical about expectations

Table 3.6 – Examples of the first round of coding for the emergence of options

I repeated the content analysis exercise in the second iteration of coding to identify additional excerpts that relate to these codes. Additional excerpts were inserted into the earlier Excel file and codes were either renamed or added. A sample of the second round of first-order codes are listed in *Table 3.7*.

Triggers for the emergence of options	How the emergence of options occurred
Using previous encounters to set expectations, Expectations based on present situations, Relying on expertise and input from third parties, Obtaining assurance from others, Targeting potential suppliers to meet the working group’s requirements	Challenging ideas and solutions, Suggesting alternative solutions, Anticipating events and responses, Highlighting the obvious details relating to sourcing frameworks, The expected processes relating to the sourcing routine, Questioning the current option to achieve a preferable solution, Searching for an option to achieve a balanced outcome, Opting for a peer review to legitimise a document

Table 3.7 – Examples of the second round of coding for the emergence of options

Phase 3: Selective coding. From the initial round of coding analysis, I realised that the options emerged at the ostensive aspect first, before they were translated into actions by the routine actors. Furthermore, the emerged options were indirectly used as a means to recognise and legitimise the routine performances. So when the options were emerging, the routine actors were using these options to refer to, guide, and account for their actions during the routine enactment (Feldman and Pentland 2003). A data structure was developed based on the *Gioia method* (Langley and Abdallah 2011) consisting of first-order concepts, second-order constructs, and aggregate themes (Corley and Gioia 2004). I built the data structure by focusing on three questions:

- (1) How does the enactment of the routine itself trigger the need for options?
- (2) How do the options emerge ostensively?
- (3) How is the ostensive used to legitimise the performative aspect?

Similar to sub-case 1, building the data structure was an iterative process. An example is shown in *Figure 3.15*, where the second-order constructs (right-hand column) lift the first-order codes (left-hand column) conceptually (Suddaby 2006). The right-hand box is the code used to group these concepts in relation to the third question on how the ostensive is used to legitimise the performative aspect. In this case, the abstract category that develops the core dimensions to capture the key characteristics of the ostensive-to-performative relationship (Maitlis 2005, p.29) is the act of referring, guiding, and accounting. In other words, the first-order concepts such as ‘questioning the current option to achieve a preferable solution’, or ‘searching for an option to achieve a balanced outcome’ are mechanisms to legitimise the performative aspect through either referring, guiding, or accounting.

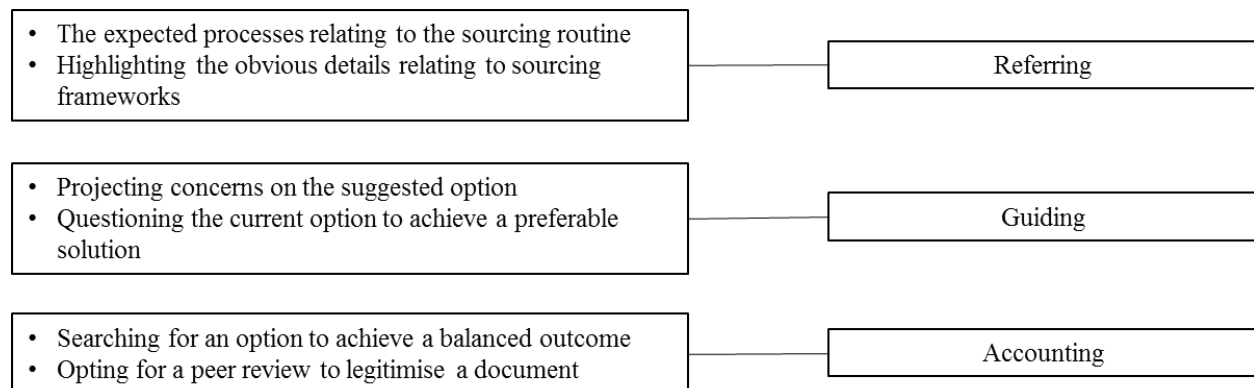


Figure 3.15 – Example of the second-order constructs lifting the first-order concepts to a conceptual level for the emergence of options

Iteration of this coding process continues until the second-order themes are refined and the theoretical constructs developed, and corresponds to the three questions earlier as illustrated in *Figure 3.16*. The three aggregate themes are:

- (1) Triggers of options that enable routine variation
- (2) Deliberative actions that lead to the emergence of options
- (3) Mechanisms for the ostensive to legitimise the performative aspect

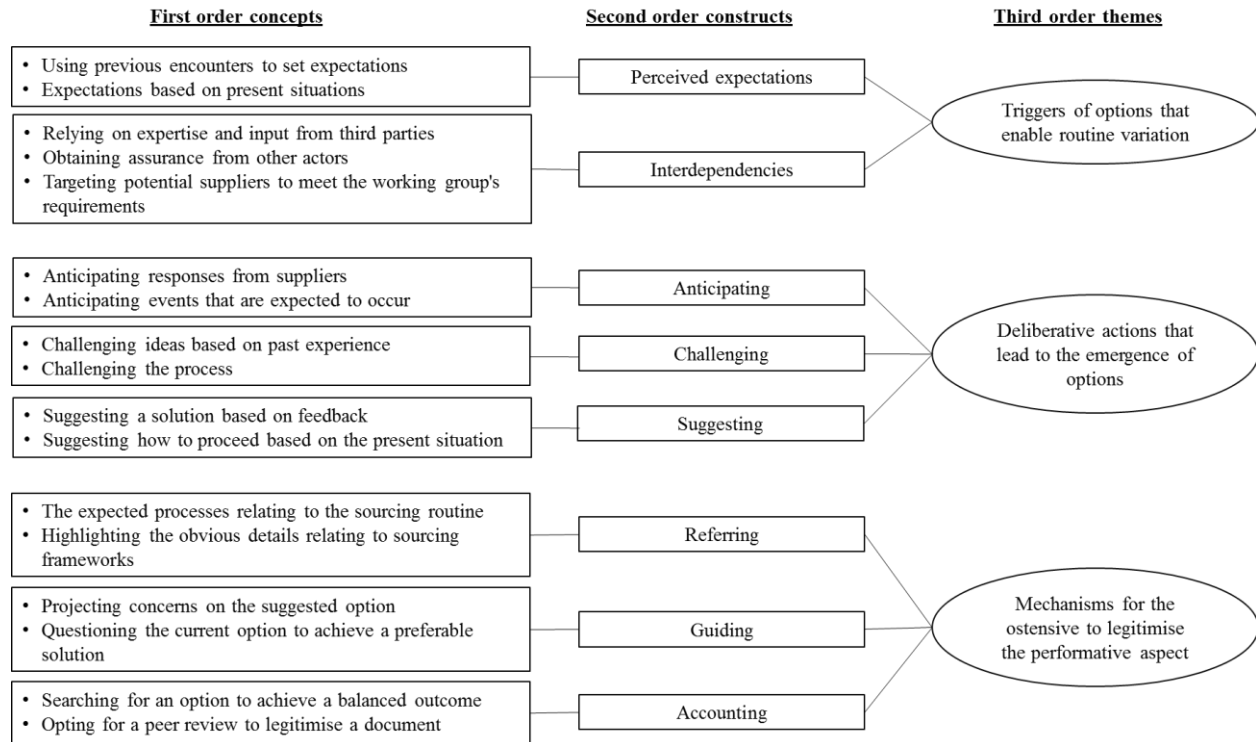


Figure 3.16 – The theoretical constructs derived from sub-case 2

3.5.4 Sub-case 3: Novel actions in routine performance

This third sub-case was discovered as I was conducting the coding for sub-case 2. I observed a recurring activity, or rather sequence of activities, relating to how the routine was performed to accomplish targeted outcomes, e.g. preferred suppliers. Thus I decided to investigate this occurrence. Because I already had the specified dimensions, the data analysis for this sub-case was conducted in only two phases: (1) axial coding, and (2) selective coding.

Phase 1: Axial coding. In this initial round of coding, I identified excerpts from transcriptions and field notes that specifically demonstrated that novel actions (Deken *et al.* 2016) achieve the targeted outcomes. Additionally, I discovered that the targeted outcomes mostly emerged during routine enactment, thus the source of the novel actions was endogenous to the routine. Based on these discoveries, I assigned codes that related to: (1) reasons why there were targeted outcomes, and (2) how novel actions were carried out to accomplish the outcomes. As with the previous two sub-cases, a content analysis was conducted using the same techniques,

through many iterations. Examples of the first and second rounds of codes are listed in *Table 3.8* and *Table 3.9*.

Codes relating to triggers for targeted outcomes	Codes relating to how the targeted outcomes were achieved
Understanding the impact of time Supplier’s incompetency Having insufficient information Improper allocation of time Prejudice towards certain products	Unconventional process Show of unfairness Demonstrating favouritism Engaging with third parties Strategizing activities to achieve something Demonstrating unfavourable treatment

Table 3.8 – Examples of the first round of coding for novel actions in routine performance

Codes relating to triggers for targeted outcomes	Codes relating to how the targeted outcomes were achieved
Acknowledging the impact of timing to the overall project, Lacking the features required for the new print service, Incompetency in terms of supplier service, Having insufficient information, which means decisions cannot be made, Questioning the allocation of time available for the activities, Different expectations on the temporal aspect of the project, Uncertainties that lead to prejudice towards certain products	Acknowledging the unconventional process of activities, Demonstrating unfairness in evaluation tasks, Demonstrating positive bias during interviews, Demonstrating negative bias during interviews, Pre-tender activities involving preferred products, Seeking external information to gain additional insights, Strategizing activities based on hidden motives, Contributing rhetorical thoughts to obtain buy-in

Table 3.9 – Examples of the second round of coding for novel actions in routine performance

Phase 2: Selective coding. From the initial round of coding analysis, I discovered that the novel actions performed by the routine actors were related to activities that appeared to be non-compliant with the sourcing routine, i.e. actions that did not align with the normal activities of the sourcing routine. These actions are referred to as decoupling activities (Fiss and Zajac 2006; Sandholtz 2012) as a solution to accomplishing the targeted outcomes that emerged due to multiple triggers. A data structure was built using the same techniques as per the previous two sub-cases, by focusing on two questions:

- (1) How are targeted outcomes established?
- (2) How do decoupling activities assist in accomplishing targeted outcomes?

A snippet of the final data structure is shown in *Figure 3.17*, where codes in the left-hand box are descriptions of first-order concepts that relate directly to the data. In the right-hand box is the code used to group these concepts in relation to the second question on how decoupling activities help accomplish the intended outcomes. In this case, the abstract category (second-order

construct) that develops the core dimensions (first-order themes) to capture the key characteristics of novel actions (Maitlis 2005, p.29) is the decoupling activities that are not part of the formal sourcing routine, i.e. disengaged decoupling. Thus, these activities are labelled as disengaged decoupling. In other words, the first-order concepts such as ‘seeking external information to gain additional insights’, or ‘strategizing activities based on hidden motives’, are novel actions in the form of disengaged decoupling activities.

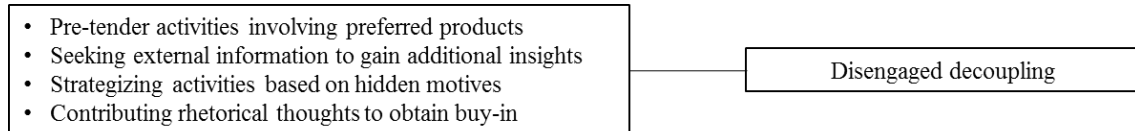


Figure 3.17 – Example of the second-order construct lifting the first-order concepts to a conceptual level for novel actions in routine performance

The complete data structure is illustrated in Figure 3.18 where the two aggregate themes are:

- (1) Endogenous sources for establishing targeted outcomes ostensibly
- (2) Novel actions via decoupling to accomplish targeted outcomes in routine performance

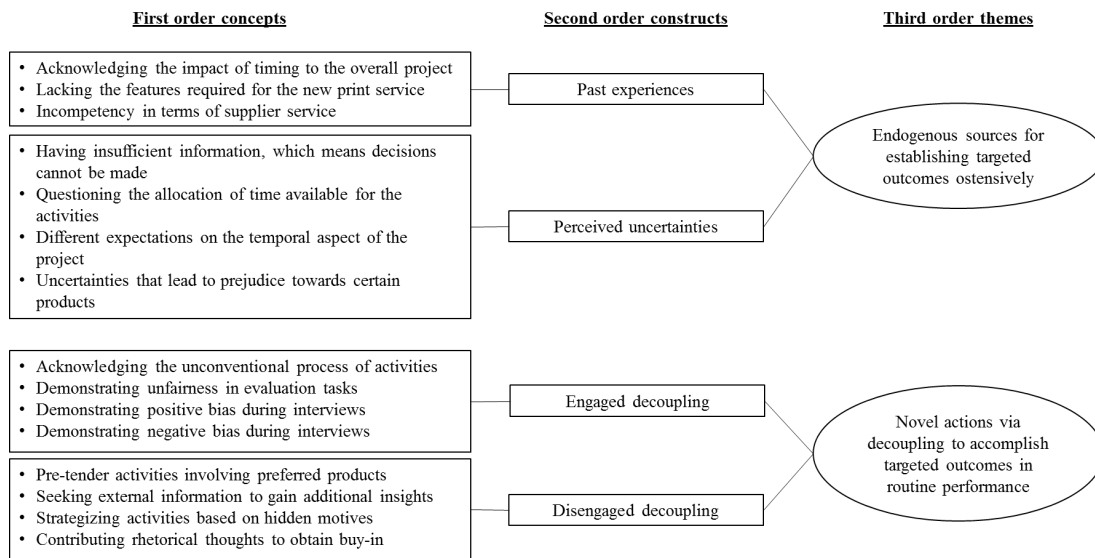
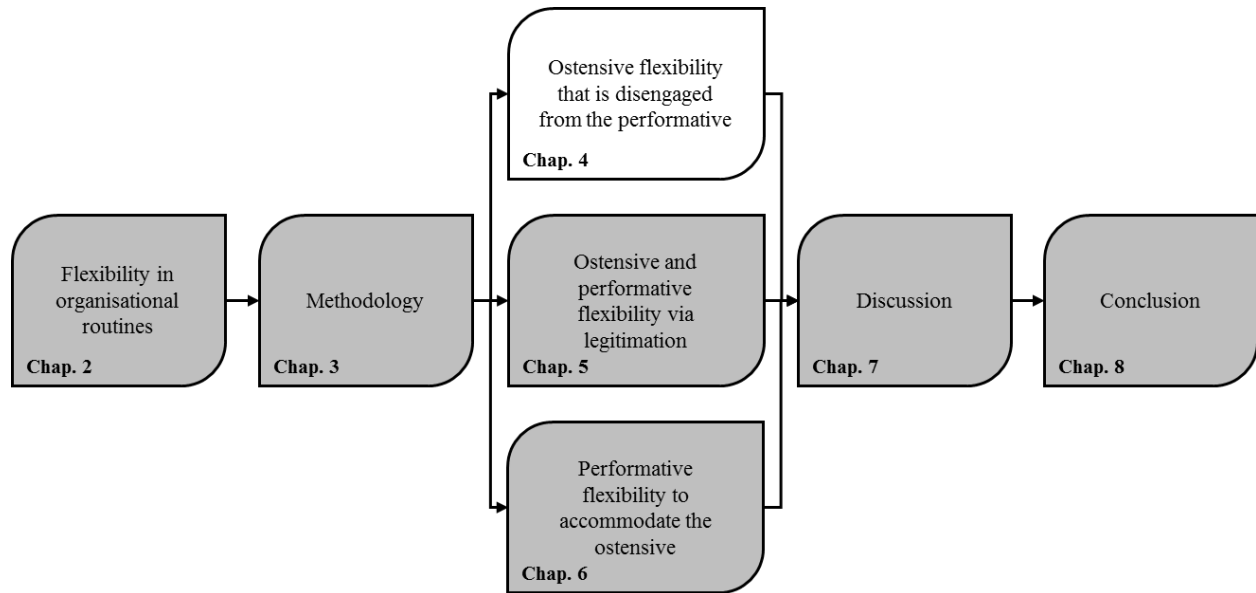


Figure 3.18 – The theoretical constructs derived from sub-case 3

3.6 Summary

This study was based on two key ontological assumptions: (1) that social life is an ongoing production that emerges through the recurrent actions of people, i.e. through practice, and (2) that the dynamic constitution of dualities plays a vital role in the understanding of routines through the ostensive and performative aspects. Based on these ontologies, the epistemological approach taken to construct theory relating to routine flexibility was through abduction, where theory and data were reviewed iteratively. Data collected through observation was the main data source, supported by formal interviews, informal discussions and artefacts. This data was then analysed through a combination of narratives and grounded theory. The narratives helped to identify which sub-cases to focus on, and thus provided the specified dimension for conducting the coding exercise for grounded analysis. By the end of the analyses, three sets of theoretical constructs were established, each corresponding to the three different sub-cases. The detailed narratives and findings from the three sub-cases are presented in the following chapters, starting with sub-case 1. The following chapter offers a descriptive narrative, followed by a discussion on the theoretical constructs and how the findings relate to routine flexibility.

CHAPTER 4 : OSTENSIVE FLEXIBILITY THAT IS DISENGAGED FROM THE PERFORMATIVE



4.1 Introduction and overview

This chapter lays out the findings through narratives and a brief discussion on how routine change emerged during the early stages of the Print Project known as the interim arrangement.

The routine in focus in this chapter is the *request* routine, which is a process for requesting a new print device whether for personal or departmental use. *Figure 4.1* shows the existing routine for requesting new print devices. Over the course of several weeks during the initial stages of the Print Project, the existing routine was challenged and thus a new, adapted routine emerged that suited the project's objectives.

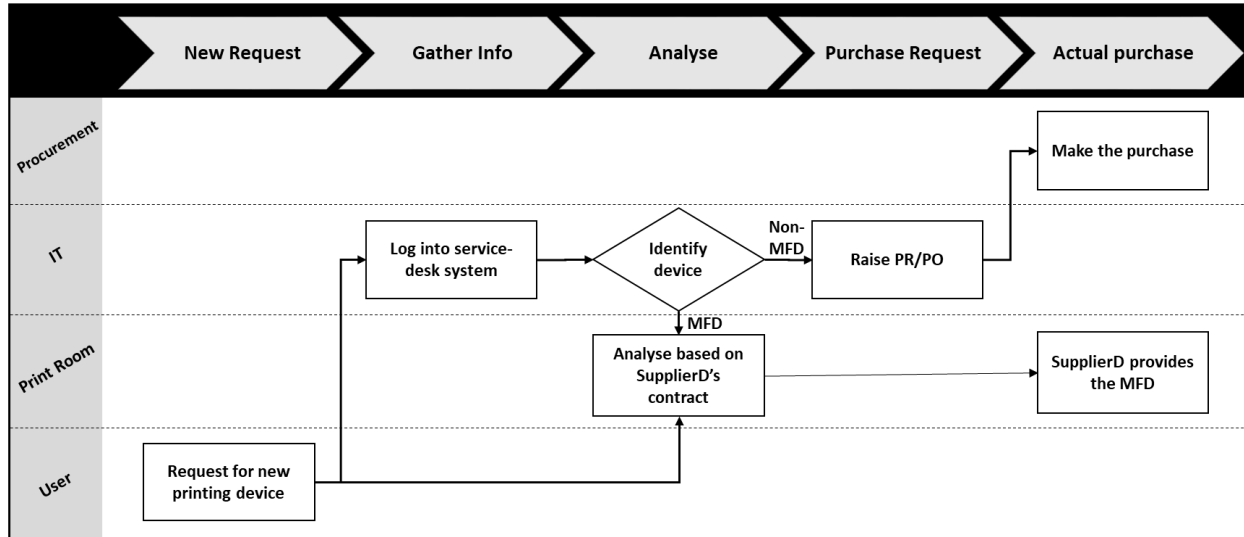


Figure 4.1 – Existing request routine

4.2 Ambiguities and uncertainties

When the Print Project commenced, there was no intention or plan to explicitly change this routine. However, by the first board meeting (Board meeting 0), there was already a realisation that a change in this routine would be needed. The subject of an ‘interim arrangement’ was brought up by the Project Manager in his opening comments. He asked whether the contract for SupplierD, the main supplier for MFDs, should be terminated or extended until the new print service began, or alternately, whether a temporary arrangement should be implemented. As MFDs form a huge part of PublicCo’s printing service, this prompted a continued discussion in subsequent meetings. Besides contract expiry, the issues of new buildings requiring printing devices, and new print device requests also added to the discussions. As the Print Project progressed, there were two causes that repeatedly emerged which led to a change in the routine at the ostensive aspect: perceived uncertainties, and boundary ambiguities. Both of these causes are discussed in the following section.

4.2.1 Resolving perceived uncertainties

The Print Project brought in representatives from various departments and divisions within the organisation. This meant that they had to leave their daily roles temporarily to attend project meetings. As part of the Committee, the members are expected to work as a team to make the Print Project a success, which involved making various decisions specifically for the benefit of the project. But when a group of people are gathered together for the first time, they start off by possessing dissimilar perceptions on issues, facts, and objectives, known as perceived uncertainties.¹² Thus part of the Committee's task, was to resolve these different perceived uncertainties.

Suggesting alternative scenarios. One of the actions that were repeated throughout the project was evaluating conditions in terms of the practicality of their impact. This would not have been possible if the Committee members all had fixed roles with fixed, straightforward objectives. The fact that they were in a temporary setting that allowed them to explore freely, meant that they could look at many different options, roles, and possible scenarios. In the early stages when they were unsure of how to manage SupplierD's contract expiring, the Project Manager suggested various options:

“So then there's the [SupplierD] contract so I guess it's actually a question as to whether we extend that maybe for the period that's been talked about or rather we put an end to that contract and then go to the third point, which is to implement temporary arrangements to meet the immediate amount of printing.”

(Project Manager – Board meeting 0)

Then there were others, playing the devil's advocate, who preferred to test alternative scenarios by looking into an option or situation an individual would not normally consider, or that was not the norm. In a discussion about which devices would eventually be replaced, the Technical Head said:

“Well it depends... let's say we chuck away the old fleet and buy a big chunk of new MFD's, so why are we interested in leasing?”

(Technical Head – WC meeting 5)

¹² Perceived uncertainties refer to the inability of the routine actors to predict something accurately (Milliken 1987) due to external factors, as well as factors internal to the routine (Dionysiou and Tsoukas 2013)

The question was quite straightforward, but by raising this in the discussion, it opened up, or rather reminded everyone else about the objectives of the Print Project. This question was responded to by the Procurement Head who explained that buying the entire print fleet required for the new service would just be too expensive. The flow of the conversation then continued until it was obvious and well understood that minimising any new purchases during the interim phase was necessary.

Identify possible limitations. Committee members often used their expertise from their respective fields to drive decisions. As the head of procurement, one member identified the limitations and possible problems that would arise if they chose to use other suppliers during the interim phase. This may be the reason why she tried to ‘push’ for a contract extension with SupplierD so that all new MFD requests would have to be supplied by them.

“The more [non-SupplierD] network printers we bring in, the more complex [it is] because we’ve got all different end dates...[SupplierD] for my simple brain [it] is easy to get around with [if] they’ve got an end date, it’s the 28th of February [2016] and they come and take all their machines away...whereas if someone buys a [HardwareH] or leases a [HardwareH] now, that might end in 4 years’ time”

(Procurement Head – WC meeting 4)

However, another Committee member pointed out a slight limitation if they chose to extend SupplierD’s contract due to issues with SoftwareS licenses which are also supplied by SupplierD.

“And it is ‘muddier’ even further in that the [SupplierD] contract that you have, are you allowed to extend that [with the existing SoftwareS devices]? ...at the moment you can’t”

(Technical Head – WC meeting 5)

In an earlier meeting, the Technical Head had raised another limitation based on his experience of working with the supplier.

“It was such a painful experience that basically we said we’re not going to roll out any further because the management of the accounts and everything...it’s all a manual process and we were getting blamed for it...so we said no, we’re not going to do any more of that. However, we put it in [DepartmentM] and they were ripped back out from the [DepartmentM], it was that bad...it was bad largely due to a lack of communication”

(Technical Head – WC meeting 4)

However, although these limitations (i.e. SoftwareS license issues, and bad service) were noted, they were considered relatively minor compared to managing different supplier accounts with different end dates, if the Committee chose to move away from SupplierD.

Inviting further clarification. One of the signs that a group of people is striving to resolve any uncertainties, is to invite further discussion to develop more clarification on certain issues. For instance, when discussing how to manage print services in new buildings that are completed during the project period, the Procurement Head suggested that the Board and Committee take a thorough look at this due to its significant implications.

“The basic thinking is we put in all these new shiny machines and through time, people will let them ‘wither on the vine’ ...I think it’s worth a bit of a debate because we’re not looking at it from a cost saving point of view...we’re talking about this, which will take years and years”

(Procurement Head – Board meeting 1)

In other words, instead of letting these new buildings have their own devices and wait until they ‘wither away’ and then install the new print management system, the Procurement Head believed that they should manage it otherwise. In another example, the Project Manager insisted that they go into detail on the process that was to be implemented during the interim phase so that both the Committee and Board members were clear.

“Between now and then, I want to make sure that: a) the project board are clear, but more importantly actually that when someone comes up from the department and says, ‘I need a new printer’. You say, ‘Ah, you’re wanting an MFD, you go and buy one from [SupplierD] ...ah, you’ll be wanting a printer, you go through this framework agreement...ah, you want a new desktop printer, you can’t have one’. So what we’ve got to do is try to visit all the scenarios and what people will need to do”

(Project Manager – WC meeting 5)

By inviting further clarification on the uncertainties, project members are able to have a clearer understanding which then helps them in finding a solution that address these uncertainties.

Acknowledge possible user resistance and lack of interest. Part of managing perceived uncertainties was to also predict, and acknowledge the type of response the project team would receive from end users. Without addressing user perceptions on the project, it would be difficult to carry out the interim arrangement in order to transform it into the new print service. During a discussion on whether it would be necessary to go full out on communicating about this interim

arrangement, both the Communications Representative and Technical Head were in agreement that most of PublicCo's staff would probably not pay much attention to any form of communication in this early stage of the project.

"The wider [staff population] generally aren't interested until later on in the project"

(Communications Rep – WC meeting 5)

"Well [the staff] probably won't care, to be fair that is more like an Easter job saying 'there is a new system coming next year for those of you that are continuing'"

(Technical Head – WC meeting 5)

The potential lack of interest from users meant that the Communications Representative could concentrate more on planning for the actual new service roll out, rather than the interim phase. Another form of user response was through resistance. This was addressed by the Project Manager with regards to what users really want:

"Because I think...there is kind of a sense...do they really want...it's about shiny new buildings and do they want, you know [new machines to go with it]"

(Project Manager – WC meeting 5)

According to the Project Manager, owners of the new buildings (e.g. Division heads) may want new print devices right away to go with the new buildings. Thus, there was a concern about how the Committee would manage this issue. Other possible resistance related to the use of personal printers. Part of the objective of the Print Project was to eventually phase out the use of these personal printers so that all staff would make use of the new shared print service. Starting from the interim phase, there would be no approvals for requests to buy personal printers.

"It's going to be a tricky area because if we were a private company, we could just switch everyone over to the new service, load lorries with all the personal printers and that's done...but I don't think that would work very well here, it's just come up with resistance so we kind of have to work this interim solution"

(Procurement Head – Board meeting 1)

What was meant by the Procurement Head was that the staff at PublicCo are quite sensitive towards the ownership of personal printers, thus the Committee would have to manage this issue effectively. According to the Print room Head, it involves managing the expectations of the staff.

“I think that goes both positively and negatively...sometimes, people’s expectations are, ‘you’re going to take my desktop [personal] printers away and I’m going to have to walk a mile to the nearest thing [printer]’. But it’s not like that”

(Print room Head – WC meeting 5)

4.2.2 Resolving boundary ambiguities

The Print Project was first initiated based on a combination of many factors. However, although it had long been in the organisation’s agenda when the project was finally officially initiated, its scope was still an ambiguous issue. One of the first activities carried out by the Project Manager was to prepare a ‘Project initiation document’, which included listing out the project scope. Besides the project scope, there were many other boundary ambiguities present during the Print Project. Boundary ambiguity differs from perceived uncertainties because the former is more tangible compared to the latter. Although the boundaries discussed here are not explicitly tangible that they can be physically touched, they can be objectively quantified and managed. The boundary ambiguities in this case were not only related to the project scope, but also the micro-details of it, such as print device related constraints, time, and cost. So a significant part of Committee’s role was to resolve these boundary ambiguities.

Functional constraints. Different print devices have different, multiple functions. For instance, because of the SoftwareS license issues with SupplierD, the initial assumption was that any new device from their contract extension would not include MFDs because they run on SoftwareS. So if a request had to be raised for a new MFD, they would face a problem. However, according to the Technical Head, he could probably manage this temporary limitation.

“In other words you can’t accept anything MFDs wise with [SupplierD] anyway...we can only do photocopiers in that arena...and I can kind of make them work a little bit better. So we can have printers and copiers but we can’t have any of the advanced features”

(Technical Head – WC meeting 5)

Nonetheless, further into the project, the SoftwareS licence issue was resolved, and thus the contract extension with SupplierD included MFDs. In another example, the Procurement Head raised a point that if new print devices were bought in during the interim phase, they would need to integrate these devices to the new print service. So this also had to be taken into consideration.

“So we’re going to have a significant portion of the fleet that’s bought outright, which then has to be integrated with the future process at some point”

(Procurement Head – WC meeting 5)

Infrastructure constraints. When it came to print devices, it was not just their function that needed to be considered, but also the infrastructure of where these devices would be placed. During a discussion about certain buildings, the Technical Head raised a point that not all buildings were equipped with network points, which meant that print devices were managed individually.

Technical Head: Let us put it this way, if there is [building GF] and their staff printer goes ‘bang’ and there is no other option available to them but to replace that printer [what would they do]?

Procurement Head: They should go to [SupplierD]

Technical Head: Well, do they? Because there’s no network points there [in that particular building]”

(WC meeting 5)

The Technical Head’s point suggested one of the possible instances where a new print device would have to be given if a request came up for that particular building and other buildings with similar infrastructure.

Setting cost and time boundaries. When it came to deciding whether to extend with SupplierD or not during the interim phase, the Procurement Head on several occasions reminded the Committee that they had an advantage in a sense that there was a confirmed end-date to their contract.

“That’s why I thought I want to keep as much as possible with the [SupplierD] contract because I know there’s a finite end to that”

(Procurement Head – WC meeting 5)

In an earlier board meeting, the Procurement Head also made a point about the implications of letting new buildings buy their own print devices, which in this case related to cost. So, by standing firm that new buildings should not purchase print devices during the interim phase, PublicCo could save on print related costs that would span over a considerable number of years.

“In [DepartmentE] they had discussed going out and buying it right with new [HardwareH] printers...potentially leasing them I think..., which is very, very expensive and they would set aside the service for the next 10 years or until those printers fail down”

(Procurement Head – Board meeting 1)

Both perceived uncertainties and boundary ambiguities led the Committee members to change the existing request routine. By resolving these uncertainties and ambiguities, the Committee was able to determine that a change in the routine was necessary for the benefit of the Print Project.

4.2.3 Summary of dealing with ambiguities among routine actors

The Committee members had never worked together prior to this Print Project. So they brought to the project various experiences and perceptions on what the project was about. The temporariness of the project setting gave rise to perceived uncertainties as well as ambiguous boundaries. The actions taken to resolve these uncertainties and ambiguities were what prompted the change in the request routine. For example, to resolve uncertainties regarding how to manage request for printers in new buildings, the Procurement Head thought that it was worth debating, thus invited more discussion. In another example, in resolving boundary ambiguities, the Technical Head pointed out that certain buildings did not have the proper infrastructure for networked printers, thus any new request for print devices for those buildings would not go through SupplierD. *Table 4.1* provides a summary of how the Committee members acted in resolving perceived uncertainties and boundary ambiguities that arose due to the temporary project setting.

Dealing with ambiguities among routine actors	Evidence
Resolving perceived uncertainties	<p>Suggesting alternative scenarios <i>“Well it depends... let’s say we chuck away the old fleet and buy a big chunk of new MFD’s, so why are we interested in leasing?”</i></p> <p>Identify possible limitations <i>“And it is ‘muddier’ even further in that the [SupplierD] contract that you have, are you allowed to extend that [with the existing SoftwareS devices]? ...at the moment you can’t”</i></p> <p>Invite further discussion <i>“I think it’s worth a bit of a debate because we’re not looking at it from a cost saving point of view...we’re talking about this, which will take years and years”</i></p> <p>Acknowledge possible user resistance <i>“I think that goes both positively and negatively...sometimes, people’s expectations are, ‘you’re going to take my desktop [personal] printers away and I’m going to have to walk a mile to the nearest thing [printer]’. But it’s not like that”</i></p>
Resolving boundary ambiguities	<p>Functional constraints <i>“So we’re going to have a significant portion of the fleet that’s bought outright, which then has to be integrated with the future process at some point”</i></p> <p>Infrastructure constraints <i>Procurement Head: They should go to [SupplierD]</i> <i>Technical Head: Well, do they? Because there’s no network points there [in that particular building]”</i></p> <p>Time and cost boundaries <i>“That’s why I thought I want to keep as much as possible with the [SupplierD] contract because I know there’s a finite end to that”</i></p>

Table 4.1 – Summary of the sources for routine change

4.3 The emergence of ostensive routine change

As mentioned earlier, routine change in this case was not initially planned, but rather emerged over time. On top of that, the change happened only at the ostensive aspect. Throughout the duration of discussions and meetings that took place relating to the ostensive routine change (referred to as the *interim arrangement*), the performance of the request routine was still based on the existing ostensive of the routine. There were three features of the routine that were repeatedly focused on that led to the ostensive change: routine definition, scoping, and enactment.

4.3.1 Routine definition

Coordination between departments. One of the main parts of a routine was to define its process in detail. This included coordination between the various departments involved in the request routine. Even if they had already established what to do during the interim phase, the matter of who did what also needed to be explored as brought up by the Procurement Head:

“What I’m coming at is [you know] when people come with a request for new printers and how does that help the procurement work with [IT department], work with [print room] and all the rest of it...so I think the action is for us to take the service design piece to see how that all operates”

(Procurement Head – WC meeting 5)

Later in the same meeting, the Procurement Head again clarified that new print orders should only be entertained if they were endorsed by the Technical Head. This indirectly raised awareness on the responsibilities of each routine actor so that the new routine could be coordinated effectively.

“...that they should only be processing printer orders that come from [the IT department] and then you’ve given advice to someone and they’ve raised the order...and they did speak to you [Technical head] and you’re OK with their order”

(Procurement Head – WC meeting 5)

In terms of how to make this process clearer, the Committee members had a few ideas. According to the Project Manager, users who make a request for a new print device would just need to check with the Technical Head on whether he had reviewed the request. But the Procurement Head suggested users needed to be informed that they would have to indicate they had spoken to, and agreed on it with the Technical Head, otherwise their order would not be processed; and that requests could only be made through the service desk, not by email.

Going down into the details, one of the strategies to minimise any new print device purchases was to either delay the request, or try to fix the current device that the user had. The Technical Head proposed this approach which was collectively agreed and thus aligned the expectations of all those involved in the request routine.

“We are looking to not doing anything on them because they’re going to replace them eventually...we’re just doing ‘break, fix and defer’...I absolutely agree with you this is not about territory line or anything like that, we just want to minimise the expenses...and that is certainly my take on this”

(Technical Head – WC meeting 6)

Exceptional cases. As the interim arrangement did not really state that all purchasing of new print devices would be put on hold, this means that there would be exceptional cases where a purchase is approved by the Technical Head. Such cases may include departments that handle sensitive and confidential information where the use of a personal desktop is recommended, as highlighted below:

“There will be occasions when individual personal printers will be appropriate. So it doesn’t say ‘there will be no personal printers’, it will just say ‘you’re not going out and buying your own under normal circumstances. You’ll have to turn around and go ‘actually in HR, this is confidential and we need one on our desk’ ...and that could be the future way”

(Commercial Head – Board meeting 1)

This acknowledgement of exceptional cases was also repeated in subsequent meetings. According to the Technical Head, purchase of new print devices during the interim phase should only occur if there is a valid reason, such as not having any network points, or if a quick solution was needed to cater for a special event.

“For me, there’ll be some cases where we actually want to tell people just to go buy a stand-alone printer for a year, and it would be the cheapest option [...]. If it’s not on the network, then it’s better for them to just go and buy a stand-alone [printer]”

(Procurement Head – WC meeting 5)

“And if we’re going to be [buying] big stuff there’s got to be a [really] good reason for it”

(Technical Head – WC meeting 6)

In summary, the routine definition includes firming the coordination between various routine actors and departments, and acknowledging where exceptions would be provided for certain cases.

4.3.2 Routine scoping

Device types. One of the critical scoping issues for the Print Project relates to the range of printer fleet they currently had. If the Committee members had ambiguities with regards to the different kinds of print devices, then how would they find a solution that covered all situations? There were many instances where a Committee member would recap the different print devices they had, such as:

“There is a number of components on this, there’s obviously the [SupplierD] side, there’s obviously the [contract staff] printers that we look after...there might be some things that we might have to purchase to support that in the future...there’s the desktop printers that people have...there’s the staff network printers that we installed”

(Project Manager – WC meeting 4)

In a later meeting, the Project Manager again highlighted the multiplicity of the print devices that the project team needed to bear in mind.

“What we’ve got at the moment, we got the [staff] printers that is managed by [the IT department], so some of those might be new ones, or some might be breaking and some might need replacing...there’s obviously the [SupplierD] ones but we’ve got the ones that the departments buy for themselves that were installed by us [the IT department]”

(Project Manager – WC meeting 5)

The most apparent ambiguity however lay in the issue of personal printers. That is, whether they should be included in the project scope (and also the interim arrangement) or not. While there were some that suggested keeping personal printers out of the scope, the Procurement Head was quite adamant that they be included.

“I would say ‘all printing’, I wouldn’t say ‘all shared printing’...I think all printing needs to go through the managed print service...now for a while the managed print service may include personal printers that people have, but through time we want to have everything in scope so that we’ve moving people off the personal printers”

(Procurement Head – Board meeting 1)

This statement was later supported by other Board members and subsequently included in the project scope.

Device definition. Besides deciding on whether to include personal printers or not, it was also important that the project team defined the term ‘personal printer’ appropriately to avoid confusion in the future.

“I think for small, personal printers we should be defining what they are...because you can buy one that’s really cheap but the running costs are really high...we should set a standard definition”

(IT Director – Board meeting 1)

For the Procurement Head on the other hand, because she was new to the organisation, her definition of printers in general, carried a very wide scope, and thus needed to be narrowed down.

“In my head, the range of printers that we have, it goes from little, tiny desktop printers, which may be appropriate for maybe because of accessibility reasons...up to big, chunky, giant printers”

(Procurement Head – Board meeting 1)

Apart from agreeing on a definition for specific physical devices, there was also a question of how one determines what print device to offer based on a user request. For example, if the request for a print device led to an MFD being the best option, it would be directed to the Print room Head to determine what can be arranged based on the SupplierD contract. However, when questioned by the Procurement Head about how the Technical Head would determine whether it’s an MFD or not, he had the following to comment:

Procurement Head: And at what point do you decide if it should be an MFD and therefore it should go to [SupplierD]

Technical Head: Generally speaking MFDs are largely already out there, so we don’t get that many requests [for them]. The only ones that that did buy [a] MFD bought it in a separate project using cash

(WC meeting 5)

In other words, at that particular moment, because the Technical Head believed that there would not be many requests for MFDs during the interim period, there was no need to probe further on this issue.

4.3.3 Routine enactment

Once the definition and scope of the routine was defined, the details of how to practically enact it also required some discussion.

New buildings. On the issue of maintaining the contract with SupplierD for new MFD requests, the Commercial Head clearly made it known to others that he expected this to be the way forward during the interim phase. On discussing whether to buy or lease from other suppliers besides SupplierD, he responded with the following:

“Not that I have an interest from [SupplierD’s] point of view but it just seems crazy when we’re talking about that exactly...that’s not where we’re trying to go”

(Commercial Head – Board meeting 1)

This idea echoed the Procurement Head’s vision to only use SupplierD as the supplier for large print devices during the interim phase. One of the concerns however was for new buildings completed during this phase as they would require a large number of devices.

“If we could encourage the new buildings that come in on-line that want new MFDs to go through the [SupplierD] arrangements and not set up separate contracts with [SupplierH], then it will make it a lot easier to unravel”

(Procurement Head – Board meeting 1)

What users needed to understand was that new buildings were also included in the project scope and would eventually receive new print devices once the new service started. So what they had to accept was that whatever devices they receive would only be temporary and that they would operate just as well as new devices as mentioned by the Print room Head:

“And we don’t need ‘bells and whistles’ and they are working perfectly well ...we’re not giving any junk... and ironically the two coloured devices destined for there, [were] for [BuildingIF]...so they are actually getting new machines”

(Print room Head – WC meeting 5)

New MFDs. All devices from SupplierD including MFDs, run on SoftwareS to manage the printing. Apparently, due to past experience where the management of this software in terms of licenses and charges were poor, there had been an organisation-wide ban on installing any more of it on print devices. However, if they chose to extend with SupplierD, the Technical Head suggested that he would be able to provide some flexibility to this:

“So what are we going to add them to the [SoftwareS] system...there’s [an organisation-wide] ban on expanding it but I’m prepared to be flexible on the basis...”

(Technical Head – WC meeting 4)

His willingness to offer some flexibility shows a less rigid thinking to resolving an issue in the best interest of the project. Additionally, the Procurement Head also raised the issue of avoiding multiple leases by using only SupplierD for new MFDs.

“But when we come on to the interim procurement arrangement we could probably discuss this further...my view is that for MFDs from between now and when we have a new contract [for the final print solution], which [should come] from SupplierD, because to do anything else i.e. leases from different companies...it will complicate things”

(Procurement Head – WC meeting 5)

The discussions that took place ensured that every aspect of the routine was accounted for in determining the new request routine as the interim arrangement. This includes how to manage new buildings, and how to respond to new MFD requests.

4.3.4 Summary of the emergence of ostensive routine change

The process of how the routine change occurred emerged over several weeks of meetings and discussions. Committee members repeatedly focused on three main features. The first feature was the routine’s definition relating to who was involved, their interdependence, and how actors carry out their tasks. For instance, it was agreed that all print device requests should go through the IT help desk and be endorsed by the Technical Head before being forwarded to the Procurement team, although it was expected that most requests would not reach the Procurement stage. The second feature was the scope of the routine, which included defining all the various types of print devices so that everybody involved would have a common understanding of what a personal printer is, for example. The last feature, was the routine enactment which relates to identifying how the routine would be enacted for different scenarios, such as new buildings and requests for specific devices. *Table 4.2* provides a summary of how the ostensive change emerged by focusing on the three features.

Emergence of an ostensive routine change	Evidence
Routine definitive	<p>Coordination <i>“They should only be processing printer orders that come from [the IT department] and then you’ve given advice to someone and they’ve raised the order...and they did speak to you [Technical Head] and you’re OK with their order”</i></p> <p>Exceptional cases <i>“There will be occasions when individual personal printers will be appropriate. So it doesn’t say ‘there will be no personal printers’, it will just say ‘you’re not going out and buying your own under normal circumstances. You’ll have to turn around and go ‘actually the HR, this is confidential and we need one on our desk’ ...and that could be the future way”</i></p>
Routine scoping	<p>Device types <i>“There is a number of components on this, there’s obviously the [SupplierD] side, there’s obviously the [contract staff] printers that we look after...there might be some things that we might have to purchase to support that in the future...there’s the desktop printers that people have...there’s the staff network printers that we installed”</i></p> <p>Device definition <i>“I think for small, personal printers we should be defining what they are...because you can buy one that’s really cheap but the running costs are really high...we should set a standard definition”</i></p>
Routine enactment	<p>New buildings <i>“If we could encourage the new buildings that come in on-line that want new MFDs to go through the [SupplierD] arrangements and not set up separate contracts with [SupplierH], then it will make it a lot easier to unravel”</i></p> <p>New MFDs <i>“But when we come on to the interim procurement arrangement we could probably discuss this further ...my view is that for MFDs from between now and when we have a new contract [for the final print solution], which [should come] from SupplierD, because to do anything else i.e. leases from different companies...it will complicate things”</i></p>

Table 4.2 – Summary of how the ostensive change emerged

4.4 Enforcement of the new routine

After many weeks of meetings and discussions, it slowly emerged that a change to the request routine (*Figure 4.1*) would be necessary and a new ostensive of the routine was developed, which is represented as *Figure 4.2*. This was clarified with project members through discussions. Its main objective was to make it more difficult for users to purchase new print devices. In other words, they would have to really justify their request for a new purchase.

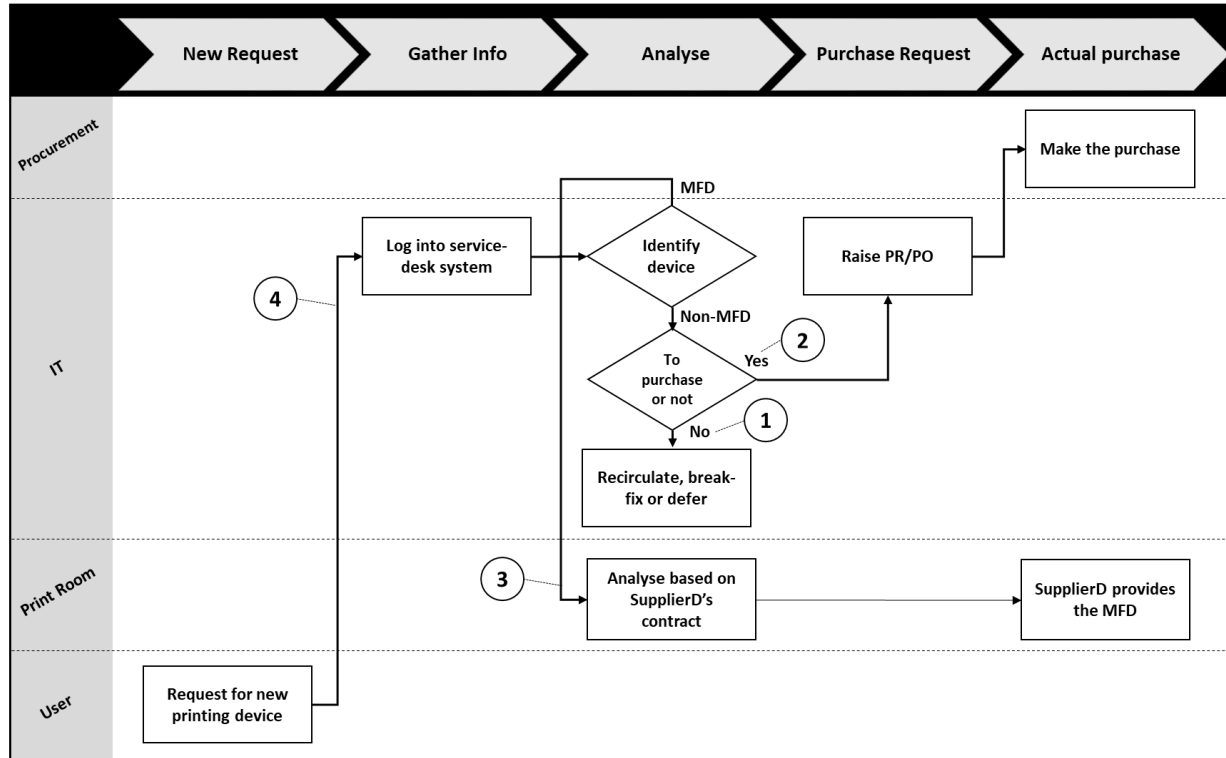


Figure 4.2 – Revised request routine

The numbered sections were parts of the routine that were adjusted from the original request routine (i.e. *figure 4.1*) in order to align with the Print Project’s objectives. The following are some excerpts from these conversations that relate to the different numbers:

1. During a discussion about the roles of each department for the request routine, the Technical Head made it clear that they should all work together to minimise new purchases without worrying about territorial lines: *“We are looking to not doing anything on them because they’re going to replace them eventually...we’re just doing ‘break, fix and defer’ ...I absolutely agree with you this is not about territory line or anything like that, we just want to minimise the expenses...and that is certainly my take on this”*. Thus they should all have the same expectation of fixing available devices and deferring new requests.
2. When discussing about possible requests for new print devices, the Commercial Head stated that, *“There will be occasions when individual personal printers will be appropriate...You’ll have to turn around and go ‘actually in HR, this is confidential and we need one on our desk’ ...and that could be the future way”* which meant that he

- expects requestors may insist on getting personal printers. So even though the aim is to reduce any new purchases, they still had to keep the option open to buy new print devices open.
3. At some point, the Procurement Head questioned the Technical Head about MFD's, *“And at what point do you decide if it should be an MFD and therefore it should go to [SupplierD]?”* to which the Technical Head replied, *“Generally speaking MFDs are largely already out there, so we don't get that many requests [for them]. The only ones that that did buy [a] MFD bought it in a separate project using cash”*. From this conversation, although according to the Technical Head there would not be many requests for new MFD's, the Procurement Head expects that there will be some requests and that they should be clear on how they determine that particular device type request.
 4. When the Procurement Head recapped the responsibilities of different parties in the new routine, she stated that *“they should only be processing printer orders that come from [the IT department] and then you've given advice to someone and they've raised the order...and they did speak to you [Technical head] and you're OK with their order”*. Therefore she is reiterating the expectation that all new requests for print devices have to be reviewed by IT and the Technical Head.

4.4.1 Legitimising the routine

Back-up document. As the routine change emerged ostensibly, it was only fitting that it would be embedded in the form of an artefact, which in this case is referred to as the interim policy (see *Figure 4.3*). Having the policy legitimised the routine change and provided clarity to the new process, thus reducing any resistance from users, as brought up by two of the Committee members:

“But the first time I had an argument with someone and it gets escalated, there's no strategy or policy to back me up”

(Procurement Head – Board meeting 1)

“It fits into the interim arrangements as well, [people will ask] ‘why would I want to do that’ and it's what we can do and what we can't do”

(Print room Head – WC meeting 5)

By having a written policy, it can be used as an enforcement mechanism to get users to adhere to the interim solution.

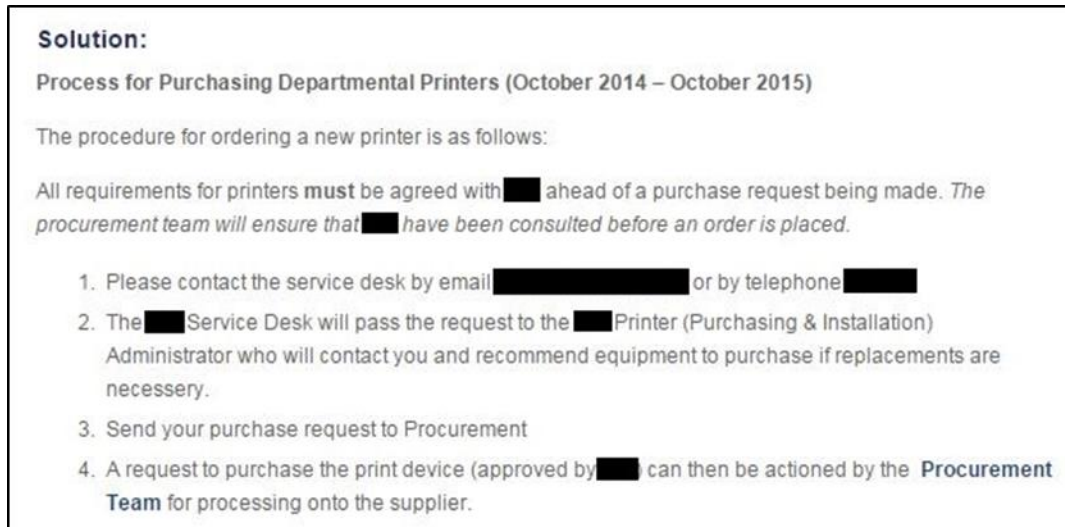


Figure 4.3 – Interim arrangement policy announcement on PublicCo’s internal webpage

Usefulness of a policy. The policy acted as a form of communication tool that enforced the actions of users. In other words, it supported the routine by managing the ostensive aspects (via the specific action details in the policy), which led to the actual performance of the routine.

“So we do need this policy that says nobody is to go out and buy anything at the moment...we just got to lease and these are the places you can lease from”

(Project Executive – Board meeting 1)

The Technical Head who was not part of the Board also expressed the importance of making people aware that a new print service would be rolled out, and that was why they were having this interim arrangement.

“Probably from your perspective as a short term interim phase, should there not be an awareness that something is [going to happen]”

(Technical Head – WC meeting 5)

The Procurement Head’s expectation that new buildings should get their print devices from SupplierD also served as an acknowledgement that some form of communication was needed. This was further supported by the Technical Head:

“Yes to a point, but if they’re going out to buy massive print devices with serious expenditure [then it’s best to] let them know that something is going to change”

(Technical Head – WC meeting 5)

The significance of having a written policy was so that information about this interim arrangement could be communicated throughout PublicCo, which would avoid unnecessary requests and purchases of new print devices.

4.4.2 Projecting information

Simple, straight-forward document. Having a written policy would be redundant if it was not communicated effectively. The Project Manager was practical about the approach they should take in creating the interim arrangement policy, that is, to make it a simple document.

“I’m envisaging a project document that we can present to the project board, probably an A4 just one side that describes [the interim arrangement] ... and then that document we can use as a communications thing to send to department reps”

(Project Manager – WC meeting 4)

Additionally, knowing who to communicate with for disseminating the new policy helped towards reaching a desirable solution as shared by the Technical Head:

“And there are probably two layers for that, because there’s the technical layer - who would want to know what that really means, and there is a user layer just for an awareness at the back of their mind at some point in the future, things might change”

(Technical Head – WC meeting 5)

In other words, the general print user only needed an awareness, and not information that was too detailed. Before its release, the final version of the policy was further simplified by the Procurement Head so that it only carried the basic material that users should be informed of.

“I feel I may make some slight tweaks to it but other than that it’s fairly uncontroversial...I think it’s basically a reminder of what people should be doing anyway...that they’ve got a print requirement, they contact [IT] in the first instance and then to procurement”

(Procurement Head – WC meeting 6)

Use of technology. To ease the Committee in effectively communicating the new policy, the use of available online interfaces was suggested such as, publishing through PublicCo's online newsletter, and also putting it on the Procurement website.

"I think we need to get this through [online newsletter] port because it will come up where people [can see]"

(Procurement Head – Board meeting 1)

"I wasn't planning to send it out as an email but was thinking of putting in on the procurement website because we don't get that many requests for print really"

(Procurement Head – WC meeting 6)

Again, to simplify the communication process, email was not used as not all print users would be involved with this request routine. Usually, departmental administrative staff would be the users that actually make the requests for new print devices. So it was appropriate if the policy was only published on the website, and not sent to everybody's email.

The interim policy that was published is shown in *Figure 4.3*. As observed, it was a very simple list of procedures that departments needed to adhere to when requesting for new print devices. And the main point in the policy was that all requests needed to be approved or endorsed by the Technical Head before being forwarded to the Procurement team for processing.

4.4.3 Summary of enforcement of the new routine

In order to communicate the interim arrangement (i.e. the temporary change to the request routine), the Committee agreed that a written policy needed to be communicated to all relevant parties that legitimised the new routine so that the Committee members could refer to it when dealing with other staff within PublicCo. The policy would also be a means of communicating to everyone that a new managed print system would be implemented, thus setting the expectations of the print users and departmental administrative staff. A simple policy distributed online was agreed as adequate as the majority of the staff were not involved in the request routine. *Table 4.3* provides a summary on how the new routine was embedded into a policy.

Enforcement of the new routine	Evidence
Legitimising the routine	<p>Back-up document <i>“But the first time I had an argument with someone and it gets escalated, there’s no strategy or policy to back me up”</i></p> <p>Importance of a policy <i>“So we do need this policy that says nobody is to go out and buy anything at the moment...we just got to lease and these are the places you can lease from”</i></p>
Project information	<p>Simple, straight-forward document <i>“I’m envisaging a project document that we can present to the project board, probably an A4 just one side that describes [the interim arrangement] ...and then that document we can use as a communications thing to send to department reps”</i></p> <p>Use of technology <i>“I wasn’t planning to send it out as an email but was thinking of putting in on the procurement website because we don’t get that many requests for print really”</i></p>

Table 4.3 – Summary of how the new routine was embedded

4.5 Conceptual interpretation

The chapter sheds light on a different path to routine change by demonstrating how it can be driven from the ostensive aspect, and not only from the performative aspect. Actors can “alter the potential repertoire of activities” while performing a routine to modify the ostensive aspect of it (Feldman and Pentland 2003, p.108). However, it can also be modified by subconsciously exploring potential possibilities through discussions or activities not directly related to the routine. In this case, the temporary project setting gave rise to perceived uncertainties and boundary ambiguities, which enabled the current ostensive to be challenged as actors strove to resolve these issues. The ostensive change occurred as an emergent and evolutionary process over weeks of discussions that focussed on three features of the routine: routine definition, routine scoping, and routine enactment. Once a common ostensive was reached, where all the Committee members agreed on how the new routine should be performed, it was then enforced by embedding it into the form of a policy, which was distributed to ensure that the request routine was performed according to the new established ostensive.

From the findings, it can be observed that the Print Project, as a new and temporary set-up enables the ostensive to become momentarily disengaged from the performative. While the

performance of the routine remains unchanged, the ostensive goes through a readjustment process as actors try to resolve perceived uncertainties and boundary ambiguities. Past studies demonstrated that effective ostensive change usually involves the performative aspect (e.g. Rerup and Feldman 2011; Bucher and Langley 2016). But the findings in this study demonstrate otherwise. It was observed that because the actors did not depend on ‘testing’ the new ostensive through performances, they compensate for this through many ways. For instance, the actors ensured that they had covered multiple scenarios of how the routine would be performed, such as possible resistance especially when it relates to personal printers. To address this scenario, the actors agreed that personal printers would not be taken away and that this information should be made clear to all users. Similarly, to address the scenario for new buildings needing print devices, the actors ensured that the contract extension with SupplierD was enough to cover these buildings. Thus they could still maintain the new ostensive of reducing the purchases of new print devices. By addressing multiple scenarios and anticipating responses from users, the actors were able to confidently produce a new collectively agreed ostensive, without depending on the performative aspect that is legitimised by embedding it in the form of an artefact. Following this, the ostensive aspect of the routine can now move beyond the Print Project, to the rest of PublicCo to be translated into the performative aspect.

In summary, the findings demonstrate that actors dealing with perceived uncertainties and managing their ambiguities allows for creativity to arise in coming up with new ostensives that adhere to a specific context, which in this case was the Print Project. Thus the routine actors themselves enforces the emergence of ostensive change.

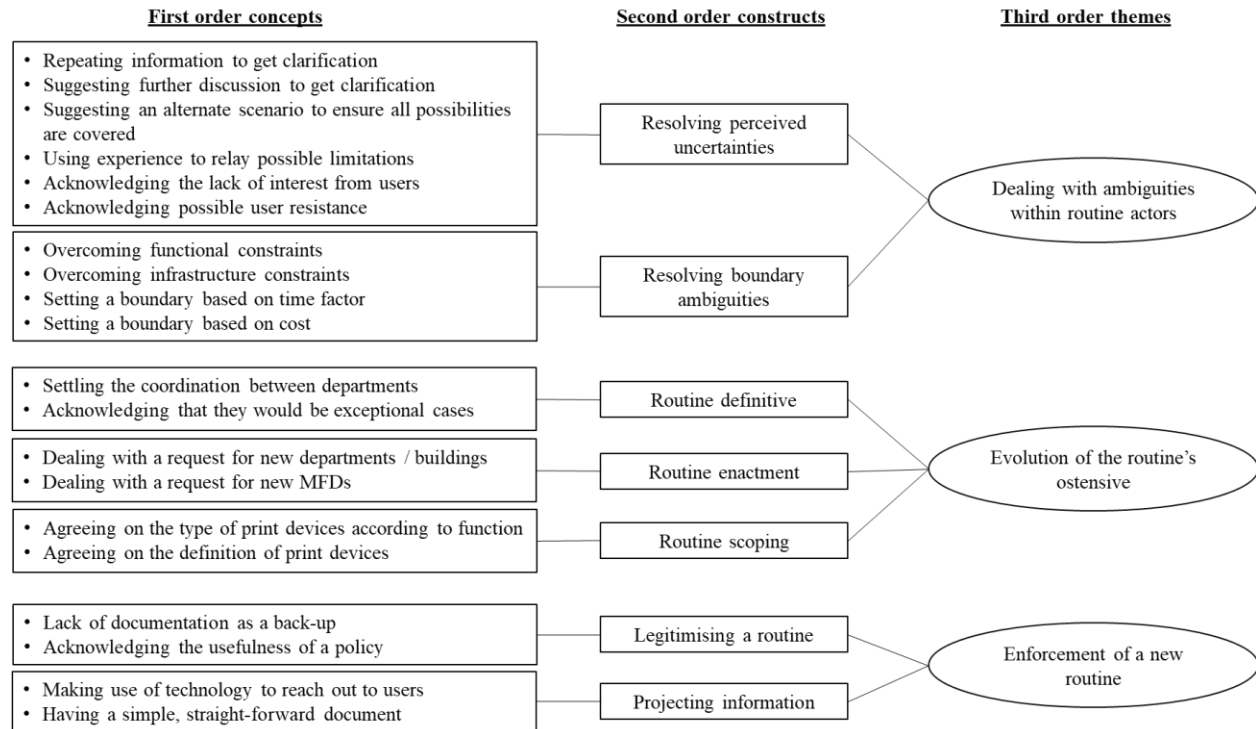


Figure 4.4 – Theoretical constructs for the emergence of ostensive change

Table 4.4 – Evidence of the theoretical constructs for the emergence of ostensive change

Illustrative evidence (1 st order)	Theoretical observations (2 nd order)	Theoretical constructs (3 rd order)
<p>Repeating information to get clarification</p> <p>“General speaking somebody comes to us [you know] ‘we need a new mono or colour printer or network printer device or network sharing [printer]’...so they come back to us, the request usually goes to technician service desk, which ends up on my desk, and [I would say] this is what you might want to look at. So we [IT department] already have that process. So those are network [printer] devices” (Technical Head)</p> <p>“So we’re happy we’re excluding personal printing devices because that’s a bridge far too far?” (Project Executive)</p> <p>“My assumption is the majority of the fleet was going to get replaced” (Project Manager)</p>	Resolving perceived uncertainties	Dealing with ambiguities within routine actors
<p>Suggesting further discussion to get clarification</p> <p>“The basic thinking is we put in all these new shiny machines and through time, people will let them [new printers] ‘wither on the vine’...I think it’s worth a bit of a debate because we’re not looking at it from a cost saving point of view...we’re talking about this, which will take years and years” (Procurement Head)</p> <p>“I think for small, personal printers we should be defining what they are...because you can buy one that’s really cheap but the running costs are really high...we should set a standard definition” (IT Director)</p> <p>“Here’s where it gets a bit more ‘woolly’ when we get to photocopiers and MFDs that will be routed to [the Print room Head]” (Technical Head)</p>		

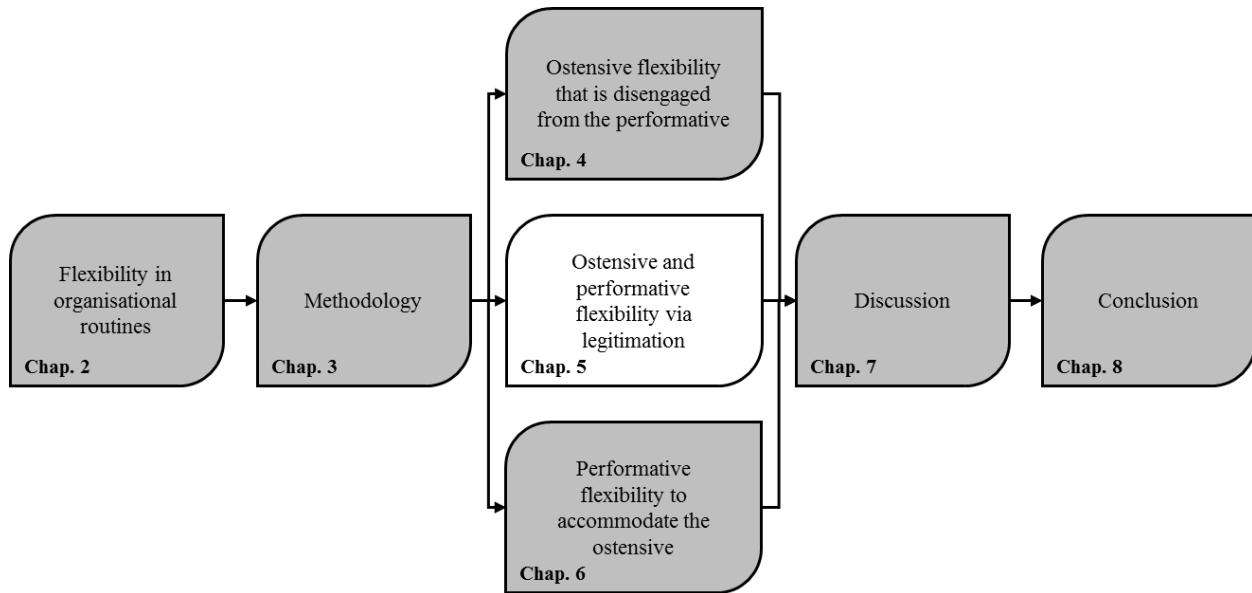
<p align="center">Illustrative evidence (1st order)</p>	<p align="center">Theoretical observations (2nd order)</p>	<p align="center">Theoretical constructs (3rd order)</p>
<p>“Between now and then, I want to make sure that: a) the project board are clear, but more importantly actually that when someone comes up from the department and says, ‘I need a new printer’. You say, ‘Ah, you’re wanting an MFD, you go and buy one from [SupplierD]’...’ah, you’ll be wanting a printer, you go through this framework agreement...ah, you want a new desktop printer, you can’t have one’. So what we’ve got to do is try to visit all the scenarios and what people will need to do” <i>(Project Manager)</i></p>		
<p>Suggesting an alternative scenario to ensure all possibilities are covered</p> <p>“Well it depends... let’s say we chuck away the old fleet and buy a big chunk of new MFD’s, so why are we interested in leasing?” <i>(Technical Head)</i></p> <p>“So, then there’s the [SupplierD] contract so I guess it’s actually a question as to whether we extend that maybe for the period that’s been talked about or rather we put an end to that contract and then go to the third point, which is to implement temporary arrangements to meet the immediate amount of printing.” <i>(Project Manager)</i></p>		
<p>Using experience to relay possible limitations</p> <p>“And it is ‘muddy’ even further in that the [SupplierD] contract that you have, are you allowed to extend that [with the existing SoftwareS devices]? ...at the moment you can’t” <i>(Technical Head)</i></p> <p>“It was such a painful experience that basically we said we’re not going to roll out any further because the management of the accounts and everything...it’s all a manual process and we were getting blamed for it...so we said no, we’re not going to do anymore of that. However, we put it in [DepartmentM] and they were ripped back out from the [DepartmentM], it was that bad...it was bad largely due to a lack of communication” <i>(Technical Head)</i></p> <p>“The more non-[SupplierD] network printers we bring in, the more complex [it is] because we’ve got all different end dates” <i>(Procurement Head)</i></p>		
<p>Acknowledging the lack of interest from users</p> <p>“The wider [staff population] generally aren’t interested until later on in the project” <i>(Communications Representative)</i></p> <p>“Well [staff] probably won’t care, to be fair that is more like an Easter job saying ‘there is a new system coming next year for those of you that are continuing’” <i>(Technical Head)</i></p>		
<p>Acknowledging possible user resistance</p> <p>“This may be a project risk rather than a risk to [PublicCo] but we don’t get engagement with the users...we don’t get like a buy-in” <i>(Procurement Head)</i></p> <p>“And anyone who gets their own individual device would be included in the project as well...it doesn’t mean we’re going to wake up and take everybody’s printers, but we need to look at the whole picture” <i>(Procurement Head)</i></p> <p>“It’s going to be a tricky area because if we were a private company, we could just switch everyone over to the new service, load lorries with all the personal printers and that’s done...but I don’t think that would work very well here, it’d just come up with resistance so we kind of have to work this interim solution” <i>(Procurement Head)</i></p> <p>“I think that goes both positively and negatively...sometimes, people’s expectations are, ‘you’re going to take my desktop [personal] printers away and I’m going to have to walk a mile to the nearest thing [printer]’. But it’s not like that” <i>(Print room Head)</i></p>		

<p align="center">Illustrative evidence (1st order)</p>	<p align="center">Theoretical observations (2nd order)</p>	<p align="center">Theoretical constructs (3rd order)</p>
<p>Overcoming functional constraints</p> <p>“In other words you can’t accept anything MFDs wise with [SupplierD] anyway...we can only do photocopiers in that arena...and I can kind of make them work a little bit better. So we can have printers and copiers but we can’t have any of the advanced features” (<i>Technical Head</i>)</p> <p>“So we’re going to have a significant portion of the fleet that’s bought outright, which then has to be integrated with the future process at some point” (<i>Procurement Head</i>)</p>	<p align="center">Resolving boundary ambiguities</p>	
<p>Overcoming infrastructure constraints</p> <p>“Well the MFDs fleet runs on [SoftwareS] and [SoftwareS] has its own set of issues and we’ve delivered at the moment to the [Building UH] and if we have extra licenses and you want to push forward for [DepartmentE] and that’s OK with [DepartmentE], it would work on that but it’s going to be a very limited expansion” (<i>Technical Head</i>)</p> <p><i>Technical Head:</i> Let us put it this way, if there is [building GF] and their staff printer goes ‘bang’ and there is no other option available to them but to replace that printer [what would they do?]</p> <p><i>Procurement Head:</i> They should go to [SupplierD]</p> <p><i>Technical Head:</i> Well, do they? Because there’s no network points there [in that particular building]</p>		
<p>Setting a boundary based on time factor</p> <p>“That’s why I thought I want to keep as much as possible with the [SupplierD] contract because I know there’s a finite end to that” (<i>Procurement Head</i>)</p> <p>“[SupplierD] for my simple brain is easy to get around with, they’ve got an end date, it’s the 28th of February [2016] and they come and take all their machines away...whereas if someone buys a [HardwareH] or leases a [HardwareH] now, that might end in 4 years’ time” (<i>Procurement Head</i>)</p>		
<p>Setting a boundary based on cost</p> <p>“In [DepartmentE] they had discussed going out and buying it right with new [HardwareH] printers...potentially leasing them I think..., which is very, very expensive and they would set aside the service for the next 10 years or until those printers fail down” (<i>Procurement Head</i>)</p>		
<p>Acknowledging that they would be exceptional cases</p> <p>“And if we’re going to be [buying] big stuff there’s got to be a [really] good reason for it” (<i>Technical Head</i>)</p> <p>“For me, there’ll be some cases where we actually want to tell people just to go buy a standalone printer for a year, and it would be the cheapest option...If it’s not on the network, then it’s better for them to just go and buy a stand-alone [printer]” (<i>Procurement Head</i>)</p> <p>“There will be occasions when individual personal printers will be appropriate. So it doesn’t say ‘there will be no personal printers’, it will just say ‘you’re not going out and buying your own under normal circumstances. You’ll have to turn around and go ‘actually the HR, this is confidential and we need one on our desk’...and that could be the future way” (<i>Commercial Head</i>)</p>	<p align="center">Routine definition</p>	<p align="center">Evolution of the routine’s ostensive</p>
<p>Settling the coordination between departments</p> <p>“What I’m coming at is [you know] when people come with a request for new printers and how does that help the procurement work with [IT department], work with [print room] and all the rest of it...so I think the action is for us to take the service design piece to see how that all operates” (<i>Procurement Head</i>)</p> <p>“We are looking to not doing anything on them because they’re going to replace them eventually...we’re just doing ‘break, fix and defer’...I absolutely</p>		

<p align="center">Illustrative evidence (1st order)</p>	<p align="center">Theoretical observations (2nd order)</p>	<p align="center">Theoretical constructs (3rd order)</p>
<p>agree with you this is not about territory line or anything like that, we just want to minimise the expenses...and that is certainly my take on this” <i>(Technical Head)</i></p> <p>“That they should only be processing printer orders that come from [the IT department] and then you’ve given advice to someone and they’ve raised the order...and they did speak to you [Technical Head] and you’re OK with their order” <i>(Procurement Head)</i></p>		
<p>Agreeing on the definition of print devices</p> <p>“In my head, the range of printers that we have, it goes from little, tiny desktop printers, which may be appropriate for maybe because of accessibility reasons...up to big, chunky, giant printers” <i>(Procurement Head)</i></p> <p><i>Procurement Head:</i> And at what point do you decide if it should be an MFD and therefore it should go to [SupplierD]? <i>Technical Head:</i> Generally speaking MFDs are largely already out there, so we don’t get that many requests [for it]. The only ones that that did buy MFD’s bought it in a separate project using cash</p>		
<p>Agreeing on the type of print devices according to function</p> <p>“There is a number of components on this, there’s obviously the [SupplierD] side, there’s obviously the [staff] printers that we look after...there might be some things that we might have to purchase to support that in the future...there’s the desktop printers that people have...there’s the staff network printers that we installed” <i>(Project Manager)</i></p> <p>“What we’ve got at the moment, we got the [staff] printers that is managed by [the IT department], so some of those might be new ones, or some might be breaking and some might need replacing...there’s obviously the [SupplierD] ones but we’ve got the ones that the departments buy for themselves that were installed by us [the IT department]” <i>(Project Manager)</i></p> <p>“I would say ‘all printing’, I wouldn’t say ‘all shared printing’...I think all printing needs to go through the managed print service...now for a while the managed print service may include personal printers that people have, but through time we want to have everything in scope so that we’re moving people off the personal printers” <i>(Procurement Head)</i></p>	<p align="center">Routine scoping</p>	
<p>Dealing with a request for new departments / buildings</p> <p>“It doesn’t cost us any more so they haven’t increased the pricing for that 12-month period and they’ve also put in some provision for the new building coming in if we want to take that option...so we have an interim procurement arrangement with them for those new buildings coming on” <i>(Procurement Head)</i></p> <p>“There wasn’t a huge amount of printers [needed], it’s mostly labs...but we have a provisional contract for new machines for additional requirements because there are people getting rid of some machines, so we can recirculate those and we can also lease on a short term basis from [SupplierD] as well...they’ll give us a price on a short-term basis I suppose if we need that” <i>(Procurement Head)</i></p> <p>“If we could encourage the new buildings that come in on-line that want new MFDs to go through the [SupplierD] arrangements and not set up separate contracts with [HardwareH supplier], then it will make it a lot easier to unravel” <i>(Procurement Head)</i></p>	<p align="center">Routine enactment</p>	
<p>Dealing with a request for new MFDs</p> <p>“The thing in an ideal world would be that any new requirements [would] go through [SupplierD] and we wouldn’t hold us to more than 6 or 12 months” <i>(Procurement Head)</i></p>		

<p align="center">Illustrative evidence (1st order)</p>	<p align="center">Theoretical observations (2nd order)</p>	<p align="center">Theoretical constructs (3rd order)</p>
<p>“But when we come on to the interim procurement arrangement we could probably discuss this further...my view is that for MFDs from between now and when we have a new contract [for the final print solution], which [should come] from [SupplierD], because to do anything else i.e. leases from different companies...it will complicate things” (<i>Procurement Head</i>)</p> <p>“So what...are we going to add them to the [SoftwareS] system?...there’s [an organisation-wide] ban on expanding it but I’m prepared to be flexible on the basis that...” (<i>Technical Head</i>)</p>		
<p>Acknowledging the usefulness of a policy</p> <p>“Probably from your perspective as a short term interim phase, should there not be an awareness that something is...[going to happen]” (<i>Technical Head</i>)</p> <p>“But if they’re going out to buy massive print devices with serious expenditure [then it’s best to] let them know that something is going to change” (<i>Technical Head</i>)</p> <p>On discussing the print policy, “Yeah...it’s just to get clarity on what we’re doing for [this project]” (<i>Project Manager</i>)</p> <p>“So we do need this policy that says nobody is to go out and buy anything at the moment...we just got to lease and these are the places you can lease from” (<i>Project Executive</i>)</p>	<p align="center">Legitimising a routine</p>	
<p>Lack of documentation as a back-up</p> <p>“It fits into the interim arrangements as well, [people will ask] ‘why would I want to do that’ and it’s what we can do and what we can’t do” (<i>Print room Head</i>)</p> <p>“But the first time I had an argument with someone and it gets escalated, there’s no strategy or policy to back me up” (<i>Procurement Head</i>)</p>		
<p>Having a simple, straight-forward document</p> <p>“And there is probably two layers for that, because there’s the technical layer who would want to know what that really means, and there is a user layer just for an awareness at the back of their mind at some point in the future, things might change” (<i>Technical Head</i>)</p> <p>“I feel I may make some slight tweaks to it but other than that it’s fairly uncontroversial...I think it’s basically a reminder of what people should be doing anyway...that they’ve got a print requirement, they contact [IT] in the first instance and then to procurement” (<i>Procurement Head</i>)</p> <p>“I’m envisaging a project document that we can present to the project board, probably an A4 just one side that describes [the interim arrangement]...and then that document we can use as a communications thing to send to department reps” (<i>Project Manager</i>)</p>	<p align="center">Projecting information</p>	<p align="center">Enforcement of a new routine</p>
<p>Making use of technology to reach out to users</p> <p>“I wasn’t planning to send it out as an email but was thinking of putting in on the procurement website because we don’t get that many requests for print really” (<i>Procurement Head</i>)</p> <p>“I think we need to get this through [online newsletter] port because it will come up where people [can see]” (<i>Procurement Head</i>)</p>		

CHAPTER 5 : OSTENSIVE AND PERFORMATIVE FLEXIBILITY VIA LEGITIMATION



5.1 Introduction and overview

In this chapter, flexibility was observed in both the ostensive and performative aspects, originating in the former, which then translated to the performative. The chapter provides narratives of three complete cycles of the sourcing routine performed over the course of the observation period. The first was the sourcing of print specialists i.e. experts in managed print services. The idea of engaging them as consultants appeared in the very first Board meeting as it was seen that the organisation did not have enough expertise to complete the Print Project independently. The estimated value of the print specialists' contract was around £25,000. The second routine was the sourcing of print software only. At the beginning of the project, it was assumed that the print software and hardware would come in as a whole package for the managed print service. However, as the project progressed, a decision was made to procure these products separately mainly due to the Committee members' preferences in having control and ownership over the two products that would allow them flexibility in terms of managing them in the future. The estimated value of the print software was around £122,000. Once that was procured, it then came to the third sourcing routine, for the print hardware, which had the highest contract value of the three i.e. approximately £200,000. In carrying out these routines, there were two main groups of people involved. The first group, the working committee (hereafter known as the Committee only), which comprised of

representatives from the IT department, procurement, print room, and was headed by a Project Manager. The second group was the Board members, which comprised of top management and representatives from various end-users e.g. different departments or divisions. The Project Manager and Procurement Head sat on both these committees. Most of the decision-making occurred within the Committee but some high risk issues or where a solution could not be decided, were brought up to the Board level.



Figure 5.1 – The stages of the sourcing routine

The following sections will provide narratives on each of the three sourcing routines relating to the stages shown in *figure 5.1*. The *project creation* stage of the sourcing routine revolves around setting up the fundamentals of the sourcing exercise, which includes selecting an appropriate procurement framework to use. A framework is a particular agreement put in place with a range of suppliers that enables buyers to place orders for products or services without running lengthy, full tendering exercises. In other words, suppliers listed in a particular framework will have already been shortlisted based on the framework's requirements, which reduces the time for buyers to source their products as they do not need to carry out a due diligence exercise or a pre-qualification questionnaire (PQQ).

There are certain circumstances where a buyer must purchase a product through a particular framework due to regulations. For example, for a public institution or organisation, any contract above the value of £164,000 must be purchased following the European Union (EU) regulations. Because of this, organisations tend to make their purchase through a known framework to minimise the process that they would have to go through. As I will show later, there are several criteria involved when conducting the selection process. The *create ITT* stage is about who contributes to the production of the document, as well as what its contents should be. The *accept ITT* stage on the other hand, is about who should approve the document before it is released to the suppliers. The final stage in focus, the *evaluation period*, concerns the strategies for conducting the evaluation. This includes determining who should evaluate, the format of the interview

sessions, and most importantly, the criteria for evaluating, for example the weighting of different sections.

The narratives provide insight into how different options emerged for the various stages. The focus of issues varied across the three cases. For example, discussions for evaluation strategies during the sourcing of print specialists were non-existent whereas for the sourcing of print hardware, there were in-depth discussions regarding this same issue. Nonetheless, there were three main *deliberative actions* that repeatedly surfaced in the identification and emergence of options: challenging ideas or solutions, anticipating events or responses, and suggesting alternative solutions. An additional observation from the findings of this chapter is that the options that emerge serve as a legitimization mechanism for the actions of the project members. Or in other words, the options provide an unofficial sanction for the routine performance. For instance, some options arose as a guide to how the routine should be performed, whereas some arose as a form of accountability for the actions taken. In certain instances, specific options emerged only for that particular situation referring to practicality concerns. Thus routine performances were legitimised through guiding, accounting, and referring via the options that emerge.

Each narrative will have a summary of how the options emerge and how they form the legitimization mechanism. The final section in this chapter is a brief discussion on the theoretical constructs that explain the relationship between how the emergence of options relate to the ostensive-performative cycle of a routine.

5.2 Sourcing of print specialists

5.2.1 Overview of the case

This first case is about the sourcing of print specialists who are basically consultants in the area of print services. The case starts off with the selection of the procurement framework where there were two options: PP framework, and open tender. The next part of the routine is to prepare the ITT document. For this activity, there are two parts to it that involve options. Firstly, the preparation itself involved the option of engaging with potential suppliers to obtain third party input, rather than relying on just independent effort. Secondly, the approval of the document saw the option of including the IT Director as part of the reviewer besides the Committee. The final

main activity within the routine is the evaluation of the tenders. During this activity, the option of inviting all suppliers to the interview stage emerged instead of the usual process of conducting a score consolidation, and short-listing the candidates for the interview phase.

5.2.2 How the options emerged

Project creation

Following the project creation, the selection of the procurement framework saw the conventional option of using the PP framework being put aside as the Committee opted for an open tender exercise.

At the beginning of the Print Project, it was generally assumed by project members that the print specialists would be selected through the PP framework and that the whole tendering process should not take very long because of this framework. This assumption came about as it was pointed out that whichever print specialists they chose would need to have experience of working with public organisations, as seen in the conversation below.

IT Director: I think the earlier thing I wanted to say there was, they really need to have [public organisation] experience as well

Procurement Head: Yeah, there is actually a [PP] framework and there's at least two companies on there that I've already spoken to...and they do seem to know what they're doing

(Board meeting 0)

However, later on in the project, the project team realised that this assumption was premature and that they were not sure what type of suppliers were available in the market. A suggestion that the PP framework may not be the most suitable option emerged after the Procurement Head conducted some information gathering based on responses from potential suppliers.

"...I have spoken to quite a few of them [print specialists] that are already on the framework, I'm not actually sure if I'll go through with the framework because...the other thing is it's quite specific in the buyer's guide for the framework, it's about audit...and I'm not sure that we need the audit right now, it doesn't really fit the scope"

(Procurement Head – WC meeting 5)

According to the Procurement Head, the suppliers listed in the PP framework offer services that mostly relate to audit, which is an independent inspection of print devices, print processes, print patterns and anything else to do with printing. The function of a print audit is usually to gather data and to get an accurate report of the current print service in an organisation. However, since this particular organisation already has a database of print jobs, devices etc., an audit would be quite redundant. The project team was looking for a specialist in print services that could guide them with getting a feasible print policy translated into the specifications for the new managed print service. Because of this, and through more information gathering, it was suggested to move forward with an open tender i.e. not using any particular procurement framework, which turned out to be the option the project team chose.

“The ones I spoke to are quite knowledgeable, there’s 5 or 6 on the framework...maybe more actually, some I don’t know...some, quite a few I’ve spoken to [SupplierU] is probably I talked to the most...but the framework is actually for audit, not for print specialists...so we can’t really squeeze this through the framework, so I’m just going to do it as an ordinary procurement open procedure...but I’ll write to all the ones that are on the framework saying you may be interested in this...”

(Procurement Head – WC meeting 6)

Create ITT

The second part of the sourcing routine was to get the ITT document ready. The conventional option is to complete this activity independently i.e. just among the Committee members. However, in this sourcing routine, this activity involved the option of engaging with third parties i.e. potential suppliers.

As part of this process, it was vital that the specifications of the tender were clear and accurate. One of the ways of ensuring this was by engaging with potential suppliers, as it was anticipated that they would provide valuable input. For instance, as the project team was not familiar with the capabilities of print specialists, the team needed input on exactly what type of services were offered by them. This was to ensure that whatever was written in the specifications were feasible. The following conversation is an example of this:

Project Manager: I think print strategy is kind of their bread and butter isn’t it...as well as audit. The service design component might not be their [expertise] so well

Procurement Head: I've had an offer from a few of them to [assist with] this ITT, but I've not done that...I don't think it's quite fair, I have thought about that about service design as well...I could speak to them over the phone, a couple of them...see if we put that in the ITT, would they [be OK with it]. They might not have come across that wording, but they might have had to write some operating procedures...how all the different bit are going to fit together

(WC meeting 7)

In the same meeting, it was again made clear that the project team really depended on the feedback from potential suppliers in order to finalise their ITT document.

"I could speak to them over the phone, and see if we put that [Service Design as a deliverable] in the ITT is everybody going to go up and go, 'what, what are you talking about?'...but you know I did go on Wikipedia to check what my perception was, and it's basically just bringing the operational side of things and the technical side things. So it's not...they may not come across that wording"

(Procurement Head – WC meeting 7)

From the Procurement Head's point of view, it would be better to get some advice from potential suppliers on the type of services they offer, and how they define their deliverables. According to her, some words or definitions may not be the same on the operational and technical side of things.

Accept ITT

The approval of the ITT document saw the option of including the IT Director besides the Committee member.

When it came to approving the document, a suggestion was made to get the IT Director to do a final review as the Project Manager assumed he would not object to it. So the review by the IT Director was a way to legitimise the document. It was also assumed that the IT Director would approve the new proposed dates stated in the ITT as they were more feasible.

Project Manager: Because I thought I've got some time here...you're obviously busy, I thought I'd get on with it because I'm sure I can make use of it whatever

Procurement Head: Well...I want to get it out tomorrow, ideally...but I'd like you to look at it first before it goes out really. So it's not just me

Project Manager: I'm wondering whether we ought to...we could get [IT Director] to [review it too] ...he's probably alright on this one but it will be good

Procurement Head: He'll acknowledge it...we've got time. I think we pretty much realised it we're not going to get the kick-off meeting with them before Christmas, but if we put the kick-off meeting in for the first week of January...

(WC meeting 7)

Evaluation period

The conventional process for the selection of a preferred supplier involves shortlisting suppliers based on the initial round of evaluation, followed by an interview session for the shortlisted suppliers. However, in this sourcing routine, the Committee opted to invite all suppliers who responded without undergoing a shortlisting process.

In WC meeting 9, the Procurement Head proposed to shortlist three suppliers for the interview session, which involved a presentation by the suppliers followed by a question and answer session. This option was proposed in anticipation that several suppliers would respond to the tender as per previous tender exercises. So initially, the project team anticipated that it would be a routine evaluation process including the option to consolidate individual scores and shortlist.

Procurement Head: No...so this would be on the panel to read the tenders that are submitted from the print specialists and sit through the presentations. We would do a short-list...we don't imagine there'll be any more than three presentations to do.

Project Manager: No, but we've got a scoring scheme haven't we?

Procurement Head: We have, yeah...it's pretty straight forward.

(WC meeting 9)

However, when the responses arrived, only two suppliers responded. Based on this new update, it was suggested that there was no need to consolidate the scores and that they would invite both suppliers for the interview session.

“Because only two of them came back, and there’s not much between them...so we’ll see them both I presume. And the idea is that we just get them to take us through the answers that they’ve given...answer and questions...and if we want to change any of our scores after that, then we can. There aren’t any specific scores attached to the interview, but if we sort of want to revisit any of our scores, we could do”

(Procurement Head – WC meeting 11)

After the interview, the scores were not changed and the Committee was still happy with the given scores, which favoured one supplier over the other. Within the next few days, SupplierE was chosen as the preferred print specialist.

5.2.3 The outcome

From the narratives, it is observed that options explicitly emerged for four of the sourcing activities as illustrated in *Figure 5.2*. Firstly, for the selection of the procurement framework, the initial option was to use the PP framework as the most obvious, straightforward approach since most sourcing exercises conducted by PublicCo use this framework. However, the option for an open tender arose because the suppliers on the PP framework did not meet the project team’s requirements, thus the Committee needed a more flexible option. Secondly, the option to obtain third party input for the preparation of the ITT document emerged through the project team’s anticipation of what kind of feedback potential suppliers would offer to provide a form of guidance on what to include in the ITT.

Thirdly, on the ITT approvals, the option to involve the IT Director in the activity as a fresh pair of eyes arises as it was suggested that he may not pose any objections to the finalised document i.e. would not delay the ITT release. His involvement with the ITT approvals also served as an accountability mechanism on behalf of the Committee as he is part of higher management. Lastly, because only two suppliers responded to the ITT, it was suggested that the evaluation process should be simplified by just inviting both for the interview session. This option was more feasible as the usual option of conducting a shortlisting process would seem redundant. All these options arose during routine enactment through many deliberative actions, such as making suggestions and through anticipation.

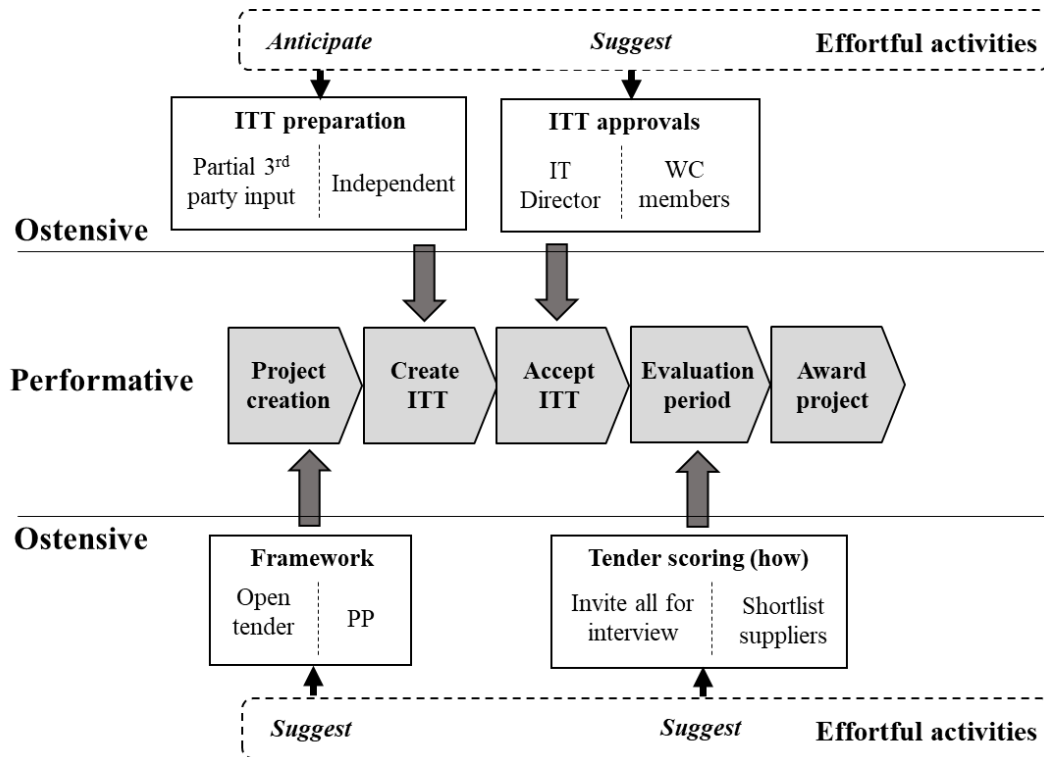


Figure 5.2 – Options that emerge during the print specialists’ sourcing routine

In addition to the deliberative actions, the options that arose were also a way of legitimising the actions of the routine actors through referring, guiding, and accounting. The referring allowed actors to acknowledge a certain option as unique to a particular context. For instance, the decision to proceed with an open tender was because the print specialists on existing frameworks did not meet the specifications needed for the Print Project. Usually, the framework would have been adequate for guiding actors on which suppliers are available but because of the distinctive context of the Print Project, the actors opted for an ITT open tender instead. When enacting this option during other routine activities, actors could refer and relate it to a specific context, thus legitimising their actions. Some options also arose as a guide to an individuals’ actions. For example, the option to gain some input from third parties (e.g. potential suppliers) during the ITT preparation, was so that feedback from them could act as a guide for completing the activity. By completing the ITT document based on third party feedback assumed to be reliable, this indirectly legitimised the actions taken by the actors. Lastly, options can offer legitimacy by way of accounting. For instance, in the ITT approval activity, both options that emerged i.e. getting other Committee members to take part, and getting the IT Director as the final approver, were a way of ensuring that whatever was produced in the ITT, was accounted for. Thus, if the document were to be challenged, the

Committee could use evidence from the options they had taken (e.g. approval by the IT Director) as a way to support them.

Routine activities	Options	Evidence	Legitimation mechanism
Framework	PP framework	"There is actually a PP framework and there's at least two companies on there that I've already spoken to...and they do seem to know what they're doing"	Referring
	Open tender	"But the framework is actually for audit, not for print specialists...so we can't really squeeze this through the framework, so I'm just going to do it as an ordinary procurement open procedure"	Referring
ITT preparation	Independent	<i>Conventional option</i>	Guiding
	Partial 3rd party input	"I could speak to them over the phone, a couple of them...see if we put that in the ITT, would they [be OK with it]. They might not have come across that wording, but they might have had to write some operating procedures"	
ITT approvals	WC members	"Well...I want to get it [ITT] out tomorrow, ideally...but I'd like you [Project Manager] to look at it first before it goes out really. So it's not just me"	Accounting
	IT Director	"I'm wondering whether we ought to...we could get [IT Director] to [review it too]...he's probably alright on this one but it will be good"	Accounting
Tender scoring	Shortlist suppliers	"We would do a short-list, we don't imagine there'll be any more than three presentations to do"	Referring
	Invite all for interview	"Because only two of them came back, and there's not much between them...so we'll see them both I presume"	Referring

Table 5.1 – Summary of the emerged options in the print specialists' sourcing exercise

5.3 Sourcing of print software

5.3.1 Overview of the case

This section is about the second sourcing exercise that the project team completed to purchase print software that would fit the needs of the new managed print service. The routine started off with the selection of the procurement framework. For this activity, at first the NPA option seemed the obvious one as it is a framework specifically for managed print solutions in the public sector. However, eventually the project team opted for an open tender. For the preparation of the ITT document, besides doing most of the work internally, the team also opted to obtain input from print specialists (hereafter known as Consultants) and gain insight from site visits in order to finalise the document. Once prepared, the ITT approvals were initially required from the Committee only, however it was later decided to extend the approvals to all the Board members. When it came to

the evaluations, the interview session followed a demonstration-type format, more specific in its purpose compared to a conventional presentation. As for the evaluation criteria, several options emerged in terms of which criteria would have least weighting or impact e.g. support, costing, and technical ability.

5.3.2 How the options emerged

Project creation

Similar to the previous sourcing exercise, the first part of the routine was to decide on what procurement framework to use. The initial option was to use the NPA framework, however eventually the Committee opted to go for an open tender i.e. without the use of a framework.

In one of the earlier meetings, the NPA framework was suggested as it is designed specifically to cater for the public sector. Thus all suppliers on the framework would already be familiar with the needs of a public organisation such as PublicCo. Furthermore, it was thought that the NPA framework would provide greater flexibility in terms of the list of software the project team can choose from. Because of these reasons, it made sense to use this framework. Furthermore, when the Procurement Head had an informal chat with a potential software supplier, she got the impression that they assumed PublicCo would use the NPA framework as the obvious option.

“Well not from what these guys [potential supplier] said this morning, [if we go] down the [NPA] route, we’ve got flexibility...to some extent obviously... You’ve probably got it narrowed down in your head to either [SoftwareP], [SoftwareE], possibly not [SoftwareS]”

(Procurement Head – WC meeting 4)

Mid-way through the Print Project in the 10th month, as the Committee started to focus on the sourcing of the print software, they still suggested the NPA framework as the best option as it had suppliers that were manufacturers, as well as non-manufacturers. Thus, the framework did not limit the choice of software that could be selected, as pointed out by the Technical Head in the conversation below:

Procurement Head: But remember [the Consultant’s] recommendation is to not get too excited about [SoftwareP], because he reckons that some of the others are just as good. And my concern is that we

don't go down a route that restricts a list of manufacturers, have to make sure that they all support anybody on the [NPA] framework. So that's sort of deciding we're using the [NPA] framework

Technical Head: I'm just picking that because it has got everyone on it

(WC meeting 15)

However, a week later, this option was no longer the focus of the Committee because they opted for an approach that had more flexibility in terms of suppliers and time. Still in-line with what the Procurement Head mentioned above about supplier restrictions, it was eventually decided to do an open tender (i.e. no framework was used) for the purchase of the print software as they did not want to limit the suppliers being invited to participate in the tender process. Another reason that led them to decide on an open tender was due to time restrictions. As the expected value of the print software contract was below the threshold required to be purchased through an EU procurement framework (such as NPA), they had the option to do otherwise. Being a non-EU framework, they had more flexibility with setting the critical timelines, such as the response time from suppliers. When the Project Manager asked whether they could reduce the time between releasing the ITT and getting the response back from the suppliers, the Procurement Head commented:

“Since it's a non-EU framework, we can do what we want. We can do it to 2 weeks. Usually they complain if it's less than 3 weeks...so I think 3 would probably be OK. And then we've got to shortlist and invite them for a demo, there's a bit of a gap as well”

(Procurement Head – WC meeting 16)

Create ITT

In creating the ITT document, the Committee had several options for how they accomplished this. The first was to complete it independently within the Committee, the second was to gather partial input from third parties, such as Consultants, and the last was to obtain insight by visiting other organisations in a similar setting to PublicCo to see how they managed their print software.

By the second Board meeting, the purchasing of the print software had not progressed much, meaning it was delayed. This was due to the key person being occupied with other work making him unable to provide input in order for them to make vital decisions. However, the Procurement Head challenged this reason saying that it was more than just relying on the Technical Head. They

had other ongoing issues and thus suggested waiting for the Consultants to be on-board to get a second opinion. The option of obtaining third party input meant that the preparation of the ITT was no longer an independent, internal activity, which would be the conventional way of doing things.

Project Manager: The one thing we haven't made quite so much progress on is the print software. And that's for a couple of reasons really, [Technical Head's] availability has not been great before Christmas, he has always said that he would have greater availability after Christmas, so we expected that

Procurement Head: I think it's more than that, because we haven't really decided that...we weren't really sure how to get to the bottom of it, so we thought why don't we wait for the [Consultants] on it. We can use that expert knowledge to give us another opinion on it because we've got different opinions in the group if that makes sense

(Board meeting 2)

Besides relying on the Consultants to assist the ITT document preparation, it was also suggested that a site visit to various software suppliers or users be arranged. This was so that the Committee could gather more information in order to better strategize how they should complete the ITT e.g. what sort of requirements should be included.

"Well I think if we could schedule the [SoftwareS] visit, the [SoftwareP] visit, and then we could have a look at the feature-set of [SoftwareE]...I suspect after that we will have a decision on what we would want to do, and then it's more a case of finding the best route to procurement"

(Technical Head – WC meeting 13)

Accept ITT

For the approval of the ITT before it was released, the initial option was to only involve the Committee members, but the eventual option was to include the Board members also.

When it came to the approval of the ITT document, in usual circumstances, it would only need the Committee's sign-off before it is released to the suppliers. However, one of the Board members challenged this approval process and suggested that the Board should give the final approval. Thus this option was chosen as the approval process.

“Is it because that we’re the project board, we sort of sign off on the specifications that we don’t sign off on who the final decision tendering is? It’s a procedural issue as to whether, we as the project board, we sign up to the specifications and we’re happy with that...and now we just leave it to the project team to decide?”

(R&D representative – Board meeting 4)

Evaluation period

For the evaluation, there were two parts. One was the supplier presentation, which saw different options for the format of the presentation (i.e. conventional, demonstration style), and the other was the tender scoring criteria, which saw some debate on the various criteria options (i.e. support weighting, financial weighting, technical capabilities).

Once the responses were received, part of the evaluation was to conduct an interview session with the shortlisted suppliers. For this particular sourcing exercise, there was specific interest in the format of the interviews as this involved a technical product and some of the interview panel may have found it difficult to grasp its capabilities. It was anticipated that if they did not have a specific format, the suppliers’ presentation may diverge from its main purpose, and thus not achieve what the project members intended to find out from the interview sessions.

“But we also need to make sure that we have a program of what we want...because if not they would just take us through things that they are interested in. We need to be quite prescriptive, that’s the word”

(Project Manager – WC meeting 16)

One other issue that came up was on the evaluation criteria as questioned by the Technical Head below:

“Remember the interviews [demonstration presentation] are only to inform the questions on the sheets [tender response] one way or the other, at the moment...we’ve already got a winner [i.e. Supplier1]. Now the only thing that could happen is if they dig themselves a big hole, and even if that support line came back as zero, is it going to change the whole score enough?”

(Technical Head – Software evaluation part 1)

The Technical Head anticipated that the support criteria would contribute little weighting if any. Because of this, he believed that the scores after the interview sessions even if they were altered, would not impact the final chosen supplier. This option, however, was not officially agreed on because during a discussion after the presentations, the Committee debated on how they should

review or finalise the scores. The Procurement Head posed a question, this time concerning the weighting of the pricing:

“I think if I’m honest, it’s not going to come down to pricing is it? So I’m not sure if doing that [requesting for different maintenance costs] ...is going to be much of a difference”

(Procurement Head – Debrief after software demonstration)

Following the software demonstrations, the Technical Head and Project Manager had another round of reviewing the scores based on what they had sat through. During their discussion, it became obvious that the differences between SoftwareP and SoftwareS were very little making it difficult to evaluate which was the better of the two. The following is a discussion between the two Committee members about how they evaluated the two suppliers based on the capabilities of both. Their discussion focused on comparing their technical capabilities, which, according to the Technical Head, do not seem to differ much. However, the Project Manager pointed out a key feature of *page type* detection that SoftwareP had over SoftwareS.

Project Manager: Like, it was easier for me, I found it much easier to assess what they had gone through and what they hadn’t

Technical Head: Okay, well let’s see if I can put in any...

Project Manager: But you’ve got the knowledge of...

Technical Head: Yes, well I’ve used both, so technically, technically I can’t split... I could split on fine grain bits and pieces. These guys have now got the reverse counting in, which is one of the things [Pcounter], who allegedly, I’ve never seen it work, but these guys do have that, that guaranteed page device. They have a better refund model

Project Manager: Right, because that was one of their big differences, wasn’t it? Being able to detect the type of page. So how does that manifest itself in real life? Try and find a scenario

Technical Head: What they really do is if you have got a printer in the library that’s run out of paper halfway through a job, then the job’s been submitted, but the job will, sort of, time out at the end of it, so normally you charge because the job went to the device. I should say, a power cut’s the easy one to go with here. So you submit a job, job fires off, it’s 100 pages long, it gets 10 pages...

Project Manager: It charges

Technical Head: You've charged 100 pages, whereas what these guys are saying is they read pre and post the job...

Project Manager: With these guys, you had to tick the box, didn't you, to get it to charge post?

Technical Head: Yes, I've never seen it do it, but yes, I mean, it could do. I've never seen it do it

Project Manager: Because they did say you can do it. We didn't really talk about it much, but they did mention it a couple of times

(Print software final tender evaluation meeting)

From this conversation alone, it was evident that the foremost criterion that the Committee was looking for, was the technical abilities of the software and supplier. This included technicalities to the very last detail as brought up by the Technical Head above. The rest of the evaluation session continued to be a debate regarding the differences between the software's capabilities. Eventually, SoftwareP was chosen as the preferred software as it appeared superior compared to the others in terms of what it can offer and its compatibility with the organisation's processes.

5.3.3 The outcome

From the narratives, it can be observed that options explicitly emerge for five of the sourcing activities as illustrated in *Figure 5.3*. Firstly, for the selection of the procurement framework, initially the option to use the NPA framework emerged through suggestions based on their judgement that it would provide better flexibility in terms of choice of suppliers. Thus it would provide the best guide for this sourcing exercise. However, the project team opted for an open tender as it also provides flexibility in terms of time, which was an important factor for the Print Project. Secondly, the option to obtain third party (i.e. Consultants') input for the preparation of the ITT document emerged as one of the Committee members challenged the sole reliance on another Committee member. A third party's input was assumed to be more impartial and thus provide better accountability for the ITT document. Besides that, the suggestion to go for site visits as part of the initiatives to finalise the ITT came about as it was assumed that the visits would provide more information and thus, more guidance on what to include in the document.

Thirdly, on the ITT approvals, the option to involve the whole Board as part of the final review emerged as one of the Board members challenged the original process. Fourthly, since the sourcing activity was for a complex technical product, the option to have a demonstration style interview session emerged as it was anticipated that a conventional presentation would not get its message across to the interview panel. A demonstration approach would provide a more effective guide for the suppliers to prepare their presentation. Thus, there were several options that arose in terms of the evaluation criteria. However, the final decision was chosen based on the supplier’s technical abilities, which at the time of the discussion were deemed as the most important criteria.

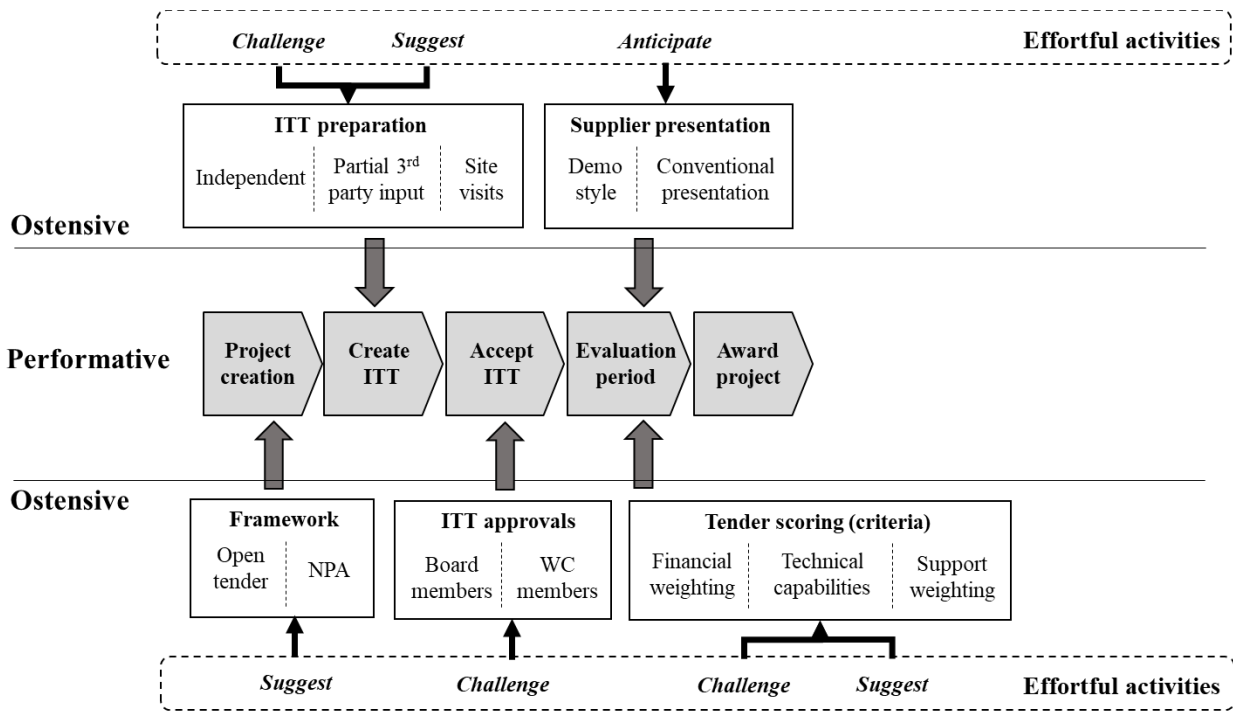


Figure 5.3 – Options that emerge during the print software sourcing routine

All these options arose during routine enactment through many deliberative actions, such as making suggestions, posing challenges, and through anticipation. In addition they were also a way of legitimising the actions of the routine actors through referring, guiding, and accounting. For instance, similar to the previous routine, the option to proceed with an open tender for the sourcing of print software was specific to this context. Although it was the same as for the print specialists, the reason behind it was different. The open tender was opted for because it offered more freedom in terms of timescales (e.g. tender response time), providing legitimacy by referring to a specific context of the routine enactment. For the tender scoring activity, all the options that emerged were

also specific to this particular sourcing exercise. For instance, technical capabilities refer to the software's capabilities, support weighting refers to the technical support of the software supplier, and financial weighting in this case bore less importance because it involved a technical product. Thus these options only refer to this particular context.

Routine activities	Options	Evidence	Legitimation mechanism
Framework	NPA	"And my concern is that we don't go down a route that restricts a list of manufacturers, have to make sure that they all support anybody on the [NPA] framework. So that's sort of deciding we're using the [NPA] framework"	Guiding
	Open tender	"Since it's a non-EU framework [i.e. open tender], we can do what we want. We can do it to 2 weeks. Usually they complain if it's less than 3 weeks...so I think 3 would probably be OK"	Referring
ITT preparation	Independent	<i>Conventional option</i>	Accounting
	Partial 3rd party input	"I think it's more than that, because we haven't really decided that...we weren't really sure how to get to the bottom of it, so we thought why don't we wait for the [Consultants] on it. We can use that expert knowledge to give us another opinion on it because we've got different opinions in the group if that makes sense"	
ITT approvals	Site visits	"Well I think if we could schedule the [SoftwareS] visit, the [SoftwareP] visit, and then we could have a look at the feature-set of [SoftwareE]...I suspect after that we will have a decision on what we would want to do, and then it's more a case of finding the best route to procurement"	Guiding
	WC members	<i>Conventional option</i>	Accounting
Board members	"Is it because that we're the project board, we sort of sign off on the specifications that we don't sign off on who the final decision tendering is? It's a procedural issue as to whether we as the project board, we sign up to the specifications and we're happy with that...and now we just leave it to the project team to decide?"		
Supplier presentation	Conventional presentation	<i>Conventional option</i>	Guiding
	Demonstration style	"But we also need to make sure that we have a program of what we want...because if not they would just take us through things that they are interested in. We need to be quite prescriptive, that's the word"	
Tender scoring	Technical capabilities	"Yes, well I've used both, so technically, technically I can't split... I could split on fine grain bits and pieces"	Referring
	Financial weighting	"I think if I'm honest, it's not going to come down to pricing is it? So I'm not sure if doing that [requesting for different maintenance costs]...is going to be much of a difference"	Referring
	Support weighting	"Now the only thing that could happen is if they dig themselves a big hole, and even if that support line came back as zero, is it going to change the whole score enough?"	Referring

Table 5.2 – Summary of the emerged options in the print software sourcing exercise

Some options arose as a means to account for their actions. For instance, the option to wait for the Consultant's feedback in deciding what to include in the ITT document was a means to ensure that possible gaps in their expertise were covered. Similarly, the ITT approval activity also saw an option that emerged as a means to account for that particular activity i.e. to have all Board members approve the document. During the ITT preparation, the option to do site visits emerged so that the outcome from these visits could offer guidance on what should be included in the document. Thus, this reason legitimised the actions taken based on this option.

5.4 Sourcing of print hardware

5.4.1 Overview of the case

The final section is about the purchase of print hardware, the print devices that would cater for the requirements of the new managed print service. Since the existing print fleet was made up of multiple types of devices, the new fleet is expected to be more uniform, as well as multi-functional. The sourcing routine started off the same as the previous two sourcing exercises, with the selection of the procurement framework. Several options emerged throughout the project team's discussion, which include: (1) the DPC Limited, and (2) the NPA frameworks. The final decision, however, was to use a combination of the two frameworks. For the preparation of the ITT document, the project team opted to rely on Consultants to lead this activity. Although there was a suggestion to opt for input from potential suppliers, this option was challenged and eventually disregarded. The approval of the ITT was initially thought to only involve the IT Director, however it was later changed to include all of the Board members. One major difference about this case compared to the other two sourcing routines was the evaluation strategy. Particular attention was given to this as there were several commercial options involved in the tender, which made it complex and thus difficult to evaluate. Additionally, there was also the option of changing the finance to quality percentages for the overall criteria in order to get a more justified evaluation. Thus, a specific evaluation strategy was planned out among the Committee members.

5.4.2 How the options emerged

Project creation

For the activity of selecting the procurement framework, initially the choice was between the NPA and DPC framework. However, the Committee eventually opted to use a combination of the two frameworks for their sourcing exercise.

As usual, the initial part of the sourcing routine was to choose an appropriate procurement framework. Similar to the print software case, this sourcing of the print hardware relied on being flexible in terms of the range of suppliers. Due to this, several frameworks were suggested as per the conversation below:

Procurement Head: Do you think there's a framework agreement that can meet what we want? Or do we have to do something bespoke? Do an RFP [request for proposal], a PQQ [pre-qualification questionnaire]?

Consultant: There will be frameworks...I mean the obvious one would be the RM1599 one. There's also LPP...I know that's a London one...it comes down to the range of suppliers

Procurement Head: [NPA] and also [Delta]...

Consultant: The [DPC] yeah...the thing will be is to look at the suppliers that are on those frameworks, you'll get a mixture of manufacturers and you'll get all the big players...the only question is whether there are also some of the smaller, you know...people like [SupplierD]...it's just a question of, is the framework flexible enough, and are they the right range of suppliers on there? It comes down to that"

(WC meeting 14)

Apart from the range of suppliers, there was also the issue of commercial requirements. While discussing this, the Procurement Head mentioned that there were currently three options, which were: (1) purchase devices, (2) lease devices, and (3) cost-per-copy for all (i.e. devices, consumables, services). When the Technical Head challenged these options by suggesting a fourth one, which was to buy the devices up-front including consumables and services, the other Committee members seemed reluctant.

Procurement Head: I suppose we didn't really discuss that with [the Consultant], one thing he did say was depending on what option we pick

here determines what type of framework we use and also it gives you less flexibility

Technical Head: I'm not saying we have to put it here, I'm just saying hypothetically we end up with a consumables and service cost that's 3 million quid a year, I'm just picking random numbers here...we need something to benchmark this something against to work out where our value lies. I don't think we necessarily need it in here, but I do think it would be interesting

(WC meeting 20)

But then the Project Manager joined in the conversation and asked about consumables to which the Technical Head responded:

Technical Head: What sort of services would we be buying if we bought those damn devices?

Procurement Head: Break-fix?

Technical Head: But that comes with the devices...I'm just playing devil's advocate here

Procurement Head: Should we put in 'if we purchased all' [in the commercial requirements]?

Technical Head: Well they can't best guess the purchase of consumables

(WC meeting 20)

Therefore, by challenging the already set existing options, the Technical Head opened up another commercial option (although it was eventually discarded). As mentioned by the Procurement Head, whichever option they chose would determine the framework they use. Eventually, as even the Board could not decide on a specific option to use, they decided to include the first three commercial options in the ITT document. This evidently affected the framework they chose. In the supplier briefing held after the ITT was released, the Project Manager stated that the tender would be done through two frameworks, which was very unconventional. The two frameworks were: (1) DPC Limited, and (2) NPA, so only suppliers participating in these frameworks would be able to submit a proposal.

Create ITT

For the preparation of the ITT document, it was well understood that the Committee opted for having Consultants as the lead in this activity. Another option that arose was to get partial input from third parties, such as potential suppliers to provide ideas on what specifications or requirements should be included in the ITT.

Since the beginning there had been a perception that this activity would not be successful without the help from Consultants as anticipated by the Commercial Head:

“You can’t do the business case on the machines [hardware] yet certainly, because actually until you’ve done the consultancy, you’ll have difficulty doing that”

(Commercial Head – Board meeting 0)

Other project members also shared this anticipation in the belief that these Consultants would actually benefit them in terms of producing a quality ITT document. So the option of preparing this document without any external help was non-existent.

“And also, we’re going to ask the [Consultants] to help us with that as well...based on previous experience, those were the areas that I felt we could do with external help...the tendering and contracting side of things, and the strategy and the policy side of things”

(Procurement Head – Board meeting 1)

Another option in the preparation of the ITT was to get input from potential suppliers, however, this was challenged by the Procurement Head who believed that it would be irrelevant because she needed to get the document released as soon as possible due to the tight deadlines.

Procurement Head: They want us to have the supplier day, and then release the ITT?

Project Manager: Yeah, so the supplier day is actually during the period before it’s released

Procurement Head: I’d rather do it the other way round

Project Manager: I think he [the Consultant] thinks that the suppliers might put something that we might have to put back into the ITT

(WC meeting 16)

Accept ITT

The approval of the ITT saw the option of either having the IT Director as the final approver, or the whole of the Board.

On the approvals of the ITT, it was brought up that the IT Director wanted to be the sole final approver (besides the Committee). However, the Project Manager challenged this option as he believed that getting the entire Board to review the document would provide a more universal feedback.

“It would be interesting if this goes to the board actually because I was concerned that by being too close to [IT Director] I was giving too much [effort] to the supplier requirements and not enough to user and business requirements [...] He thinks he speaks for the [whole organisation]...I think that’s what he does feel, which is why I’m in a difficult position. Because we have representatives in the project board, it kind of defeats the purpose of having that project board if he’s just going to speak for everybody”

(Project Manager - WC meeting 18)

Even the Board members questioned why they had not been involved with the ITT as they also believed that the document was too critical for them not to review. Eventually, the ITT was reviewed by all the Board members and given their final approval prior to being released.

"You’ve had these discussions about the print [hardware] specifications, but I would have thought this group needs to be sure it’s the right specifications, because I kind of thought we’ve already got to one...so this is maybe refining the details of what we’ve already agreed isn’t it?"

(Project Executive - Board meeting 4)

Evaluation period

For the evaluation of the tender responses, there were several discussions concerning the evaluation criteria such as the financial weighting, and how to deal with the different commercial options.

When it came to the evaluations, there was a concern that the set weightings of the different criteria would not be sound enough for this print hardware sourcing routine. As suggested by the Technical Head, a strategy that uses a grid scoring format would allow all the criteria to be reviewed fairly.

“My only concern buried in the midst of that is that we don’t end up with a solution that is 100% financially sound, but functionally completely useless, and it’s finding that balance. And is what I’m interested in, is that we have that grid of scoring, which balances, rather than ending up halfway toward the wrong place”

(Technical Head – WC meeting 20)

The above suggestion could be feasible as, according to the conversation below, the procurement frameworks they used did not restrict them to certain percentage breakdowns in terms of weighting.

Procurement Head: [The Consultant] says that none of the frameworks he’s looking at particularly confine us in terms of, you know some of them says ‘you must have 25% of this and 25% of that

Technical Head: Well most of ours will be pretty sensible along the standard lines anyway

Procurement Head: You can do 60-40 [60% quality, 40% financial], you can do what you want

(WC meeting 20)

Part of the reason the evaluation strategy was discussed more for this sourcing exercise compared to the other two was due to anticipation. For instance, the Consultant anticipated that because this tender was quite complex due to the many commercial options involved, they may find themselves having trouble figuring out how to evaluate the tender responses once they were received. Because of this, a customised evaluation strategy was well-planned out and thought through.

Obviously we don’t want to get to the point where the responses come back and then we sit around saying ‘what do we do next?’ ...so it’s just agreeing on what are going to be the actions we want to do during that phase”

(Consultant – Hardware tender scoring strategy discussion)

Even the little details of the evaluation were based on anticipation such as in the conversation below where they predicted the type of responses they might receive for particular questions in the tender.

IT Representative: But some of the questions are ‘can you deliver by ‘X’ or can you do ‘Y’’, so how do you mark them?

Technical Head: Mark 5 for a bog standard response, if they come back and they say ‘we can deliver with a gold plated vehicle and we will slide gently to the rail ramp with cushions’, that’s a more

positive answer...but if they turn around and say 'we'll deliver these at your expense'

Procurement Head: On our usual scoring sheet we have a guide at the bottom that says 'zero' means less, '1-2' means this, '9-10' means that...

Consultant: Yeah, that's what we're using...I can understand where you're coming from, there are some individual questions that...what we really need to look for, for questions to be more than satisfactory...and what do we need to look for if an answer is poor? So I put in some guidance on that as well on the spreadsheet

(Hardware tender scoring strategy discussion)

A week following the evaluation strategy meeting, there were still some concerns regarding the evaluation activity. As the Technical Head mentioned, he was concerned about the timeframe if they received too many responses. Indirectly, he was suggesting that they might need to re-visit the evaluation strategy by maybe simplifying it.

Technical Head: I'm just slightly cautious about our timeframe depending on responses

Project Manager: Yes, well I'm also worried about that.

Technical Head: If we do get more than a handful of responses and even if we do that [in a] day and a half, we've got to read them.

Project Manager: I think we need to re-visit this thing, which is what I wanted to do actually.

Technical Head: I mean I could probably read through ten at best guess. Whether or not I can get anywhere close to 21 is...

Project Manager: Kind of why I'd have liked to have had [Procurement Head] at this meeting really.

(WC meeting 21)

The Project Manager also challenged the current evaluation plan they had in place saying that, although they needed it to be flexible, they also want it to be complete enough so that everyone involved in the scoring would be clear on their role, especially in terms of the financial scorings due to the different commercial options. This concern also relates to the timeframe they had, which was really tight.

Technical Head: To be honest with you I'd keep it flexible because [it depends] on the results and what they can return

Project Manager: What I'm worried about is to make sure when I'm not around we are evaluating the financial side of it and make sure that everybody knows what they're doing, what we're trying to achieve and gets on with it and doesn't fuff about by asking silly questions because time will be of the essence they need to be focused and get on with it

(WC meeting 21)

Following all the discussions on evaluation, the scoring strategies and relevant parties were appointed up-front so that when the tender proposals were received, they were able to execute their actions instantly and complete the evaluation in a timely manner. The final decision was to get a number of project members (including one or two outside the Committee) as well as the Consultant to mark the quality section of the tender i.e. based on requirements, while the Project Manager and Procurement Head marked the cost section separately. A specific date was also chosen for key members to sit down and consolidate the scores to come up with a shortlist of suppliers for the next round of evaluation, the interviews. After the three interviews were held, the Committee members including the additional few that were brought in for this evaluation activity followed through with a debriefing discussion. The discussion led to the majority agreeing with pursuing SupplierK as the preferred supplier.

5.4.3 The outcome

From the narratives, it can be observed that options explicitly emerged for four of the sourcing activities as illustrated in *Figure 5.4*. Firstly, for the selection of the procurement framework, no particular framework was focused on throughout the process while the project team explored various options. However, the NPA and DPC frameworks were both mentioned on a few occasions. The final option to use a combination of these two frameworks emerged though a suggestion made based on the requirement to have some sort of flexibility but with low risk. So a combination of the two frameworks was the best option to guide this particular sourcing exercise (for print hardware). Secondly, the option to depend heavily on a third party (i.e. the Consultants) for the preparation of the ITT document emerged as it was suggested that the Consultants would provide a lot of guidance that would benefit them in terms of completing a quality document, as

well as offering better accountability. Besides that, there was also the option of getting potential suppliers' input before the document was finalised. However, this option was challenged by the Procurement Head as taking up too much of the little time they have.

Thirdly, on the ITT approvals, initially the option was to get only the IT Director to approve it before its release but this was challenged by the Project Manager, who believed that the other Board members would provide a more rounded review; thus providing valuable feedback and guidance on how to improve the document. Lastly, there were several options that arose in terms of the evaluation criteria. Initially there were some serious discussions on the weighting of financial scorings to the quality scorings with the Technical Head suggesting a grid-like scoring format to enable them to find the right balance between the two aspects. A balanced scoring system inevitably forms accountability for the evaluation activity, to a greater degree. Additionally, there were some discussions on how to score the different commercial options, which was anticipated to be quite a complex thing. This led to the Committee conducting a meeting dedicated to discussing the evaluation strategies for the print hardware. The eventual suggestion was to get the assistance from the Finance Head to prepare a financial scoring model (template) that covered all commercial options.

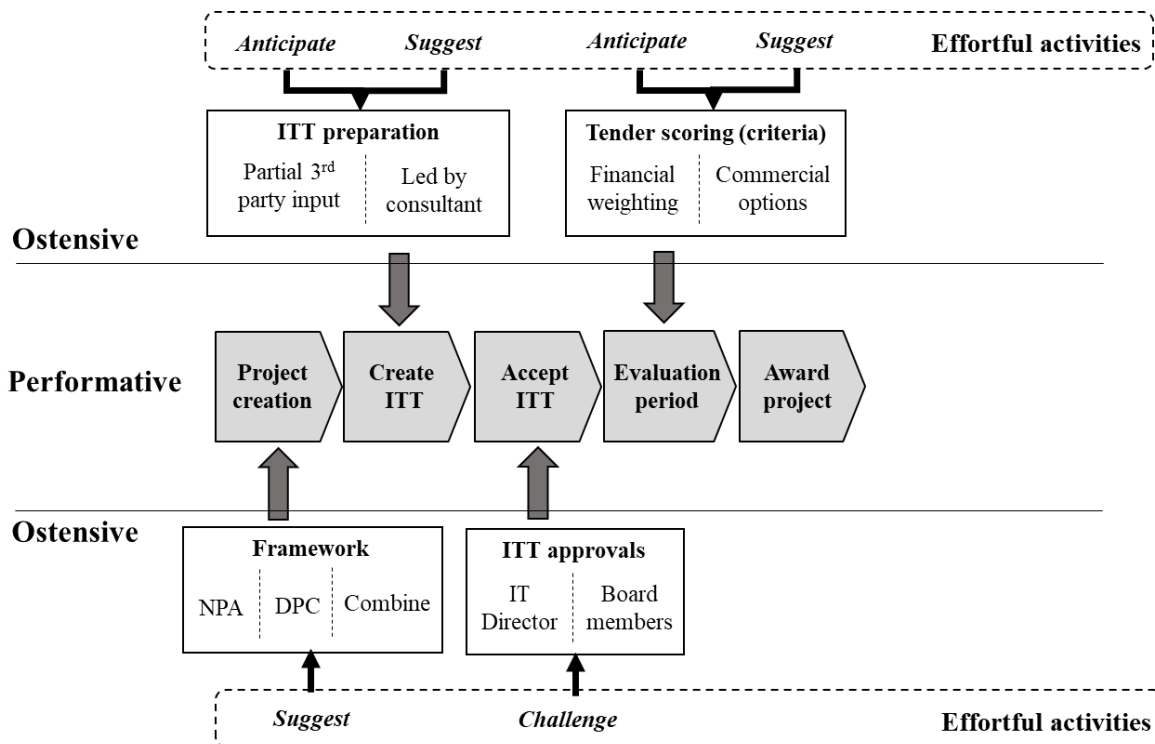


Figure 5.4 – Options that emerged during the print hardware sourcing routine

Routine activities	Options	Evidence	Legitimation mechanism
Framework	DPC	"The [DPC] yeah, the thing will be is to look at the suppliers that are on those frameworks, you'll get a mixture of manufacturers and you'll get all the big players...the only question is whether there are also some of the smaller, you know...people like [SupplierD]"	Referring
	NPA	"There will be frameworks...I mean the obvious one would be the RM1599 one. There's also LPP...I know that's a London one...it comes down to the range of suppliers [...] [NPA] and also [DPC]..."	Referring
	Combination	"The procurement framework that we'll be using...we intend to use a pre-existing framework, there's some discussion to be heard as to which one is more appropriate particularly as to whether we buy or lease"	Referring
ITT preparation	Led by consultant	"You can't do the business case on the machines [hardware] yet certainly, because actually until you've done the consultancy, you'll have difficulty doing that" "And also, we're going to ask the print specialists to help us with that as well...based on previous experience, those were the areas that I felt we could do with external help...the tendering and contracting side of things"	Guiding Accounting
	Partial 3rd party input	"I think he [the Consultant] thinks that the suppliers might put something that we might have to put back into the ITT"	Guiding
	IT director Board members	<i>Conventional option</i> "It would be interesting if this goes to the board actually because I was concerned that by being too close to [IT director] I was giving too much [effort] to the supplier requirements and not enough to user and business requirements"	Guiding
Tender scoring	Financial weighting	"My only concern buried in the midst of that is that we don't end up with a solution that is 100% financially sound, but functionally completely useless, and it's finding that balance"	Accounting
	Commercial options	"Obviously we don't want to get to the point where the responses come back and then we sit around saying 'what do we do next?'...so it's just agreeing on what are going to be the actions we want to do during that phase"	Guiding

Table 5.3 – Summary of the options that emerged in the print hardware sourcing exercise

All these options arose during routine enactment of many deliberative actions such as making suggestions, posing challenges, and through anticipation. In addition to these deliberative actions, the options that arose were also a way of legitimising the activities carried out by the routine actors, through referring, guiding, and accounting. For example, for the selection of a procurement framework, initially the DPC and NPA frameworks were mentioned as they had the potential to be the best option for the sourcing routine due to the type of suppliers on these frameworks. However, the Committee eventually opted to use a combination of the two frameworks to gain more variety in terms of the possible suppliers. Thus, this option is unique to this context and is legitimised through reference to this context. Alternatively, options can also provide legitimacy by providing accountability. For example, having the Consultant lead the ITT preparation, and the

option of finding the right balance for the financial weighting ensured that actions taken could be accounted for. Lastly, some options emerged as a means to guide the actions in routine enactment. For example, getting the Board members to verify the ITT document helped the Committee to improve the document based on their feedback and guidance. Similarly, the option to discuss how to evaluate the different commercial options was to ensure that when it came to the tender scoring activity, the Project members already had a guide on what they should do. Thus, enacting these options was legitimised as they offered guidance for ensuring the routine activity was enacted efficiently.

5.5 Conceptual interpretation

The three narratives provide evidence that options emerged during routine enactment as the result of multiple deliberative actions: challenging, suggesting, and anticipating. The routine actors engaged in activities that involved deliberation on the information they collected based on their experiences, evidence gathering, and also planned activities. The actors exercised their agency by evaluating and deliberating on the situation that led to the emergence of the various options for each individual routine enactment. These effortful activities, which I label as deliberative actions, formed the mechanism for how the options emerged. There were also multiple sources that triggered these deliberative actions. One of them was the dependency on multiple individuals or parties, such as potential suppliers, consultants, other organisations, and also senior management. This was due to the inexperience of the Committee members in carrying out the sourcing routines specifically for the Print Project. This also led to the second source, perceived expectations. Due to their inexperience in addition to their multiple backgrounds, the Committee members had different perceptions when it came to what they expected to encounter during the routine enactment. The interdependencies and perceived expectations triggered the deliberative actions resulting in the emergence of multiple options during routine enactment.

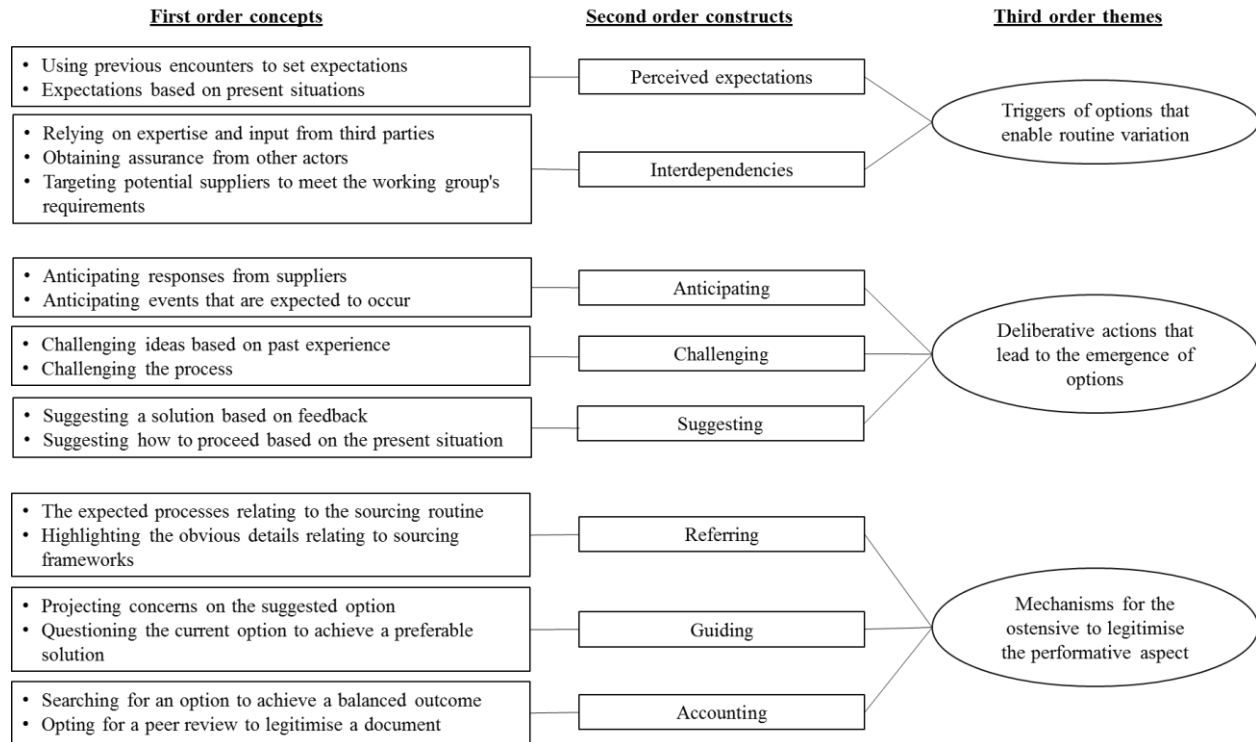


Figure 5.5 – Theoretical constructs for the emergence of options as a legitimation mechanism

For the individual sourcing routines, options emerged at different parts of the routines. For instance, in one routine performance, a part of the routine may have had some options whereas in another routine performance, there were no options. An example of this was the interview format during the evaluation stage, in which there was discussion of options for the sourcing of print software whereas the other two sourcing exercises did not focus on it as much. In another example, in terms of the evaluation strategy, the sourcing of the print specialists only involved options in terms of the overall process of that activity. On the other hand, the other two sourcing exercises focused on the evaluation criteria where various options emerged. The reason why the options differed was because each routine had its own distinctive objective. For instance, the aim of the routine in the first case was to obtain the service of consultants whereas in the other two cases the aim was to purchase products, with one having a value almost double the other. Due to the different objectives, different preferences and priorities were set for the individual routines. That is why there was a diversity of options that emerged for varying activities. Nonetheless, the consistent appearance of deliberative actions that gave rise to the options in all three cases, means that it can be generalised in other conditions or routines.

What needs to be noted is that the options emerged ostensively first, before being translated into the performative aspect i.e. routine performance. The three deliberative actions thus gave rise to options, which were formed ostensively. These options then became a mechanism to refer, guide, and account for the performative aspect of the routine. Referring, in the ostensive to performative relationship, is when the ostensive is used to signify similar patterns of activities or performances that create a routine. In this study, referring is constantly used to deliberate on distinctive situations where only certain options are the most practical. For instance, for the print hardware sourcing routine, the option to adopt two procurement frameworks is referred to as the most practical one based on the requirements of the Print Project. The ostensive aspect of the routine allows actors to describe their performance in ways that make sense of what they are doing. In other words, it can be used to account for the actions taken during routine performance. When options emerge as the result of deliberative actions, indirectly the actors are in the process of finding a solution that would account for their actions. For example, in the print software sourcing routine, the option to involve the IT Director in the ITT approvals is a strategy to obtain more accountability for the document in case it is challenged in the future. Lastly, the ostensive aspect of the routine serves as a guide, but does not provide specific details on how to perform the routine. Some options emerge as a specific guide to how to perform the activities within the routine. For instance, for the sourcing of the print specialists, the option to obtain involvement from potential suppliers during the ITT preparation is so that their input could offer some guidance as to what to include in the ITT document.

In summary, the emergence of options enables flexibility in both the ostensive and performative aspects. The options emerge ostensively as the routine actors deliberate through their thoughts on how to enact the routine, depending on the problem and situation. These options then form the legitimation mechanism for routine actors to perform the routine, thus allowing performative flexibility without jeopardising the validity of the routine.

Table 5.4 – Evidence of the theoretical constructs for the emergence of options as a legitimation mechanism

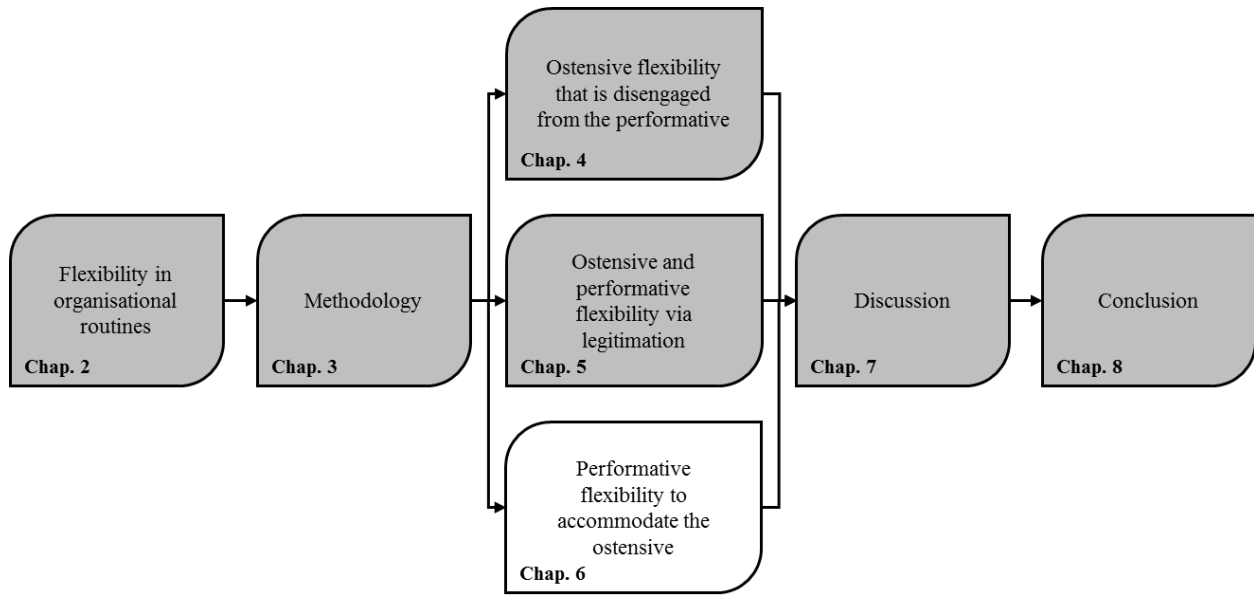
Illustrative evidence (1 st order)	Theoretical observations (2 nd order)	Theoretical constructs (3 rd order)
<p>Expectations based on present situations</p> <p>“I think if I’m honest, it’s not going to come down to pricing is it? So I’m not sure if doing that [requesting for different maintenance costs]...is going to be much of a difference” (<i>Procurement Head</i>)</p> <p>“The procurement framework that we’ll be using...we intend to use a pre-existing framework, there’s some discussion to be heard as to which one is more appropriate particularly as to whether we buy or lease” (<i>Project Manager</i>)</p>	<p>Perceived expectations</p>	
<p>Using previous encounters to set expectations</p> <p>“I remember doing the national ones and they had forty-seven responses. You just sit there with a really big monitor and you just pick through the columns. You actually do it that way. It’s the only way you can focus but it’s a bloody nightmare and it really matters what they put in the boxes because you’re not going to read around what they’ve written” (<i>Technical Head</i>)</p> <p>“Yes, well I’ve used both, so technically, technically I can’t split... I could split on fine grain bits and pieces” (<i>Technical Head</i>)</p>		
<p>Relying on expertise and input from third parties</p> <p><i>Project Manager:</i> The one thing we haven’t made quite so much progress on is the print management software. And that’s for a couple of reasons really, [technical head’s] availability has not been great before Christmas...he has always said that he would have greater availability after Christmas, so we expected that.</p> <p><i>Procurement Head:</i> I think it’s more than that, because we haven’t really decided that...we weren’t really sure how to get to the bottom of it, so we thought why don’t we wait for the print specialists on it. We can use that expert knowledge to give us another opinion on it because we’ve got different opinions in the group if that makes sense</p> <p>“Well not from what these guys [potential suppliers] said this morning, [if we go] down the [NPA] route, we’ve got flexibility...to some extent obviously...You’ve probably got it narrowed down in your head to either [SoftwareP], [SoftwareE], possibly not [SoftwareS]” (<i>Procurement Head</i>)</p> <p><i>Project Manager:</i> I think print strategy is kind of their bread and butter isn’t it...as well as audit. The service design component might not be their [expertise] so well.</p> <p><i>Procurement Head:</i> I’ve had an offer from a few of them to [xxx] this ITT, but I’ve not done that...I don’t think it’s quite fair, I have thought about that about service design as well...I could speak to them over the phone, a couple of them...see if we put that in the ITT, would they [be OK with it]. They might not have come across that wording, but they might have had to write some operating procedures...how all the different bit are going to fit together</p> <p>“Well I think if we could schedule the [SoftwareS] visit, the [SoftwareP] visit, and then we could have a look at the feature-set of [SoftwareE]...I suspect after that we will have a decision on what we would want to do, and then it’s more a case of finding the best route to procurement” (<i>Technical Head</i>)</p>	<p>Interdependencies</p>	<p>Triggers of options that enables routine variation</p>

<p align="center">Illustrative evidence (1st order)</p>	<p align="center">Theoretical observations (2nd order)</p>	<p align="center">Theoretical constructs (3rd order)</p>
<p>Targeting potential suppliers to meet the working group's requirements “But we also need to make sure that we have a program of what we want ...because if not they would just take us through things that they are interested in. We need to be quite prescriptive, that’s the word” (<i>Project Manager</i>) “There is actually an [PP] framework and there’s at least two companies on there that I’ve already spoken to...and they do seem to know what they’re doing” (<i>Procurement Head</i>)</p>		
<p>Obtaining assurance from other actors “You’ve had these discussions about the print [hardware] specifications, but I would have thought this group needs to be sure it’s the right specifications, because I kind of thought we’ve already got to one...so this is maybe refining the details of what we’ve already agreed isn’t it?” (<i>Project Executive</i>) “The ones I spoke to are quite knowledgeable, there’s 5 or 6 on the framework ...maybe more actually, some I don’t know...some, quite a few I’ve spoken to [SupplierU] is probably I talked to the most...but the framework is actually for audit, not for print specialists...so we can’t really squeeze this through the framework, so I’m just going to do it as an ordinary procurement open procedure...but I’ll write to all the ones that are on the framework saying you’re maybe interested in this” (<i>Procurement Head</i>)</p>		
<p>Anticipating responses from suppliers <i>IT Representative:</i> But some of the questions are ‘can you deliver by ‘X’ or can you do ‘Y?’’, so how do you mark them? <i>Technical Head:</i> Mark 5 for a bog standard response, if they come back and they say ‘we can deliver with a gold plated vehicle and we will slide gently to the rail ramp with cushions’, that’s a more positive answer...but if they turn around and say ‘we’ll deliver these at your expense’ <i>Procurement Head:</i> On our usual scoring sheet we have a guide at the bottom that says ‘zero’ means less, ‘1-2’ means this, ‘9-10’ means that... <i>Consultant:</i> Yeah, that’s what we’re using...I can understand where you’re coming from, there are some individual questions that...what we really need to look for, for questions to be more than satisfactory...and what do we need to look for if an answer is poor? So I put in some guidance on that as well on the spreadsheet</p>	<p align="center">Anticipating</p>	<p align="center">Deliberative actions that lead to the emergence of options</p>
<p>Anticipating events that are expected to occur “Obviously we don’t want to get to the point where the responses come back and then we sit around saying ‘what do we do next?’...so it’s just agreeing on what we are going to do, be the actions we want to do during that phase” (<i>Consultant</i>) “He’ll acknowledge it...we’ve got time. I think we pretty much realised it we’re not going to get the kick-off meeting with them before Christmas, but if we put the kick-off meeting in for the first week of January” (<i>Procurement Head</i>)</p>		
<p>Challenging ideas based on past experience “You can’t do the business case on the machines [hardware] yet certainly, because actually until you’ve done the consultancy, you’ll have difficulty doing that” (<i>Commercial Head</i>)</p>	<p align="center">Challenging</p>	

Illustrative evidence (1 st order)	Theoretical observations (2 nd order)	Theoretical constructs (3 rd order)
<p>Challenging the process</p> <p>“Is it because that we’re the project board, we sort of sign off on the specifications that we don’t sign off on who the final decision tendering is? It’s a procedural issue as to whether we as the project board, we sign up to the specifications and we’re happy with that...and now we just leave it to the project team to decide?” (<i>R&D Representative</i>)</p>		
<p>Suggesting a solution based on feedback</p> <p>“I have spoken to quite a few of them [print specialists] that are already on the framework, I’m not actually sure if I’ll go through with the framework because...the other thing is it’s quite specific in the buyer’s guide for the framework, it’s about audit...and I’m not sure that we need the audit right now, it doesn’t really fit the scope” (<i>Procurement Head</i>)</p>		
<p>Suggestion how to proceed based on the present situation</p> <p>“Because only two of them came back, and there’s not much between them...so we’ll see them both I presume. And the idea is that we just get them to take us through the answers that they’ve given...answer and questions...and if we want to change any of our scores after that, then we can. There aren’t any specific scores attached to the interview, but if we sort of want to revisit any of our scores, we could do” (<i>Procurement Head</i>)</p>	Suggesting	
<p>Highlighting the obvious details relating to sourcing frameworks</p> <p>“Since it’s a non-EU framework [i.e. open tender], we can do what we want. We can do it to 2 weeks. Usually they complain if it’s less than 3 weeks...so I think 3 would probably be OK” (<i>Procurement Head</i>)</p> <p>“There will be frameworks...I mean the obvious one would be the RM1599 one. There’s also LPP...I know that’s a London one...it comes down to the range of suppliers [...] [NPA] and also [DPC]” (<i>Consultant</i>)</p>		
<p>The expected processes relating to the sourcing routine</p> <p><i>Procurement Head:</i> So this would be on the panel to read the tenders that are submitted from the print specialists and sit through the presentations. We would do a short-list, we don’t imagine there’ll be any more than three presentations to do.</p> <p><i>Project Manager:</i> No, but we’ve got a scoring scheme haven’t we?</p> <p><i>Procurement Head:</i> We have, yeah...it’s pretty straight forward</p> <p>“Remember the interviews [demonstration presentation] are only to inform the questions on the sheets [tender response] one way or the other, at the moment...we’ve already got a winner [i.e. SupplierI]. Now the only thing that could happen is if they dig themselves a big hole, and even if that support line came back as zero, is it going to change the whole score enough?” (<i>Technical Head</i>)</p>	Referring	Mechanisms for the ostensive to legitimise the performative aspect
<p>Projecting concerns on the suggested option</p> <p><i>Procurement Head:</i> They want us to have the supplier day, and then release the ITT?</p> <p><i>Project Manager:</i> Yeah, so the supplier day is actually during the period before it’s released.</p> <p><i>Procurement Head:</i> I’d rather do it the other way round.</p> <p><i>Project Manager:</i> I think he [the Consultant] thinks that the suppliers might put something that we might have to put back into the ITT</p> <p>“And my concern is that we don’t go down a route that restricts a list of manufacturers, have to make sure that they all support anybody on the [NPA] framework. So that’s sort of deciding we’re using the [NPA] framework” (<i>Procurement Head</i>)</p>	Guiding	

<p align="center">Illustrative evidence (1st order)</p>	<p align="center">Theoretical observations (2nd order)</p>	<p align="center">Theoretical constructs (3rd order)</p>
<p>Questioning the current option to achieve a preferable solution</p> <p>“It would be interesting if this goes to the board actually because I was concerned that by being too close to [IT Director] I was giving too much [effort] to the supplier requirements and not enough to user and business requirements [...] He thinks he speaks for the [whole organisation]...I think that’s what he does feel, which is why I’m in a difficult position. Because we have representatives in the project board, it kind of defeats the purpose of having that project board if he’s just going to speak for everybody” (<i>Project Manager</i>)</p> <p>“The [DPC] yeah...the thing will be is to look at the suppliers that are on those frameworks, you’ll get a mixture of manufacturers and you’ll get all the big players...the only question is whether there are also some of the smaller, you know...people like [SupplierD]...it’s just a question of, is the framework flexible enough, and are they the right range of suppliers on there? It comes down to that” (<i>Consultant</i>)</p>		
<p>Searching for an option to achieve a balanced outcome</p> <p>“And also, we’re going to ask the print specialists to help us with that as well...based on previous experience, those were the areas that I felt we could do with external help...the tendering and contracting side of things, and the strategy and the policy side of things” (<i>Procurement Head</i>)</p> <p>“My only concern buried in the midst of that is that we don’t end up with a solution that is 100% financially sound, but functionally completely useless, and it’s finding that balance” (<i>Technical Head</i>)</p>	<p>Accounting</p>	
<p>Opting for a peer review to legitimise a document</p> <p>“Well...I want to get it [ITT] out tomorrow, ideally...but I’d like you [Project Manager] to look at it first before it goes out really. So it’s not just me.” (<i>Procurement Head</i>)</p> <p>I’m wondering whether we ought to...we could get [IT Director] to [review it too] ...he’s probably alright on this one but it will be good. (<i>Project Manager</i>)</p>		

**CHAPTER 6 : PERFORMATIVE FLEXIBILITY TO ACCOMMODATE THE
OSTENSIVE**



6.1 Introduction and overview

This chapter focuses on sourcing routines for the print software and print hardware. Below is a list of all the main suppliers involved in either one, or both sourcing routines. A reseller is a supplier that sells products from other manufacturers, thus acting as a third party. A manufacturer on the other hand supplies its own products directly to customers. From the list of suppliers, SupplierD and SupplierT have worked with PublicCo prior to the Print Project.

Supplier	Type of supplier	Products
SupplierB	Reseller	SoftwareS
SupplierD	Reseller	Multiple: SoftwareS, HardwareH
SupplierI	Reseller	SoftwareP
SupplierK	Manufacturer	HardwareK
SupplierP	Reseller	HardwareS
SupplierT	Reseller	Multiple: SoftwareS, HardwareH

Table 6.1 – Summary of the various suppliers and their products

The focus of this chapter is on how the routine performances involve decoupled activities as a mechanism for flexibility. Decoupling generally refers to the creation and maintenance of gaps between formal policies, and actual organisational practices. Decoupling can be an action that does not align with the actual process of doing things, but still achieves similar outcomes. For instance, a process consists of activities A, B, C and D in order. A person performs activities A and B, but

skips activity C to move straight to activity D. Nonetheless that person still manages to achieve the same outcome as though they carried all activities. However, decoupling can be more than just skipping activities within a process. It could also mean deviating from a process to reach a targeted goal. For example in a hiring routine, the activities can be manipulated in order to obtain the preferred candidate. Decoupling in this chapter refers to similar activities where the routine is performed flexibly through decoupled activities to accomplish targeted outcomes.

The following two sections are descriptive narratives for the software and hardware sourcing routine. The narratives provide insight into sources that trigger decoupled activities, and how these decoupled activities occur or develop in the routine performance. The final section is a discussion on the theoretical constructs built, based on the analysis of these narratives.

6.2 Decoupling in the software sourcing routine performance

6.2.1 Overview

Talks about print software began early on in the Print Project. Initially, it was not yet certain whether the software should be purchased on its own, or combined with the hardware. After numerous discussions and advice from the Consultants, the Committee decided to purchase the print software separately from the hardware. The existing print management software in use at PublicCo is SoftwareS provided by SupplierD, and an internal software called SoftwareO, which is obsolete. The intention of the Print Project was to obtain a unified software that had the capabilities to do many new things as specified in the ITT document. Before the ITT was released, the Committee explored three potential software products, SoftwareS, SoftwareE, and SoftwareP. But when the proposals come back, one supplier proposed SoftwareP, and two proposed SoftwareS. Thus SoftwareE was not an option based on the proposals.

The next sections are two detailed narratives on the activities relating to the sourcing of the print software, which include: (1) the sources that trigger decoupled activities which are categorised as: *experience*, and *uncertainties*, and (2) the activities that were considered a form of decoupling.

6.2.2 Sources of decoupling

There are many sources and combinations of sources that lead to decoupling activities in the sourcing routine for the print software.

Experience. The Print Project operated according to a certain project timeline. There were certain parts of the activities that were pushed forward or backwards based on insight from the Committee's experiences. For instance, when discussing the suggested response time for the potential software suppliers to reply with a proposal, the Procurement Head suggested to push for two weeks for suppliers to respond, which would provide the Committee plenty of time to shortlist the responses and invite the selected few for a demonstration session. Because the Committee was moving ahead with an open tender, they were not bounded by any specific timelines. However, the Procurement Head did mention that suppliers would usually complain if they were given less than three weeks to respond, based on her experience. Thus the Committee decided to maintain the usual 3-week response time.

Because the Committee could not push for a shorter response time, this directly affected the subsequent activities' timeline, such as the time to actually evaluate the responses and make a decision. In another example, the Procurement Head proposed to cut time by 'squeezing' the phased approach for the final system roll out. Even though a phased approach was possible if the Committee did all the planning correctly, from her experience, the Procurement Head anticipated that they would end up rushing to implement the different phases. Thus, she suggested pushing all activities by focusing on critical groups of staff. By following this strategy, it could provide a shorter time to complete all the other sourcing activities.

"If we plan it right we should be able to do a phased approach, but if we're pushed for time then we might end up a bit rushed [...] It's not going to be easy. I would prefer for [staff] printing to be done earlier in the summer, so that we could quickly move to the [contract staff]"

(Procurement Head – Board meeting 1)

Besides experiences on the impact of the project timeline, one of the main reasons and motivations to move away from the current supplier (SupplierD), was because of the undesirable experiences working with them, as observed in the following conversation:

Project Manager: How do we know whether they're [the numbers] right or not?

Procurement Head: Well, will they not be based on the number of clicks that [SupplierD] has charged this...based on their metering?

Technical Head: Well, there is no metering software at the moment...so it's based on what [SupplierD] tells [Print room Head] what the metering was on the devices, and then you pay what [SupplierD] tells [Print room Head]

Procurement Head: Right...so there's no audit? Ok...

(WC meeting 11)

This conversation clearly shows a trust issue between staff at PublicCo and SupplierD, which effectively means there is a negative biased perception towards that supplier. Coupled with time pressure to complete the Print Project in a timely manner, these factors ultimately encourage activities within the sourcing routine that are seen as decoupled from the usual process.

Uncertainty. As this Print Project is considered a one-off exercise that occurs only every 10-15 years, most of the issues or scenarios faced by the Committee were new to them. So there were constant uncertainties. Take for example knowledge on various types of print software. Apart from the Technical Head, the rest of the Committee were quite unknowledgeable about the products. This led to the Print room Head suggesting they engage in some activities in order to gain more insights into these different software products.

Project Manager: We need to make a decision [on software selection] by this point, and the activities that we need to participate in to help me make that decision, let's think about those and do them now. I'm not quite sure what they would be, what would help me with that decision

Print room Head: Do you want to go see some software? Because I can probably find easily three different ones if you give me what you want to look at

Technical Head: Well we only need to see those three [softwareP, softwareE, and softwareS][...]. We've got friends in the sector, we can do it more than one way. We can either do it here, or there, or we rig the demos internally to work with our [processes]

(WC meeting 8)

On top of not knowing the capabilities of the software, there were also concerns regarding the future of some of the products in terms of their development. This was specifically related to SoftwareS and SoftwareE, as brought up by the Print room Head:

Print room head: You know [Technical head], what's going to happen with [SoftwareS] because they shut some offices down recently...and the way I understand it is they're taking the best bits out of [SoftwareS] and blending them into [SoftwareE]

Technical head: [SoftwareE] and [SoftwareC], they're both getting the content of some [SoftwareS], so it's pushing North and South. And that's what worries me. Because there is very little investment in [SoftwareS] at the moment. There is also, the flipside of it is, they're not actually developing [SoftwareE] or anything much at the moment. They're just taking a few features, which are left over from other places

(WC meeting 10)

Upon returning from a site visit to see SoftwareP at an organisation, which had a similar setting to PublicCo, this same issue regarding uncertain future development was again brought up by the Print room Head. This suggested that he was starting to believe that it was not worthwhile to pursue more information regarding the two other software products.

"I think the other thing is the longevity of the product, because you don't know what's going to happen to [SoftwareS], and what's it...[SoftwareE]"

(Print room Head – Informal discussion returning from site visit)

Although the Committee member's experience had some effect on how they dealt with time in this project, there were many uncertainties regarding the temporal affects. For instance in one scenario, the Project Manager was concerned about the overall timeline as, according to him, there were a lot of activities that needed to be carried out after the software purchase, such as the probability of building a prototype modelling the new service. Because of this, he was rather adamant that they try to push forward as much as they could in terms of the software sourcing activities.

Project Manager: Because I'm worried about the thing you mentioned earlier, about the time. It's having time upfront to sort of put this in, configure, make sure you've got time because...this is the time between bringing in the hardware, and the software.

Procurement Head: We need to act quickly on it because I think ideally we'd want to know by February whether it's in or out at the latest. And that's not that long away."

(WC meeting 8)

The concern with regards to the overall project timeline was also shared with the Project Executive where, in one of the Board meetings, she highlighted the importance of meeting the target roll-out date. She also questioned whether the Committee had done enough in terms of making sure that they stuck to the planned timeline:

"The issue with the [staff] ones is, there'll be a day where we say, "Alright, now we're changing over to another system". We've already said of the summer, whilst the majority of the [staff] who are [non-Finance], there isn't a problem. The ones who are here, the [Finance staff], those are absolutely crucial times for the [Finance staff], so are we sure, we've built in enough in terms of all these things that could go wrong i.e. the library might not have...you know...I just think can you go back, just look at that [risk assessment] again, just really get that [Finance staff] part of it...put it as a big risk. Are we doing as much as we need to do?"

(Project Executive – Board meeting 2)

When a team works together for the first time, and in a rare type of project, such as the Print Project, there are bound to be different expectations. In this case, communications led to a misalignment in terms of the expectations regarding certain dates. In the conversation below, it was clear that the Procurement Head had a different idea about when the print software should be awarded, which affected how she focused on activities prior to this. For instance, in a previous meeting she had clearly mentioned that she was putting aside the print software ITT and prioritising the print specialists' ITT instead. This resulted in earlier activities within the software sourcing routine taking up more time than needed, which then led to subsequent activities having a more compressed time to be completed.

Procurement Head: 26th of March I had pencilled in for demos, we might be able to do it before then. There must be a reason I had put it for the 26th. I'm saying we could agree on it pretty quickly after the demos. So you're talking just before Easter really. That's not really in the critical path is it?

Project Manager: What I'm thinking going back to all those boxes [on the timeline], it's not just the software we've got to think about, it's the interface with all our systems. So that's what I'm worried about. And the sooner we can get that.

Procurement Head: We would have [the] preferred bidder on the 26th of March because I think once we've seen the demos, we'll be able to make a decision that day, which is the week before Easter.

Project Manager: I thought it would be much earlier than that. Can we not pull that forward?

Procurement Head: Well I was assuming we'll get it out next week didn't I? Yup...I mean giving them 2-3 weeks to get it back...OK I'll have a look at it and see if I can put it forward a week to the 19th of March then

(WC meeting 16)

While a bad experience with the current software supplier formed part of the drive to initiate this Print Project, it was also an excuse to cast aside the particular software related to that supplier (i.e. SoftwareS). Furthermore, uncertainties regarding the development of SoftwareS and SoftwareE provided an advantage for the remaining print software in the running, which was SoftwareP. Experiences and concerns with regards to time management throughout the project caused certain activities within the sourcing routine to be brought forward, and some activities to be pushed back. As a consequence, the latter sourcing activities, which mainly revolved around the evaluation phase were pressured by time and had to be completed within a tight deadline. The next section discusses the specific decoupling activities that were carried out, whether intentionally or unintentionally, leading to the purchase of SoftwareP.

6.2.3 Decoupling activities

For the sourcing of print software, a combination of triggers led to two obvious conclusions regarding the intended outcome from this sourcing routine. Firstly, was to cast aside SoftwareS, and secondly, was to proceed with SoftwareP as the preferred supplier.

Disengaged decoupling

Two decoupling activities that were disengaged from the main routine activities were building the proof of concept (POC) model using SoftwareP, and arranging a site visit to SoftwareP only.

One of the indicators that decoupling was occurring, was that there did not seem to be any valid problem with SoftwareS. When questioned by the Consultant, the Technical Head simply

said that he wanted a change from SoftwareS. In other words, his preference would be to have any software other than SoftwareS.

Consultant: Are there issues with [SoftwareS]? Is that why you're looking for...

Project Manager: There are two systems at the moment, [SoftwareO] thing, which is our internal software...and then we've got [SoftwareS], which is through [SupplierD]. I'll let [Technical head] explain

Technical Head: To be honest, I mean it's a lovely product, showing a bit longer in the tooth really. And it doesn't have all the features in the modern popular...I'm sorry I haven't read the report. But it would be interesting to see how the [staff survey] came back. But the [staff] population have been screaming for years in my wish-list about you know...I want to print from my android tablet or print from my mobile phone

(WC meeting 14)

According to the Technical Head, they needed a software product that could cater to the current requirements for the new print management system. To him, SoftwareP seemed to be able to do this although initially some of the Committee members did indirectly suggest that it could be a risk if they decided to proceed with SoftwareP. This was because there were not many other similar organisations to PublicCo that use this product.

Print room Head: I haven't heard any bad things about [SoftwareP]. [...] I think it does what it does

Technical Head: It does exactly what it does! I'm afraid [PublicCo] is very much a...a school of our thought is that we very much always bought stuff that might not be traditionally what people buy. We don't go out of our way to buy [NetworkS] network because it's too damn expensive. We take the new kid on the block and that will work

(WC meeting 10)

The above conversation shows both Committee members trying to convince themselves that SoftwareP should be pursued as the preferred software. To convince them further, the Project Manager suggested to have a POC built so that they could see the interface between the software and hardware.

Project Manager: I was thinking if you buy the software, you get it in early on, you can then actually start building the interfaces

Technical Head: This is where I wanted to be, I think the right thing to do coming back to all of this is to go and see [SoftwareP] in the flesh for you as a user to see it and say, “that would provide me with features I would want as a member of this [organisation]” [...] And then we’ll go away and you’ll turn around and say, “That’s great, I want that feature, I want that, not worried about that...”, then we can go away and shape it. The best example to see that with, is actually [SoftwareP] because it has all the features, so you can turn around and say, “Yes, yes, yes, no...maybe depending on cost”, and then we sit there and go, there’s the list of options, we put that in the tender document

(WC meeting 11)

The Project Manager constantly pushed to move quickly with the purchase of the print software in order for this POC to be built. The intent of the POC was to fix any potential problems with the interface, and address any possible issues prior to the actual roll-out of the new print service in the summer. However the push for the software to be purchased quickly indirectly encouraged the Committee members to focus their energy on obtaining SoftwareP.

“Which is one of the reasons why I’m keen to get this print management software in the bag really. That’s why I’m pushing to get that in quickly now because I think once that’s in, that gives [the Technical Head] opportunity to set the proof of concept, test it, get it integrated with all the various things...he has to do that. And actually to get the infrastructure in place in principle, so that when we get the devices [i.e. the print hardware], it is just a case of [implementing it]. I don’t want to be complacent but at least we’ve done a lot of work for testing, and the sooner we can get on with that...because I’m aware that that would be a bottleneck if we leave that too late”

(Project Manager – Board meeting 3)

Because the final purchase of the software appeared to take longer than what the Project Manager expected, he and the Technical Head decided to move ahead building the POC using a trial version of SoftwareP. In the following Board meeting, the Project Manager acknowledged that going forward with this approach had its risks. One of the main risks was that SoftwareP may not turn out to be the chosen software at the end of the sourcing exercise. However, if looking at a different angle, by having a POC that shows the successful interface using SoftwareP, it would definitely have some influence on the views of the other Committee and Board members with regards to the software.

“I’ve asked [the Technical Head] to produce a proof of concept on one of the platforms that we’ve got, and he has done some work to try to understand what’s involved in implementing that particular solution. It was a risk because it might not have won the tender, but [the Technical Head’s] going to be able to demonstrate that on the 24th March [2015]”

(Project Manager – Board meeting 4)

Besides having a POC, another activity that signified SoftwareP as the preferred supplier throughout the sourcing process was the site visit. Initially, a site visit for SoftwareE was planned out as seen in the conversation below:

Print room Head: Yup, I’ve had some responses back from [various companies] ...they’re all competing for us to go! Depends how far you want to go. The ones that have come back, there’s [ChestCo] ...

Project Manager: What are they? Are they [SoftwareE]?

Print room Head: Yup, [SoftwareE] ...they’re all [SoftwareE] because that’s what he [Technical head] wants to see. There’s [SouthCo], which is a way to go [...] and then the last one that came through this morning is [StockCo], which is a good one, because it’s a big one ...they’ve got a lot of devices there. I say it’ll be interesting because that [organisation] used to be a [SupplierD] ...it was a [SupplierP] ...they lost it on price to I don’t remember who it was, but it is [SoftwareE] anyway. So I would suggest that in terms of size, compatibility, [StockCo] would be a good one.

Project Manager: What about [SoftwareP] though? Because we talked about [SoftwareP]

Print room Head: Well do you want [SoftwareP]? Well I can do the same exercise. So now we have a [SoftwareE] site that we’re happy [with]so so now [SoftwareP] people will have a chance to offer us green tea...or whatever else

(WC meeting 9)

From this conversation, it was as if SoftwareE was the initial software that the Committee thought would be ideal for this project since it had been proven successful in other similar organisations. A few meetings later, the plan was changed slightly to include visits to different organisations for all three software products i.e. SoftwareS, SoftwareP, and SoftwareE to compare their capabilities. The Technical Head suggests that by seeing all three, the Committee would have

a clearer understanding of what they would like to set for their software specifications that are to be included in the ITT.

However, eventually a site visit was arranged only to view SoftwareP for two reasons: (1) it was the Technical Head's preferred software, and (2) the organisation they visited (i.e. ShefCo) had purchased their software separately from their print hardware, which was the approach PublicCo wanted to adopt. The idea was to gain insight into the advantages and disadvantages of SoftwareP based on feedback from ShefCo. This insight would then either help to confirm or disprove their current views regarding the software's capabilities. During the visit, there was one negative insight about SoftwareP and its supplier (SupplierI) that was related to the support service as seen in the statement below:

“The basics...they're fine. Then past them...if there's anything more in-depth, as soon as you get to [SoftwareP], they're brilliant, but the [SupplierI] support team aren't. Product is great, the support...the basic stuff in setting and configuring and all that kind of thing, is fine...but anything deeper...”

ShefCo representative – PublicCo's site visit

However, even with this input, the site visit did not change the Committee's view that SoftwareP was ideal as the preferred software. During the journey back from ShefCo, they had a discussion on how not to make it too obvious that they preferred SupplierP over others.

Project Manager: You can't just say, “right, we've decided...we're going to buy [SoftwareP]” can we?

Technical Head: That's why their points were quite interesting...welcome to the world of tendering! You want it to be competitive enough, so that you get more than one response. Because there's no point writing a tender that's just [SoftwareP]...

Project Manager: Yeah, need to be fair

Technical Head: So there's a fine line that need to be drawn between the two

(Informal discussion returning from site visit)

Engaged decoupling

There were several decoupled activities that were part of the official routine activities. These include being biased during tender scoring, and demonstrating favouritism during supplier interviews.

By preparing a more generic ITT, the Committee received several responses that offered different solutions. There was SupplierI who offered SoftwareP, and then there were SupplierB and SupplierT who both offered SoftwareS as the solution in their proposal. While comparing evaluation scores for SupplierI's proposal, there were several instances where the evaluators demonstrated a form of bias in their marks. The following conversation was one example:

Technical Head: 7B, what's that? Please describe...something (laughs)

Project Manager: Ooo...this is the device management thingy isn't it?

Technical Head: [SoftwareP] does do this, doesn't it?

Project Manager: It does...to a degree obviously

Technical Head: I mean it's not as good as [SoftwareJ]

Project Manager: Yeah, I know...the thing is they're quite lazy. I mean look at the detail

Technical Head: That's where I'm coming from...you gave it a four

Project Manager: A four? Did I? Maybe they needed a crack at the answer even though they have the capability. [He reads back his comments] I think it was a bit shit...I mean email? I thought...whereas [SupplierD], which supposedly can do less said they can actually put things on the console itself, not email!

Technical Head: We're going to compromise on a six

(Software evaluation part 1)

In the above conversation, the Project Manager had initially marked a particular section with a very low score. But when he tried to explain why he gave SupplierI such a low mark for it, the Technical Head immediately cuts him off and puts down a higher score instead without much justification. Another example is shown in the next conversation:

Technical Head: So the last one of the list, is the [SupplierI] one...see I've given a 10, look at that!

Project Manager: You've given a 10? Now who's being generous?

Technical Head: To be honest I was thinking it was a super answer

Project Manager: What was that? Which one was it? The first one by the looks of it

Technical Head: Right at the top, this is question 1.1

Project Manager: *You were immediately impressed and entered the blocks weren't you?*

Technical Head: *I was sold...question 1, solution works in our environment!
So, yes! Sorry...I'm not going to change it*

(Software evaluation part 1)

While the first example illustrates a scenario where a low score was increased, in this scenario the Technical Head provided a very high (perfect) score for one of the sections. Even when the Project Manager questioned the mark given, the Technical Head did not change his score. At the end of this evaluation session, the Project Manager raised a concern that they had rushed with this activity, but then seemed to convince himself otherwise:

"I'm just slightly worried because we are rushing this as well...we might not be able to check our working out, then we can easily make a mistake and that could be a bit embarrassing couldn't it?... And we've got all three in, if we invite all three in...then we're covering our [backs]"

(Project Manager – Software evaluation part 1)

After the scoring activity, all three suppliers were invited for an interview session, which was held as a demonstration format. But because SupplierB and SupplierT offered the exact same solution, they were invited to the interview as a joint session. Therefore in effect, there were only two software demonstrations that the Committee had to attend. Before the demonstrations, the Technical Head reminded everyone that this activity should not affect the supplier scores. According to him, the interviews were only to “*inform the questions on the sheets [i.e. tender responses]*”, and not add any new information that could increase the supplier's scores. Thus indirectly, making sure that SupplierI (which proposes SoftwareP as the product solution) would become the winning supplier.

During the interviews, again there were some instances where favouritism was quite obvious. For instance, during SupplierI's interview, when one attendee kept on repeating his question to the supplier representatives to get the answer that he needed, the Technical Head jumped in and provided a clearer answer to the question. This act demonstrates that he wanted to help SupplierI by not letting them look bad in front of the other project members.

IT representative I: *Sorry I'm not making myself very clear here, I apologise for that. If I have all these options, can I set a default where you can just go in and click 'yes' and moving on, rather than*

having to walk through all my options if I don't want to walk through it all

[SupplierI 1 and SupplierI 2 continue to provide a solution for this, but they seem to struggle with a convincing answer]

Technical Head: I think to bring this forward, if you know the average Joe [staff], or Joe department member and go through [IT], you hit print jobs...it flies through the system [...] so there's pull-print, drop, go...three button clicks. So that's the average Joe...the other step then is on the 3rd click, which has the option of which cost code to take, so you're looking at four to five clicks. I can't get you away from that

(SupplierI interview)

In another example, this time during the other interview headed by SupplierT, when the representative attempted to answer the question given by an attendee, the Technical Head came up with a sarcastic remark in response. By doing this, indirectly he was trying to make SupplierT appear incapable in front of the other project members, thus giving them a disadvantage.

Procurement Head: Nothing specific, I guess you probably already answered it, it's just a general point about...everything that you've showed us today is included in the pricing...the things that you've mentioned and the client billing and all that. So that's just my general point, is that it's all included?

SupplierT: Oh yeah, everything that I've shown on the screen

Technical Head: One other quick thing is...

Procurement Head: Do you have any specifics on the numbers?

Project Manager: No I don't think I have

Technical Head: Yeah, well [SupplierT] have a history of getting this right...so it's all good...(sarcastically)

SupplierT: No problem

Technical Head: No no no...honestly! (laughs)

(SupplierT interview)

In a proper sourcing process, a supplier is chosen based on cost as well as quality. However, in this case as pointed out by the Procurement Head, the cost held no influence in the final outcome but was down to the quality scores, which in this case was won by SupplierI. In the journey to achieving the intended outcome of removing SoftwareS and obtaining SoftwareP, the project

members took part in many activities that would be considered out of the norms for a sourcing routine. These activities included: building a POC using SoftwareP, arranging a site visit to SoftwareP only, providing biased scores for SupplierI, and showing favouritism during supplier interviews.

6.2.4 Summary

Table 6.2 provides a summary of all the triggers, targeted outcomes, and decoupled activities within the software sourcing routine. A combination of unsatisfactory experiences and uncertainties regarding the capabilities of certain software steered the Committee to deciding that they should remove SoftwareS from the picture, and focus on SoftwareP as the preferred software. Since the decision between SoftwareS and SoftwareP was based on the proposals, it was clear to see that the advantage lay with SoftwareP as, since the beginning of the project, it was presumed that SoftwareS was not capable enough. Thus, the preference for SoftwareP was obvious through the many actions whether deliberate or not, that led to decoupled activities.

Endogenous sources for establishing targeted outcomes ostensibly	Targeted outcome	Novel actions via decoupling to accomplish targeted outcome in routine performance
<p>Past experience:</p> <ul style="list-style-type: none"> • Undesirable experience with SupplierD’s service and its software i.e. SoftwareS • Different expectations in deadlines <p>Perceived uncertainties:</p> <ul style="list-style-type: none"> • Uncertainties with the future developments of SoftwareS and SoftwareE • Concerns about how time is managed 	<ul style="list-style-type: none"> • Remove SoftwareS • SoftwareP as preferred software 	<p>Disengaged decoupling:</p> <ul style="list-style-type: none"> • Build a POC using SoftwareP • Arrange a site visit to SoftwareP only <p>Engaged decoupling:</p> <ul style="list-style-type: none"> • Provide biased scores for SupplierI • Showing favouritism during supplier interviews <ul style="list-style-type: none"> ○ Assist SupplierI with interview questions ○ Being harsh with SupplierT

Table 6.2 – Summary of decoupling sources and activities to accomplish the targeted software supplier

6.3 Decoupling in the hardware sourcing routine performance

6.3.1 Overview

As soon as the preferred software was confirmed, work commenced on sourcing for the print hardware. The existing hardware fleet at PublicCo was a mix of devices with HardwareH as the main brand supplied by SupplierD. For this sourcing exercise, the Committee was open to any solution and any type of device as long as the end result would be a unified product. They also engaged with print specialists (Consultants) to assist them specifically with this exercise. The sourcing of the print hardware was not only about obtaining new print devices, but also about the commercial arrangement of how these devices would be obtained. There were three options:

1. Purchase the hardware
2. Lease the hardware only but supply own consumables
3. Cost-per-copy charging system, which covers the hardware and consumables.

Initially, the idea was to get the supplier to propose the best solution based on these three options. But eventually the Committee decided to request the potential suppliers to provide a pricing for all three options so that they could make a proper comparison. The ITT was released through two procurement frameworks: the NPA framework, and the DPC framework. One was for third party suppliers, while the other was specifically for manufacturers. After the ITT was released, a total of 13 suppliers responded. Three were chosen and invited for an interview as part of the evaluation: SupplierT, SupplierP, and SupplierK. One of the suppliers that responded i.e. SupplierD was deliberately left out so that they would not emerge as one of the top suppliers. The reasons for this will be explained within the narratives. Eventually, SupplierK was chosen as the preferred supplier.

The next sections are two detailed narratives on the activities relating to the sourcing of print hardware, which include: (1) the sources that triggered decoupled activities, which are categorised into: *experience*, and *uncertainty*, and (2) the activities that were considered a form of decoupling.

6.3.2 Sources of decoupling

Experience. One of the main reasons the Print Project was initiated was because PublicCo had been using SupplierD as the main print supplier for the past 10 years. Besides needing a change, it was also pointed out that SupplierD could not offer the type of services PublicCo was looking for.

“The only reason that we’re shifting really and playing around with [SupplierD] is that they don’t offer the service that we’re moving to”

(Technical Head – Informal discussion after WC meeting 8)

Additionally, the current print devices on offer from SupplierD were also lacking in terms of capabilities.

“Authentication...you know when we did the first bit of roll-out with [SoftwareS], that was the biggest complaint of anything. The amount of time it takes to log in...”

(Print room Head – Informal discussion during journey back from site visit)

However, the most pressing issue was the bad experience PublicCo had endured with the services provided by SupplierD as explained by the Technical Head:

Project Manager: They’re not going to judge that much on how cost effective they are aren’t they? They’re going to judge us on how reliable

Technical Head: The thing is with the [SupplierD] device, the one that they put into conferences recently took months to configure by which time the conference had gone

Project Manager: Yeah but that has got nothing to do with buying or leasing is it?

Technical Head: Well that’s because of the relationship with them...it wasn’t our device, they picked the device to put in, we had no concept about it. They then decided to chuck some tickets and bounce around all over the place, and then when it finally landed up with people who could do the job, after it had been through [Print room Head] and other people, it was too late.

(WC meeting 11)

So, because of the detrimental experiences with regards to SupplierD’s services and their print devices capabilities, this affected how the Committee members deliberated on SupplierD’s proposal for the print hardware.

Uncertainty. The Print Project had one crucial deadline that the Committee had to meet, which was complete the first phase of the implementation by summer. This was because the financial closing date for PublicCo was 31st August, and since phase one included the Finance staff, it was vital that the new print service's roll-out did not affect this crucial period. However, as raised by the Project Executive, this period is also a period where many staff take some time off for a holiday. If this was the case, then there would be a problem with resources for the implementation work.

Project Executive: *So are you concerned with the bit, I mean...do we need say, some of these later parts in the flow diagram are definite times, and therefore we're going to need 'x' amount of weeks...*

IT Director: *Yeah, we're heading to doing a hell of a lot of work during July and August [2015].*

Project Executive: *People tend to take [a few] weeks of holiday*

Project Manager: *I can only put resources down in generality at the moment, I will not know the detail.*

IT Director: *But can we move any of it forward? That's really [I] suppose the question I'm asking*

(Board meeting 3)

Because of this issue, it was decided to expedite the purchasing of print hardware so that the Project team could roll-out the new print system much earlier than August. The impact of this was that the Committee had a more compressed time to complete the sourcing routine for print hardware. Due to the reduced time to carry out the routine's activities, the Committee was therefore unable to explore all options thoroughly, but chose to focus on a particular solution that seemed the most reliable based on the existing information and expertise.

6.3.3 Decoupling activities

A combination of multiple triggers led the Committee members to performing decoupled activities for the hardware sourcing routine in order to accomplish certain targeted outcomes. Specifically, these outcomes were: firstly, to cast aside SupplierD, and secondly, to work towards SupplierK as the preferred supplier.

Disengaged decoupling

There were two decoupled activities that were not part of the official routine activities: conducting references checks, and arranging a site visit to SupplierK.

During the first round of evaluation, it was evident that the evaluators felt that what they read in the proposals was not enough for them to make an informed judgement on the proposed hardware and the service quality. To address this, the Finance Head suggested to carry out a reference check on all the suppliers. However, according to the Procurement Head, they could not carry out this activity as part of the evaluation process. She also added that they could just easily do the reference checks without breaking any rules.

Finance Head: For references, do you do that before or after you do the selection?

Procurement Head: Well, it's a bit odd because this is a framework, references and all that should already be taken for the framework, we didn't ask for references at the end because they are essentially pre-qualified

Project Manager: So we don't need to look at references at all?

Procurement Head: Officially it can't be part of the assessment because they are already pre-qualified on to the framework, however unofficially...it's a small world, and we know where these suppliers work...it wouldn't be beyond the human capabilities for us to go and google and find out, which other [organisations] are using [the suppliers] and find out what their experiences have been

(Hardware evaluation part 1)

During the post-interviews debriefing, the Technical Head proposed a site visit to SupplierK as a means to convince the other Committee members that SupplierK has the print devices that could meet the new print system's requirements.

Procurement Head: So if we can ask them to...I don't know whether I should [go] back and ask from [SupplierK] only for different prices...for some higher end devices?

IT Rep 1: They have the showroom down in [WarTown], would it be [unrealistic] for us to go down to the showroom on Tuesday and go look at their range of machines?

Consultant: Well just looking at the [web]site, there's only [a number of] machines going for the [45-46] page per minute. This is actually for their cash price is an extra £500

Procurement Head: Oh so that's nothing

Consultant: Yeah, I think they could swallow that wouldn't they?

Technical Head: Well it's only [WarTown], we could probably shoot down next Tuesday, which goes before the 21st, if we can arrange it

As seen in the conversation, the Consultant tried to steer them away from this idea of a site visit by saying that they could look at the device information on SupplierK's website. However, the Technical Head seemed to ignore this and agreed with the visit saying that it's only nearby. Hence the Procurement Head requested him to arrange this visit off the record with SupplierK.

Procurement Head: Right, can we do this off the record then? So if you've got [SupplierK's rep] email and contact details, it's the tender...can you arrange that with him off-line and then let me know?

Consultant: If you're interested in the highest product range, it goes up to 75 pages per minute

Technical Head: Don't you [Print room Head] have a top end one in the print room?

Print room Head: Oh you can't have many of them! Now ours start at 105 pages a minute, but you can come and look at them

Technical Head: But it is a [HardwareK] device though?

Print room Head: Yup, I've got three of them

Technical Head: So actually we don't need to leave the site

Project Manager: Aren't there any local sites, like [BurnTown]? Won't that be more speedy?

Procurement Head: Depends on how new they are. Yours are quite new aren't they?

Print room Head: Err...ours are new, theirs are new

Technical Head: Won't be the [correct] range

Further into the conversation, the Committee members seemed to acknowledge that there were some of the SupplierK's devices available for viewing at PublicCo's print room and also nearby organisations. However, the Technical Head seemed to believe that these devices were not

the type of devices that he would want for the Print Project. Again, the Procurement Head questioned whether he really wanted to visit SupplierK at their office in WarTown:

Procurement Head: So what do you want to do? Do you physically want to contact them and go to the site, or do you want to 'cloak and dagger'?

Consultant: We did mention site visits didn't we? So what's wrong with asking for a...did we not mention about site visits?

Procurement Head: Yeah, we reserve the right to basically turn up anywhere, anytime, or something to that effect

IT Rep 1: We need to see the range of products they have

IT Rep 2: I personally would be more comfortable if me and [Technical Head] can go down and meet some technical people over there and talk about their devices and stuff

(Debrief after all hardware interviews)

Thus a site visit to SupplierK was arranged for the Committee members to gain more details on the exact devices that SupplierK could offer.

Engaged decoupling

Apart from unofficial activities that were carried out, there were also decoupled activities that were officially part of the routine activities. These included marking financial and quality sections concurrently, having a shortlisting exercise, and showing both negative and positive bias during interviews.

One of the first instances of engaged decoupling was during the discussion between the Consultant and Committee members regarding the evaluation strategy. One of suggestions brought up by the Procurement Head, was to mark the financial and quality parts of the proposals concurrently in order to save on time. This approach impacted the overall evaluation process as it was implying that the financial mark would have no effect on the quality evaluation.

"Generally those two things are marked separately...usually procurement marks the cost and send it on...we try and do the scoring first and then pass it on to everybody else who's going to do the quality scoring but...we might have to do the two things in tandem because we don't really have time"

(Procurement Head – Hardware evaluation strategy discussion)

One of the intended outcomes of the sourcing exercise was to remove SupplierD from the picture. While finalising the responses from the multiple suppliers, the Committee opted to shortlist the potential suppliers so that they could eliminate SupplierD in the early stages.

“If they [SupplierD] got full marks, they still wouldn’t make the shortlist...this is going to be like an illegal shortlisting that I’m doing, because we’re not meant to shortlist the framework. Because it’s a framework, it’s already been shortlisted, so you’re not meant to shortlist again”

(Procurement Head – Hardware tender evaluation part 1)

As a result, the top three suppliers excluding SupplierD were invited for an interview session as part of the next stage of evaluation. During the interviews, there were several instances where a form of bias was shown towards the supplier. For the SupplierK interview, throughout the session, the Committee members seemed at ease with them and did not ask too many difficult questions. At one particular point, it was obvious that the Technical Head had been in contact with SupplierK prior to that session. On top of that, SupplierK was quite at ease with providing PublicCo with suggestions for references although they were not obliged to as seen in the conversation below:

Procurement Head: I did have a question about references though because you obviously mentioned [DartCo] quite a bit and then you mentioned a testimonial from [UweCo] ...are you OK for us to contact somebody there or do you want to provide suggestive contacts to me?

SupplierK1: [Frances] is the project lead

Technical head: I think you worked with [Mark] a bit

SupplierK1: And [Mark] yeah

SupplierK2: I would suggest [AdCo] because they use [SoftwareP] and they had very similar timelines [...] there’s a guy call [Alex] who’s their team lead there

Procurement Head: It’s just a case of...it seems that you’ve already unofficially contacted [each other]. You know in this sector everybody talks to each other

SupplierK2: Absolutely, yeah

(SupplierK interview)

Following the interview with SupplierK, the Technical Head made it clear that his preference was SupplierK, and that he requested it to be maintained as the preferred supplier based on the evaluation ranking even after the interviews of the other suppliers.

“I would be more interested to see more of this tomorrow...but remember what as we said originally, this [SupplierK] is basically our number 1 if you look at the green sheet, and the others were 2 and 3...so they have more to do to get our favour”

(Technical Head – Debrief after SupplierK interview)

During the other two interview sessions, the general mood was different compared to the SupplierK interview. For instance, in the SupplierT interview, the Technical Head particularly showed hostile behaviour towards the representatives. When SupplierT attempted to answer a question he had given to them, the Technical Head mocked their answers by making remarks such as, “it’s a waste of exercise” and interrupting them mid-way by saying, “keep going” sarcastically. As a result of this, it gave a negative impression of SupplierT to the rest of the attendees. The effect was obvious because in the debriefing session after the interview, the Project Manager also tried to downplay SupplierT’s efforts.

Project Manager: It was all him as well? The other two didn’t say very much did they? Yeah, it just didn’t feel confident enough

Consultant: I thought they were OK, they just weren’t as good as yesterday...if there was nobody else, I’m sure they can do it.

(Debrief after SupplierT interview)

In the above conversation, the Consultant was clearly attempting to neutralise their views on SupplierT. The rest of the Committee members seemed to support this notion and tried to evaluate all three suppliers fairly based on their interview sessions. Following the last interview session, the Committee had a debriefing to discuss on how they should move forward with their decision-making. Again, the Technical Head tried to influence the other Committee members by downplaying SupplierT’s capabilities.

Technical Head: Well we would be ruling out a lot of [SupplierT’s] units anyway, the base-end one is a printer, which actually failed the spec...the inkjet one doesn’t work on the recycled paper we use, it works great on any other paper, but it’s twice the price

Project Manager: [HardwareH’s] inkjet one?

- Technical Head:* Yeah, one of the devices they offered in the [SupplierT] response, is a [page-wide red]
- Procurement Head:* Well definitely they're providing the cheapest way to get [HardwareH], and that I think is sort of their proposition that we'll work on [HardwareH]
- Consultant:* Compared to the [SupplierK] devices...even with the cheapest [HardwareH], would it still be more than [SupplierK]?
- Procurement Head:* [SupplierT] purchase option is £311,000, the [SupplierK] purchase option is £313,000. So not much in it. And similar with the lease option. The cost difference that they've presented is negligible but that's within this matrix...

From the conversation, the Procurement Head appeared to like SupplierT's proposal as they offered HardwareH as the solution, which is considered one of the top ranges of print devices on the market, for a relatively low price, which was not far off from the price of SupplierK's proposal. The point about both suppliers having similar prices was also mentioned by the Technical Head as seen in the subsequent conversation:

- Communications Rep:* Probably they would need to change some of the printers because they're not up to spec...because this is priced on stuff that doesn't fit
- Technical Head:* Yes, they're doing the purchase price. I mean all of it will shift around, and then there's the game playing with the fleet design, which is going to be a blank cheque. But the worst case scenario, the most expensive option they do...and then walk across the hierarchy for everything, which is really the pessimistic view, we'll still find out that the pool out roughly the same
- Procurement Head:* I think it makes a really interesting point and a valid point in that this is a crystal ball at the minute, and it may not reflect exactly how the cost will pan out to what how we've chosen to mark them. So the costs are very close...too close to call. The quality score is significantly different between [SupplierK] and [SupplierT]. OK so people are maybe saying that they want to bump up [SupplierD] maybe a little bit based on some of the things that they've answered today, but there was 18 points on the tender scoring between [SupplierD] and [SupplierK]
- Technical Head:* Yeah I mean 10 of those are [feature Y section], because there's a question at the bottom that carries a 100-mark

weighting. At the moment, if you touch that, it has a big impact on it. So they're not that far apart to be honest

When the Procurement Head suggested the project team reevaluate the scores due to the new information and insight, the Technical Head tried to provide other excuses as to why they should not have to re-score. Yet at the same time, he briefly suggested that the hardware solution proposed by the two suppliers was not that different in terms of capability. Based on this point made by the Technical Head, the Procurement Head again suggested they reevaluate the quality scores for both SupplierT and SupplierK.

Procurement Head: So people are feeling that they're not far apart now? That's OK

Technical Head: The other bit, I mean the security elements and where they were going with that...what my questions are leading to. And the stock targeting, we knock them for jet advice because we didn't understand what their response was. So you could, basically run them through now with pretty much the same scores

Procurement Head: OK, if that's the case I think everybody should rescore [SupplierT] and [SupplierK] then. Because I don't think we're going to get to...at the moment it's still [SupplierK]. So I think we need to go back in and re-score it

But once again, the Technical Head tried to avoid this approach by saying that he was now interested in the financial side of the proposals. In response, the Procurement Head proposed to also reevaluate the financial scores.

Technical Head: But I'm very interested in the financial...ultimately no matter what we do with the quality side of it...

Procurement Head: Do you think? Well we could re-score the financials as well

Consultant: There isn't much difference between the two bids in terms of the quality, so assume the quality is the same. It really does come down to the cost doesn't it?

Technical Head: So if we ask another question looking at [IT rep 2], I mean if you got the two of them on the table, from a service desk, maintenance perspective I suppose, drag [IT rep 1] into this point as well, which one carries more weight with you two?

IT Rep 1: I think that [SupplierK] would be better...I mean their tender response was better anyway. Some of that...there's also the clarification questions, we'll see how that goes...they seem to have some flexibility with how we go and how we might do things together

(Debriefing after all hardware interviews)

Upon hearing the recommendation from the Procurement Head, the Technical Head tried a different tactic by putting his colleague who is also from the IT department on the spot. As he had hoped, his colleague (IT rep 1) noted that he preferred SupplierK over SupplierT. By the end of the debriefing session, it was evident that the Committee members had come to an agreement that they would pursue SupplierK as the preferred supplier. Their preference was further strengthened by the site visit to SupplierK that was arranged. Eventually the Committee accomplished their intended goals of removing SupplierD and getting SupplierK as the favoured supplier.

6.3.4 Summary

Endogenous sources for establishing targeted outcomes ostensibly	➡ Targeted outcome	➡ Novel actions via decoupling to accomplish targeted outcome in routine performance
<p>Past experiences:</p> <ul style="list-style-type: none"> • Undesirable experiences with the services and products of SupplierD <p>Perceived uncertainties:</p> <ul style="list-style-type: none"> • Uncertainties on the resource availability during the crucial period 	<ul style="list-style-type: none"> • Remove SupplierD • SupplierK as preferred hardware provider 	<p>Disengaged decoupling:</p> <ul style="list-style-type: none"> • Conduct reference checks • Arrange site visit to SupplierK <p>Engaged decoupling:</p> <ul style="list-style-type: none"> • Unconventional way of doing things in terms of process-wise <ul style="list-style-type: none"> ○ Mark financial and quality sections concurrently ○ Short suppliers for the interview stage • Show biased behaviour during supplier interviews <ul style="list-style-type: none"> ○ Assist SupplierK with some of the interview questions ○ Being harsh with SupplierT's responses

Table 6.3 – Summary of decoupling sources and activities to accomplish the targeted hardware supplier

Table 6.3 provides a summary of all the triggers, targeted outcomes, and decoupled activities within the hardware sourcing routine. A combination of bad experiences and uncertainties steered

the Committee to deciding that they should remove SupplierD from the picture, and focus on SupplierK as the potential tender winner. Although the sourcing of the print hardware was conducted via two frameworks to increase the number of responses, at the end of the day, the Technical Head preferred to work with a manufacturer assumed to be a better option in terms of faster support and turnaround times. Thus, his preference was obvious through his many actions whether deliberately or not, that led to decoupled activities, which were supported by the rest of the Committee.

6.4 Conceptual interpretation

When a routine is enacted, there is usually an objective that is achieved in the routine outcome. So for a sourcing routine, the objective is to purchase a product or service. In the case of the Print Project, the Committee developed targeted outcomes based on multiple sources. These targeted outcomes were developed over time as the Committee members enacted the routine. Thus the sources that triggered this phenomenon are considered as endogenous as they came from within the routine itself, such as experiences of the routine actors, and perceived uncertainties among the routine actors. When a targeted outcome is established, routine actors knowingly or unknowingly begin to perform the routine in order to accomplish the targeted outcome. They engage in novel actions, specifically decoupling activities during routine performance. The decoupling activities are categorised into two types. The first type are activities that are part of the official routine activities such as: shortlisting the suppliers for the interview phase, carrying out the financial and quality evaluation concurrently, playing bias when marking supplier proposals, and showing favouritism during supplier interviews. These activities are labelled as engaged decoupling as the activities are still engaged with the routine itself. The second type are activities that are not part of the official routine activities, such as: arranging a site visit to view the products, conducting reference checks, and building a POC using the preferred software. These activities are referred to as disengaged decoupling as they are not officially attached to the sourcing routine's activities.

The ability for the routine performances to include decoupled activities allow the enactment of the routine to be flexible, yet still maintaining its validity. Although decoupling appear to be a negative approach as it involved diverging from the expected process, it can also prove to be advantageous (Storz 2007). In this study, decoupling enabled routine performances to

accommodate the changing ostensives in the form of targeted outcomes. Thus, it provides the mechanism for performative flexibility. *Figure 6.1* illustrates the theoretical constructs established from the findings of this empirical chapter, and the evidence for these constructs are laid out in *Table 6.4*.

To sum up all three empirical chapters, routine flexibility can emerge due to the conditions of actors’ pursuit of understanding the tacit component, options that arise, and decoupled activities. These factors involve the ostensive and performative aspects in various ways that contribute to routine flexibility. The following chapter provides further discussion on the different ostensive-to-performative relationships that exist, which lead to the emergence of endogenous routine flexibility.

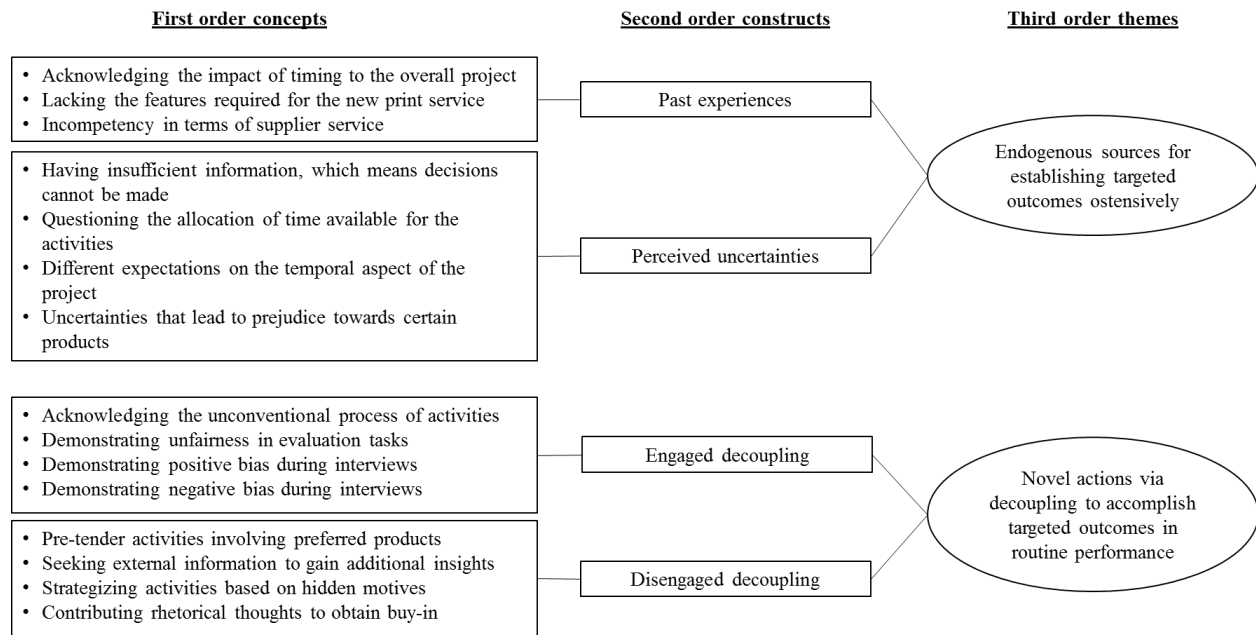


Figure 6.1 – Theoretical constructs for novel actions in accomplishing targeted outcomes

Table 6.4 – Evidence of theoretical constructs for novel actions in accomplishing targeted outcomes

<p align="center">Illustrative evidence (1st order)</p>	<p align="center">Theoretical observations (2nd order)</p>	<p align="center">Theoretical constructs (3rd order)</p>
<p>Incompetency in terms of supplier service</p> <p><i>Project Manager:</i> How do we know whether they're [the numbers) right or not? <i>Procurement Head:</i> Well, will they not be based on the number of clicks that [SupplierD] has charged this...based on their metering? <i>Technical Head:</i> Well, there is no metering software at the moment...so it's based on what [SupplierD] tells [Print room Head] what the metering was on the devices, and then you pay what [SupplierD] tells [Print room head]. <i>Procurement Head:</i> Right...so there's no audit? Ok...</p> <p><i>Project Manager:</i> As I said earlier, the benefits, which we are to get from this [print project] is better service. So while there are others that might... <i>Technical Head:</i> Perpetually, nobody has a better service for a 'click' model...I mean you talk to the people running it and they have a miserable experience, and our experience with [SupplierD] is pretty miserable. <i>Procurement Head:</i> You can still have, even if you buy it right...I don't think it matters</p> <p><i>Project Manager:</i> They're not going to judge that much on how cost effective they are aren't they? They're going to judge us on how reliable. <i>Technical Head:</i> The thing is with the [SupplierD] device, the one that they put into conferences recently took months to configure by which time the conference had gone. <i>Project Manager:</i> Yeah but that has got nothing to do with buying or leasing is it? <i>Technical Head:</i> Well that's because of the relationship with them...it wasn't our device, they picked the device to put in, we had no concept about it. They then decided to chuck some tickets and bounce around all over the place, and then when it finally landed up with people who could do the job, after it had been through [Print room Head] and other people, it was too late.</p> <p>Acknowledging the impact of timing to the overall project</p> <p>"Since it's a non-EU framework, we can do what we want. We can do it to 2 weeks. Usually they complain if it's less than 3 weeks...so I think 3 would probably be OK. And then we've got to shortlist and invite them for a demo, there's a bit of a gap as well" (<i>Procurement Head</i>)</p> <p>"If we plan it right we should be able to do a phased approach, but if we're pushed for time then we might end up a bit rushed [...] It's not going to be easy. I would prefer for [staff] printing to be done earlier in the summer, so that we could quickly move to the staff" (<i>Procurement Head</i>)</p> <p>Lacking the features required for the new print service</p> <p>"The only reason that we're shifting really and playing around with [SupplierD] is that they don't offer the service that we're moving to." (<i>Technical Head</i>)</p> <p>"Authentication...you know when we did the first bit of roll-out with [SoftwareS], that was the biggest complaint of anything. The amount of time it takes to log in..." (<i>Print room Head</i>)</p>	<p align="center">Past experience</p>	<p align="center">Endogenous sources for establishing targeted outcomes ostensibly</p>
<p>Different expectations on the temporal aspect of the project</p> <p><i>Project Executive:</i> So are you concerned with the bit, I mean...do we need say, some of these later parts in the flow diagram are definite times, and therefore we're going to need 'x' amount of weeks...</p>	<p align="center">Perceived uncertainties</p>	

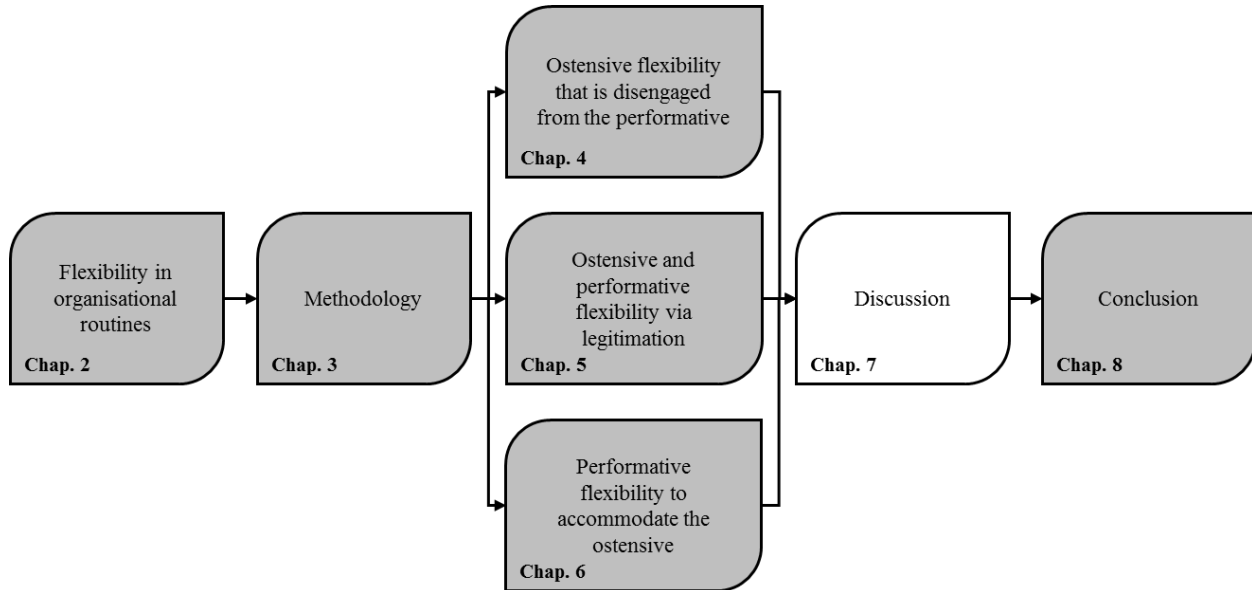
<p style="text-align: center;">Illustrative evidence (1st order)</p>	<p style="text-align: center;">Theoretical observations (2nd order)</p>	<p style="text-align: center;">Theoretical constructs (3rd order)</p>
<p><i>IT Director:</i> Yeah, we're heading to doing a hell of a lot of work during July and August [2015].</p> <p><i>Project Executive:</i> People tend to take [a few] weeks of holiday.</p> <p><i>Project Manager:</i> I can only put resources down in generality at the moment, I will not know the detail.</p> <p><i>IT Director:</i> But can we move any of it forward? That's really [I] suppose the question I'm asking</p> <p><i>Procurement Head:</i> 26th of March I had pencilled in for demos, we might be able to do it before then. There must be a reason I had put it for the 26th. I'm saying we could agree on it pretty quickly after the demos. So you're talking just before Easter really. That's not really in the critical path is it?</p> <p><i>Project manager:</i> What I'm thinking going back to all those boxes [on the timeline], it's not just the software we've got to think about, it's the interface with all our systems. So that's what I'm worried about. And the sooner we can get that.</p> <p><i>Procurement Head:</i> We would have preferred bidder on the 26th of March because I think once we've seen the demos, we'll be able to make a decision that day, which is the week before Easter.</p> <p><i>Project Manager:</i> I thought it would be much earlier than that. Can we not pull that forward?</p> <p><i>Procurement Head:</i> Well I was assuming we'll get it out next week didn't I? Yup...I mean giving them 2-3 weeks to get it back...OK I'll have a look at it and see if I can put it forward a week to the 19th of March then</p> <p>Having insufficient information means decisions cannot be made</p> <p><i>Project Manager:</i> We need to make a decision [on software selection] by this point, and the activities that we need to participate in to help me make that decision, let's think about those and do them now. I'm not quite sure what they would be, what would help me with that decision.</p> <p><i>Print room Head:</i> Do you want to go see some software? Because I can probably find easily three different ones if you give me what you want to look at.</p> <p><i>Technical Head:</i> Well we only need to see those three [SoftwareP, SoftwareE, and SoftwareS]...[...] We've got friends in the sector, we can do it more than one way. We can either do it here, or there, or we rig the demos internally to work with our [processes]</p> <p><i>Finance Head:</i> For references, do you do that before or after you do the selection?</p> <p><i>Procurement Head:</i> Well, it's a bit odd because this is a framework, references and all that should already be taken for the framework, we didn't ask for references at the end because they are essentially pre-qualified.</p> <p><i>Project Manager:</i> So we don't need to look at references at all?</p> <p>Questioning the allocation of time available for the activities</p> <p>"The issue with the [staff] ones is, there'll be a day where we say, "Alright, now we're changing over to another system". We've already said of the summer, whilst the majority of the [staff] who are [non-Finance], there isn't a problem. The ones who are here, the [Finance staff], those are absolutely crucial times for the [Finance staff], so are we sure, we've built in enough in terms of all these things that could go wrong i.e. the library might not have...you know...I just think can you go back, just look at that [risk assessment] again, just really get that [Finance staff] part of it...put it as a big risk. Are we doing as much as we need to do?" (<i>Project Executive</i>)</p> <p><i>Project Manager:</i> Because I'm worried about the thing you mentioned earlier, about the time. It's having time upfront to sort of put this in, configure, make</p>		

<p style="text-align: center;">Illustrative evidence (1st order)</p>	<p style="text-align: center;">Theoretical observations (2nd order)</p>	<p style="text-align: center;">Theoretical constructs (3rd order)</p>
<p>sure you've got time because...this is the time between bringing in the hardware, and the software.</p> <p><i>Procurement Head:</i> We need to act quickly on it because I think ideally we'd want to know by February whether it's in or out at the latest. And that's not that long away</p> <p>Uncertainties that lead to the prejudice towards certain products</p> <p><i>Print room Head:</i> You know [Technical head], what's going to happen with SoftwareS because they shut some offices down recently...and the way I understand it is they're taking the best bits out of [SoftwareS] and blending them into [SoftwareE].</p> <p><i>Technical Head:</i> [SoftwareE] and [SoftwareC], they're both getting the content of some [SoftwareS], so it's pushing north and south. And that's what worries me. Because there is very little investment in [SoftwareS] at the moment. There is also, the flipside of it is, they're not actually developing [SoftwareE] or anything much at the moment. They're just taking a few features, which are left over from other places</p> <p>"I think the other thing is the longevity of the product, because you don't know what's going to happen to [SoftwareS], and what's it...[SoftwareE]" (<i>Print room Head</i>)</p>		
<p>Acknowledging the unconventional process of activities</p> <p>"Generally those two things are marked separately...usually procurement marks the cost and send it on...we try and do the scoring first and then pass it on to everybody else who's going to do the quality scoring but...we might have to do the two things in tandem because we don't really have time" (<i>Procurement Head</i>)</p> <p>"If they [SupplierD] got full marks, they still wouldn't make the shortlist...this is going to be like an illegal shortlisting that I'm doing, because we're not meant to shortlist the framework. Because it's a framework, it's already been shortlisted, so you're not meant to shortlist again" (<i>Procurement Head</i>)</p> <p>Demonstrating bias in evaluation tasks</p> <p><i>Technical Head:</i> So the last one of the list, is the [SupplierI] one...see I've given a 10, look at that!</p> <p><i>Project Manager:</i> You've given a 10? Now who's being generous?</p> <p><i>Technical Head:</i> To be honest I was thinking it was a super answer</p> <p><i>Project manager:</i> What was that? Which one was it? The first one by the looks of it</p> <p><i>Technical Head:</i> Right at the top, this is question 1.1</p> <p><i>Project Manager:</i> You were immediately impressed and entered the blocks weren't you?</p> <p><i>Technical Head:</i> I was sold...question 1, solution works in our environment! So, yes! Sorry...I'm not going to change it</p> <p><i>Technical Head:</i> 7B, what's that? Please describe...something (laughs)</p> <p><i>Project Manager:</i> Ooo...this is the device management thingy isn't it?</p> <p><i>Technical Head:</i> [SoftwareP] does do this, doesn't it?</p> <p><i>Project manager:</i> It does...to a degree obviously</p> <p><i>Technical Head:</i> I mean it's not as good as [SoftwareJ]</p> <p><i>Project Manager:</i> Yeah, I know...the thing is they're quite lazy. I mean look at the detail</p> <p><i>Technical Head:</i> That's where I'm coming from...you gave it a four</p>	<p>Engaged decoupling</p>	<p>Novel actions via decoupling to accomplish targeted outcome in routine performance</p>

<p style="text-align: center;">Illustrative evidence (1st order)</p>	<p style="text-align: center;">Theoretical observations (2nd order)</p>	<p style="text-align: center;">Theoretical constructs (3rd order)</p>
<p><i>Project Manager:</i> A four? Did I? Maybe they needed a crack at the answer even though they have the capability. [He reads back his comments] I think it was a bit shit...I mean email? I thought...whereas [SupplierD], which supposedly can do less said they can actually put things on the console itself, not email!</p> <p><i>Technical Head:</i> We're going to compromise on a six (without further argument)</p>		
<p>Demonstrating negative bias during interviews</p> <p><i>Procurement Head:</i> Nothing specific, I guess you probably already answered it, it's just a general point about...everything that you've showed us today is included in the pricing...the things that you've mentioned and the client billing and all that. So that's just my general point, is that it's all included?</p> <p><i>SupplierT:</i> Oh yeah, everything that I've shown on the screen</p> <p><i>Technical Head:</i> One other quick thing is...</p> <p><i>Procurement Head:</i> Do you have any specifics on the numbers?</p> <p><i>Project Manager:</i> No I don't think I have</p> <p><i>Technical Head:</i> Yeah, well [SupplierT] have a history of getting this right...so it's all good...(sarcastically)</p> <p><i>SupplierT:</i> No problem</p> <p><i>Technical Head:</i> No no no...honestly! (laughs)</p> <p>Demonstrating positive bias during interviews</p> <p><i>IT Representative I:</i> Sorry I'm not making myself very clear here, I apologise for that. If I have all these options, can I set a default where you can just go in and click 'yes' and moving on, rather than having to walk through all my options if I don't want to walk through it all. [SupplierI 1 and SupplierI 2 continue to provide a solution for this, but they seem to struggle with a convincing answer]</p> <p><i>Technical Head:</i> I think to bring this forward, if you know the average Joe staff, or Joe department member and go through [IT], you hit print jobs...it flies through the system [...] so there's pull-print, drop, go...three button clicks. So that's the average Joe...the other step then is on the 3rd click, which has the option of which cost code to take, so you're looking at four to five clicks. I can't get you away from that</p>		
<p>Contributing rhetorical thoughts to obtain buy-in</p> <p><i>Print room Head:</i> I haven't heard any bad things about [SoftwareP]</p> <p><i>Technical head:</i> I think a lot of people are a bit cautious about...it's kind of like admitting that you're an [xxx] you know...you park in the car park, you walk around the car park...you know...</p> <p><i>Print room Head:</i> I think it does what it does</p> <p><i>Technical Head:</i> It does exactly what it does! I'm afraid [PublicCo] is very much a...a school of our thought is that we very much always bought stuff that might not be traditionally what people buy. We don't go out of our way to buy [NetworkS] network because it's too damn expensive. We take the new kid on the block and that will work</p> <p><i>Consultant:</i> Are there issues with [SoftwareS]? Is that why you're looking for...</p> <p><i>Project Manager:</i> There are two systems at the moment, [SoftwareO] thing, which is our internal software...and then we've got [SoftwareS], which is through [SupplierD]. I'll let [Technical head] explain</p> <p><i>Technical Head:</i> To be honest, I mean it's a lovely product, showing a bit longer in the tooth really. And it doesn't have all the features in the modern popular...I'm sorry I haven't read the report. But it would be interesting to</p>	<p style="text-align: center;">Disengaged decoupling</p>	

<p style="text-align: center;">Illustrative evidence (1st order)</p>	<p style="text-align: center;">Theoretical observations (2nd order)</p>	<p style="text-align: center;">Theoretical constructs (3rd order)</p>
<p>see how the [staff survey] came back. But the [staff] populous have been screaming for years in my wish-list about you know...I want to print from my android tablet or print from my mobile phone</p> <p>Pre-tender activities involving preferred products</p> <p>“Which is one of the reasons why I’m keen to get this print management software in the bag really. That’s why I’m pushing to get that in quickly now because I think once that’s in, that gives [the Technical Head] opportunity to set the proof of concept, test it, get it integrated with all the various things...he has to do that. And actually to get the infrastructure in place in principle, so that when we get the devices [i.e. the print hardware], it is just a case of [implementing it]. I don’t want to be complacent but at least we’ve done a lot of work for testing, and the sooner we can get on with that...because I’m aware that that would be a bottleneck if we leave that too late” (<i>Project Manager</i>)</p> <p>“I’ve asked [the Technical Head] to produce a proof of concept on one of the platforms that we’ve got, and he has done some work to try to understand what’s involved in implementing that particular solution. It was a risk because it might not have won the tender, but [the Technical Head’s] going to be able to demonstrate that on the 24th March [2015]” (<i>Project Manager</i>)</p> <p>Seeking external information to gain additional insights</p> <p>“Officially it can’t be part of the assessment because they are already pre-qualified on to the framework, however unofficially...it’s a small world, and we know where these suppliers work...it wouldn’t be beyond the human capabilities for us to go and google and find out which other institutions are using [the suppliers] and find out what their experiences have been” (<i>Procurement Head</i>)</p> <p>Strategising activities based on hidden motives</p> <p>“This is where I wanted to be, I think the right thing to do coming back to all of this is to go and see [SoftwareP] in the flesh for you as a user to see it and say, “that would provide me with features I would want as a member of this [company]” [...] And then we’ll go away and you’ll turn around and say, “That’s great, I want that feature, I want that, not worried about that...”, then we can go away and shape it. The best example to see that with, is actually [SoftwareP] because it has all the features, so you can turn around and say, “Yes, yes, yes, no...maybe depending on cost”, and then we sit there and go, there’s the list of options, we put that in the tender document” (<i>Technical Head</i>)</p> <p><i>Project Manager</i>: you can’t just say, “right, we’ve decided...we’re going to buy [SoftwareP]” can we?</p> <p><i>Technical Head</i>: that’s why their points were quite interesting...welcome to the world of tendering! You want it to be competitive enough, so that you get more than one response. Because there’s no point writing a tender that’s just [SoftwareP]</p> <p><i>Project Manager</i>: Yeah, need to be fair</p> <p><i>Technical Head</i>: So there’s a fine line that need to be drawn between the two</p>		

CHAPTER 7 : DISCUSSION



Driven by the interest in how organisations adapt to different contexts, this study of a temporary project team delivering a new print service system offers a detailed account of how the ostensive-to-performative relationship affects routine flexibility that emerged endogenously. The project team was expected to engage and enact pre-existing routines including the request and sourcing routines. However, each individual comes with different experiences and priorities, and thus different ways of thinking. This includes having a certain perception towards the routines based on their prior roles or responsibilities relating to these routines. Furthermore, the usual factors related to projects such as time pressure, environmental uncertainties, and ambiguous boundaries (e.g. work scope, timeline) all contribute to the emergence of routine flexibility. According to Howard-Grenville (2005), a routine is more than just a prescribed set of actions, thus it has the potential to be flexible (Howard-Grenville 2005). Feldman and Pentland's work (2003; 2005; 2008a) provides a theoretical framework describing the internal dynamics of routines as generative systems where the ostensive and performative aspects form a continuous cycle in which one cannot exist without the other. Thus this chapter aims to provide insight into the relationship between routine flexibility, and its ostensive and performative aspects.

	Ostensive flexibility	Performative flexibility
Exogenous source	<p><u>Emergent change (in response)</u> <i>Reynaud (2005)</i> Introduction of new rules cause actors to revisit their understanding of the routine</p> <p><u>Planned change (in response)</u> <i>Bucher and Langley (2016)</i> The role of experimental and reflective spaces in intentional routine change</p> <p><i>Short and Toffel (2010)</i> Introduction of new legislation changed how organisations manage their air pollutant emissions</p>	<p><u>Guided emergence change</u> <i>Beckman and Haunschild (2002)</i> Adopt practices from network partners</p> <p><u>Guided instantaneous change</u> <i>Turner and Rindova (2012)</i> Environmental factors force routine actors to adapt using artefacts as their guide to maintain consistency</p> <p><i>Pentland and Rueter (1994)</i> Complexity of the given context means that frequent 'search and deliberation' is required</p> <p><i>Turner and Fern (2012)</i> Experience of past routine performances shapes the variability of the current routine performance</p>
Endogenous source	<p><u>Planned change</u> <i>Rerup and Feldman (2011)</i> Modify routines through trial and error (spontaneous variations)</p> <p><u>Emergent change</u> <i>Aroles and McLean (2016)</i> Meetings used as a space to question routines by highlighting concerns and raising controversies</p> <p><i>Whitford and Zirpoli (2014)</i> An undesired routine performance led to the current ostensive being challenged and adapted</p> <p><i>This study: Section 7.1</i> Ostensive change independent of the performative driven by routine actors</p> <p><i>This study: Section 7.2</i> The emergence of options allows actors to legitimise their actions through referring, guiding and accounting</p>	<p><u>Planned change</u> <i>Feldman (2000)</i> Routines are changed based on past performances in order to repair, expand and strive to achieve better performances</p> <p><u>Instantaneous change</u> <i>Bapuji et al. (2012)</i> The role of intermediaries in creating routine variation</p> <p><i>Bruns (2009)</i> Different objectives between actors and the organisation (routine owners) lead to routine performance variation</p> <p><i>Howard-Grenville (2005)</i> Routine actors use their power depending on context to determine which parts of the routine to enact</p> <p><u>Emergent change</u> <i>This study: Section 7.3</i> Novel actions through decoupling to achieve specific targeted outcome that have emerged ostensively</p>

Table 7.1 – Contribution of this study

Table 7.1 indicates where the empirical contributions of this study lie within the routines literature. As observed, all of the contributions relate to endogenous change. However, although they are listed under the ostensive and performative columns, the overall findings essentially relate to both aspects of routines. The categorisation only refers to the aspect from which the routine change originated, whereas in actual fact, as the rest of this chapter will show, the routine changes

involve both the ostensive and performative aspects. Also noted is that the contributions are associated with emergent routine flexibility.

This study proposes four contributions to the theory of organisational routines, which are reviewed in further detail in the following sections:

- (1) Emergent routine change: The role of routine actors in ostensive flexibility
- (2) Legitimising routine performances: The emergence of options as a mechanism of flexibility
- (3) Novel actions for a targeted outcome: Decoupling as a mechanism of flexibility
- (4) Routine flexibility: The role of the ostensive-to-performative relationship.

7.1 Emergent routine change: The role of routine actors in ostensive flexibility

While past studies have demonstrated how ostensive change occurs inter-relationally with the performative aspect (Feldman 2000; D'Adderio 2003; Pentland and Feldman 2008a; Goh *et al.* 2011; Whitford and Zirpoli 2014), this study provides insight into how ostensive change takes place independently of the performative. The emergent change occurred as the routine actors explored different ostensive understandings which involves significant tacit components (Feldman and Pentland 2003). My analysis points towards two key mechanisms underpinning ostensive flexibility: boundary ambiguity and perceived uncertainties.

7.1.1 Actors as the source of ostensive exploration

Tacitness of routines

Routines are tacit in a sense that it cannot be encoded because only human actors know exactly how to carry out the routine (Nelson and Winter 1982). Furthermore, it has been proven through experimental analysis that the ostensive aspect has a significant tacit component embedded in procedural knowledge (Cohen and Bacdayan 1994). For example, a person who drives several routes to work would not be able to explicitly verbalise how and why they chose the routes at different times. That person has driven the many routes to work so many times that it has become part of their instinct when choosing which route to take. Thus there is tacitness to their decisions.

The setting of this study is unique due to the temporary nature of the Print Project. For some of the project members, it was their first time involved in the request routine, and for others it was the first time enacting it with the other members. So due to the tacit component of routines, this contributed to the different ostensive understandings, uncertainties, as well as ambiguities. Even if some of the actors had previously enacted the routine, it was not possible to convey their knowledge and tacit understanding of the routine to the other actors (Birnholtz *et al.* 2007). Because they needed to work together in enacting the routine, they were forced to find ways to make sense of the tacit component. They managed this by verbalising their thoughts. For instance, in their talk, they used words such as “should”, “there will be”, and “just want to” which suggest that they are talking about their expectations of what they think should happen. Since the perception of a routine is shaped by the ostensive aspect (Feldman and Pentland 2003), the perception, or expectations of the routine shared by the participants also represents the actors’ ostensive understanding.

In the bid to explore the tacit component of the routine, actors engaged with each other through talk by verbalising their thoughts and expectations i.e. ostensive understandings so that they could be explored collectively. Although from different departments with their own daily roles, the actors understood that their role in the Print Project was to work together in finding a solution for a new managed print service. They involved themselves with talk to reach a common ground, and shared understandings to coordinate the tacit aspect of the routine (Srikanth and Puranam 2011; Helfat and Campo-Rembado 2016). Thus the actors’ effort to embrace the tacitness of the routines led to the exploration of different ostensive understandings of the request routine.

Emergent ostensive change

Previous studies on ostensive change often relate to a planned change, such as when organisations undergo a major development in their organisational processes that involves the introduction of new systems (e.g. D’Adderio 2003; Pentland and Feldman 2008a; Goh *et al.* 2011). There are also some cases where unplanned ostensive change occurred as the result of undesirable or unintended routine performances (e.g. Feldman 2000; Whitford and Zirpoli 2014). This study offers insight into how an unplanned ostensive change can happen without the influence of the routine’s performance. Although it may seem like a planned change, but it was through conversational interaction that the actors realised they needed to revise the request routine. This provides further

nuance to the research on routine dynamics which emphasizes the emergent nature of routine change (e.g. Aroles and McLean 2016; Bucher and Langley 2016; Dittrich *et al.* 2016). Yet, in contrast to extant research on routine dynamics which sees the ostensive implicated in a process of structuration, the findings of this study suggests that the ostensive understanding of organizational routines might evolve without the ‘experiential learning’ implied in the ostensive-performative cycle suggested by Pentland and Feldman (2005).

From the study, I found that there were two recurring challenges relating to the unfamiliar tacit component of the routine: (1) boundary ambiguities, and (2) perceived uncertainties. In this study, I observed how the actors underwent the process of overcoming these challenges which led to the exploration of different ostensives and thus the emergent of a new ostensive understanding.

Boundary ambiguities. In this study, ‘boundary’ refers to a symbolic boundary which is a “conceptual distinction made by social actors to categorize objects, people, practices, and even time and space” (Lamont and Molnar 2002, p.168). Ambiguity refers to the situation of being open to multiple interpretations. Thus boundary ambiguity means having conceptual distinctions that are open to various interpretations. Specifically, the boundary ambiguities that were observed in this study relate to the work and roles involved in the Print Project.

When project members became involved in the Print Project, they faced an uncertain ‘structure’ as the normal order, such as departmental practices, was suspended (Sturdy *et al.* 2006) and certain practices, norms and bureaucracy no longer applied. Therefore there were initial ambiguities regarding the work boundaries, e.g. how far the project scope went, or whether all staff members in the organisation would be affected. However, shadows of past projects have an impact on creating and spanning these work boundaries (Stjerne and Svejenova 2016). For example, in the study by Van Marrewijk *et al.* (2016), they observed a conflict between project members where one party’s expectations of the programme management was different to common practices based on their past experiences. Thus the work boundaries were not clear and consequently affected the project deliverables. Similarly, the project members in the Print Project came from different backgrounds with various work practices. For example, the Project Manager followed the PRINCE2 project management framework by the book, whereas to others, PRINCE2 was not a norm. Due to this framework, the Project Manager designed tasks according to a specific method and tried to enforce his approach on the others. Some members felt that a few of the tasks

were irrelevant but to the Project Manager they were vital to the overall process, thus leaving some ambiguities with regards to the work boundaries at the initial phases.

Another ambiguity that arose due to the nature of the Print Project relates to the roles of its members (Stjerne and Svejenova 2016). For example in Stjerne and Svejenova's (2016) study, they observed how the absence of boundary roles resulted in tasks not meeting expectations and objectives. Furthermore, besides understanding individual roles, understanding how each role relates to the others is an important factor. In the Print Project, this was particularly important in order for the members to agree on how the interim arrangement for the request routine should be conducted, specifically, how the individual members fitted into the new routine. This is supported by Van Marrewijk *et al.* (2016) who pointed out that members of a project needed to overcome their differences by clearly defining their roles.

To overcome these boundary ambiguities, coordination plays a key part especially in the early stages of a project where the ambiguities themselves can serve as a motivator for coordination (van Marrewijk *et al.* 2016). In the study by Bechky (2006), she observed how coordination was focused on role expectations which were accomplished through "practices of enthusiastic thanking, polite admonishing, and role-oriented joking" (p.3). These practices helped the members to learn and negotiate the role structures (Bechky 2006). Thus, informally communicating role expectations served as an effective mechanism for coordination. This was also observed in the Print Project, where weekly committee meetings were not conducted too formally as there were plenty of jokes and laughs, and once the Procurement Head even brought in some cakes to share around, creating a sense of camaraderie among the team members. Additionally, an important part of coordination is that project members must be willing to be flexible in their roles. This was observed in Stjerne and Svejenova's (2016) study where managers "proactively blurred their role boundaries" to ensure that the project completed its objectives (p.1784). During the Print Project, the Print Room Head was tasked with negotiating with SupplierD on the contract extension due to their long-term relationship, even though this task would usually be carried out by the Procurement Head. This shows a willingness to step into others' roles for the benefit of the project. When the team is coordinated effectively, this eases the process of exploring the different ostensives to reach a common one that is agreed collectively.

Another approach to overcoming boundary ambiguities is by creating a shared understanding, without which project members may end up disagreeing about their determined roles which leads to undesired outcomes as observed in Van Marrewijk *et al.*'s (2016) study. For example, Stjerne and Svejenova (2016) observed how a project was eventually successful once its members collectively acknowledged the role of a senior keyperson due to her credible project experiences. In the Print Project, initially some of the project members did not want further association with a certain supplier, but because of concerns raised by the Procurement Head, supported by other Board members, eventually everyone agreed to continue with this supplier during the interim phase. Thus they managed to overcome any uncertainties – they had to establish a *shared understanding*. This is similar to “role taking” where actors align their actions to the actions of others to form a joint action, which may include forming a collective ostensive (Dionysiou and Tsoukas 2013). This is also supported by Czarniawaska and Mazza (2003) who stated that actors experience an increased sense of togetherness with others in the same environment which is seen as temporary such as a project. This connection allows shared understandings for a routine to be developed, such as what actions need to be taken in a specific routine (Feldman and Rafaeli 2002), and thus a shared ostensive can be accomplished.

Perceived uncertainties. Perceived uncertainties refer to the inability of the routine actors to predict something accurately (Milliken 1987) due to external factors, as well as factors internal to the routine (Dionysiou and Tsoukas 2013). As pointed out by Dionysiou and Tsoukas (2013), based on the work by Weick (1979), when individuals interface for the first time in a specific joint activity, they face two inputs: (1) a few rules available to them such as a broadly defined common goal, and (2) some perceived uncertainties. This is supported by Brown *et al.* (2010) in their study, where it was observed that the start of each project was always full of questions and uncertainties. Although the collective experiences of the different project members can serve as a form of uncertainty reduction (Swärd 2016), there are many types of uncertainties that require more than just experience to overcome them. Specifically, the perceived uncertainties observed in this study relate to expectations, and the personal behaviour of each member of the project.

Because of the lack of prior relational experiences between the project members, their initial expectations regarding the project may differ but are expected to become less uncertain as the project progresses (Swärd 2016). For example, in the study by Van Marrewijk *et al.* (2016), the

expectations of the consultants involved in the project with regards to their role were vastly different. Whereas in past experience they had led projects, in that particular project they were treated as ordinary staff. In this study, one of the main differences of expectations was the types of print devices included in the project scope. The members had different expectations of what a 'print device' was due to their different technical knowledge. The Project Manager and Procurement may have expected a more generic print device, whereas the Technical Head and Print Room Head knew the specific models and types of print devices involved due to their technical experience.

In Swärd's (2016) study, she observed how some of the participants had uncertainties about the other participants with whom they were newly engaged. This was because from past experiences, how people behave (e.g. how cooperative they can be) may not be fully understood due to the temporary nature of the project. Furthermore, even if they appear to be getting along fine, the participants still held some reservations and uncertainties towards the other participants' motives. Unlike Swärd's (2016) study where the project members came from different organisations, members of the Print Project all work for PublicCo, so having dissimilar motives was not an issue as they all served the same organisation. However, uncertainties about each other's personal behaviour still existed as most of them had no prior working relationships. For example, how committed each member was to the project was definitely a question the Project Manager needed to answer. For example, the Print Room Head became part of the Working Committee because his superior, the Commercial Head, had asked him. While other members were assigned to the Print Project as part of their job scope (e.g. a Project Manager's role is to manage a project, a Procurement Head's role is to manage the purchasing of items), the Print Room Head was assigned to a role that differed from his daily one. So there was uncertainty regarding his commitment to the Print Project.

To overcome these uncertainties, Swärd (2016) proposes that the act of reciprocation can be vital as a substitute or foundation for trust when dealing with issues that involve uncertainties. Trust is the willingness to be vulnerable to other members' actions based on the assumption that the actions are significant to the trustor (Mayer *et al.* 1995). Developing trust is important in a temporary set-up (such as a project) where there is a limited history between its members (Swärd 2016). However, according to Curall and Inkpen (2002), trust is a collective action and is

particularly important among the working level members. In the Print Project, the Working Committee represented the working level members. One element of evident trust was when the Committee agreed on the Technical Head being the sole person to review every single request before it was forwarded to the next stage of the request routine. This meant that the Committee acknowledged his technical expertise as well as his judgement to make certain decisions. As a result, this eliminated any uncertainties on what type of requests Procurement or the Print Room should expect to receive and helped to narrow down the ostensive to one agreed by everyone.

One of the key contributing factors to the success of this Print Project was that its members made sure they gathered together at least once a week to update each other as well as share information. Because the individuals also had their day-to-day roles, this weekly meet-up played a crucial role in enabling any uncertainties to be ironed out. This is similar to what Torre (2008) terms “temporary geographical proximity” where members of a group meet up face-to-face every now and then to exchange information necessary for cooperation. So in a project where members are only partially committed to its activities, it is not necessary to meet face-to-face as often as expected because meetings that are attended occasionally can be dense in interactions, knowledge transfer, and conflict management (Torre 2008). This puts less pressure on the members as they can still maintain their daily roles while working effectively on the project activities. Enabling less pressure and allowing members to have a clear mind helped the Print Project resolve any uncertainties and achieve an ostensive that was agreed by all members and met the project’s objectives.

In summary, this study observed how boundary ambiguities and perceived uncertainties in the early stages of the Print Project were part of the unknown tacit component of the request routine. Overcoming these challenges through coordination, creating a shared understanding, enabling trust, and practising temporary geographical proximity through their weekly meetings allowed for their ostensive to fluctuate and change as they collectively developed and explored new ideas until a common ostensive understanding emerged. According to Srikanth and Puranam (2011), a common ground reached through ongoing communication enables tacit coordination. Similarly, in this study the constant talk and discussions enabled the actors to overcome any perceived uncertainties and boundary ambiguities and thus reach a common understanding that is explicit i.e. no longer tacit knowledge.

7.1.2 Ostensive change decoupled from the performative

My analysis shows that ostensive flexibility does not automatically translate into performative change because of: (1) the ability to temporarily explore new ostensives, (2) the prevention of miscommunicated objectives, and (3) focusing on specific aspects of the routine.

Temporary exploration. The Print Project as a temporary set-up indirectly gave permission for the project members to explore solutions aligned with its objectives. One of these solutions had an impact on the *request* routine. The temporary set-up is described by Hendry and Seidl (2003) as “strategic episodes” where existing strategies can be questioned. Although the setting, physically and socially, separates the project members from their daily roles, the new ideas or solutions must still have some association with the daily roles so that they can be integrated back into the organisation (Hendry and Seidl 2003). According to Bucher and Langley (2016), one of the advantages of having such space allows “conceptual language” for theorising change (p.597). Routine actors are able to examine new concepts of routines, thus creating a new ostensive without impacting the existing routine performance. Past studies have observed temporary ostensive exploration occurring in relation to the routine’s performance (e.g. Rerup and Feldman 2011; Bucher and Langley 2016). In their studies, the new ostensives are given the chance of being tested, and then changed again, based on feedback from the performance. However, in this study, the final ostensive that was eventually accepted was established without being tested out. This was because the actors knew that the routine change would also be temporary as it was meant to cater for print device requests during the period of the project. The actors did not see the necessity for the new ostensive to be refined further once one had emerged that was commonly accepted. Therefore, if a routine change is understood to be temporary, it is not necessary for the new ostensive to be verified and tested for it to be collectively accepted.

Preventing miscommunication. The *request* routine involved multiple actors from various departments across the organisation. Because the discussions on the routine change took place over a number of weeks, it was difficult to align the performative to the constantly fluctuating ostensive because of the temporary set-up of the Print Project. One of the reasons was the need to disseminate the information to a wide audience within a short period. If there was a breakdown in communication with regards to how to perform the routine, it would result in an undesirable outcome. This would be similar to the case where routine owners do not communicate their

objectives clearly to the routine actors (Bruns 2009; Bapuji *et al.* 2012). In other words, if the correct ostensive were not transferred to all the routine actors, it would result in routine performances that deviate from the intended objective. Thus, the practical solution was to allow the routine to be carried out as normal until a new ostensive could be established. After several weeks of discussion, the project team arrived at a new, commonly agreed ostensive of the routine which they termed *interim arrangement*. Similar to the case observed in Whitford and Zirpoli's (2014) study, the new ostensive was documented in an artefact that was distributed to the whole organisation as a means to communicate to all routine actors, on the assumption they would perform the routine according to the new ostensive.

Focusing on specific aspects. Before a new ostensive is established, it goes through a changing process that gradually stabilises over time by deliberating on three specific features of the routine. Past studies have observed different mechanisms of achieving routine flexibility, such as: repetition over time (Cohen and Bacdayan 1994), repairing, expanding and striving to improve past performances (Feldman 2000), obtaining actors' feedback (Goh *et al.* 2011), and continuous reflection and experimentation (Bucher and Langley 2016). The findings of this study closely resemble Bucher and Langley's (2016), where there was a space for routine actors to deliberate their ideas. The only difference is that this study does not include any experimental action as the ideas were not tested out. As the changes and stabilisation of the ostensive occurred independently of the performative, I observed that actors were more involved in mindful actions, such as deliberation. In devising the revised routine, the process focused on three main features: (1) the routine definition – how actors understood what the routine objective was, acknowledging any exceptional cases, (2) the routine scoping – agreeing on the type of print devices involved and what their functions were, and (3) the routine enactment – what to expect in actually carrying out the routine in different scenarios. A constant discussion that closely kept to these three issues only indicated that the routine actors were constantly deliberating on the ideas and solution. They eventually converged on a common understanding when all possible angles had been considered. The result was a new stable routine where its actors had a common ostensive on how to enact it.

Although the performative of the routine remained constant, the ostensive endured multiple changes by temporary routine actors over a certain period of time. This occurrence was possibly due to the conditions of the temporary set-up of the Print Project, with its boundary ambiguities

and perceived uncertainties. So, while past studies have shown that different routine ostensives are the result of multiple perspectives and interpretations of the routine actors (Cohen and Bacdayan 1994; Czarniawska and Mazza 2003; Feldman and Pentland 2003), this study provides evidence that the characteristics of a temporary project setting provide an additional increase in these differences. While in the project environment, the routine ostensive reaches stability after a series of mindful actions, such as deliberation that focuses on specific features of the routine. The new ostensive is then encoded into an artefact to be communicated to other routine actors (Bapuji *et al.* 2012; Whitford and Zirpoli 2014).

7.1.3 Summary

The Print Project has a limited time duration where actors work together temporarily to accomplish some objectives. Like other projects in the past, the initial phase included many boundary ambiguities in terms of the actors' roles and the work involved, and perceived uncertainties with regards to expectations and other actors' personal behaviour. Besides that, there is also the tacit component of the routine that the actors needed to embrace and understand. The process of overcoming these challenges led to the ostensive aspect of the request routine being explored, and undergoing constant fluctuation until a new common ostensive was established. Because the Print Project is a temporary set-up within a bigger organisation (i.e. PublicCo), while the ostensive within the project members changed, the request routine was still carried out by the rest of PublicCo based on the existing ostensive. While the ostensive is known not to determine specific performances (e.g. D'Adderio 2003; Bruns 2009) due to the role of agency, this is a different case. Rather, the reason why the changes in the ostensive were not instantly translated to the performative was the temporary nature of the Print Project, which meant it was disengaged from the rest of the organisation. The only way it was translated to the performative was through a formal re-engagement into PublicCo via the interim arrangement policy. Thus the ostensive change emerged gradually without any obvious "initiating jolts" or pressures as actors explore and experiment with various options (Howard-Grenville *et al.* 2011) while being temporarily disengaged from the performative.

7.2 Legitimising routine performances: The emergence of options as a mechanism

My analysis demonstrates that the emergence of options provides a mechanism for routines to be performed flexibly. Furthermore, options that emerge ostensibly offer legitimation to the actions taken during routine enactment. In this section, the discussion is split into two parts. The first part relates to how options emerge during the routine enactment, and the second relates to how actors use these options as a way to legitimise their actions.

7.2.1 The emergence of options

By comparing three routine performances, I observed that the flexibility in the routine's performance is driven by the options that emerge endogenously during the enactment of the routine, through deliberative actions and improvisation. There have been many mechanisms for routine flexibility in past research, such as performance improvement (Feldman 2000), use of grammar-like structures (Pentland and Rueter 1994), trial and error (Rerup and Feldman 2011), use of artefacts (Bapuji *et al.* 2012; Turner and Rindova 2012), and use of spaces (Aroles and McLean 2016; Bucher and Langley 2016). An area that has been overlooked relates to the options that emerge as the result of these mechanisms. An option is when an actor has a choice between two or more actions when enacting a routine. For instance in Feldman's (2000) hiring routine, interviewing a candidate can be done either face-to-face or via an online video call. Having these two ways of conducting the interview means there are options within the hiring routine. In past studies, the mechanisms used to create routine flexibility indirectly created options. For instance, Pentland and Rueter (1994), Turner and Rindova (2012), and Bapuji *et al.* (2012) observed actors engaged in a controlled number of options. Whereas the first two studies involved pre-determined options that were specified in the form of artefacts (e.g. route planner, call-tracking database), the latter study involved choices that were limited by what was in the hotel room (e.g. in the bath tub, on the chair). On the other hand, other studies observed actors establishing alternative options as a response to undesirable routine performances (Feldman 2000; Rerup and Feldman 2011). Thus options were either triggered, or limited. This study provides insight into how options emerge through the enactment of the routine itself as the result of: (1) deliberative actions, and (2), improvisation.

Deliberative actions. Actors' engagement in deliberation during routine enactment contributes to the emergence of options. For the sourcing of print specialists and print software, in each case the option to move forward with an open tender only emerged as the project team realised that suppliers in all the procurement frameworks that they had examined did not meet the criteria they had set. The process of exploring the various available frameworks took several weeks before they established a conclusion that none were suitable. Thus a lot of effort was used in deciding which course of action to take in order to proceed with the sourcing routine. Pentland and Rueter (1994) refer to this ability to adapt to the various contexts of everyday life as effortful accomplishments. Some of the actions that demonstrated these in enacting the routine were challenging the existing option, anticipating events or responses, and suggesting alternative options. The effortful activities suggest that there is a form of deliberation among the routine actors. According to Cohen (2007), routines are not mindless actions, but ones that are full of deliberation and reflection. Deliberative actions relate to the act of "reflexive self-monitoring" (Giddens 1984) where actors question their actions during routine enactment. Dittrich *et al.* (2016) suggest that reflective talk, in the form of envisaging alternative actions and/or patterns within a routine, opens up opportunities for routine change. Thus, the reflective talk is a form of deliberation which then reduces the need to deliberate in subsequent routine performances (Dittrich *et al.* 2016). Similarly, Bucher and Langley (2016) observed how reflective spaces were used to envision and deliberate on new concepts of a routine. However, in both studies, the deliberative actions that gave rise to new options within the routine were the result of responding to certain pressures or events, whereas in this study, it is demonstrated that options can arise through deliberation that is emergent, and unintentional.

Improvisation. What is meant by improvisation is that each of the options that emerged was unique to a particular routine performance. Deliberation among the routine actors not only affects interdependent activities within a routine, but also subsequent routine performances (Dittrich *et al.* 2016). Therefore when options emerge during a particular routine performance as the result of deliberative actions, future performances of the same routine could make use of these options. However, in this study, it was observed that all three performances of the sourcing routine involved different options at various activities. This occurred because the deliberative actions that were carried out were improvisatory. According to Pentland and Feldman (2005), enacting a routine is always novel to some extent, , which means that the actions chosen are inherently "improvisatory"

(p.796). Because routines are expected to be flexible at all times (Howard-Grenville 2005; Pentland and Feldman 2005; 2008a), they involve thinking in real time, which is a state of active awareness that is simultaneous with the carrying out of an action (Salvato 2009). The processing of real-time information in routine enactment leads to ad-hoc coordination of actions (Kremser and Schreyögg 2016) and “mindfulness in actions” (Levinthal and Rerup 2006, p.505). In this study, the improvisation by the actors facilitates the emergence of options as the routine is being enacted. For example, despite the first two sourcing routine performances involving an open tender (i.e. no procurement framework was used), the sourcing for the print hardware saw the actors again engaging with the exploration of multiple options. As a result, for that particular sourcing routine, a combination of two frameworks was decided on as the best option. The unique context and issues relating to the enactment of the print hardware sourcing routine triggered the improvisatory decision of choosing an unconventional option. Whereas previous studies have observed improvisatory options in routine enactment that were instantaneous (e.g. Cohen and Bacdayan 1994; Turner and Rindova 2012), this study demonstrates improvisatory options that were emergent over time.

In summary, improvisation and deliberative actions that promote the emergence of options provide the mechanism for routine flexibility. Routine actors constantly take part in reflective self-monitoring (i.e. deliberating) to ensure that they perform the routine correctly (Feldman and Pentland 2003) by facilitating the emergence of options during routine enactment. This notion is supported by Kremser and Schreyögg (2016) as they propose that an organisational routine be defined as “a repetitive, recognizable pattern of interdependent actions, involving multiple actors that strives to accomplish a day-to-day operational task and emerges as actions become reflective of each other” (p.20). Therefore, routines are about deliberating on the various possible actions and their impact on one another, before enacting them. Additionally, the novel aspect of routines due to their improvisatory characteristics (Pentland and Feldman 2005), opens up opportunities for flexibility in the routine enactment. Thus, routine flexibility arises from the emergence of options as the result of deliberation and improvisation.

The options that emerge are initiated from the ostensive aspect. Similar to Bucher and Langley’s (2016) reflective spaces where new concepts of the routine are discussed, the options in this study emerged through deliberating and improving different concepts, thus creating a new

ostensive. Because the routines are part of a norm, rather than codified in an artefact, actors possessed the flexibility to adapt their ostensive within changing contexts. Howard-Grenville's (2005) study is an example of actors using their power to influence their ostensive towards others because their road-mapping routine had no embedded artefact that forced them to enact the routine in a specific way. However, in this study, the different contexts encouraged the exploration of new ostensives as a collective, rather than individual, effort. With the options that emerge, a new ostensive is developed and established thus creating new norms relating to the routine. The 'incompleteness' of the routine (due to it not being embedded in an artefact) depends on the tacit knowledge of actors (Reynaud 2005) for its enactment. This is similarly addressed by D'adderio (2003) who stated that even with a new understanding of the routine (i.e. ostensive), its implementation requires tacit knowledge and experience to reapply meaning to the new understanding. Thus, a combination of the new and existing tacit knowledge is what ensures that the new ostensive, as the result of the options, is translated into the performative.

7.2.2 Legitimising actions

Although novel ways of the performative aspect can lead to new ostensive patterns emerging (Deken *et al.* 2016), the same cannot be observed when the novelty occurs at the ostensive aspect. This is because the ostensive does not necessarily determine the performative (Giddens 1984; Feldman and Pentland 2003). The new ostensive patterns in Deken *et al.*'s (2016) study are assumed to be stabilised, whereas in this study, no fixed (stable) performative was established. Even though the new ostensive was indeed translated into actions at a particular time, it was not enough to warrant a fixed new way of performing the routine. Rather, the ostensive served another purpose, to legitimise the performative via the options that had emerged.

Options that transpire through deliberative actions and improvisation form a legitimisation mechanism for routine flexibility. There are limited studies that discuss how the enactment of a routine is legitimised, in other words, understanding how a routine's performance is recognised as acceptable based on the expectations of how it should be performed. Some studies discuss similar ideas; for instance, Turner and Rindova (2012) observed how artefacts were used as a means for routine actors to maintain consistency in the routine performance. Preserving consistency was vital to the routine's enactment, thus being able to maintain it forms a mechanism for determining

legitimacy of the routine. In my study, it is demonstrated how legitimacy is created through: (1) referring, (2) guiding, and (3) accounting, which are key ‘ingredients’ in the ostensive-to-performative relationship (Feldman and Pentland 2003).

Referring. Firstly, the emergence of options allows actors collectively to refer to a specific context for routine enactment. Referring, in the ostensive-to-performative relationship, occurs when the ostensive is used to signify similar patterns of activities or performances that create a routine (Feldman and Pentland 2003). It is an understanding of the expectations of how a routine should be performed. Within an organisation, formal institutions such as SOPs combine with informal institutions such as norms to create expectations (Becker 2004) for routine actors on how to enact organisational routines. Options that emerge serve as references for the actions within the routine performance, which “would otherwise be incomprehensible” (Feldman and Pentland 2003, p.107). In this study, options arose as a means to refer to a particularly specific context for routine enactment. For example, when it came to deciding on the evaluation criteria for the print software, there were the options of considering technical capabilities, cost, and support. However, the Committee eventually opted for technical capabilities as the main criteria that overshadowed the other two. This was because, for the sourcing of a technical product, the importance of its capabilities appeared to surpass all other factors. The option to allocate a heavy weighting for technical capability serves as a reference for situations where the product sourced is a piece of technology. This particular point in the routine becomes a reference point for the actors, which helps them to comprehend and manage their actions better (Feldman and Pentland 2003). Thus, the reference point provides legitimacy to the actors’ actions. In the study by Howard-Grenville (2005), she noted that the understanding of how to enact the routine was not embedded in any artefact, but in the minds of the actors, which is similar to the sourcing routine in this study. The study observed that certain individuals had the power to break this referring by offering alternative options in certain contexts. Hence, the relationship between the actor and the context was what allowed the routine to be flexible (Howard-Grenville 2005). Instead of specific individuals who have the power to change a routine in specific contexts, this study offers insight into how a group of actors collectively agree on alternative options that have specific reference to certain contexts.

Guiding. Secondly, options enable some form of guidance for routine performance without having to depend on artefacts. According to Feldman and Pentland (2003), the ostensive can “serve

as template for behaviour or a normative goal” (p.106). For example, when it came to deciding on a procurement framework to assist with the sourcing process, having a limited number of options that emerged through discussions and information-gathering narrowed the scope for the actors who were making the decision. Rather than having an open-ended decision to make, specifying and laying out the options served as a guide for the actors to perform the routine effectively. While past understandings have discussed how an existing ostensive can serve as a guide to the performative, this study provides evidence of an evolving guide, through the impact of options. In other words, the routine actors are constantly guided throughout the routine enactment as the ostensive changes when options emerge. This means that it only serves as a guide, but does not provide specific details on how to perform the routine. Previous studies have observed how artefacts assist actors in guiding them on which option to take when enacting a routine (e.g. Pentland and Rueter 1994; Turner and Rindova 2012). In this study, it is observed that it is not necessary to depend on artefacts as the guide. Instead, the availability of the options that emerge themselves can serve the purpose of guiding the actors on how to enact a routine; thus, it also serves as a legitimation factor.

Accounting. Lastly, options that emerge enable collective accountability for the actions taken. The ostensive aspect of the routine is useful as it allows actors to describe their performance as ways that make sense of what they are doing. It can be used to either legitimise or de-legitimise a routine, or what Feldman and Pentland (2003) refer to as ‘accounting’. When options emerge and actors strive to find which option to enact, indirectly the actors are in the process of finding a solution that allows them to account for their actions. In this study, there were several instances where some of the actors suggested opting for having a ‘fresh pair of eyes’ to review the documents that included decisions which were a vital part of pursuing the sourcing routine. This option was a form of validating the document so that it would be well accepted, and thus account for the decision being made. Similarly, the option to involve Consultants in the ITT preparation for the print hardware was a tactic to ensure that this activity would be performed in a proper manner. Because the Committee members themselves were not experts on print hardware, having the Consultants to assist them with the ITT provided the assurance that it would be a quality document. In both examples, the options that emerge during routine enactment are based on the necessity to account for those taken in completing a certain activity. Thus, actions are legitimised through these options. In the study by Bruns (2009), the actors chose how and when they wanted to enact the lab safety

routine, which often saw the enactment deviate from the organisation's expectations. They justified this by stating that their actions were in the best interest of the lab specimens, which were equally important. In Bruns' (2009) study, she observed how individuals accounted for their own actions. However, in this study, it is demonstrated that the options allow the routine performance enacted by the project team to be accounted for. Thus besides individual accountability, accountability can also be established on a collective level through options that emerge during routine enactment.

7.2.3 Summary

In section 7.1, the exploration of the ostensive occurred without directly affecting the performative aspect. However, in this section, the ostensive was explored while instantly impacting the performative aspect of the sourcing routine. This is because unlike the request routine, the sourcing routine was carried out as part of the Print Project. Thus the actors were not disengaged from its performance. The deliberation and improvisation by the actors that resulted in multiple options as part of the routine's ostensive were directly translated into actions that were part of the routine's performance. This was made possible because the options acted as a reference, guidance, and accountability for those actions (Feldman and Pentland 2003). So building on Feldman and Pentland's (2003) theory on the ostensive-to-performative relationship, this study provides evidence on how the existence of options serves as a mechanism for legitimising the performative aspect of the routine.

7.3 Novel actions for a targeted outcome: Decoupling as a mechanism

In this study, it is demonstrated how routine flexibility is accomplished by performing decoupled activities in order to obtain a targeted outcome. Decoupling refers to actions that do not align with the actual process of doing things, but still achieve similar outcomes. A targeted outcome is an end point that is expected to be accomplished by the end of a routine enactment, e.g. hiring a preferred candidate. Examining past studies, routine flexibility in the performative aspect is achieved through: inconsistent sequence of actions (Cohen and Bacdayan 1994; Turner and Rindova 2012; LeBaron *et al.* 2016), novel actions or activities within a routine (Pentland and Rueter 1994;

Reynaud 2005; Deken *et al.* 2016), and adaptive responses to the temporal aspect (Miller *et al.* 2012; Turner 2014). Thus a routine is not necessarily made up of a fixed sequence of activities enacted over a fixed period of time. Observations from this study indicate that besides a routine being flexible in terms of varying activities with no fixed sequence and time, it can also be flexible based on the ability to have different outcomes. For example, when enacting a sourcing routine, the routine actors have a preferred supplier as the final outcome. Even though they follow the activities within the routine, some activities are adapted in order for them to accomplish the intended outcome.

There are two parts to this section. Firstly, a discussion on how and why targeted outcomes emerge, and secondly, a discussion on how decoupling allows for routine flexibility.

7.3.1 The emergence of targeted outcomes

This study demonstrates that performative flexibility is triggered by the need to obtain targeted outcomes that are specific to certain routine performances. Targeted outcomes emerge ostensibly during routine enactment and are triggered by: (1) experiences, and (2) perceived uncertainties.

Experiences. One of the reasons specific outcomes are targeted is past experiences. In Bruns' (2009) study, how a routine is performed is dependent on the routine actors' experience, which determines whether they should enact the routine in certain contexts and not others. These experiences do not necessarily have to relate to the routine itself, but could be anything that relates to its performance. For instance, the issue of the project team not wanting a specific software product even before they had read the proposals was due to their own past experiences of using that particular software. Because of this, the project members assumed that the software would not be able to meet their specific requirements as stated in the ITT document, and thus put it aside as a non-contender.

Perceived uncertainties. Secondly, another reason why specific targeted outcomes exist is perceived uncertainties, which is the inability of the routine actors to predict something accurately (Milliken 1987) due to external and internal factors (Dionysiou and Tsoukas 2013). Because routine actors may not have enough information, expertise or experience to make a judgement, they instead rely on a solution that they can predict. In other words, they would prefer to opt for a

solution that they are comfortable and confident with. For instance, in the case of sourcing for print software, besides the one software product that was put aside, between the remaining software contenders, the project team only managed to arrange for a site visit to view SoftwareP, which gave them more insight and confidence in its capabilities. On the other hand, information on a third software product was limited and so its capabilities were quite uncertain. Due to this, the project members decided to pursue the one product they perceived as having the most potential to be successful for the new print service, which was SoftwareP.

In past studies, discussions on targeted outcomes in routine enactment refer to outcomes that are still quite general. For instance, in the study by Deken *et al.* (2016), they examine how routine actors engage with *routine work*¹³ to accomplish targeted goals which are open-ended, such as to produce a reduction in operating costs. Similarly, in Turner and Rindova's (2012) study on waste collection routines, the target was to complete a waste collection that covered a certain area, within a certain time. In both the above examples, the targeted outcomes were not uniquely specific to a certain routine enactment. In this study, the intended outcomes relate to achieving very specific end-goals for individual routine performances. For example, for the sourcing of print software, the project team had made up their mind that they did not even want to consider a specific software product that was competing for the tender, and had a preference for another specific type of software. This means that they had a specific product that they wanted, yet they would still have to go through the sequence of activities within the sourcing routine. This instance, where a specific end-goal is the intended outcome, can also be observed in other types of routines such a hiring routine where a specific candidate is preferred, or a garbage collection routine where the truck driver prefers to end his task at a specific location. Thus, this research extends Deken *et al.*'s (2016) work by providing insight into how routine actors create novel actions to accomplish a specific intended outcome.

¹³ Deken *et al.* (2016) refers to *routine work* as the actors' effort that directs routine performances to achieve their intended outcomes and respond to feedback from past routine performances. Thus routine work conceptualises routines as effortful accomplishments, which they categorise into three types: flexing, stretching and inventing.

7.3.2 Decoupling as a mechanism for performative flexibility

Performance flexibility can be accomplished in the form of decoupling activities that are either engaged or disengaged from the core routine activities. Past studies have provided examples of routine actors focusing on accomplishing a certain outcome, although their actions were undesirable from the organisation's point of view (e.g. Reynaud 2005). In this study, it is observed that actions taken to accomplish the intended outcome were acceptable and not wrong in the eyes of the organisation. In other words, the routine was performed via legitimate actions, and a mechanism to describe this occurrence is called decoupling.

Decoupling is a method that upholds the assumption that people are acting in good faith by maintaining standardised, formal structures while activities are varied in response to practical considerations (Meyer and Rowan 1977). For example, compliance with external rules (such as EU regulations for public organisations), can be merely symbolic (Fiss and Zajac 2006). Although non-compliance may appear to be a negative trait, there have been many studies that prove otherwise. For instance Storz (2007) pointed out that non-compliance is more a solution to a problem than a problem itself, i.e. decoupling activities that are non-compliant can bring more advantages than disadvantages. According to Westphal and Zajac (2001), top management that acknowledges the encouraging potential of decoupling will most likely engage in activities related to it. In the case of a routine, its performance can be varied but still foster the perceived legitimacy of organisations as institutions (Feldman and Pentland 2003).

Past studies have labelled different types of decoupling. For example, Sandholts (2012) suggests two types of decoupling, *malignant strain* and *benign strain*, based on whether decoupling negatively or positively affects the organisation in the long term. On the other hand, Bromley and Powell (2012) differentiate decoupling according to the level at which it occurs, i.e. *policy-practice*, which relates to the relationship between policy and practice, and *mean-ends*, which relates to the relationship between policy and core tasks. In this study, I introduce a new type of categorisation for decoupled activities that is relevant to routine studies. The types of decoupling are labelled according to the means by which they occur: (1) *disengaged decoupling*, and (2) *engaged decoupling*.

Disengaged decoupling. Disengaged decoupling is defined as decoupled activities that occur outside the core tasks of the routine. It was observed that actors carried out certain activities within

the routine that were not part of the core activities, but yet were still accepted as legitimate actions for the routine. This type of disengaged decoupling is referred to as *unofficial activities*. Unlike experimentation activities (Bucher and Langley 2016), or trial-and-error activities (Rerup and Feldman 2011) that impact the routine's enactment, these unofficial activities do not directly impact the routine as they are considered actions taken outside the routine process. For instance, during the evaluation phase of one of the products, the project team wanted to carry out reference checks to gain better information on the shortlisted products. However, since they were purchasing the product under a procurement framework, the activity for reference checking was not part of the process. The project team pursued this activity nonetheless, as they assumed it to be an unofficial activity which would not be included in the final evaluation. Since the findings of their reference checks were not objectively evaluated as part of the sourcing routine, the whole routine performance was still deemed legitimate.

Engaged decoupling. Engaged decoupling is defined as decoupled activities that occur within the core tasks of the routine. The second means of decoupling observed is through activities that were part of the core activities of the routine; for example, the act of preferential treatment in activities that are subjective in nature (e.g. scoring essays, giving attention to customers) or in other words, a show of biased conduct. According to Fiss and Zajac (2006), decoupling can be subtle in a sense that it may involve several different means of presenting and justifying the actions taken. There has been little reference to the impact of bias in routine enactment. However similar discussions relate to: having power to influence decision-making (Howard-Grenville 2005), using rules for personal advantage (Reynaud 2005), and prioritising differently to set expectations (Bruns 2009). This provides direct insight into the impact of bias towards the outcome of the routine. For instance, as the project team had targeted the print software that they preferred, this was apparent through the bias that was shown during some activities that led to the final purchase of that particular software. During the tender evaluation, some of the project members gave very strict marks for software that they did not prefer and were more lenient with their preferred software. Since the marking was based on individual perception and thus very subjective, there was little evidence to prove anyone had marked a proposal biasedly. In another incident, during the interview session for the preferred software held as part of evaluation, one of the project members was particularly helpful in assisting the presenters with answering some of the questions being asked. Much more thought and interest were given to this supplier's session as compared to the others.

The helpfulness of the project member showed preferential treatment and evidently helped with the supplier's evaluation. Again, because this can be perceived subjectively as different routine actors evaluate routine performances differently (Deken *et al.* 2016), there is no explicit evidence of any bias.

In summary, this study builds on from the work of Deken *et al.* (2016) by providing insight into how novel actions in routine performance are driven by the intention to accomplish a specific outcome. The novelty that I observed refers to the decoupling actions, whether through actions that are disengaged from the core tasks of the routine, such as unofficial activities, or those that are part of the routine core tasks, such as biased treatment, in order to acquire the intended outcome.

7.3.3 Summary

The sourcing routine in this study exists as part of a norm, and is not embedded in the form of an artefact which is similar to the road-mapping routine observed in Howard-Grenville's (2005) study, so, its ostensive lies tacitly embedded in the minds of its actors. Because of this, there are no fixed methods of enacting the routine as the actors have all the freedom to perform the routine depending on their ostensive. In this case, the ostensive changed with the different targeted outcomes that emerged, which led to the actors using improvisation (Feldman and Pentland 2003) and effortful techniques (Pentland and Rueter 1994) in their routine performances in order to accomplish these outcomes. Some of their actions included decoupled activities but still remained within certain limits, as the Print Project was part of PublicCo, which is bounded by EU regulations. Even though some of their actions appeared to be non-compliant, they were still part of a legitimate routine performance. The reason for this is that the routine itself was performed adequately, meaning all core tasks were carried out as would be expected in a sourcing routine. Thus, the decoupled activity did not affect the overall performance. It only acted as a solution to the problem (task) (Storz 2007), accomplishing an outcome that was specifically intended.

7.4 Routine flexibility: The role of the ostensive-to-performative relationship

This study highlights the role of the ostensive-to-performative relationship in routine flexibility. Both the ostensive and performative aspects form the generative properties of routines, which enable routines to exist (Feldman and Pentland 2003). Besides the existence of routines, I argue that their flexibility is also dependent on the relationship between the two aspects. Each of the empirical findings demonstrates different roles of the ostensive-to-performative relationship that enable flexibility in routine enactment.

7.4.1 Disengaged relationship

This study gives insight into how routine flexibility can occur while the ostensive is temporarily disengaged from the performative. The condition that allowed this to occur was the characteristic of being in a temporary set-up such as a project.

The generative characteristic of the ostensive-to-performative relationship, according to Feldman and Pentland (2003), suggests that this relationship should always be coupled. Past studies have supported this notion; for instance in Rerup and Feldman's (2011) study, they observed how new routines are established through a trial-and-error learning process that engaged with both aspects of the routine dynamics. One part of the trial-and-error process was to solve problems raised by the routine enactment (i.e. performative), while another part was to resolve questions raised by disconnection between espoused and enacted organisational schemata¹⁴ (i.e. ostensive). Thus, routine change was only possible via a trial-and-error process involving both the ostensive and performative aspects. Similarly, Bucher and Langley (2016) observed the use of spaces that interact between the ostensive and performative aspects to acquire a routine that performs to expectations. A reflective space is used to develop new concepts of the routine (i.e. ostensive), whereas an experimental space is used to test and modify routines based on the new concepts (i.e. performative). In both these studies, the existence of routine flexibility relied on the dependencies between the two aspects of the routine. However, in this study, it is demonstrated that routine flexibility can also occur while the two aspects are disengaged from one another.

¹⁴ Organisational schemata is defined as “a set of shared assumptions, values, and frames of reference that give meaning to everyday activities and guide how organization members think and act” (Rerup and Feldman 2011, p.578)

Specifically, it was observed how the ostensive is gradually changed over time, while the routine's performance is still based on the original ostensive. Only when the new ostensive was embedded in an artefact, did it translate into the routine's performative. The condition for this occurrence is the temporary nature of the organisation.

The temporary state of Print Project meant that normal order and practices were suspended (Sturdy *et al.* 2006). This in turn gives rise to creativity (Garsten 1999) among routine actors, which allows them to challenge and question the routine's ostensive in an experimental manner. The actors are able to temporarily experiment with different ostensives without affecting the current performance of the routine. However, some association with the routine needs to be maintained (e.g. anticipating responses, considering all scenarios) so that the new ostensive can be reintegrated into the routine without any problems (Hendry and Seidl 2003). Additionally, because the routine change is temporary, it was not necessary to put too much effort into coming up with a 'perfect' new ostensive by testing out and refining it based on feedback from performances. Thus the new ostensive that emerged was collectively accepted based on conceptual-related discussions.

7.4.2 Legitimation relationship

This study provides further understanding on how the ostensive can serve as a legitimation mechanism for the performative, which enables routine flexibility to exist. Specifically, options that emerge ostensibly during routine enactment provide the legitimacy for the routine performance.

Feldman and Pentland (2003) introduced their routine dynamics frameworks, which showcased how the ostensive can legitimise some routine performances as appropriate to the routine. However, there has been little research on how this is accomplished. Some studies indirectly demonstrate certain phenomena that demonstrate legitimacy. For instance, Reynaud (2005) observed how actors were able to legitimise their actions because they were just following the rules set by the organisation. Similarly, in Whitford and Zirpoli's (2014) study, the legitimation of the inter-organisational routine was ensured through a boundary artefact that was shared between all organisations. In both these examples, artefacts function as the legitimation mechanism. Alternatively, the ostensive can also be used for the same reason. For example, Bruns

(2009) witnessed how actors used their expectations and priorities to account for their actions. Besides an individual ostensive, a shared, collective ostensive can also legitimise the performative. This is demonstrated in the study by Lebaron *et al.* (2016) where the ostensives shared among routine actors were vital to how they were able to enact the routine flexibly. The unspoken common understanding gave consent to the actors to negotiate the routine performances without having to explicitly discuss them. Whereas this example focuses on how the performative flexibility arose, this study provides insight into how the emergence of the shared ostensive itself provides legitimacy. The options that arise through deliberation and improvisation offer the legitimation factor for the performative aspect. This is accomplished by allowing actors to refer to specific contexts, have guidance without relying on artefacts, and account for their collective actions.

7.4.3 Accommodating relationship

In this study, it is demonstrated how performative flexibility is used to accommodate ostensive flexibility. Flexibility in the routine ostensive emerges when specific targeted outcomes are established for certain routine performances. When the ostensive is focused on accomplishing the specific outcome, the performative needs to be adapted to accommodate this. This study proposes decoupling as a mechanism to enable this to happen.

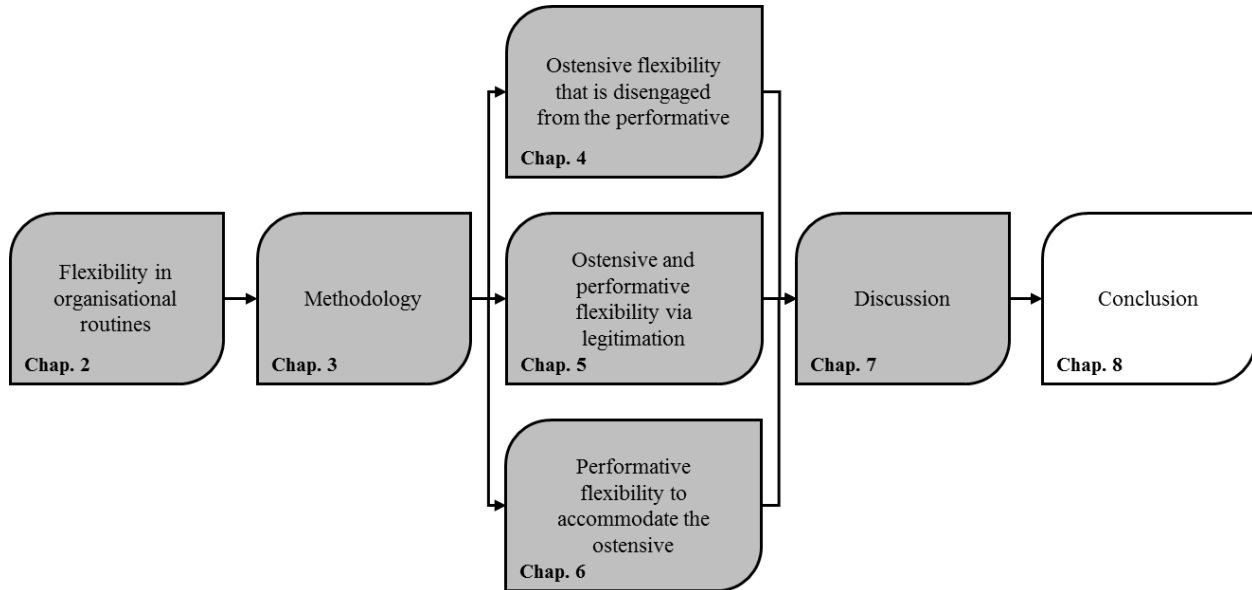
According to Feldman and Pentland (2003), the ostensive can constrain and enable routine performances. The performance of a routine generally relates directly to the ostensive of individual actors, as well as the collective ostensive. For instance, Howard-Grenville (2005) observed how a senior executive who had an alternative idea (ostensive), pushed for the routine to be performed so that this idea was accommodated. Likewise, Goh *et al.* (2011) observed how the performance of several routines had to be changed with the introduction of a new software system that had the new ostensive embedded in it. Both these examples provide scenarios where the performative is forced to accommodate the ostensive. However in the study by Deken *et al.* (2016), they examined how actors generate flexibility in the interdependent actions of a routine to strive for novel outcomes. They also viewed having established intended outcomes as parallel to the understandings of the ostensive patterns of the routine. Thus performative flexibility in the form of flexing, stretching and inventing can be used to accommodate the ostensive flexibility represented by the novel outcomes (Deken *et al.* 2016). This study extends their study by providing

an alternative mechanism for how this ostensive-to-performative relationship is managed. Deken *et al.*'s (2016) study focus on the interdependencies of actions, and who the routine enactment involves (e.g. actors who have performed the routine before, actors who are not familiar with the routine). This study offers a specific mechanism, decoupling, for the performative to accommodate the ostensive. Decoupling enables activities that appear to be inappropriate for the routine to be legitimately carried out. One of the conditions for this mechanism to be used is when a specific outcome is intended, such as having a preferred supplier for a sourcing routine.

7.4.4 Summary of the ostensive-to-performative relationships

From the previous sections, it can be concluded that different types of relationships take place between the ostensive and performative aspects of a routine. These relationships play a significant role in enabling routine flexibility. What is common among all three types of relationships is that they become apparent when the routine flexibility is emergent, i.e. not planned. For instance, the ostensive change for the request routine emerged as the project members became more engaged with the Print Project. Similarly, the options for all the sourcing routines only emerged once the routine was enacted. Additionally, the ostensive-to-performative relationships could only materialise through the collective effort of the routine actors. For example, in order to resolve the ambiguities that arose due to the conditions of a temporary set-up, actors strived to create a common understanding. Similarly, to accomplish the target of procuring a preferred supplier, the actors needed to possess a shared understanding of the decoupled activities in order for those activities to be successful. Therefore, in summary, the conditions that give rise to the different ostensive-to-performative relationships to enable routine flexibility are: (1) involving routine change or flexibility that is emergent, and (2) the collective effort of the routine actors.

CHAPTER 8 : CONCLUSION



This study brings attention to routine flexibility in areas that have seldom been discussed in previous research. As organisations are faced with the need to constantly adapt and survive in ever-changing markets, routines are being used as the source for their flexibility (Feldman and Pentland 2003). A temporary project team formed the context for studying how routines can be flexible through the different relationships between the ostensive and performative aspects. The ostensive observed in this study represented the abstract understandings which were embedded in the actors' minds rather than an artefact similar to Howard-Grenville's (2005) case. Because the ostensive was not codified physically, it was thus observable through the actors' talk (Bucher and Langley 2016) where actors envisaged and negotiated alternative patterns of the routine (Dittrich et al. 2016). In this study, no artefacts were influential in the routine enactment. The workflows were meant to capture a partial understanding of the routine to provide a clearer view to anyone studying the routine, and thus did not influence the actual routine's performance. The three empirical chapters presented in this study deliver insights into the main research question: *How does the ostensive-to-performative relationship affect the emergence of endogenous routine flexibility?*

In the first empirical chapter I examined how actors, through their effort to embrace the tacit component of the routine (Cohen and Bacdayan 1994; Feldman and Pentland 2003), was able to explore many ostensive understandings until a common one emerged. In this study, it was observed that boundary ambiguities and perceived uncertainties were part of the unknown tacit component.

Overcoming these challenges through effective coordination, establishing a shared understanding, enabling trust, and regularly meeting face-to-face caused the actors' ostensive to fluctuate while trying to reach common ground. The constant changes in the ostensive during the project period made the routine flexible, yet did not affect the performative aspect. The routine's performance still referred to the old ostensive, which was the existing ostensive before the Print Project started. In other words, the ostensive changes occurred independently of the performative. Previous studies have demonstrated how ostensive changes occur as a response to the performative (Rerup and Feldman 2011; Jarzabkowski *et al.* 2012; Whitford and Zirpoli 2014; Bucher and Langley 2016). However this study has proved that this is not always the case, and that routine flexibility in terms of ostensive changes can emerge without the influence of or the need to refer to the performative aspect. One of the main reasons this was possible was the ability of the actors to temporarily explore new ostensives because of project setting. Furthermore, because the changed routine was only valid throughout the duration of the Print Project, the change was temporary. Thus the actors collectively agreed that it was not necessary to verify the new ostensive through test performances. The performative aspect only changed in response to the new ostensive once the ostensive was embedded in the form of an artefact as a means of communicating with all the routine actors. Thus the relationship between the ostensive and performative aspects was a disengaged one.

The second empirical chapter provides insight into how emergent routine flexibility can still maintain its validity. There are planned routine flexibility (e.g. Rerup and Feldman 2011; Bucher and Langley 2016) and unplanned routine flexibility, which are variations in the routine that emerge during routine enactment. In the latter type of routine flexibility, past studies have demonstrated that some form of guiding artefacts were present in assisting routine actors to perform the routine by providing choices on how to enact it (e.g. Pentland and Rueter 1994; Turner and Rindova 2012). However, in this study, routine flexibility was emergent, yet the routine actors were not guided by any predetermined options on how to perform the routine. Rather, the options developed during the routine enactment as the context changed and routine actors engaged in deliberation. The options themselves served as the legitimation factor to validate the actions taken through guiding, referring, and accounting (Feldman and Pentland 2003). Even though routine flexibility existed without the need of guiding artefacts, the routine performances could still be validated through the options that emerged. Thus the relationship between the ostensive and performative aspects was a legitimation relationship.

The third empirical chapter provides insight into how a routine's flexibility can be applied to accomplish targeted outcomes that emerge ostensibly. Past studies have discussed targeted outcomes in routine enactment that are still rather general. For instance, Deken *et al.* (2016) looked at open-ended targeted goals, such as a reduction in operating costs, whereas Turner and Rindova (2012) looked at targeted goals of finishing certain tasks within a certain period. However, in this study, very specific end-goals emerged ostensibly during routine enactment. As a result, the routine performances needed to be flexible in order to accommodate these targeted outcomes. The flexibility of the routines was accomplished through both engaged and disengaged decoupling activities but still maintained the legitimacy of the routines (Feldman and Pentland 2003; Storz 2007). Thus the relationship between the ostensive and performative aspects was one of accommodation.

Besides the findings based on the three empirical chapters, the over-arching phenomena observed in this study were the different relationships between the two aspects of routine dynamics. These relationships could only materialise when the routine flexibility was emergent, and through the collective effort of the routine actors. In summary, findings from this study lead to four contributions to research on routine flexibility: (1) routine actors' pursuit of understanding the tacit component of routines promotes the emergence of ostensive routine change through the process of overcoming boundary ambiguities and perceived uncertainties, (2) the emergence of options through deliberative actions can act as a mechanism to legitimise the performative aspect, (3) novel actions in the form of decoupling activities form a mechanism for obtaining targeted outcomes in routine performances, and (4) multiple types of ostensive-to-performative relationships play a significant role in the emergence of endogenous routine flexibility, and this is dependent on the actors' collective effort.

8.1 Limitations

First and foremost, it is worth noting that there is a fundamental limitation of the routines concept when it comes to more distributed and complex activities, because it is almost impossible adequately, to study them empirically. It is no coincidence that most routines researched are rather localised and simple activities. In other words, studies like this, test the concept to its limits in terms of empirical investigation. Nonetheless, it is essential to discuss these limitations as a reference for future routine studies. There are two main arguments in this limitations section: (1) limitations regarding the observation of organisational routines in practice, and (2) limitations regarding data analysis.

8.1.1 Observation of organisational routines

The first limitation relates to the available data in this study but in research on organizational routines more generally. There are three factors to this limitation.

Firstly is the source of the data itself. While routine studies try to get close to the performance of routines in practice, in some cases, researcher can only rely on what participants say, rather than what can be observed (Van Maanen, 1979b). In these cases, researchers need to draw on other sources of data, such as interviews or artefacts in order to obtain insights into the performative aspect of routines. This applies to the empirical work in this study as some of the routine activities could not be directly observed. An example of this is my study of the sourcing routine. One step of this routine is 'Preparing the ITT'. This requires actors to discuss and agree on specifications. This step of the routine was directly observed. However, the actual writing down of the ITT document was not directly observed as it was performed by multiple people in a distributed / collaborative way. In such cases, I followed Pentland and Feldman (2005) and used artefacts as a proxy for the performative aspects of the routine. This may be the first step to understanding actions (i.e. the performative aspect) using digitised data (i.e. artefacts) which is highlighted by Feldman *et al.* (2016) as one of the future directions of routine studies.

These limitations raise challenges for routine studies more widely as it might not be possible to follow the activities of all actors in real time. While this might be possible in simple manual routines, it becomes very challenging in more complex organizational routines, involving multiple actors, which might even be geographically dispersed. Thus, in order to capture the actual

performance of routines in such settings would require simultaneous, distributed data collection. For instance, future studies could use recording devices, video logs etc. in order to capture such distributed activities similar to Yamauchi and Hiramoto's (2016) study of reflexivity of routine performances at sushi bars, and LeBaron *et al.*'s (2016) study on hand-off routines in the intensive care unit. Besides being able to capture emergent routines as they unfold over time and space, video recordings also allows for the empirical events to be repeatedly observed so that recurring action patterns could be identified (LeBaron *et al.* 2016) and the non-verbal conducts can be intricately analysed (Yamauchi and Hiramoto 2016).

Secondly, the generalisability of my study is affected by it being a single case and the length of the study period. This study is considered 'short' in comparison to other ethnographic studies like Rerup and Feldman (2011), and Bucher and Langley (2016) who collected data over nine and four years respectively. Due to this, I was only able to observe three complete iterations of the sourcing routine. This leaves a question mark as to whether the sourcing routine is enacted the same way for other large procurement exercises and thus reduces the generalisability of this study. Furthermore, the findings of this study is very much context-dependent as a single organisation was observed. D'Adderio (2014) pointed out the limitation of her study in a sense that other organisations may not prioritise innovation and replication the same way as the organisation she observed. Similarly, this study's findings are very much specific to PublicCo's setting and culture. For example, PublicCo allows decoupling in the routine performances, whereas other organisations with strict auditing practices may not allow decoupling at all. Thus some of the findings from this study may be trivial to these type of organisations. This echoes Langley and Abdallah (2011) who pointed out that single case studies will find it challenging to identify generic qualities that could enable the findings to be relevant elsewhere, and thus unable to generate theoretic insights that is valuable beyond a specific context. To overcome this, future studies can emphasise more on translating the research into solutions for managers (Rousseau 2006) which would certainly make the study more generalizable.

Lastly, PublicCo is a mature organisation and according to Hannan and Freeman (1984) mature organisations tend to have a strong level of inertia because the actors have established highly specific understandings of what constitute acceptable routine performances (i.e. ostensive) (Deken *et al.* 2016). So although the project team are working together for the first time, some of

its members such as the Technical Head, and Print Room Head have been with the organisation for quite a number of years which means they are more tuned to PublicCo's culture. This may in turn have intensified the effects of the differences in the participants' understandings of the routine. Additionally, differences in terms of position and authority may have affected the level of influence among the routine actors (Edmondson *et al.* 2001). Therefore, the level of accustomisation to an organisation's culture and the level of authority could have an impact on how routine changes emerge which have not been explored in this study.

8.1.2 Limitations regarding data analysis

Data analysis is affected by the partial knowledge of the organizational context. To quote Van Maanen (1979b), "it would be absurd to suggest that I understand the [organisation¹⁵] as my informants do" (p.542). So because I will never fully comprehend the 'natural' form of the participants (Van Maanen 1979b), my background expectancies is therefore limited by what 'I think' I know. As explained earlier in this letter, background expectancies is central to how I conducted my analysis. For instance, according to Gioia *et al.* (2012), it is essential to find a balance between the "level of meaning of the people living that experience" (i.e. first order concepts) and the "level of scientific theorizing about that experience" (i.e. second order concepts). So without proper knowledge of the setting and understanding of the organisation's culture (Van Maanen 1979a; 1979b), there would be limitations to finding this balance. There are many reasons why my study is impacted by this.

Firstly, my observation relied heavily on the talk by the participants. However it is acknowledged that participants may not always be able to articulate their thoughts properly (Pentland and Feldman 2005; Bucher and Langley 2016). So the talk I observed may not represent their true feelings or thoughts which then obscures my ability to analyse their true ostensive. Furthermore, talk alone may not be sufficient in order for me to fully comprehend the tacit aspect of the routines. A longer study period could provide the necessary time to understand the organisation and participants better which would benefit in setting up the background expectancies. A more accurate background expectancy could facilitate a truer analysis of the

¹⁵ In the original quote Van Maanen wrote "police world"

participants' talk which includes comprehending the tacitness of the routines involved. Furthermore, my reliance on talk was due to PublicCo's working culture that requires quick turnaround times due to how PublicCo operates which means that its employees rather engage in face-to-face communications. So this study complements other studies that rely on similar organisational settings (e.g. Dittrich *et al.* 2016), but does not consider other organisations that have different working cultures where they prefer communicating through email or instant messaging. The ready-made assumptions made during analysis was based on a specific organisational setting and culture. For example, it is expected that face-to-face talk are an effective approach to accomplishing a collective understanding on the routines due to it being synchronous (Tsoukas 2009). In light of this, future studies could explore how other genres of communication affect the collective ostensive understandings and routine performances.

Secondly, the analysis was carried out by a single person (i.e. myself) which may be limited by certain personal bias. For example, part of the abductive approach is to use doubt in deciding how to proceed with the analysis (Locke *et al.* 2008). But because this study was conducted by a single person, the doubt being forecasted is based on one person's interpretation of the data. Although many studies are usually conducted by more than one person, there has been proven success of studies by a single person i.e. the analysis was conducted independently such as D'Adderio (2014), and Bechky (2006). What made these studies succeed was the level of involvement with the studied organisation. For instance, D'Adderio (2014) got involved with the organisation almost every day over a 2-year period allowing many direct observations and reducing the need to rely solely on the participants' perceptions. On the other hand, Bechky (2006) was a full-time participant observer being fully involved with the organisations' daily activities. These approaches provided both researchers with the necessary data and background expectancies to be able to accurately establish the first and second order concepts. Therefore being an independent researcher can still yield quality results if carried out appropriately. Another way to address this limitation in the future, is to appoint an independent person who is impartial to the project to recode the transcriptions and then analyse the discrepancies between that person's codes and mine such as done in Raisch and Tushman's (2016) study. By doing this, the accuracy and credibility of the theoretical constructs would be undoubtedly better. Alternatively, the codes and concepts could be refined via discussions with the participants themselves as done so by Maitlis (2005) and Bechky (2006). Although I engaged in discussions with my supervisors regarding my

codes and concepts, getting the participants' involvement with the data analysis may result in an analysis that is more representative of the data.

Lastly, the challenges in my analysis relate to the limitation of what was observed. During the analysis for the request routine, I did not carry out an analysis of the actual routine enactment as it was not observed. Rather, my findings were based on people talking about the routine's enactment, and artefacts which are the material elements of the work processes. One disadvantage of depending on artefacts for the representation of the performative aspect is that it does not provide the tacit detail of the routine, it only provides the 'end-product'. So artefacts can only relay information based on my own interpretation which may not be the same as the routine actors' interpretation (i.e. the tacitness). For example, I understood the interim policy to represent the new ostensive for the request routine, but routine actors may understand it as just a formality and continue to purchase new print devices. Likewise, words in an email does not entirely portray what a person is thinking. As pointed out by Pentland and Feldman (2005), different interpretations of the artefact may "reveal different visions of the relationship between artefacts and the ostensive aspect of the routine" (p.808). While there has been plenty of studies regarding artefacts in routine enactment (e.g. Bapuji *et al.* 2012; Turner and Rindova 2012; Whitford and Zirpoli 2014), none of the researchers have referred solely on the artefacts as evidence of the routine's performance. Their interpretation of the artefacts were mainly to understand both aspects of the routine. For example, Turner and Rindova (2012) referred to the artefacts to understand the routine's performance i.e. how the routine actors maintained a consistent performance in their routine enactment. Less has been explored by practice researchers on the interpretation of artefacts in routines. Therefore I encourage further studies to understand more about the role of artefacts in interpreting the ostensive and performative aspects of the routine.

8.2. Future research

There are two suggestions for future research based on this study: (1) to expand research on enacting routines in a temporary setting, and (2) to further understand the performative-ostensive relationship in routine flexibility.

8.2.1 Enacting routines in a temporary setting

Unlike regular routine actors, the actors in this study were only working together temporarily to enact an existing routine. This could have had a great impact on routine performance as their perception of how to enact a routine as a temporary activity might be different compared to a conventional situation where routine actors learn a new routine with the perception that they would be enacting it for the long term. Additionally, some of the project members were fairly new to the organisation; for example, one member had just transferred to PublicCo from another organisation and so was new to the work culture. An example of new actors temporarily enacting a routine is contained in the study by Bapuji *et al.* (2012) where the routine was only effectively performed after the organisation (as the routine owner) put more effort into communicating their intentions regarding the objective of the routine to the routine actors. In this study, however, the routine owners (i.e. PublicCo) only specified the overall objective of the Print Project, and so it was up to the project team as the routine actors to perform the sourcing routine according to their own understandings.

It is assumed that routines are performed in an organisation by regular staff. Yet there are many scenarios (similar to this study) where this is not the case. For instance, in the Columbia space shuttle disaster, different groups of people instantly came together and started working based on emergency and recovery related processes (Beck and Plowman 2014). Similarly, film projects can be viewed as temporary organisations, in which actors are expected to know their individual roles and the regular practices of a film project (Bechky 2006). Both these scenarios are temporary in nature as they existed within a fixed time-frame, yet still rely on routines in their day-to-day operations.

More organisations nowadays are operating as project-based institutions as a form of temporary organising (Davison *et al.* 2012) due to its attractiveness in terms of manageability (van Berkel *et al.* 2016). However, according to Bechky (2006), little is known about how work is accomplished in temporary set-ups. This study provides a snippet of routine enactment by a temporary team but there is still more to uncover regarding how temporary settings have an impact to how routines are performed.

8.2.2 Performative-to-ostensive relationship

The findings in this study focus primarily on the ostensive to performative relationship in routine flexibility: how ostensive change emerges independently of the performative, how the options that emerge ostensively provide a legitimation factor for the performative aspect, and how decoupling occurs during routine performance as the result of the targeted outcome that has been established ostensively. While there have been plenty of insights into how the ostensive relates to the performative, little attention has been given to the performative-to-ostensive relationship. According to Feldman and Pentland (2003), the performative is supposed to create, maintain, and modify the ostensive.

During observations, it was noted that after a performance of a particular sourcing routine, the subsequent performance still underwent the same deliberation as the previous one. In other words, the performative aspect did not seem to influence the ostensive in any way. It was obvious in chapter 5, where each sourcing routine had different options emerging during its individual routine enactment. However, in chapters 4 and 6, it was implied that the performative maintained the ostensive. For example, once the request routine was embedded in an artefact, there was evidence demonstrating that the routine performance had changed according to the new ostensive, thus maintaining it. Similarly, the decoupled activities performed were to accommodate the changing ostensives, i.e. ensuring targeted outcomes would be accomplished. However, this performative-ostensive relationship was not highlighted and well understood in this study. For future studies, it is recommended to analyse this phenomenon further to understand why, how and under what conditions the performative has any impact on the ostensive.

REFERENCES

- Aarts, H. and Dijksterhuis, A. (2003) 'The silence of the library: Environment, situational norm, and social behavior', *Journal of Personality and Social Psychology*, 84(1), 18-28.
- Adler, P.S., Goldoftas, B. and Levine, D.I. (1999) 'Flexibility versus efficiency? A case study of model changeovers in the Toyota production system', *Organization Science*, 10(1), 43-68.
- Anderson, L. (2008) 'Participant observation' in Thorpe, R. and Holt, R., eds., *The Sage dictionary of qualitative management research*, London: Sage, 150-152.
- Anteby, M. (2010) 'Markets, morals, and practices of trade: Jurisdictional disputes in the U.S. commerce in cadavers', *Administrative Science Quarterly*, 55(4), 606-638.
- Aroles, J. and McLean, C. (2016) 'Rethinking stability and change in the study of organizational routines: Difference and repetition in a newspaper-printing factory', *Organization Science*, 27(3), 535-550.
- Austin, J.L. (1975) *How to do things with words*, Oxford: Oxford University Press.
- Bapuji, H., Hora, M. and Saeed, A.M. (2012) 'Intentions, intermediaries, and interaction: Examining the emergence of routines', *Journal of Management Studies*, 49(8), 1586-1607.
- Barker, C. (2000) *Cultural practice: Theory and practice*, Great Britain: SAGE Publications.
- Bechky, B.A. (2006) 'Gaffers, gofers, and grips: Role-based coordination in temporary organizations', *Organization Science*, 17(1), 3-21.
- Beck, T.E. and Plowman, D.A. (2014) 'Temporary, emergent interorganizational collaboration in unexpected circumstances: A study of the Columbia space shuttle response effort', *Organization Science*, 25(4), 1234-1252.
- Becker, M.C. (2004) 'Organization routines: A review of the literature', *Industrial and Corporate Change*, 13(4), 643-677.
- Beckman, C.M. and Haunschild, P.R. (2002) 'Network learning: The effects of partners' heterogeneity of experience on corporate acquisitions', *Administrative Science Quarterly*, 47(1), 92-124.
- Beech, N. (2011) 'Liminality and the practices of identity reconstruction', *Human Relations*, 64(2), 285-302.
- Berente, N., Lyytinen, K., Yoo, Y. and King, J.L. (2016) 'Routines as Shock Absorbers During Organizational Transformation: Integration, Control, and NASA's Enterprise Information System.', *Organization Science*.
- Berg, B.L. (2009) *Qualitative research methods for the social sciences*, 7 ed., Boston, USA: Allyn and Bacon.
- Birnholtz, J.P., Cohen, M.D. and Hoch, S.V. (2007) 'Organizational character: On the regeneration of camp poplar grove', *Organization Science*, 18(2), 315-332.
- Bourdieu, P. (1977) *Outline of a theory of practice*, Cambridge: Cambridge University Press.

- Bourdieu, P. (1990) *In other words : Essays towards a reflective sociology*, Cambridge, UK: Polity Press.
- Brauer, M. and Laamanen, T. (2014) 'Workforce downsizing and firm performance: An organizational routine perspective ', *Journal of Management Studies*, 51(8), 1311-1333.
- Bresman, H. (2013) 'Changing routines: A process model of vicarious group learning in pharmaceutical R&D', *Academy of Management Journal*, 56(1), 35-61.
- Bromley, P. and Powell, W.W. (2012) 'From smoke and mirrors to walking the talk: Decoupling in the contemporary world', *The Academy of Management Annals*, 6(1), 483–530.
- Brown, A.D., Kornberger, M., Clegg, S.R. and Carter, C. (2010) '“Invisible walls” and ‘silent hierarchies’: A case study of power relations in an architecture firm', *Human Relations*, 63(4), 525-549.
- Bruns, H.C. (2009) 'Leveraging functionality in safety routines: Examining the divergence of rules and performance', *Human Relations*, 62(9), 1399-1426.
- Bucher, S. and Langley, A. (2016) 'The interplay of reflective and experimental spaces ininterrupting and reorienting routine dynamics', *Organization Science*, 27(3), 594–613.
- Burgelman, R.A. (1994) 'Fading memories: A process theory of strategic business exit in dynamic environments', *Administrative Science Quarterly*, 39(1), 24-56.
- Burgelman, R.A. (2002) 'Strategy as vector and the inertia of coevolutionary lock-in', *Administrative Science Quarterly*, 47(2), 325-357.
- Cicourel, A.V. (1967) *The social organization of juvenile justice*, New York: Wiley.
- Cohen, M.D. (1991) 'Individual learning and organizational routine: Emerging connections', *Organisation Science*, 2(1), 135–139.
- Cohen, M.D. (2007) 'Reading Dewey: Reflections on the study of routine', *Organization Studies*, 28(5), 773-786.
- Cohen, M.D. and Bacdayan, P. (1994) 'Organizational routines are stored as procedural memory: Evidence from a laboratory study', *Organization Science*, 5(4), 554-568.
- Corbin, J. and Strauss, A. (2008) *Basics of qualitative research: Techniques and procedures for developing grounded theory*, 3 ed., London: Sage Publications Ltd.
- Corley, K.G. and Gioia, D.A. (2004) 'Identity ambiguity and change in the wake of a corporate spin-off', *Administrative Science Quarterly*, 49(2), 173-208.
- Crozier, M. (1964) *The Bureaucratic Phenomenon*, Chicago: Chicago University of Chicago Press
- Currall, S.C. and Inkpe, A.C. (2002) 'A multilevel approach to trust in joint ventures', *Journal of International Business* 33(3), 479-495.
- Curtis, S., Gesler, W., Smith, G. and Washburn, S. (2000) 'Approaches to sampling and case selection in qualitative research: Examples in the geography of health', *Social Science & Medicine*, 50(7), 1001-1014.

- Cyert, R.M. and March, J.G. (1963) *A behavioral theory of the firm*, Englewood Cliffs, N.J.: Prentice-Hall.
- Czarniawska, B. and Mazza, C. (2003) 'Consulting as a liminal space', *Human Relations*, 56(3), 267-290.
- D'Adderio, L. (2003) 'Configuring software, reconfiguring memories: The influence of integrated systems on the reproduction of knowledge and routines', *Industrial and Corporate Change*, 12(2), 321-350.
- D'Adderio, L. (2008) 'The performativity of routines: Theorising the influence of artefacts and distributed agencies on routines dynamics', *Research Policy*, 37(5), 769-789.
- D'Adderio, L. (2011) 'Artefacts at the centre of routines: Performing the material turn in routines theory', *Journal of Institutional Economics*, 7(2), 197-230.
- D'Adderio, L. (2014) 'The replication dilemma unravelled: How organizations enact multiple goals in routine transfer', *Organization Science*, 25(5), 1325-1350.
- Davison, R.B., Hollenbeck, J.R., Barnes, C.M., Slesman, D.J. and Ilgen, D.R. (2012) 'Coordinated action in multiteam systems', *Journal of Applied Psychology*, 97(4), 808–824.
- Deken, F., Carlile, P.R., Berends, H. and Lauche, K. (2016) 'Generating novelty through interdependent routines: A process model of routine work', *Organization Science*, 27(3), 659-677.
- Dionysiou, D.D. and Tsoukas, H. (2013) 'Understanding the (re)creation of routines from within: A symbolic interactionist perspective', *Academy of Management Review*, 38(2), 181-205.
- Dittrich, K., Guerard, S. and Seidl, D. (2016) 'Talking about routines: The role of reflective talk in routine change', *Organization Science*, 27(3), 678–697.
- Dougherty, D. (2015) 'Reflecting on the reflective conversation', *Organizational Research Methods*, 18(4), 606-611.
- Dubois, A. and Gadde, L.-E. (2002) 'Systematic combining: An abductive approach to case research', *Journal of Business Research*, 55(7), 553– 560.
- Edmondson, A.C., Bohmer, R.M. and Pisano, G.P. (2001) 'Disrupted routines: Team learning and new technology implementation in hospitals', *Administrative Science Quarterly*, 46(1), 685-716.
- Edmondson, A.C. and McManus, S.E. (2007) 'Methodological fit in management field research', *The Academy of Management Review*, 32(4), 1155-1179.
- Eisenhardt, K.M. (1989) 'Building theories from case study research', *Academy of Management Review*, 14(4), 532-550.
- Eisenhardt, K.M. and Graebner, M.E. (2007) 'Theory building from cases: Opportunities and challenges', *Academy of Management Journal*, 50(1), 25-32.
- Emirbayer, M. and Mische, A. (1998) 'What is agency?', *American Journal of Sociology*, 103(4), 962-1023.

- Feldman, M.S. (2000) 'Organizational routines as a source of continuous change', *Organization Science*, 11(6), 611-629.
- Feldman, M.S. (2003) 'A performative perspective on stability and change in organizational routines', *Industrial and Corporate Change*, 12(4), 727-752.
- Feldman, M.S. and Orlikowski, W.J. (2011) 'Theorizing practice and practicing theory', *Organization Science*, 22(5), 1240-1253.
- Feldman, M.S. and Pentland, B.T. (2003) 'Reconceptualizing organizational routines as a source of flexibility and change', *Administrative Science Quarterly*, 48(1), 94-118.
- Feldman, M.S., Pentland, B.T., D'Adderio, L. and Lazaric, N. (2016) 'Beyond routines as things: Introduction to the special issue on routine dynamics', *Organization Science*, 27(3), 505–513.
- Feldman, M.S. and Rafaeli, A. (2002) 'Organizational routines as sources of connections and understandings', *Journal of Management Studies*, 39(3), 309-331.
- Fiss, P.C. and Zajac, E.J. (2006) 'The symbolic management of strategic change: Sensegiving via framing and decoupling', *Academy of Management Journal*, 49(6), 1173–1193.
- Garfinkel, H. (1967) *Studies in ethnomethodology*, New Jersey: Prentice-Hall.
- Garsten, C. (1999) 'Betwixt and between: Temporary employees as liminal subjects in flexible organizations', *Organization Studies*, 20(4), 601-617.
- Gersick, C.J.G. and Hackman, J.R. (1990) 'Habitual routines in task-performing groups', *Organizational Behavior and Human Decision Processes*, 47(1), 65-97.
- Giddens, A. (1984) *The constitution of society: Outline of the theory of structuration*, Berkeley: University of California Press.
- Gidlow, B. (1972) 'Ethnomethodology--A new name for old practices', *The British Journal of Sociology*, 23(4), 395-405.
- Gioia, D.A., Corley, K.G. and Hamilton, A.L. (2012) 'Seeking qualitative rigor in inductive research: Notes on the Gioia methodology', *Organizational Research Methods*, 16(1), 15-31.
- Glaser, B.G. and Strauss, A.L. (1967) *The discovery of grounded theory: Strategies for qualitative research*, London: Wiedenfeld and Nicholson.
- Goh, J.M., Gao, G.G. and Agarwal, R. (2011) 'Evolving work routines: Adaptive routinization of information technology in healthcare', *Information Systems Research*, 22(3), 565–585.
- Golant, B.D., Sillince, J.A., Harvey, C. and Maclean, M. (2015) 'Rhetoric of stability and change: The organizational identity work of institutional leadership', *Human Relations*, 68(4), 607-631.
- Golsorkhi, D., Rouleau, L., Seidl, D. and Vaara, E. (2010) 'Introduction: What is strategy as practice?' in Golsorkhi, D., Rouleau, L., Seidl, D. and Vaara, E., eds., *Cambridge handbook of strategy as practice*, Cambridge: Cambridge University Press, 1-20.

- Gomez, M.-L. (2010) 'A Bourdieusian perspective on strategizing' in Golsorkhi, D., Rouleau, L., Seidl, D. and Vaara, E., eds., *Cambridge handbook of strategy as practice*, Cambridge: Cambridge University Press, 141-154.
- Gupta, A., Hoopes, D.G. and Knott, A.M. (2015) 'Redesigning routines for replication', *Strategic Management Journal*, 36(6), 851–871.
- Hannan, M.T. and Freeman, J. (1984) 'Structural inertia and organizational change', *American Sociological Review*, 49(2), 149-164.
- Helfat, C.E. and Campo-Rembado, M.A. (2016) 'Integrative capabilities, vertical integration, and innovation over successive technology lifecycles', *Organization Science*, 27(2), 249–264.
- Hendry, J. and Seidl, D. (2003) 'The structure and significance of strategic episodes: Social systems theory and the routine practices of strategic change', *Journal of Management Studies*, 40(1), 175-196.
- Howard-Grenville, J., Golden-Biddle, K., Irwin, J. and Mao, J. (2011) 'Liminality as cultural process for cultural change', *Organization Science*, 22(2), 522–539.
- Howard-Grenville, J.A. (2005) 'The persistence of flexible organizational routines: The role of agency and organizational context', *Organization Science*, 16(6), 618-636.
- Iversen, J.H., Mathiassen, L. and Nielsen, P.A. (2004) 'Managing risk in software process improvement: An action research approach', *MIS Quarterly*, 28(3), 395-433.
- Jarzabkowski, P. (2003) 'Strategic practices: An activity theory perspective on continuity and change', *Journal of Management Studies*, 40(1), 23-55.
- Jarzabkowski, P.A., Le, J.K. and Feldman, M.S. (2012) 'Toward a theory of coordinating: Creating coordinating mechanism in practice', *Organization Science*, 23(4), 907-927.
- Klag, M. and Langley, A. (2013) 'Approaching the conceptual leap in qualitative research', *International Journal of Management Reviews*, 15(1), 149–166.
- Knudsen, T. (2008) 'Organizational routines in evolutionary theory' in Becker, M. C., ed., *Handbook of organizational routines*, Cheltenham: Edward Elgar Publishing Limited, 125-151.
- Konisky, D.M. and Reenock, C. (2012) 'Case selection in public management research: Problems and solutions', *Journal of Public Administration Research and Theory*, 23(2), 361-393.
- Kremser, W. and Schreyögg, G. (2016) 'The dynamics of interrelated routines: Introducing the cluster level', *Organization Science*, 27(3), 698–721.
- Krippendorff, K. (2004) *Content analysis: An introduction to its methodology*, 2nd ed., Thousand Oaks, CA: Sage.
- Lamont, M. and Molnar, V. (2002) 'The study of boundaries in the social sciences', *Annual Review of Sociology*, 28, 167-195.
- Langley, A. (1999) 'Strategies for Theorizing from Process Data', *Academy of Management Review*, 24(4), 691-710.

- Langley, A. and Abdallah, C. (2011) 'Templates and turns in qualitative studies of strategy and management', *Research Methodology in Strategy and Management*, 6, 105-140.
- Langley, A., Smallman, C., Tsoukas, H. and Van De Ven, A.H. (2013) 'Process studies of change in organization and management: Unveiling temporality, activity, and flow', *Academy of Management Journal*, 56(1), 1-13.
- Latour, B. (1986) 'The powers of association' in Law, J., ed., *Power, action and belief*, London: Routledge & Kegan Paul, 264-280.
- LeBaron, C., Christianson, M.K., Garrett, L. and Ilan, R. (2016) 'Coordinating flexible performance during everyday work: An ethnomethodological study of handoff routines', *Organization Science*, 27(3), 514-534.
- Levinthal, D. and Rerup, C. (2006) 'Crossing an apparent chasm: Bridging mindful and less-mindful perspectives on organizational learning', *Organization Science*, 17(4), 502-513.
- Levitt, B. and March, J.G. (1988) 'Organizational learning', *Annual Review of Sociology*, 14(1), 319-340.
- Locke, K., Golden-Biddle, K. and Feldman, M.S. (2008) 'Making doubt generative: Rethinking the role of doubt in the research process', *Organization Science*, 19(6), 907-918.
- Maitlis, S. (2005) 'The social processes of organizational sensemaking', *Academy of Management Journal*, 48(1), 21-49.
- Malone, T.W., Crowston, K., Pentland, B., Dellarocas, C., Wyner, G., Quimby, J., Osborn, C.S., Bernstein, A., Herman, G., Klein, M. and O'Donnell, E. (1999) 'Tools for Inventing Organizations: Toward a Handbook of Organizational Processes', *Management Science*, 45(3), 425-443.
- Manning, P.K. (1982) 'Organizational work: Structuration of environments', *The British Journal of Sociology*, 33(1), 118-134.
- Mantere, S., Schildt, H.A. and Sillince, J.A.A. (2012) 'Reversal of strategic change', *Academy of Management Journal*, 55(1), 172-196.
- March, J.G., Schulz, M. and Zhou, X. (2000) *The dynamics of rules: Change in written organizational codes*, Stanford, California: Stanford University Press.
- March, J.G. and Simon, H.A. (1958) *Organizations*, New York: Wiley.
- Martin, J.L. (2003) 'What is field theory?', *American Journal of Sociology*, 109(1), 1-49.
- Martins, C.S.P., Lia (2013) 'Understanding participation in company social networks', *Journal of Service Management*, 24(5), 567-587.
- Mayer, R.C., Davis, J.H. and Schoorman, F.D. (1995) 'An integrative model of organizational trust', *Academy of Management Review*, 20(3), 709-734.
- Meyer, J.W. and Rowan, B. (1977) 'Institutionalized organizations: Formal structure as myth and ceremony', *American Journal of Sociology*, 83(2), 340-363.

- Miettinen, R., Samra-Fredericks, D. and Yanow, D. (2009) 'Re-turn to practice: An introductory essay', *Organization Studies*, 30(12), 1309–1327.
- Miller, K.D., Pentland, B.T. and Choi, S. (2012) 'Dynamics of performing and remembering organizational routines', *Journal of Management Studies*, 49(8), 1536-1558.
- Milliken, F.J. (1987) 'Three types of perceived uncertainty about the environment: State, effect, and response uncertainty', *Academy of Management Review*, 12(1), 133-143.
- Miner, A.S., Ciuchta, M.P. and Gong, Y. (2008) 'Organizational routines and organizational learning' in Becker, M. C., ed., *Handbook of organizational routines*, Cheltenham, UK: Edward Elgar Publishing Ltd, 152-186.
- Miner, A.S. and Raghavan, S.V. (1999) 'Interorganizational imitation: A hidden engine of selection' in Baum, J. A. C. and McKelvey, B., eds., *Variation in organization science*, Thousand Oaks, CA: Sage.
- Monin, P., Noorderhaven, N., Vaara, E. and Kroon, D. (2013) 'Giving sense to and making sense of justice in postmerger integration', *Academy of Management Journal*, 56(1), 256–284.
- Narduzzo, A., Rocco, E. and Warglien, M. (2000) 'Talking about routines in the field ' in Dosi, G., Nelson, R. and Winter, S., eds., *The nature and dynamics of organizational capabilities*, New York: Oxford University Press.
- Nelson, R.R. and Winter, S.G. (1982) *An evolutionary theory of economic change*, Cambridge, MA: Belknap Press/Harvard University Press.
- Obstfeld, D. (2012) 'Creative projects: A less routine approach toward getting new things done', *Organization Science*, 23(6), 1571–1592.
- Orlikowski, W.J. (1992) 'The duality of technology: Rethinking the concept of technology in organizations', *Organization Science*, 3(3), 398-427.
- Orlikowski, W.J. (2000) 'Using technology and constituting structures: A practice lens for studying technology in organizations', *Organization Science*, 11(4), 404-428.
- Orlikowski, W.J. (2002) 'Knowing in practice: Enacting a collective capability in distributed organizing', *Organization Science*, 13(3), 249-273.
- Orlikowski, W.J. (2010) 'Practice in research: Phenomenon, perspective, and philosophy' in Golsorkhi, D., Rouleau, L., Seidl, D. and Vaara, E., eds., *Cambridge handbook of strategy as practice*, Cambridge: Cambridge University Press, 23-33.
- Paavola, S. (2004) 'Abduction as a logic and methodology of discovery: The importance of strategies', *Foundation of Science*, 9(3), 267-283.
- Parmigiani, A. and Howard-Grenville, J. (2011) 'Routines revisited: Exploring the capabilities and practice perspectives', *The Academy of Management Annals*, 5(1), 413-453.
- Pentland, B.T. (2011) 'The foundation is solid, if you know where to look: Comment on Felin and Foss', *Journal of Institutional Economics*, 7(2), 279-293.

- Pentland, B.T. and Feldman, M.S. (2005) 'Organizational routines as a unit of analysis', *Industrial and Corporate Change*, 14(5), 793-815.
- Pentland, B.T. and Feldman, M.S. (2008a) 'Designing routines: On the folly of designing artifacts, while hoping for patterns of action', *Information and Organization*, 18(4), 235-250.
- Pentland, B.T. and Feldman, M.S. (2008b) 'Issues in empirical field studies of organizational routines' in Becker, M. C., ed., *Handbook of organizational routines*, Cheltenham: Edward Elgar Publishing Limited, 281-300.
- Pentland, B.T., Harem, T. and Hillison, D. (2010) 'Comparing organizational routines as recurrent patterns of action', *Organization Studies*, 31(07), 917-940.
- Pentland, B.T., Harem, T. and Hillison, D. (2011) 'The (n)ever-changing world: Stability and change in organizational routines', *Organization Science*, 22(6), 1369-1383.
- Pentland, B.T., Malone, T.W., Lee, J. and Crowston, K.G. (1996) 'Taxonomic representation of business processes in the process handbook', in *ICOS Working Conference on Process Representation*, Ann Arbor, Michigan.
- Pentland, B.T. and Rueter, H.H. (1994) 'Organization routines as grammars of action', *Administrative Science Quarterly*, 39(3), 484-510.
- Pentland, B.T., Shabana, A.A., Soe, L.L., Ward, S.G. and Roldan, M. (1994) 'Lexical and sequential variety in organizational processes: Some preliminary findings and propositions', in *Academy of Management*, Dallas, TX.
- Perren, L. and Grant, P. (2000) 'The evolution of management accounting routines in small businesses: A social construction perspective', *Management Accounting Research*, 11(4), 391-411.
- Raisch, S. and Tushman, M.L. (2016) 'Growing new corporate businesses: From initiation to graduation', *Organization Science*, 27(5), 1237-1257.
- Rerup, C. and Feldman, M.S. (2011) 'Routines as a source of change in organizational schemata: The role of trial-and-error learning', *Academy of Management Journal*, 54(3), 577-610.
- Reynaud, B. (2005) 'The void at the heart of rules: Routines in the context of rule-following. The case of the Paris metro workshop', *Industrial and Corporate Change*, 14(5), 847-871.
- Rousseau, D.M. (2006) 'Is there such a thing as "Evidence-based management"?', *Academy of Management Review*, 31(2), 256-269.
- Rubin, H.J. and Rubin, I. (1995) *Qualitative interviewing: The art of hearing data*, Thousand Oaks: Sage Publications.
- Salvato, C. (2009) 'Capabilities unveiled: The role of ordinary activities in the evolution of product development processes', *Organization Science*, 20(2), 384-409.
- Sandholtz, K.W. (2012) 'Making standards stick: A theory of coupled vs. Decoupled compliance', *Organization Studies*, 33(5-6), 655-679.

- Schatzki, T.R. (2001) 'Introduction: Practice theory' in Schatzki, T. R., Cetina, K. K. and Savigny, E. V., eds., *The practice turn in contemporary theory*, UK: Routledge, 1-14.
- Schatzki, T.R. (2002) *The site of the social: A philosophical account of the constitution of social life and change*, Pennsylvania: State University Press.
- Schatzki, T.R. (2005) 'Peripheral vision: The sites of organizations', *Organization Studies*, 26(3), 465-484.
- Schatzki, T.R. (2012) 'Primer on practice' in Higgs, J., Barnett, R., Billett, S., Hutchings, M. and Trede, F., eds., *Practice-based education: Perspectives and strategies*, Rotterdam: Sense Publishers, 13-26.
- Schweisfurth, T.G. and Herstatt, C. (2016) 'How internal users contribute to corporate product innovation: The case of embedded users', *R&D Management*, 46(1), 107-126.
- Sele, K. and Grand, S. (2016) 'Unpacking the dynamics of ecologies of routines: Mediators and their generative effects in routine interactions', *Organization Science*, 27(3), 722-738.
- Sewell, J.W.H. (1992) 'A theory of structure: Duality, agency, and transformation', *American Journal of Sociology*, 98(1), 1-29.
- Short, J.L. and Toffel, M.W. (2010) 'Making self-regulation more than merely symbolic : The critical role of the legal environment', *Administrative Science Quarterly*, 55(3), 361-396.
- Silverman, D. (2001) *Interpreting qualitative data : Methods for analysing talk, text, and interaction*, Second ed., London: Sage Publications.
- Simpson, B. and Lorino, P. (2016) 'Re-viewing routines through a pragmatist lens' in Howard-Grenville, J., Rerup, C., Langley, A. and Tsoukas, H., eds., *Organizational routines: How they are created, maintained, and changed*, Oxford: Oxford University Press, 47-70.
- Srikanth, K. and Puranam, P. (2011) 'Integrating Distributed Work: Comparing Task Design, Communication, and Tacit Coordination Mechanisms', *Strategic Management Journal*, 32(8), 849-875.
- Stene, E.O. (1940) 'An approach to the science of administration', *The American Political Science Review*, 34(6), 1124-1137.
- Stinchcombe, A.L. (1959) 'Bureaucratic and craft administration of production: A comparative study', *Administrative Science Quarterly*, 4(2), 168-187.
- Stjerne, I.S. and Svejenova, S. (2016) 'Connecting temporary and permanent organizing: Tensions and boundary work in sequential film projects', *Organization Studies*, 37(12), 1771-1792.
- Storz, C. (2007) 'Compliance with international standards: The EDIFACT and ISO 9000 Standards in Japan', *Social Science Japan Journal*, 10(2), 217-241.
- Strauss, A. and Corbin, J. (1998) *Basics of qualitative research: Techniques and procedures for developing grounded theory*, 2nd ed., Thousand Oaks. London: Sage.
- Sturdy, A., Schwarz, M. and Spicer, A. (2006) 'Guess who's coming to dinner? Structures and uses of liminality in strategic management consultancy', *Human Relations*, 59(7), 929-960.

- Suddaby, R. (2006) 'From the editors: What grounded theory is not', *Academy of Management Journal*, 49(4), 633-642.
- Swärd, A. (2016) 'Trust, reciprocity, and actions: The development of trust in temporary inter-organizational relations', *Organization Studies*, 37(12), 1841–1860.
- Timmermans, S. and Tavory, I. (2012) 'Theory construction in qualitative research: From grounded theory to abductive analysis', *Sociology Theory*, 30(3), 167–186.
- Torre, A. (2008) 'On the role played by temporary geographical proximity in knowledge transmission', *Regional Studies*, 42(6), 869–889.
- Tsoukas, H. (2009) 'A dialogical approach to the creation of new knowledge in organizations', *Organization Science*, 20(6), 941-957.
- Turner, S. (2014) 'The temporal dimension of routines and their outcomes: Exploring the role of time in the capabilities and practice perspectives' in Fried, A. J. S. a. Y., ed., *Time and work: How time impacts groups, organizations and methodological choices*, East Sussex: Psychology Press, 115-145.
- Turner, S.F. and Fern, M.J. (2012) 'Examining the stability and variability of routine performances: The effects of experience and context change', *Journal of Management Studies*, 49(8), 1407-1434.
- Turner, S.F. and Rindova, V. (2012) 'A balancing act: How organizations pursue consistency in routine functioning in the face of ongoing change', *Organization Science*, 23(1), 24-46.
- van Berkel, F.J.F.W., Ferguson, J.E. and Groenewegen, P. (2016) 'Speedy delivery versus long-term objectives: How time pressure affects coordination between temporary projects and permanent organizations', *Long Range Planning*, In Press.
- Van De Ven, A. and Johnson, P.E. (2006) 'Knowledge for theory and practice', *Academy of Management Review*, 31(4), 802-821.
- Van Maanen, J. (1979a) 'Reclaiming qualitative methods for organizational research: A preface', *Administrative Science Quarterly*, 24(4), 520-526.
- Van Maanen, J. (1979b) 'The fact of fiction in organizational ethnography', *Administrative Science Quarterly*, 24(4), 539-550.
- Van Maanen, J., Sørensen, J.B. and Mitchell, T.R. (2007) 'Introduction to special topic forum: The interplay between theory and method', *Academy of Management Review*, 32(4), 1145-1154.
- van Marrewijk, A., Ybema, S., Smits, K., Clegg, S. and Pitsis, T. (2016) 'Clash of the titans: Temporal organizing and collaborative dynamics in the Panama Canal megaproject', *Organization Studies*, 37(12), 1745–1769.
- Wadham, H. and Warren, R.C. (2014) 'Telling organizational tales: The extended case method in practice', *Organizational Research Methods*, 17(1), 5-22.
- Weber, M. (1947) *The theory of social and economic organization*, New York: Free Press.
- Weick, K.E. (1979) *The social psychology of organizing*, Reading: MA: Addison-Wesley.

- Weick, K.E. (1989) 'Theory construction as disciplined imagination', *Academy Management Review*, 14(1), 516-531.
- Weick, K.E. (2005) 'Organizing and failures of imagination', *International Public Management Journal*, 8(3), 425-438.
- Weiss, H.M. and Ilgen, D.R. (1985) 'Routinized behavior in organizations', *The Journal of Behavioral Economics*, 14(1), 57-67.
- Westphal, J.D. and Zajac, E.J. (2001) 'Decoupling policy from practice: The case of stock repurchase programs', *Administrative Science Quarterly*, 46(2), 202-228.
- Whitford, J. and Zirpoli, F. (2014) 'Pragmatism, practice, and the boundaries of organization', *Organization Science*, 25(6), 1823-1839.
- Whittington, R. (2006) 'Completing the practice turn in strategy research', *Organization Studies*, 27(5), 613-634.
- Winter, S.G. (2003) 'Understanding dynamic capabilities', *Strategic Management Journal*, 24(10), 991-995.
- Yamauchi, Y. and Hiramoto, T. (2016) 'Reflexivity of routines: An ethnomethodological investigation of initial service encounters at sushi bars in Tokyo', *Organization Studies*, 1-27.
- Yi, S., Knudsen, T. and Becker, M.C. (2016) 'Inertia in routines: A hidden source of organizational variation', *Organization Science*, 27(3), 782-800.
- Yin, R.K. (2009) *Case study research: Design and methods*, 4 ed., Thousand Oak, California: SAGE Publications.
- Zbaracki, M.J. and Bergen, M. (2010) 'When truces collapse: A longitudinal study of price-adjustment routines', *Organization Science*, 21(5), 955-972.
- Zollo, M. and Winter, S.G. (2002) 'Deliberate learning and the evolution of dynamic capabilities', *Organization Science*, 13(3), 339-351.

APPENDICES

Appendices for chapter 4

The following figures are examples of service desk incident tickets during the period when the request routine was facing change ostensibly, while the performative remained constant, and after the change was made.

- (1) Before the interim policy – request for a new print device

Offset to timezone failed [REDACTED]
Call assigned to [REDACTED] by [REDACTED]
Offset to timezone failed General Update [REDACTED]
Logged From Inbound Email (Mailbox: [REDACTED] Service Desk, Received at: Mon, 22 Sep 2014 15:46:27)
From: [REDACTED]
To: [REDACTED] Service Desk [REDACTED]
Subject: New printer required

Hello,

Please could we request that a new printer be sourced for our new office in [REDACTED]
I believe a technician will come to assess the requirements and make a suggestion on the correct make/model.

Kind regards,
[REDACTED]

- (2) Before the interim policy – response that a purchase order for the print device has been made

Offset to timezone failed SYSTEM-AUTO
This call was automatically closed by the Supportworks System Auto-Attendant because the call had been in the resolved state for the specified period of time**Call closed by SYSTEM-AUTO**
Offset to timezone failed [REDACTED]
This has arrived. New job gone in for the installation.**Call resolved by [REDACTED]*
Offset to timezone failed [REDACTED]
Call taken off hold early by [REDACTED] Call was originally on hold until Offset to timezone failed
Offset to timezone failed General Update [REDACTED]
Hi [REDACTED]

I placed the order on 15th October with Procurement and the purchase order was created yesterday.
Therefore I imagine it will be here early next week.
Regards,
[REDACTED]

(3) After routine change – request for a personal desktop printer

17/03/2015 16:42:52 General Update SYS_AUTORESP

From: [REDACTED]

Sent: 17/03/2015 16:42:48

Hi,

We are looking at ordering a HP CE749A LaserJet Pro P1606dn Mono Laser Printer for a member of staff. The price is £187.69 on Amazon. Would it be possible for IT to obtain the same printer at a lower cost?

Many thanks

[REDACTED]

[REDACTED]

Departmental & [REDACTED] Assistant

[REDACTED] Department

(4) After routine change – response is a rejection of the request and advise to use existing print devices

28/03/2015 10:55:33 SYSTEM-AUTO

This call was automatically closed by the Supportworks System Auto-Attendant because the call had been in the resolved state for the specified period of time**Call closed by SYSTEM-AUTO**

18/03/2015 10:55:31 [REDACTED]

Hi [REDACTED]

After looking into this, I've been informed by my supervisor that due to the availability of the Software 'S' printing system in [REDACTED], we do not support desktop printing. Unfortunately I cannot advise on this request as such, and would instead suggest using the existing Software 'S'.

Thanks,

[REDACTED] *

18/03/2015 10:19:15 E-Mailed Customer [REDACTED]

Call accepted by [REDACTED]

The response time has been marked.

The response time has been met.

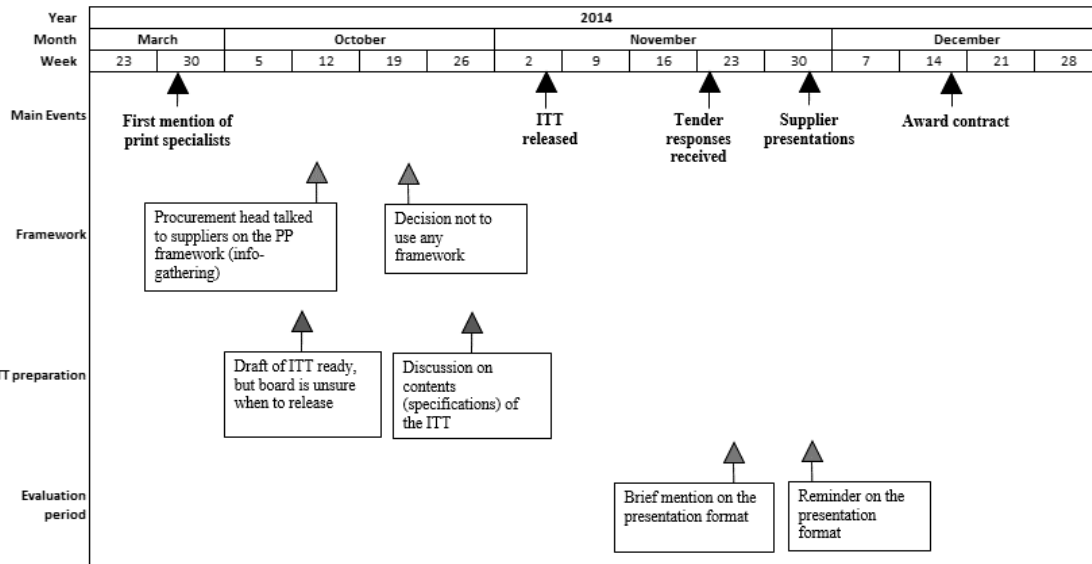
17/03/2015 17:30:10 [REDACTED]

Call assigned to the [REDACTED] group by [REDACTED]

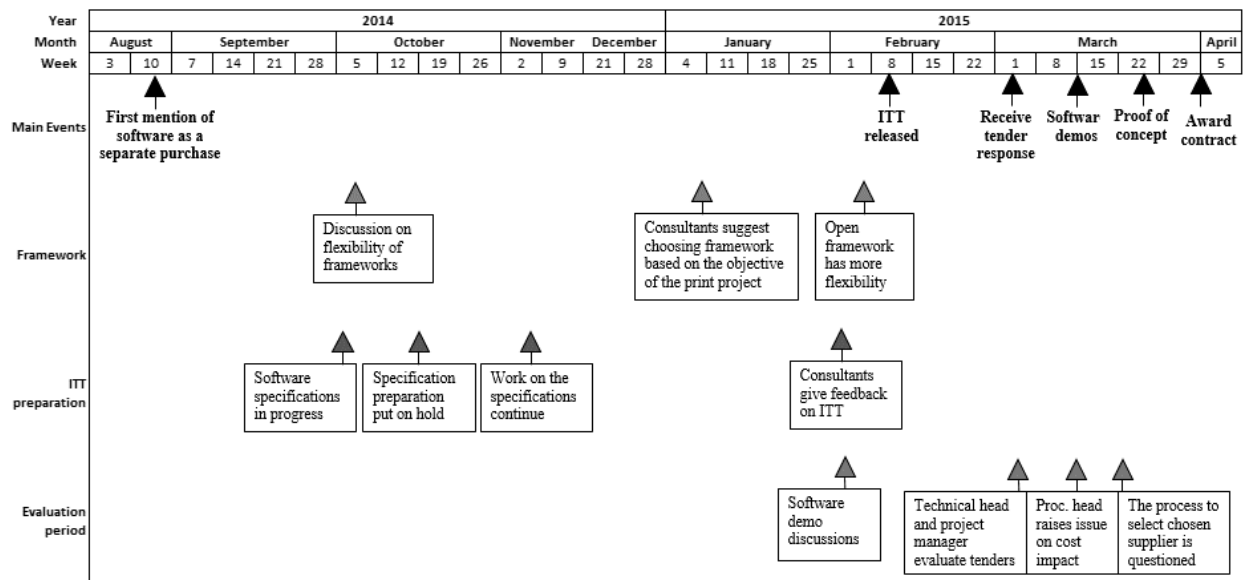
Appendices for chapter 5

The following figures illustrate the detailed timeline of the activities within the three sourcing routines.

(1) Sourcing of print specialists



(2) Sourcing for print software



(3) Sourcing for print hardware

