CRANFIELD UNIVERSITY

Ruth Murray-Webster

What does it take for organizations to change themselves? The influences on the internal dynamics of organizational routines undergoing planned change.

SCHOOL OF MANAGEMENT

DBA
Academic Year: 2008 - 2012

Supervisor: Dr Harvey Maylor
March 2014

ABSTRACT

Accomplishing desired benefits from investments in planned change is problematical for organizations, their leaders and the change agents charged with delivery. This is despite a well-developed literature, replete with advice on how change should be achieved. Examination of this literature shows the primary focus on change agents and their practices.

This research widens the focus by observing the influence of change agents, change recipients and line managers on organizational routines undergoing planned change. It examines the interplay between stability and change in organizational routines, adopting a social practice perspective, and the routine intended to change as the unit of analysis (Feldman and Pentland, 2003, 2005). The research builds on claims that to understand the patterns of action within routines requires the internal dynamics – the claimed duality between ostensive (in principle) and performative (in practice) aspects - to be examined.

A research method to operationalize the study of this claimed duality was devised following the principles of Strong Structuration (Stones, 2005). This method enabled a unique conceptualization of the study of routine dynamics, focused on planned change from the perspective of multiple, interdependent actors. Two cases of change agents following the advice in the planned change literature were explored. In one case, stability of the routine persisted when change was intended. In the other, change was relatively easy to achieve irrespective of change agent actions.

The primary contribution is the demonstration of how the attitudes to change of change recipients, line managers *and* change agents influence the internal dynamics of routines undergoing planned change. Other contributions pertain to the method of 'unpacking' organizational routines and its potential for shaping future practice. This research does not offer new 'normative' advice but instead sensitizes planned change practitioners to the level of analysis they need to carry out to ensure that their interventions are suitably designed.

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1 INTRODUCTION

1.1 The research problem

This research was motivated by the convergence of professional observation as an organizational change consultant, and a growing recognition in sections of the management literature that accomplishing planned change is problematic.

The practitioner problem in accomplishing planned change was highlighted by a quotation from the Chief Executive Officer of the Europe, Middle East and Africa region of a global IT services organization in 2008. *"We are investing in research at Cranfield because we find we are unable to effectively change ourselves."*

This challenge is widespread across all sectors of the economy where planned change is a ubiquitous feature of organizational life. Portfolios of programmes and projects are invested in for many purposes, from new product development through major IT-enabled change to organizational cultural transformation. Some changes are proactive initiatives, designed to create a differential advantage in a market, or to create additional social, shareholder and/or stakeholder value. Others are reactive responses to competitive, regulatory or other market or societal moves. They all require an injection of organizational resources to bring about the desired beneficial change.

Advice to practitioners on how to achieve the desired organizational benefits from investments in planned change is widespread. Such advice is offered by (1) professional bodies, e.g. the Association for Project Management (2012), (2) government agencies, e.g. the Office of Government Commerce (2011) and (3) renowned academics, e.g. Kotter (1995).

My experience as an organizational change consultant suggested that, despite this advice, there was more to learn about how to craft approaches to planned change that would be more successful, more of the time. This research was designed to explore this problem.

1.2 The research process

The research process began with an initial broad scan of the literature associated with planned change. This literature is vast and covers many aspects of the subject. It was decided to focus on literature relating to (1) the purpose of planned change, (2) challenges with accomplishing planned change, (3) advice on how to implement planned change. From this initial literature review there was an increasing call to explore planned change 'as practice', i.e. from the perspective of what people do.

If planned change work is to be successful, it needs to change the way that work is performed by the recipients of the change. Accordingly, a practice-perspective that looked beyond change agents alone as key influencers in the planned change process appeared likely to be beneficial in understanding the problem identified. Further exploration of the literature that adopted an 'as practice' perspective led to the literature on organizational routines (Feldman and Pentland, 2003; Pentland and Feldman 2005) and suggested the organizational routine undergoing planned change as a promising phenomenon to research. Not only did this provide an approach that fitted the observed practitioner problem, it also addressed a theoretical gap in the literature, and one where empirical studies were few in number.

Following the calls in Feldman and Pentland (2003, 2005), it was decided to devise a research method that (1) adopted the routine undergoing change as the unit of analysis and (2) 'unpacked' the routine to understand its internal dynamics – in particular the claimed mutually constitutive relationship between the 'in principle' (ostensive) and 'in practice' (performative) aspects of the routine. To do this, a research method that enabled the internal dynamics of the routine to be examined from the perspective of change agents and change recipients was required. This was developed building on the literature that discusses the use of Structuration Theory empirically. Stones' Strong Structuration (2005) was chosen as a suitable methodological approach to unpacking organizational routines undergoing planned change and studying

their internal dynamics. The synthesis of the literature on (1) planned change, (2) organizational routines and (3) the use of Structuration Theory in empirical studies resulted in the design of a conceptual model and research questions. These were used to study two cases with the primary purpose of uncovering the influences on the internal dynamics of organizational routines undergoing planned change.

1.3 The structure of the thesis

In Chapter 2, a review of the literature as outlined above is detailed. This review demonstrates how the phenomenon of the organizational routine, as conceived in social practice theory, can be used as a lens through which to examine planned change in action. At the end of this chapter, the conceptual model derived from review of the literature and research questions to explore empirically are outlined.

In Chapter 3, the research method for exploring the research questions using the conceptual model is outlined. A case-based approach was chosen with cases chosen to focus on planned change to organizational routines in general, rather than on the organization in particular. From this, criteria for case selection were defined. Data collection was informed by further literature that suggested a repertoire of methodological strategies when pursuing a structurationist agenda (Langley, 1999; Pozzebon and Pinsonneault, 2005). Data analysis followed an inductive approach, drawing on multiple sources of primary data that tracked how planned change to organizational routines had progressed over multiple years.

Chapters 4 and 5 details findings from the two contrasting cases selected. Both cases were researched using the same research method. One case (ELibrary) showed the persistence of a stable routine despite efforts to change this over many years. The other case (CityTransport) showed the creation of a stable routine from disparate practices, and on-going attempts to further improve the routine, once created. Findings from each case are summarized at the end of Chapter 4 and 5 respectively.

In Chapter 6 a cross-case discussion of findings is presented, using the research questions and claims from the literature to structure the discussion. From this cross-case discussion, contributions are synthesized.

Chapter 7 concludes findings and contributions to organizational routines theory and planned change practice. This chapter also discusses limitations of the research and highlights areas for further research. Finally, a summary of my personal journey as a doctoral researcher is provided.

2   LITERATURE REVIEW

2.1   Overview of the Chapter

In this chapter the literature relevant to the accomplishment of planned change to organizational routines is synthesized, to show where further research might make a contribution to theory and practice. A conceptual model, and research questions for empirical study are derived from this synthesis of the literature. These are used to guide exploration of cases where the investing organization intended routines to change in a particular way.

The literature on planned change is extensive. The areas reviewed relate to (1) the purpose of accomplishing planned change; (2) the challenges of doing so and (3) two main 'schools' of advice of how to approach the task - the project-based view and the organizational development/behavioural (OD/OB) view.

Although the project-based view starts from a systems perspective, and OD/OB from a human perspective, the literature establishes some key paradigms that generally apply in both schools. The first is the creation and role of a temporary organization to lead planned change to the operations of the host organization. This purposeful organizational separation creates the need for boundary spanning activities. The second key paradigm is the role of multiple actors – change agents in the temporary organization and change recipients in operations – and the interactions between them.

Both schools consider the change agent to be the primary actor and offer extensive 'prescriptions' for change agents to adopt. Despite this normative advice, the literature notes that achieving objectives remains problematic in practice, that stability often persists when change was intended, or that the change brings unintended outcomes.

A primary reason for unrealized planned change is claimed to be 'resistance to change' by change recipients. Perceived resistance is often assumed by change agents to be illegitimate but this position is increasingly challenged in the literature. Specific research on change recipients shows that considering

their views alone does not yield useful insights. Promising insights are suggested however by (1) paying attention to all the actors involved in planned change, their role, attitudes, rhetoric and action, and (2) focusing on a higher level construct than the individuals involved.

To approach this challenge the chosen perspective is practice-based. This allows an holistic exploration of planned change, paying attention to all the actors, and the operation as well as the change activities. It is consistent with such an holistic approach that the phenomenon to be researched is the organizational routine undergoing planned change, as conceived in social practice theory as *"the repetitive, recognizable patterns of interdependent actions carried out by multiple actors"* (Feldman and Pentland, 2003:95). This construct enables a focus on the whole system involved in the planned change embracing individual and collective patterns of action.

To research organizational routines as described, the internal dynamics of the routine are explored, as a duality between the ostensive aspects (in principle) and the performative aspects (in practice). Empirical research has already provided insights about the internal dynamics of routines that were expected to be stable, but were found to be changing. There remains a gap in the literature however in understanding the internal dynamics of organizational routines that are intended to be changing. Accordingly, the primary research question taken forward is 'what influences the internal dynamics of organizational routines undergoing planned change?' adopting the routine undergoing planned change as the unit of analysis.

Supplementary research questions are designed to explore the juxtaposition between two distinct literatures; (1) the interplay of stability and change within organizational routines, and (2) planned change from the perspective of change recipients, line managers and the strategically-significant work that is intended to change.

Finally in this chapter, a conceptual model to guide operationalization of the research questions is derived. The model theorizes the relationship between the

internal dynamics of organizational routines undergoing planned change involving multiple actors. In addition to the two literatures already mentioned, it also draws on literature that has claimed to use Structuration Theory methodologically. The approach chosen is based on Stones' (2008:85) Strong Structuration thesis; a *"quadripartite model"* that enables the ostensive and performative aspects of routines to be theorized more accurately in structurationist language and a *"composite research strategy"* that matches the exploration of the organizational change as the unit of analysis.

Figure 1 illustrates the structure of this chapter.

Figure 1: Structure of the literature review

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2.2 Planned change: purpose and current advice

This section looks at what the literature tells us about the fundamentals of planned change. It starts with discussing the purpose of planned change, then looks at the challenges in accomplishing planned change. This is followed by review of the project-based view of planned change. Finally, the organizational development/behaviour view of the subject is examined.

2.2.1 Purpose of planned change

It is recognized that keys to organizational success include (1) the ability to perform operational tasks and processes reliably, and (2) the ability to change things when the context demands. The imperative for organizations to develop and change at least at the same pace as competition, avoiding 'strategic drift' is well understood (Johnson, Scholes and Whittington, 2008). Organizations are not rigid and inflexible (March, 1991) and they continuously adapt. Yet inevitably there are times when organizational adaptation in a continuous improvement mode is insufficient to maintain a relative advantage and a planned 'step-change' is required (Mintzberg, 1978).

The literature on the management of change is extensive but it can be argued to fall into two categories: endogenous organizational adaptation and continuous improvement (Gersick, 1991; Romanelli and Tushman, 1994; Weick and Quinn, 1999) and exogenous intentional change (Balogun and Hope Hailey, 2004; Bower, 2000; Burnes, 2004; Burnes and Cooke, 2013; Lippitt, 1958; Wruck, 2000). This is an oversimplified distinction in practice as authors writing about endogenous change debate whether it is continual or episodic (e.g. Huy, 2001), while those researching exogenous change argue the need to be able to deal with emergence and to be opportunistic alongside deliberate strategy implementation (e.g. Orlikowski and Hofman, 1997). The need to accomplish planned change is not disputed in the literature. Neither is the view that doing this is problematical.

2.2.2 Challenges in accomplishing planned change

Realising tangible benefit from purposeful investments in change is cited as problematic for managers, staff and investors (Beer and Nohria, 2000; Buchanan, Claydon and Doyle 1999; The Standish Group International, 2009). Concern is expressed about a poor record for accomplishing benefit from planned change. This concern is accompanied by an emerging view that (1) change management issues are becoming more complex, and that traditional models of change, particularly those based on rational functionalist paradigms, are over-simplified and flawed (Cicmil, 2006; Weick and Quinn,1999): (2) unintended consequences of planned change can be as prevalent as planned consequences (Balogun, 2006): (3) underpinning assumptions of linearity and rationality do not hold up as well in practice as they do theoretically (Mintzberg, 1978).

To reflect this perceived complexity, some authors have theorized the interplay between deliberate and emergent change by defining typologies that define various aspects of the change landscape. For example:

> Mintzberg and Westley (1992) defined cycles of change that accommodate content and level of change, the means and process of change, episodes and stages of change and sequences and patterns of change.

> Van der Ven and Poole (1995) defined four theories of change with different event sequences and generative mechanisms that could be applied depending on the unit of change and mode of change.

Such typologies provide an explanatory theoretical framework, but do little to guide practical attempts to bring about beneficial change in organizations. More practical advice on 'how to' can be found in two distinct, but complementary literatures. These are explored next.

2.2.3 Project-based view

Although the academic literature on project-based change is relatively young compared with that on planned change more generally, this approach is applied extensively across all sectors. Planned changes are increasingly articulated as projects or programmes (Pellegrinelli, 2011; Pellegrinelli and Bowman, 1994). Historically project-based approaches have a systems perspective at their core (Burnes, 2004).

What the project-based view lacks in terms of academic longevity, it offers in terms of practical usage and relevance for most organizations. The field has a large underpinning practitioner literature that is largely normative, presenting 'prescription-like' advice. Core texts codifying advice include the Bodies of Knowledge from the UK and US professional bodies (Association for Project Management (APM), 2012; Project Management Institute (PMI), 2013) and methods funded by the UK government but used internationally (PRINCE2™, 2009; Managing Successful Programmes (MSP™), 2011; Management of Portfolios (MoP™), 2011; Portfolio, Programme and Project Offices (P3O™), 2013). These 'bodies of knowledge' are supported by compilation texts edited by respected academics and practitioners such as the Gower Handbook of Project Management (Turner, 2007), the Gower Handbook of Programme Management (Reiss, Anthony, Chapman, Leigh, Pyne and Rayner, 2006), the Wiley Guide to Managing Projects (Morris and Pinto 2004) and by focused text books. (e.g. Maylor, 2010; Murray-Webster and Simon, 2007).

A central tenet for all practitioner-focused texts is that projects are differentiated from 'business as usual' with the latter being the value-creating operations performed by the organization, and the project being the novel, constrained, uncertain and technically and/or organizationally complex vehicle used to plan and deliver desired outcomes. A further core principle is that the effort to accomplish planned change work is organizationally detached from 'business as usual' resources. Change agents in a temporary organization are appointed to create new capability and to realise benefit by transforming the nature and

performance of existing operational routines. This purposeful organizational detachment inevitably creates tensions across organizational boundaries.

Figure 2: The paradigm underpinning generic practitioner guidance for planned change

Tensions across organizational boundary

Change agents in a temporary organization Initiators of planned change to routine work.

Practitioners in the host organization Recipients of planned change to routine work.

Change and Boundary Spanning Practices
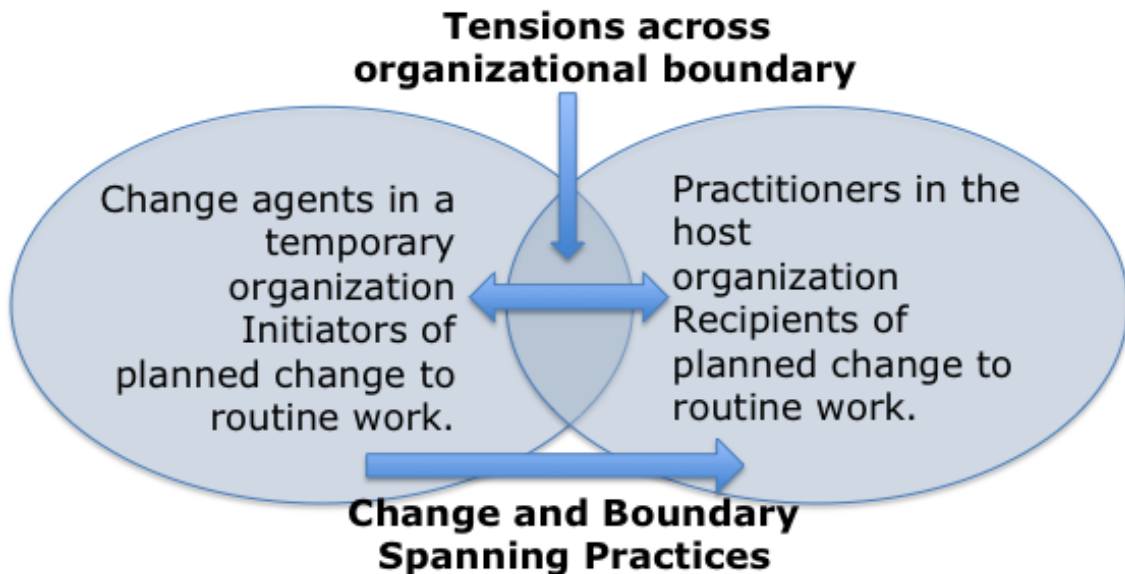
2.2.3.1 Boundary spanning

As shown in Figure 2 the prevailing paradigm for bringing about planned change using the project-based view relies on the creation of a temporary team to shape and lead the desired changes to operations. The boundaries between the temporary and host organization are said to be porous rather than sharp (Pellegrinelli, Partington, Hemingway, Mohdzain and Shah, 2007) and therefore need to be managed. A key part of this management is the interplay between isolation and integration practices, structures and controls.

Integration is achieved through flexible yet purposive adaption of resources to 'shake' the boundary (Balogun, Gleadle, Hailey and Willmott, 2005). Isolation activities serve to bound and protect the temporary team's work, and to build momentum before change is instigated (Lehtonen and Martinsuo, 2008). Detailed analysis of 'what people do' in such situations is also seen to be necessary (Kellogg, Orlikowski and Yates, 2006; Orlikowski and Yates, 2002).

This follows the 'practice turn'[1] in social sciences that has emerged over past decades (Schatzki, 2001). A "*dynamic balancing of various concerns*" is needed, recognising that such concerns are political and relational as well as substantive (Stensaker and Langley, 2009:26).

The boundary spanning literature challenges a systems approach to planned change. Rather than relying on generic and normative advice, it suggests that much closer attention be paid to the detailed actions of all organizational actors involved in the change, those in operations and those within the temporary change team.

As a result, this research is designed to observe how change agents, positioned in a temporary organization, manage across the temporary/host organizational boundary in practice. In doing so, attention to integration and isolation mechanisms will be paid.

2.2.3.2 Assumptions and limitations of the project-based view

Core assumptions of the project-based view are focused on a temporary team with defined governance, roles and practices for spanning the boundary with operations and bringing about change. The project-based view predominantly has a systems orientation.

A consequence of this way of thinking is that any conceptualization of the people and things to be changed are secondary to the primary focus of what change agents do.

2.2.4 Organizational development/behaviour view

An alternative view of planned change is focused on leading people through change. This approach draws on the literature typically categorized as

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[1] The 'practice turn' is the term referred to by multiple authors, but including Schatzki et al, 2001, to highlight that practices – what people do – are of central interest to contemporary social scientists.

organizational development or organizational behaviour (OD/OB). This literature has a human, rather than systems orientation with democratic participation at its core (Burnes, 2004). Despite this human context the advice offered from the OB/OD perspective is also reported to be "prescription-like" (Buchanan and Boddy, 1992:17).

Much research done in the OD/OB tradition proposes (1) the conditions to be satisfied, and/or (2) the steps to be taken for planned change to be successful. This literature is outlined next as 'success factors' for accomplishing planned change. This is germane to this research because change can be argued to be challenging, simply because organizations have failed to follow the advice that is deemed to be 'best practice'. If they have followed the advice and change has still been unsuccessful, something else of interest is occurring.

2.2.4.1 'Success factors' for accomplishing planned change

Kotter and Schlesinger (1979) discussed key situational variables in setting a strategy for a change transition. They noted that strategic decisions about the speed at which the change transition is carried out, and the degree of consultation, must take into account a number of key situational variables. These variables are: (1) anticipated resistance from the people involved; (2) the trust and respect with which change initiators are held; (3) the capability, capacity and energy the organization can muster for implementing the change; and (4) the consequences of inaction.

Most models for the management of change are agreed on two elements, the need for a powerful vision and a compelling argument. It is essential that the argument for change is greater than the resistance to it. A number of academic studies into the management of change have provided change 'equations' that all point to this need. Examples include:

(K) Knowledge of 1st steps x (D) Dissatisfaction with current state x (V) Desirable vision must be greater than (C) Material & psychological cost of the change.

(K x D x V) > C. (Gleicher, as reported in Buchanan and Boddy, 1992)

(C) Context that argues for change x (V) Visionary leadership x (L) Perceived legitimacy of change proposal must be greater than (I) Inertia sustained by dominant practices.

(C x V x L) > I. (Pettigrew, 1985)

(D) Dissatisfaction with current state x (V) Vision x (CL) Creative Leadership x (F) First Steps must be greater than (R) Resistance.

(D x V x CL x F) >R. (Beckhard and Harris, 1987).

Other authors have considered the tactics used to implement change.

Nutt (1986) looked at 163 cases of planned changes across public, private and third sectors to examine the tactics that were used to set direction. He reported 'ultimate failure rates' from his sample by noting that planned changes where an idea is imposed on a community (concept tactics) fail more than 50% of the time, as do changes where the community engages in problem analysis to infer a solution (problem-solving tactics). An objectives approach, where the community is engaged to achieve objectives together was more successful in Nutt's (1986) sample (39% ultimate failure rate). The most successful 'tactic' was reframing to provide evidence of the gap between the current and required state (direction-setting tactic); this approach having a reported 21% ultimate failure rate).

Others (e.g. Kotter, 1995 and Burnes, 2004) report that organizational change tends to be daunting for people, and that transformation is a process, not an event. They report that planned change advances through stages that build on each other. Organizational transitions can take years, and if the first steps are too difficult, or if they take too long to implement and include no 'quick wins', then people may become overwhelmed or disillusioned and give up on the transition.

By getting people started on the transition with 'quick wins', it is commonly

accepted that the organisation will be able to 'unfreeze' from its current position as documented in the three-stage 'unfreeze-transition-refreeze' model for change (Lewin, 1947). A number of authors discuss overcoming resistance to change - alternatively framed as inertia, or readiness to change (Armenakis and Harris, 2002; Deetz, Tracy and Simpson, 2000; Ford, Ford and D'Amelio, 2008 and Pideret, 2000). All these authors discuss the importance of understanding causes of resistance and crafting communications to address these directly.

Kotter (1995) also noted that no senior sponsor, no matter how competent, is capable of single-handedly developing, communicating and gaining buy-in to a vision. Putting together a 'guiding coalition' of people to lead a change initiative is critical to its success. Such coalitions must have the right composition (roles and skills), a significant level of trust, and a shared objective.

In researching the perceived effectiveness of change agents, Buchanan and Boddy (1992) compiled data on change agent competencies. They showed that people-orientated competencies were most important. Unless change agents are capable of connecting with change recipients at a personal level, to change 'hearts and minds' about the need for change, it will fail.

Kotter (1995) further reported that another cause of failure in organizational transformation is lack of momentum once the initial novelty of the change has passed. After an initial surge of enthusiasm, including maybe some 'quick-wins', the pace of any planned change can slow down. It is crucial, therefore, that the long-term plan includes a number of energising and refreshing steps to deal with any inertia at 'flat' stages; to ensure learning; to consolidate improvements to produce more change; and to institutionalize new approaches. This can be exacerbated by complicity with the status quo by managers who perceive they have more to lose than to gain from the change (Brady and Maylor, 2010).

Maire and Collerette (2010) compare a number of different models for the management of change. They observe that the following five elements are necessary in order for change to occur: (1) Have clear and realistic objectives;

(2) Inject speed into the process; (3) Communicate with and encourage people; (4) Have a dedicated team carry the project; (5) Continuously sustain momentum of change.

Using these five high-level categories, a synthesis of the literature above suggests the following 10 'success factors' for planned change as shown below in Table 1.

Table 1: 'Success factors' for implementing planned change

'Success factors'	Synthesized from the following literature
Have clear and realistic objectives 1. The business case must be aligned with corporate strategy, understood in terms of measurable benefits, and be championed and funded by sponsors at the most senior level. 2. A powerful vision and set of key performance indicators of how the organization will look following the change must be developed and communicated to all stakeholders.	Armenakis and Harris, 2002 Buchanan and Boddy, 1992 Kotter, 1995 Nutt, 1986
Inject speed into the process 3. The first steps into the transition must be understood and made easily accessible, with a sense of urgency created to help overcome any inertia. 4. The first steps must include some quick wins in order to ensure continued investment in the change and to motivate people to want to continue with the transformation.	Beckhard and Harris, 1987 Kotter, 1995
Communicate with and encourage people 5. Change leaders must be appointed who are skilled in engaging people's hearts and minds. 6. The performance gap between the 'as is' and 'to be' states must be understood and communicated, to prevent inertia and to spread dissatisfaction with the current situation.	Armenakis and Harris, 2002 Beckhard and Harris, 1987 Buchanan and Boddy, 1992 Burnes, 2004 Deetz et al, 2000 Ford et al, 2008 Kotter, 1995 Kotter and Schlesinger, 1979 Pideret, 2000

'Success factors'	Synthesized from the following literature
Have a dedicated team to manage the change 7. Appoint visionary, creative and empowered leaders to drive the change. 8. Create a powerful, guiding coalition and supporting governance arrangements to ensure that decision-making is focused moving the organization forward towards its goals.	Buchanan and Boddy, 1992 Kotter, 1995
Continuously sustain momentum of change 9. Put in place a change management plan that maps out activity along the whole transition curve. The plan must include activities to re-energise the change work if/when inertia strikes, to learn from experience, plans for consolidating improvements and plans for institutionalizing new approaches during the 're-freeze' stage. 10. Ensure that attitudes to change are continually understood and addressed to respond to any resistance and to overcome any complicity.	Buchanan and Boddy, 1992 Brady and Maylor, 2010 Kotter, 1995 Kotter and Schlesinger, 1979

Table 1: 'Success factors' for implementing planned change

This synthesis of 10 'success factors' for planned change provides another view of how change agents, in a temporary organization, might span the boundary between this and the host organization that is intended to change.

2.2.4.2 Assumptions and limitations of the organizational behaviour view

The human orientation in this school replaces the systems orientation in the project-based school, yet the advice offered remains normative. The core assumption underpinning the OD/OB view is that the behaviour of change agents is critical in influencing change recipients who may resist change, or display other behaviours that result in stability when change is intended. The literature relating to resistance to change is explored later in the chapter.

2.2.5 Planned change: summary of current advice

The ability to realize desired benefits from purposeful investments in change is vital for success in all organizations. Despite a large academic and practitioner literature that offers consistent advice, planned change is reported to be difficult

to achieve. The prevailing paradigms from both the project-based and OD/OB 'schools' is for change to be organised and led by change agents in a temporary organization (see Figure 2). These change agents are tasked specifically with spanning the boundary with the host organization to bring about the desired changes to the practices and behaviours of the change recipients. Although derived from different starting points, the advice offered by the project-based and OD/OB schools is aligned and can be codified into a set of 10 'success factors' for the implementation of planned change as shown in Table 1. Given that planned change is difficult to accomplish, even for those organizations who put significant efforts into achieving the 'success factors' listed, it remains interesting to explore why this might be.

In summary therefore, research should explore 'how change agents, positioned in a temporary organization, manage across the temporary/host organizational boundary in practice?' A particular focus will be given to the utility of the 10 'success factors' and to how change agents use integration and isolation activities to span the boundary.

These points are taken forward to the research design phase.

2.3 Resistance to, readiness for and the rhetoric of planned change

This section begins by focusing on the notion of resistance to change. That change recipients resist change is accepted as a 'truism' by many commentators. The literature explored here raises some alternative points of view, extending the discussion on resistance into one of readiness for planned change and the rhetoric of planned change. Finally in this section, the literature that has focused on change recipients rather than change agents is reviewed.

2.3.1 Resistance to change

"The practical task of social management, as well as the scientific task of understanding the dynamics of group life, requires insight into the desire for and resistance to, specific change" (Lewin, 1947:14).

The quotation from Lewin's (1947) seminal text is discussing resistance to change as a feature of a system, and not necessarily a psychological feature of people working within that system. Lewin's work however started a stream of empirical and conceptual literature that picked up the term 'resistance to change' and explored it from different perspectives (Coch and French, 1948; Ford et al, 2008; Kotter and Schlesinger, 1979; Lawrence, 1954; Pideret, 2000).

Later work in this sequence departed from describing resistance in the system to describing the phenomenon as a mental model held by change recipients and change agents. Much of this work makes conceptual arguments to bring together perspectives on resistance to change from an individual psychological perspective with organizational-level viewpoints on change, communication and leadership.   A small number of empirical studies exist and are referenced in the following discussion.

Erwin and Garman (2009) published a meta-review of empirical work relating to resistance to organizational change. Of the 123 articles published between 1999 and 2009, 105 were theoretical discussions. Of the 18 field studies they

analysed they reported the findings to be more divergent than convergent. They gave the 'reasons' for resistance as including (1) individual influences such as identity formation, or personality and emotional intelligence attributes e.g. personal resilience, perception of risk, perception of self-efficacy; (2) communication and participation matters, and (3) leadership style influences.

The literature provides three conceptions of resistance (see Erwin and Garman, 2009; Feldman, 2004; Pideret, 2000). These are: (1) cognitive resistance based on understanding of what the change is about; (2) emotional /affective resistance driven by how the change makes the person feel, and (3) behavioural/intentional resistance that manifests itself in what people are prepared to do or not do.

Different authors have focused on one or more of these different conceptions of resistance. Kotter and Schlesinger's work (1979) addresses reasons for cognitive resistance, e.g. different stakeholders having differing assessment criteria to evaluate the change. Argyris and Schön's (1974, 1978) work on defensive routines addresses emotion-driven responses to perception of change. The literature on participative decision-making builds on classic studies that address resistance as a physical 'act' (Coch and French, 1947). Many authors question the sense of the 'resistance to change' mantra as embedded in the popular mind-set associated with planned change, (e.g. Stensaker et al, 2002) and call for a 're-casting' of the normative perspective that change recipients will automatically resist change (e.g. Balogun, Bartunek and Do, 2010) and that resistance is irrational, dysfunctional and/or illegitimate (e.g. Ford et al, 2008; Thomas, Sargent and Hardy, 2011).

2.3.1.1   Resistance as a resource

The concept of 'resistance' is increasingly challenged as a starting point, using the argument that this dominant discourse is detrimental to thinking about change processes and relationships (Balogun et al, 2010). The "*change-agent centric view*" is also challenged (Ford et al, 2008:362), claiming that change agents perpetuate the resistance metaphor believing that they are doing the

right things and that change recipients are behaving to confound their logical actions (Pideret, 2000). If change agents expect resistance it can be argued they will find it and then explain it in a self-serving way. This behaviour is said to be a type of defensive routine, i.e. one that protects the change agent from failure by implicitly blaming another party. Such a perspective, even if held at a tacit level, may lead change agents to reject change recipient points of view or alternative suggestions.

This perspective is expanded in the theoretical argument made by Palmer and Dunford (2008) that proposes a typology for managing organizational change based on six different embedded assumptions about change outcomes. They propose that the nature of 'resistance' is directly influenced by the assumptions made by change agents, e.g., if change agents assume to be able to control planned change, then resistance is likely and "*can and must be overcome in order to move change forward*" (2008:s28) whereas if change agents assume that planned change can only be shaped, then "*developing the personal confidence and capability of resistors contributes to the lowering of their resistance*" (Palmer and Dunford, 2008:s28).

Re-framing potential resistance as a resource for change is argued to be a more useful mental model (Ford et al, 2008; Wegener, Petty, Smoak and Fabrigar, 2004). Framing resistance as a resource may enable two-way communication where alternatives can be heard. Pideret (2000) argues for resistance to be sought-out, understood and appreciated as thoughtful activity; as an engagement that will enable creative results. Indeed she argues that ambivalence is more dangerous to change efforts than resistance, as ambivalence can manifest itself in silent withdrawal. Ford and Ford (2009:101), pick up on this theme saying "*a litany of complaints may be the one thing that keeps a conversation about change alive*". Similarly, Waddell and Sohal (1998:543) recognize that resistance is a "*little-recognised but critically important contributor*" to major corporate change failure, but that the "*notion of utility in resistance has been largely disregarded by present day prescriptions for the management of change*".

It is also claimed that line/middle managers have a fundamental impact on the success or failure of change initiatives in their organization. This actor is worthy of study as distinct from change agents and change recipients (Balogun, 2003; Balogun and Johnson, 2004; Rouleau, 2005). There is a call for change agents to understand positive and resistive attitudes to change of change recipients and their line managers at cognitive, emotional and intentional levels if change efforts are to be successful (Pideret, 2000).

2.3.2 Readiness for change

'Resistance to change' is argued to lead to an 'un-readiness' for change that hinders the intentions of the organization. Rather than focus on the notion of resistance and the drivers of this, some authors have instead framed their research in terms of creating readiness for change at the organizational level (e.g. Armenakis, Harris and Mossholder, 1993; Armenakis and Harris, 2002; Kotter and Schlesinger, 1979; Self and Schraeder, 2009). Although these authors argue that readiness for change is distinguished from resistance, they too frame readiness in terms of change recipients' beliefs, attitudes and intentions in a similar way to Pideret (2000), and to Erwin and Garman (2009).

The literature on readiness for change is small and claims confirm the logic that underpins common change 'prescriptions' or 'success factors' as previously summarized in Table 1. Despite this consistent advice, the fundamental argument for practitioners that underpins this doctoral thesis is that although the normative advice is logical, as far as it goes, it is not sufficient. Given that these are relatively high-level prescriptions, it is feasible they are not sufficiently granular to craft context-sensitive planned change. While it is very useful to have a breakdown of matters that need attention, it is not the individual items in those lists, but the combined effect of these that determines the outcome. This suggests that current challenges with crafting planned change practices is a feature of normative advice being, at the same time, insufficiently granular, and insufficiently integrated.

This perspective is echoed by Powell and Posner (1978) who argue that the great variation in reasons for, and expressions of resistance to change means that managerial behaviour needs to be similarly varied. They comment, "*Managers must put aside the traditional view that all employees resist all change and should be prepared to deal differently with each change situation*" (1978:29). Whilst this comment was made more than 30 years ago, the popular view of resistance prevails in practice. The literature that uses the label 'readiness', rather than 'resistance', however signals a shifting perception of why people might respond to planned change in different ways.

Continuing this theme, other perspectives offered by the literature focus on the conversations taking place between multiple actors during planned change.

2.3.3 The rhetoric of planned change

It is claimed that to bring about intentional change, rhetoric[2] is required that recognises that *"change is a recursive process of social construction in which new realities are created"* (Ford and Ford, 1995: 541).

This argument suggests it is unrealistic to expect planned change to progress as desired without close attention to communication between multiple actors involved in the change and the rhetorical devices used.

This suggestion is addressed in the literature with two findings.

The first relates to earlier findings about socially constructed perceptions about resistance. For example, Bryant's empirical work studying the narratives used by people sharing experiences of organizational change found that *"voice may be confused with resistance"* (2006: 246) indicating that any feedback from change recipients that does not fit with change agent plans can be misinterpreted. Bryant suggests that managerial communication and participation strategies during planned change would benefit from being tailored

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[2] The term rhetoric is used to relate to the art of using language effectively and persuasively

to reflect the specific narrative of organizational actors. This finding confirms that *"talk is not cheap"* (Ford and Ford 1995: 551). Not only can actual resistance to change be a consequence of ineffective communication, but what people say can also be interpreted as resistance without cause.

The second finding suggests that different types of conversations and narratives are needed at different stages of a planned change initiative (Ball and Wilson, 2000; Chreim, 2006; Ford and Ford, 1995; Sonenshein, 2010).

Progressive, regressive and stability narratives during planned change are reported by Sonenshein (2010) within the same planned change. Different narratives can result in both intended and unintended consequences. For example, if change agents adopt progressive narratives (focused on why things need to change), then change recipients can choose to accept them, agreeing and supporting the change with their own progressive narrative, or reject them resulting in logical or subversive regressive (resistance) narratives that voice why the change would not be a good thing. If change agents adopt stability narratives (focused on what's good about now), then change recipients may choose to build on these with their own stability narratives that emphasise the positives with the current situation (thus resisting change), or they may reject the stability narrative because it does not address what they perceive to be necessary, replying with their own progressive narrative. Sonenshein's study highlights in a different way that 'talk is not cheap' and that intentionality is needed to design and interpret communication during change.

In summary we can see that this literature argues for conscious awareness of the rhetorical devices used by multiple actors in their spoken and written communication during the progression of a planned change.

Given the critique of a change agent-centric view in the literature, specific literature relating to change recipients is reviewed next.

2.3.4 Change recipient responses to planned change

As previously discussed, advice in the literature related to accomplishing planned change tends to be focused on change agents in a temporary organization and what they need to do to craft planned change to overcome the forces for stability that are assumed to exist in operations. Such a change agent-centric view perpetuates views that change recipients resist change, perhaps irrationally or illegitimately.

Two researchers have published reviews of the literature pertaining to change recipient responses to change in recent times.

Oreg, Vakola and Armenakis (2011) reviewed 78 quantitative empirical studies looking at change recipient reactions to organizational change published between 1948 and 2007. Their work analysed findings from these studies and categorised them according to pre-change antecedents (recipient traits and internal context), change antecedents (change process, perceived benefits/dis-benefits and change content), explicit recipient reactions to change (at cognitive, affective and intentional levels) and consequences of the change (personally and on the work).

No conclusions were drawn from the analysis, however they recognised the limitations of the studies that focused on change recipients, but did not consider line manager and change agent responses to change recipient perceptions and reactions saying "*these must have a direct influence on change processes and ultimate success*" (2011:515).

Similarly, Bouckenooghe (2010) published a narrative review of 58 articles published between 1993 and 2008 on attitudes to change, and commented on issues of resistance, readiness, and cognitive, affective and intentional perspectives. The majority of studies used quantitative analysis of survey data of change recipient attitudes, with 84% of them adopting the individual as the unit of analysis. Bouckenooghe (2010), in a similar vein to Oreg et al (2011)

comments that such 'single-level thinking' does not advance thinking on how to craft change interventions to better connect with change recipients.

Stensaker and Meyer (2012) do address the implications of change recipient perspectives on change capabilities overall. They note from their two qualitative studies that perspectives to planned change vary according to experience of change in that organisation. Whilst less experienced change recipients were more likely to experience change fatigue or cynicism and compliance focus, the researchers found that more experienced people were more likely to have positive reactions to the change observing some common patterns that were judged to be change capabilities of the organization.

The relationship between change agents and change recipients is explored by Battilana and Casciaro (2012) through eight in-depth, longitudinal case studies in the UK National Health Service. Drawing on social network and institutional theories in informing planned change, they note the importance of the degree of embeddedness of change agents in change recipient's networks. They observed that where the planned change required change recipients to diverge significantly from established institutional norms, change agents that were less embedded in change recipient networks were more successful. In contrast, where planned change objectives diverged less from the status quo, change agents who were more embedded in change recipient networks (fewer 'structural holes') had more success.

This study is a rare example of one that considers the planned change and the actors involved as the unit of analysis and it focuses the findings from this part of the literature review. We can see that it is unlikely that the perspectives of individual agents can provide enough of a context to make sense of the overall challenge of accomplishing planned change. A higher-level construct than the individual seems necessary to bring a different focus to research into planned change, yet this construct must enable close attention to all the organizational actors involved to be paid.

2.3.5 Summary: resistance to, readiness for and the rhetoric of planned change

It can seen from the above that the literature deals with the popular notion of 'resistance to change' from a range of different perspectives.

The term 'resistance to change' was first introduced into the management literature in the 1940's, originally referring to the tensions between the desire for change and resistance to that change in a system. However, much of the recent work has taken this idea of resistance as 'opposition to force' and applied it to individuals and groups of individuals, working within such a system. As a result the literature on resistance to change has drawn on ideas from psychology and group dynamics.

Much of the recent literature is conceptual rather than empirical. The consensus is that it is important to go beyond the rhetoric of illegitimate resistance and explore attitudes to change held by multiple actors at multiple levels.

Related to the idea of 'resistance to change' is 'readiness for change' at an organizational level, i.e. the factors and conditions necessary to support planned change. A review of this small literature reveals the origin of much of the practitioner advice on planned change in the OD/OB school.

More theorizing, and some notable empirical work, exists from researchers looking at the role of communication in general, and specific discourse in particular: the rhetoric of planned change. Rather than conceptualising communication as a 'tool' that is used within a change process, these authors observe change as "*a phenomenon that occurs within communication*" (Ford and Ford, 1995:17).

It is established that accomplishing planned change is important strategically, and difficult to do. Unintended outcomes, including stability when change is intended are prevalent in practice. Multiple actors are involved in a single planned change endeavour; change agents, change recipients and their line managers.

It is clear from reviewing the literature related to resistance to change, that to understand the relationship between stability and change, and intended and unintended outcomes, requires an approach that observes the roles, attitudes, rhetoric and actions of multiple actors working on the planned change. Researching this network of actors using a unit of analysis other than the individual is needed.

Perpetuating the popular notion of 'resistance to change' in an individual or group of people has little utility in advancing knowledge of how to transcend 'prescriptions' and understand what it takes to change work practices.

An approach that explores the *"competing and complementary forces"* (Smith and Graetz, 2011:193) between change and stability during planned change is likely to make a contribution to knowledge.

In summary therefore, research should explore:

> How the attitudes to change of multiple actors[3] at cognitive, emotional and intentional levels impact on the delivery of desired benefits;

> How the spoken and written rhetoric of multiple actors during planned change is used to influence behaviour.

These points are taken forward as specific questions into the research design phase.

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[3] Change agents, change recipients and their line managers

2.4 Organizational routines undergoing planned change: a practice perspective

This section takes forward themes emerging from the literature review so far, namely (1) the need to study how change agents span the boundary *in practice*; (2) the need to understand the roles, attitudes, rhetoric and actions of *multiple actors* involved in a single planned change; and (3) the need to study planned change using a unit of analysis other than the individual. It begins with exploring insights from the management literature that has progressed the '' in contemporary social science. It then goes on to argue that the organizational routine undergoing planned change is a suitable phenomenon, and unit of analysis, for further research done in the 'as practice' tradition.

Existing insights from the literature that has studied routines and change are discussed and summarised. These raise specific questions to take forward to the research design phase.

2.4.1 The 'practice turn' in management literature

The strategy-as-practice (S-as-P) or strategizing literature (Johnson, Melin and Whittington, 2003; Johnson, Langley, Melin and Whittington, 2007; Jarzabkowski, 2005) has emerged in the management literature to encourage and record close attention to what people do. It is reported by Johnson et al, 2003 that interest in strategy-as-practice grew from a frustration that many strategy formation and implementation studies operated at a macro-firm level that focused on an aggregate set of 'top managers' and on statistical analyses of firm performance. S-as-P argues that it is more useful to consider human actors and action; seeking to find a way to analyse and understand the causal ambiguities associated with organizational capabilities.

Accordingly, strategy-as-practice is defined as *"a situated, socially accomplished activity comprising those actions, interactions and negotiations of multiple actors and the situated practices they draw upon to accomplish the activity"* (Jarzabkowski, Balogun and Seidl, 2007:7)

This definition infers that all work is strategic in nature, giving credence to the idea that strategy formulation and implementation is accomplished by a range of organizational actors other than 'top managers'. This doctoral research makes the assumption that all planned change work is strategic in nature, i.e. the outcomes of the work have strategic implications for the investing firm.

Although the 'as-practice' literature is interested in what people do, the focus on multiple actors in-situ is essential. Three domains of praxis, practices and practitioners are recognised in a meta-review of this literature (Jarzabkowski and Spee, 2009).

'Praxis' is defined as *"the stream of activity in which strategy is accomplished over time"* (2009:73). Praxis interconnects the micro actions of individuals and groups with the wider institution to which they contribute. 'Practices' are defined as *"the social, symbolic and material tools through which strategy work is done"* (2009:70). 'Practitioners', as the term suggests, relates to the individuals who perform the actions that bring about strategy.

This meta-review also reports the instances of empirical research focused at each of macro (firm/industry), meso (change or organizational) and micro (personal, group, process) levels. According to Jarzabkowski and Spee (2009), authors researching in this domain have been interested in 'how what individuals do shapes how the organization does strategy' (e.g. formulates strategy over time), or 'how what individuals do shapes what business units do' (e.g. organizational-level responses to planned change initiatives).

This is a small but growing literature. Researchers adopting a strategy-as-practice perspective tend to use this as a lens to illuminate another mid-range theoretical perspective, such as sensemaking, or a theory such as institutional theory.

To research planned change, embracing the detailed roles, attitudes, rhetoric and actions of multiple actors across a temporary organisation and operations, a practice perspective that takes a holistic approach is argued to be relevant. In

strategy-as-practice terms, this approach will enable understanding of the impact of planned change work (practices carried out by multiple practitioners) on operations (praxis) at the organizational (meso) level.

It is consistent with such an holistic approach that the phenomenon to be researched is the organizational routine undergoing planned change, as conceived in social practice theory as *"the repetitive, recognizable patterns of interdependent actions carried out by multiple actors"* (Feldman and Pentland, 2003:95). This construct enables a focus on the whole system involved in the planned change embracing individual and collective patterns of action.

2.4.2 Organizational routines undergoing planned change

The warrant for the claim that the organizational routine undergoing planned change is an appropriate phenomenon to be researched, and a suitable unit of analysis, is explored here by reference to the organizational routines literature.

This growing literature was reviewed by Becker in 2004, and by Parmigiani and Howard-Grenville in 2011.

The sub-set of these contemporary reviews concerned with the role of organizational routines and change is synthesized here.

It is argued by Becker (2004) that organizational routines were put 'centre-stage' in 1982 with the publication of Nelson and Winter's book "*An evolutionary theory of economic change*" (Nelson and Winter, 1982). This built on foundations from the Carnegie School (Cyert and March, 1963; March and Simon, 1958) and their focus on cognitive regularities that represent the understanding that groups of people involved in a routine adopt to guide their performances.

Since then a small number of researchers have concentrated on the organizational routine as a phenomenon to help understand how organisations develop, and how strategic aims are delivered. Some researchers have continued Nelson and Winter's (1982) work with a focus on the role of the

organizational routine in economics and strategic management, driven to understand the micro-foundations of firm performance (e.g. Cohen and Bacdayan, 1994). Other researchers have taken a practice perspective as their motivation is to understand embedded social behaviour (e.g. Feldman, 2000).

2.4.2.1 Organizational routines in economic and strategic management

Nelson and Winter (1982:73) argued that organizational routines are "*the repositories of organizational capabilities*". In doing so they joined their work with the stream of research associated with the resource-based view (RBV) of the firm (Barney, 1991; Barney, 2001; Barney and Zajac, 1994; Prahalad and Hamel, 1990). The RBV asserts that to achieve a sustained differential advantage an organization must understand the portfolio of tangible and intangible resources it deploys to create 'capabilities' or 'competences' that are Valuable, Rare, Inimitable and Non-substitutable and (latterly in Barney, 2001) Organizationally Orientated (i.e. usable): VRIN(O). Routines, as the repositories of organizational capabilities, are the building blocks of strategic resources (Barney, 1991). Accordingly, stability and reliability in the performance of routines is important, as is continuous improvement. Nelson and Winter (1982) proposed three ways in which routines bring stability; through organizational memory (cognitive dimension), truce (motivational dimension) and target (coordination dimension).

This proposition has been researched extensively (e.g. by Cohen, Burkhard, Dosi, Egidi, Marengo, Warglien and Winter, 1996); most latterly resulting in the dynamic capabilities literature that looks at 'meta-routines' for changing strategic routines (e.g. Zollo and Winter, 2002; Wang and Ahmed, 2007; Helfat, Finkelstein, Mitchell, Peteraf, Singh, Teece and Winter, 2007).

It is clear that a routine, performed reliably, with continuous improvement embedded, could be a source of sustained competitive advantage to an organization. In the world of organizational change, it could be argued that routinized change practices themselves could be sources of sustained competitive advantage to the firm who practices them. This argument that

change practices, in particular those practices collectively known as programme and project management, might be a source of sustained competitive advantage to a firm is an interesting topic, but it is not the focus of this research where the interest is in the routines undergoing change, rather than the routines to bring about change.

The literature relating to organizational routines in economic and strategic management shows that routines are strategically important and are therefore worth examining.

2.4.2.2 Organizational routines from a practice perspective

A growing number of researchers have followed a conceptualization of organizational routines based on theories of social practice (Bourdieu, 1977, 1990; Giddens, 1984; Latour, 1986). These include Feldman, 2000; Pentland and Reuter, 1994; Feldman and Pentland, 2003; Pentland and Feldman, 2005.

In line with the stream of research of organizational routines in economic and strategic management, early research from a practice perspective also looked at routines as sources of stability. These inquiries however discovered the potential of routines as sources of innovation and change.

Specifically, Feldman's empirical work (2000), designed to study what factors contribute to stability in routines, found most routines undergoing substantial endogenous change. Exceptions reported were when the change intended was not consistent with broader understandings of the organizational operation and continued performance (Feldman, 2003).

Other studies explored organizational routines as a source of stability through the study of formal rules (e.g. Steen, 2009) or because of the 'unlearning' necessary to change procedural memory (Lazaric and Denis, 2005).

Routines are proposed as a platform for innovation and change by a number of authors. Feldman and Rafaeli (2002) write about shared understandings supporting adaptation; Becker and Zirpoli (2009) studied the role of stable

behaviour patterns in innovation, and Pentland and Feldman (2007) researched how narrative networks support design processes.

The prevailing definition of an organizational routine emerging from this literature is that proposed by Feldman and Pentland (2003:95); "*repetitive, recognizable patterns of interdependent actions carried out by multiple actors*". Through this definition, routines are distinct from individual skills and/or habits, as they are from processes, the latter being a sub-set of routines. Routines, defined in this way, may be stable or continuously adapting. In the case of this research, they could also be a proxy for the planned change being crafted and received by multiple actors across the temporary/host organizational boundary.

To research the patterns of action that constitute routines Pentland and Feldman (2005) claim it is necessary to adopt the routine in its entirety as the unit of analysis; rather than any of its micro-foundations such as individual attitudes alone. In so doing, the routine should be 'unpacked' so that its internal dynamics can be studied. This thesis builds upon these claims with the aim of contributing to knowledge of routine dynamics during planned change.

Further warrant for adopting the organizational routine as a unit of analysis is provided by authors discussing the micro-foundations of organizational routines and capabilities (Felin, Foss, Neimeriks and Madsen 2012; Hodgson, 2012). Observing micro-foundations of routines such as individuals, processes or structures as discrete variables is important, but it is problematic to understand where micro-reduction should usefully end. Similarly, Parmigiani and Howard-Grenville (2011) argue that adopting the routine as the unit of analysis for empirical work enables the necessary focus on both the micro, situated conduct of actors and the macro context of the situation. It is concluded that in adopting the routine as the unit of analysis, research methods can be focused on direct observation of the whole routine undergoing planned change, not just a part of it. Accordingly, sense can be made of a multiplicity of variables working together in one human system.

2.4.2.3 Internal dynamics of organizational routines

Pentland and Feldman (2005) build on Latour (1986), to assert that if organizational routines are to be understood, they need to be 'unpacked' or dis-aggregated to make sense of their internal dynamics.

Further support for detailed observation of routines and 'unpacking' of their internal dynamics is provided in the literature. For example Cohen and Bacdayan (1994) note that as a routine becomes more practiced and familiar, it becomes easier to do, but harder to verbalise or explain. This has an implication for research methods where the tacit knowledge of actors needs to be made explicit in order to achieve the 'unpacking'.

Pentland and Reuter (1994), in their discussion of organizational routines as 'grammars of action', argue that if routines are described as an adjective, i.e. routine work, then mindless and habitual performances may result. In contrast routines that are variable in nature are effortful accomplishments focused on achieving specific 'performances'.

To unpack organizational routines, Feldman and Pentland (2003, 2005) argue that the relationship between the ostensive (in principle) aspects of the routine and the performative (in practice) aspects must be studied. The relationship between the ostensive and performative is claimed to be a mutually constitutive duality, i.e. there is a simultaneous reciprocity between the 'idea' or 'representation' of the routine supported by artefacts such as guides or procedures, and the specific actions taken and outcomes produced by actors in performing the routines supported by artefacts such as records.

The nature of the relationship between the ostensive and performative is argued to parallel Gidden's duality of structure embedded in Structuration Theory (1984), shown here as Figure 3.

Figure 3: Internal dynamics of organizational routines, after Pentland and Feldman (2005) and Giddens (1984).
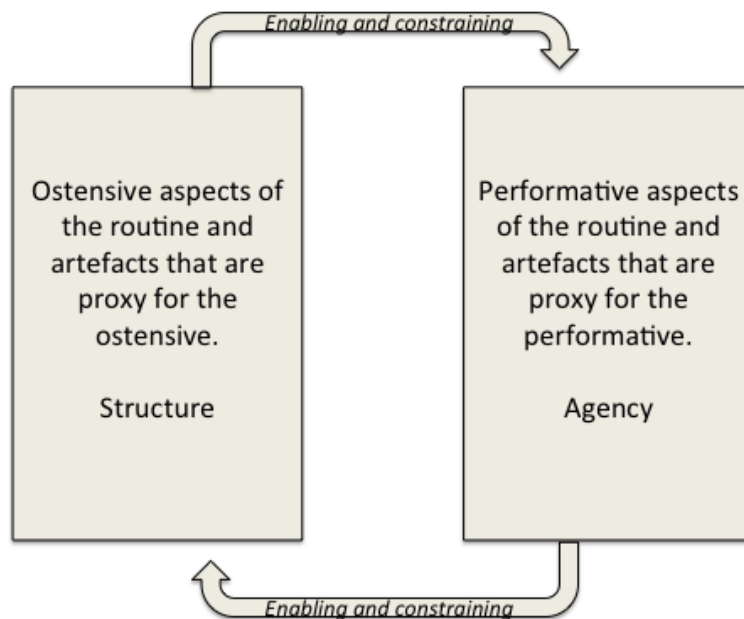
As Figure 3 shows, in Structuration Theory, agency produces and reproduces structure while *at the same time* structure constrains and enables agency. So, Pentland and Feldman (2005) argue that the performative aspects of routines produce and reproduce the ostensive (in principle) abstract idea of the routine while *at the same time* the ostensive aspects constrain and enable the performative (in practice) concrete manifestation of the routine. Artefacts are a proxy for parts of the ostensive, or parts of the performative, but do not represent the entirety of the routine, or any part of it.

A growing conversation on the role of artefacts within routines however, suggests a central, mediating role of socio-material items in the practice of routines (Hales and Tidd, 2009; D'Adderio, 2008, 2010). D'Adderio (2008:9) theorizes that artefacts act as *"intermediaries in shaping the interactions between different sides of routines"*. This work has helped to clarify the "*crucial but subtle dynamics that have been so far overlooked within the routines debate by revealing the deeper interactions between [the ostensive and performative] aspects of routines, artefacts and distributed agencies*" (D'Adderio, 2008:48). It seems therefore that the role of artefacts within routines must be understood,

but not conflated or mistaken for patterns of action. In crafting planned change implementations the *"folly of designing artefacts while hoping for patterns of action"* (Pentland and Feldman 2008:235) is clear.

Salvato and Rerup (2011) also note the usefulness of understanding the internal dynamics of routines, i.e. the interplay between the ostensive and performative that *"are created and re-created through action"* (2011:472).

The call for 'unpacking' routines is supported by Miettinen and Virkkunen (2005) and without reference to Pentland and Feldman. They criticize the historical views of organizational routines as defined and 'understood' technical phenomena. They argue that routines are better served if they are viewed as 'epistemic objects' (such as a disease, or social problem) and as objects of enquiry rather than assuming them to be stable and 'known'.

Further, Cohen el al (1996) makes a distinction between 'routines-as-representations' and 'routines-as-expressions'. This argument is compatible with Feldman and Pentland's distinction between the ostensive and performative even though Cohen et al's work is more usually positioned as following the evolutionary economics, rather than practice-based tradition. This is one instance of emerging evidence that scholars interested in organizational routines are embracing insights from both historical perspectives. Parmigiani and Howard-Grenville (2011) draw a similar conclusion that although the two traditions of studying routines have *"distinct trajectories and strengths"*, that *"elements of each can be complementary to developing a more holistic understanding".* (2011: 413).

2.4.2.4 Internal dynamics of routines conceptualized as a duality

Within contemporary management literature there is an increasing focus on the relationship between related constructs being a mutually constitutive duality (as argued by Giddens in Structuration Theory, 1984). Not only do Pentland and Feldman (2005) argue for a duality between the ostensive and performative aspects of organizational routines; Orlikowski and Yates (2002) suggest a

duality between communications and temporal practices used in boundary spanning during planned change. Further Orlikowski (1992) argues a duality between technology development in use, and organizational design. Farjoun (2010) goes further to conceptualize the very relationship between stability and change as a duality, as do Smith and Graetz (2011).

These articles all claim that a practice perspective is necessary to research empirically the simultaneous constraining and enabling forces at work as people attempt to shape progress from positions within organizations.

Feldman and Orlikowski (2011) assert that pre-requisites for adopting a practice perspective are: *"(1) that situated actions are consequential in the production of social life, (2) that dualisms are rejected as a way of theorizing, and (3) that relations are mutually constitutive".* (2011:1241)

Experience as a change management practitioner highlights that organizational outcomes from planned change are significantly influenced by two groups of factors: (1) human action (shaped by power, politics, individual and collective motivations) and (2) institutional instruments such as process, structure, organizational cultural artefacts, incentives and other control mechanisms. If these factors were conceptualized as a dualism, it would infer that they are distinct and opposing in some way, representing a dilemma and requiring an either/or choice of which factors to manage. Practitioner experience does not suggest that one or the other of these groups of factors is most influential, or indeed that they are distinct. 'Reality' seems to represent a complex interplay of human action and organizational control mechanisms, neither of which can be ignored. This supports the study of these factors as a duality. Further, the micro-foundations of organizational routines need to be observed in order to understand the interplay of human and institutional factors, but it is argued that this is most usefully done within the context of the purpose that the routine serves.

2.4.2.5 Organizational routine as phenomenon

Before summarizing this section that has addressed the organizational routine undergoing planned change from a practice perspective, the warrant for conceptualizing the organizational routine as a phenomenon is explored.

Organizational routines, as conceived in social practice theory (Feldman and Pentland, 2003; Pentland and Feldman, 2005), are defined as *"repetitive, recognizable patters of interdependent actions performed by multiple actors"* (2003: 95), and any single organizational routine is posited by those authors as a *"generative system with an internal structure and dynamics"* (2005: 793). In a social practice tradition, such a generative system and its internal dynamics would never be argued to be 'real' and observable in realist terms, this being philosophically inconsistent. The elements of the generative system posited by Feldman and Pentland (2003) – themselves interacting recursively to make up the routine dynamics – are different in nature. The ostensive is an inherently internalised notion. The performative not only involves practical action, but is also an embedded notion that includes pre-dispositions as well as action, or indeed inaction that is less obviously observable (Feldman, 2000, 2003, 2004). Artefacts may be physical objects or be represented by observable data, such as an organization structure or performance metrics. These elements of a generative system, i.e. the ostensive, the performative and artefacts are argued to be themselves constructs; a higher-order abstraction of the variables that influence them, e.g. the influence of the actual organizational structure, and the perceptions of the power relationships this infers for each person in the ostensive.

Pentland and Feldman (2005: 798) note, quoting Latour (1986: 276) that there is no underlying phenomenon of an organizational routine, but that practitioners as well as researchers *"overlay the idea of the routine on some combination of actions, people taking actions and physical objects"* (2005: 798). Conceptualizing the routine as a social phenomenon is argued here to be appropriate. This is not because the complex relationship between the constructs making up the internal dynamics of routines can and should be

reified as an observable item, nor should the detailed and potentially divergent relationships between the ostensive, performative and artefacts be lost. Instead it is argued that (1) the routine undergoing planned change is something 'real' for practitioners – there are repetitive and <u>recognizable</u> patterns of interdependent action performed by multiple actors – and these can be articulated, and (2) operationalizing the study of the internal dynamics as described enables attention to be paid to the detail of the internal dynamics while recognising the overall effect of routine dynamics on the intended organizational performance (in this research, planned change to the work conceptualized as routines).

In summary, while it could be argued that the social phenomenon of interest in this research is planned change and the organizational routine undergoing planned change is the construct used to examine that phenomenon; instead it is argued that the routine undergoing planned change is 'real' to multiple practitioners (change agents, change recipients and their line managers) and that, as the subject of the enquiry of how to intentionally change work practices, it is appropriate to conceive the routine undergoing change as a phenomenon.

As noted in Pentland and Feldman (2005), it is relatively easy to study the relationship between specific parts of an organizational routine, e.g. artefacts and the ostensive, but little research exists that has looked at the whole 'artefact influenced ostensive/performative duality' over time. The objective in this research is to operationalize this, adopting the routine undergoing planned change as the unit of analysis, and arguing this to be a valid social phenomenon, albeit socially constructed.

2.4.2.6 Section summary

This section has explored the warrant for the claim that the organizational routine undergoing planned change is an appropriate phenomenon to be researched, adopting this phenomenon in its entirety as the unit of analysis. Routines are strategically important as the repositories of organizational capabilities. They provide stability and reliability for organizations, and enable

change where the conditions for change are right. Adopting social practice theory it is argued that a better understanding of routines can be gained by 'opening the black box' to understand the internal dynamics between their ostensive and performative aspects.

The focus of this research is planned change, considering the roles, attitudes, rhetoric and actions of change agents, change recipients and their line managers. A broader unit of analysis than the individual is needed to do this.

Adopting the organizational routine undergoing planned change as the unit of analysis, and exploring the internal dynamics of the routine from the perspective of multiple actors is consistent with the literature.

The implications of this for the research design are outlined in Chapter 3.

This Chapter continues with an exploration of what the empirical routines literature reveals about the internal dynamics of routines and change.

2.4.3 Internal dynamics of routines and change: empirical evidence

Empirical studies in this literature are few but growing in number. Extant work primarily observes routines that were expected to be stable, but were found to be endogenously changing. Some examples of routines undergoing exogenous planned change exist. Both bodies of work are reviewed in this section.

2.4.3.1 Studies of emergent, endogenous change to routines

Although empirical studies are few, of note is Zbaracki and Bergen (2010) and their longitudinal study of price adjustment routines and the existence, collapse, and then re-formation of truces between sales and marketing staff within the organization.

The paper focuses on the effect of routines in providing a truce, an implied 'contract' to resolve an implied conflict between multiple parties involved in performing the routine. The role of the 'routine as truce' is a key concept from Nelson and Winter's (1982) seminal work in this field. With truces intact, stable

performances are observed, but change challenges interests and information and hence the truce. Although this research started from the literature on 'routines as providing stability', the authors conclude that to make sense of stable routines during change, "*an ontology of the routine that distinguishes between the performative and ostensive aspects of the routine is needed*" (Zbaracki and Bergen, 2010:967).

The change to the price adjustment routine was an example of emergent, endogenous change where the authors observed that the truce was broken as the ostensive interpretation of the routine held by different participants was challenged. They noted that it is not possible to make sense of the situation by only looking at actions (the performative) and their outcomes because this doesn't capture the interpretation of patterns created out of past performances embedded in the ostensive.

Feldman (2000, 2003, 2004) researched emergent endogenous change to routines in residence halls of a state university. This work supports the earlier theorizing of Pentland (1995) and Pentland and Reuter (1994) that "*an organizational routine is not a single pattern, but, rather a set of possible patterns – enabled and constrained by a variety of organizational, social, physical and cognitive structures – from which organizational members enact particular performances*" (1994:491). As a result, routines that might be expected to be stable, are in fact continually changing as the multiple stakeholders involved in the work, act and make sense of their actions over time; adjusting future actions according to their internalized structures. Feldman and Pentland (2003) describe the inherent endogenous capacity within routines to generate and retain novel patterns of action. The crux of this is within the relationship between ostensive and performative aspects of the routine. The ostensive operates both prospectively, as a guide to action (what Nelson and Winter (1982) referred to as 'routine as target', and retrospectively, to justify actions, or consolidate or build upon the internalised patterns of action carried out repetitively by multiple actors. Through this retrospective loop,

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variance in performances can be selectively retained in the ostensive, thus changing the guide to action for subsequent practice.

This theme is expanded in Rerup and Feldman, (2010) where they examine trial and error learning within a routine, looking specifically at organizational schemata, i.e. the knowledge structures/data reduction devices embedded in the ostensive aspects of the routine of multiple, different people.

More recently, Pentland, Haerem and Hillison (2011) researched invoice-processing routines in four organizations to examine specifically the role of the routine in enabling stability, or change. The researchers used a technique to model networks of actions performed by the multiple actors involved in each routine. They found evidence of continual adaptation and change to routines that were intended to be stable, and some evidence of exogenous factors (such as large invoices from rarely used vendors) not influencing adaptation when they may have been expected to. The importance of socio-material context in understanding the interplay of change and stability to routines is theorized in this paper.

Howard-Grenville's (2005) study of a single routine within a high-tech manufacturing company also found evidence of endogenous change when stability was expected. This study identified that the relative power of actors was significant in whether a routine was changed, or not. People working within a routine were found to be not interchangeable. Turner and Fern's (2012) study confirmed this latter finding through their examination of the relationship between actor's experience and adaptation of stable routines. They found that experience was necessary to gain the reliability-related benefits from routines but that yet greater experience resulted in greater adaptation of the routine.

Howard-Grenville (2005) also noted the embeddedness of the routine within structures (used in a structuration sense), therefore the need for structures to change before performances could follow in a sustained way. This study also supports earlier claims that artefacts supporting the routine inform, but do not determine, enactment.

Becker and Zirpoli (2009) studied routines in an automotive research and development department and discovered a 'governance-gap' between the actual performances and espoused performances. They suggest this has implications for design of change to routines, but their study does not look at change specifically.

In summary, empirical studies observing routines changing are relatively rare, yet those that exist consistently confirm the need for a granular approach to be adopted to understand the network of interdependent people involved in the change, and their rationale(s) and motivation(s) for change to take place.

Given the relatively few published cases looking at change within and to routines, further explanations for emergent endogenous change were sought out. Abel and Sementelli (2005:448) looked at metaphors within organizational change, noting that the machine/rational actor metaphors often used have some value, but "*fail to explain why some change is successful and others not*". They argue, quoting Deetz et al (2000:72) that "*although leaders do not and cannot completely control all events, they can nevertheless influence how events are seen and understood by paying close attention to how their language influences the interpretive frameworks of those around them*". Abel and Sementelli (2005) argue that Veblen's (1932) theory of endogenous evolution provides a metaphor that is useful to embrace alongside the Lewinian (1947) metaphor of planned change (unfreeze-transition-refreeze). This idea promotes the building of patterns in experience and understanding that provides the necessary 'stickiness' required for change to be sustained. This idea is echoed in Weick and Quinn (1999) and the claim that routines need to be 'frozen', to establish common understanding, as a pre-requisite for successful change.

Although the literature on emergent, endogenous change to routines is not extensive, it demonstrates a consistent rationale that change happens, and is sustained when the change it is initiated by the people 'doing the work'. This is because people only change the things that it makes sense to them to change.

The people 'doing the work' in this research are conceptualized as change recipients. As discussed and shown in Figure 2, the creation of temporary teams to bring about planned change creates an organizational separation of change recipients from change agents. Although in some cases of organizational change, the people tasked with making change happen could be the same people as those doing the work, (e.g. in the cases of distributed change agency studied by Buchanan, Addicott, Fitzgerald, Ferlie and Baeza, 2007), this is not typical and not the focus of this research. Accordingly, the findings from the literature relating to endogenous change to routines have implications for the design of planned change, as advised by the project-based and OD/OB schools.

2.4.3.2 Studies of planned, exogenous change to routines

Published cases are rare, an obvious gap in knowledge.

One of the few is Espedal (2006) who studied a small engineering firm through a period of significant growth, then slow subsequent decline, over 20 years. He observed 'higher-order' (two strategically-significant) routines becoming sources of stability, and some inertia as these routines were maintained "*through central actors' emotional attachment to old, successful experience: commitment to existing assumptions; and through keeping threatening questions un-discussable*" (Espedal, 2006:485). He reported that, "*the dominant logic of action acquired lifelike and possible sacred meaning and preserved the organizational status quo*" (Espedal, 2006:485).

Other than this study, to date only three other published cases where planned, exogenous change was examined from the perspective of the routines being changed have been discovered. These are expanded upon below.

Steen (2009) studied the introduction of formal rules for accounting practices in a Dutch independent banking network. His theoretical perspective was institutional theory and the interaction of formal rules and routines, which he argued was part of the process of structuration.

Across 14 bank branches, Steen observed differing success in "*altering the deeply routinized patterns of interaction between organizational inhabitants (performing the routine)*" (Steen, 2009: 1). His analysis showed that planned change was more successful when three criteria were fulfilled. (1) that the change did not directly contradict the ostensive 'understanding' of the routine, i.e. the change did not fundamentally challenge the 'logic' of the work, or introduce rules that were incompatible in the eyes of the change recipients. (2) that changes to the routine fitted in terms of the wider fit of the routine into other parts of the organization, i.e. the change made wider sense to those affected and did not introduce mutually incompatible rules across multiple routines. (3) that the degree of ambiguity created during the change process was kept at a low level, i.e. communication of change practices and their implications were explicit, leaving no room for alternative interpretations.

He also noted that although the planned change project had tangible outputs, such as new systems and processes, the degree of successful adoption of these leading to organisational benefits was greater where the project had focused on 'behavioural embedding' of the change from the start of the process (Steen, 2009).

Further, Steen's (2009) study, using the language of 'tacit scripts' and 'conscious scripts' to articulate the ostensive aspects of the routine, supports earlier findings of the need to influence the internal and external conversations that take place within and between multiple interdependent actors (Sonenshein, 2010; Ford and Ford, 2005, 2009). Steen (2009) reported the dominance of the "*all is well and it will pass script*" (2009: 12) in areas where the change was less successful, and the "*absence of a confrontation script*" (2009: 16) in areas where no accountability for the change was felt by the people performing the routine.

Reynaud (2005) examined a change in policy and associated rules, and the effect on routines through a single longitudinal study of the electrical equipment maintenance workshop of the Paris Metro. Consistent with practice theory she concludes that policy and rules are *"arrangements awaiting interpretation"*

whereas routines are *"rules already interpreted"* (Reynaud, 2005:866). Policy and rules have no influence unless embedded into the internal dynamics of the routine.

Lazaric and Denis's (2005) case of the introduction of ISO norms into a manufacturing organization focused on the challenges of 'routinization', i.e. creating new procedural memory during planned change to established routines. They draw on earlier work by Cohen and Bacdayan (1994) and differentiate between declarative memory, i.e. the knowledge-based, semantic memory that is used to code and recall facts, and procedural memory, i.e. the embodied skills-based memory that is used to decide on how to act. Lazaric and Denis (2005) use declarative and procedural memory as articulation of part of the ostensive aspects of routines and the role of the ostensive (and therefore memory) in enabling and constraining action. This is consistent with Nelson and Winter (1992) where they propose that the cognitive dimension of stable routines is in the form of organizational memory. Lazaric and Denis (2005) argue that within routines, these 'memories' work at collective rather than individual levels. Their study, that attempted to observe how planned change influenced stable routines noted how "*the changes offered opportunities for creating new processes of memorization and routinization that encountered important forces of resistance around which bargaining occurred*" (Lazaric and Denis, 2005:873). Their primary findings observed the importance of 'un-learning' with respect to procedural memory, i.e. the importance of 'rejecting' the old ways to move to the new over time. This idea is consistent with other views, using other language, that successful planned change must enable a shift in the ostensive aspects of routines, at 'deep' levels across multiple interdependent parties if actions and outcomes are to be transformed (e.g. Pideret, 2000).

Lazaric and Denis (2005) also made methodological points addressing the difficulties for scholars of organizational change in observing routines and routinization. They argue that direct observation is a useful and convenient way of gaining knowledge into recurrent interaction patterns between multiple actors.

However, they argue this is only of use if supplemented by in-depth exploration of individual views over time, and by analysis of data and documents, to link the qualitative data with actual outcomes. This study is also an example of a single planned change that influenced multiple organizational routines.

2.4.3.3 Summary of evidence of organizational routines undergoing change

Insights from Feldman's empirical work (reported in part in 2003) suggest that intended, exogenous change to routines is difficult, and that for performance to change first the 'in principle' ostensive aspects of the routine must be adapted to match with a changed view of what the organization needs to support continued performance. This idea is developed further by Feldman (2004) who notes that 'resistance to change' arises from people challenging specific knowledge-based, or identity-based, schema. Referencing Pideret (2000), Feldman (2004) argues that resistance to change can arise from positive intentions to maintain the embedded, ostensive understanding of the routine and its value to the organization.

Pentland and Feldman's work (2005) provides many insights into the 'unpacking' of routines and how empirical work might be designed to do this. For example, their thoughts (building on Latour, 1986) are that it is important to engage with multiple actors working within the same situation, and to explore both their perception of what is involved (accessing the ostensive or 'in principle' aspects of the work) and actual observations of action/what happens (picking up the performative or 'in practice' aspects), as well as understanding the role of artefacts in shaping and communicating the outputs of the routine (e.g. in D'Adderio, 2008, 2010; Hales and Tidd, 2009). To operationalize this unpacking, it is suggested to use the organizational routine as the unit of analysis.

Becker and Zirpoli (2008:146) report that the study of organizational routines as a unit of analysis is important, but difficult – the challenge being to research the *"reciprocally interdependent tasks that pose crucial organizational challenges".*

Despite the call for empirical studies to explore routine dynamics, actual published work is limited. Key points emerging from existing empirical studies are summarized here in Table 2.

Table 2: Summary of insights from empirical studies exploring routine dynamics

Insights from empirical studies researching the internal dynamics of organizational routines	Synthesized from the following literature
The performative and ostensive aspects of the routine need to be distinguished and each studied specifically, because it is not possible to make sense of routines by only looking at actions and their outcomes.	Zbaracki and Bergen, 2010
The cognitive, emotional and intentional aspects of structures (the ostensive) must change before performances can follow in a sustained way.	Espedal, 2006 Feldman, 2000, 2003 and 2004 Howard-Grenville, 2005 Lazaric and Denis, 2005 Rerup and Feldman, 2010 Steen, 2009 Turner and Fern, 2012
Important factors when attempting to intentionally change routines are: • Minimal contradiction of the 'logic' of the routine from a change recipient perspective; • The change fits – with other unaffected routines and practices; • Minimal ambiguity facilitated by explicit understanding of internal and external rhetoric within and between multiple independent actors.	Steen, 2009
Policy, rules and other artefacts have no influence unless embedded into the ostensive.	Reynaud, 2005

From the literature reviewed there is consensus that supports the call to examine the organizational routine as a unit of analysis, and to systematically

'unpack' the routine to understand the internal dynamics that can bring stability and reliability to operations, *and* change, if the conditions for change are right.

2.4.4 Organizational routines undergoing planned change: summary and the research gap

The study of organizational routines in two different but increasingly complementary theoretical traditions has provided early insights, and poses a number of questions about the dynamic nature of routines in organizational stability and change.

Adopting a social practice theory perspective, the literature calls for organizational routines to be 'unpacked' so that their internal dynamics can be understood.

There is a consistent theme throughout the literature to support the argument that the relationship between the ostensive and performative aspects of routines is a mutually constitutive duality, and that this duality warrants study using a research method that upholds the principles underpinning social practice theory and Structuration Theory.

Adopting the organizational routine undergoing planned change as the unit of analysis for empirical studies is warranted by the literature. This enables an holistic study of multiple actors and the multiplicity of micro-foundations that influence the ostensive and performative aspects of the routine embedded within the wider organizational context.

The literature notes a small number of empirical studies of routines and change. Some found routines that were expected to be stable to actually be continually adapting. Others noted examples of routines that were intended to be changing resulting in stable outcomes.

It is concluded that empirical studies of organizational routines undergoing planned change, adopting the routine as the unit of analysis, and using a research method that explores the claimed duality between the internal

dynamics of the routine will address a gap in routine dynamics knowledge, and contribute to planned change practice.

Accordingly, the primary research question for empirical work is: **"What influences the internal dynamics of organizational routines undergoing planned change?"**

In the next section, a conceptual model to explore this question is derived, drawing from the literature reviewed already and further literature relating to the operationalization of dualities using Structuration Theory. Key findings taken forward to this step are those related to (1) planned change: multiple actors and their role, attitudes, rhetoric and actions; and to (2) routine dynamics: the claimed duality between the ostensive and performative that can only be 'unpacked' using a practice perspective.

2.5 Operationalizing the study of dualities

Earlier in this chapter the normative prescriptions for planned change, and the notion of resistance to change, were explored to provide the current 'state of the art' regarding the management of planned change. The practice perspective was identified as having utility and the unit of analysis: the organizational routine undergoing planned change, identified as a promising focus for research.

In this section a conceptual model of the internal dynamics of organizational routine undergoing planned change is derived through the synthesis of one further literature: the operationalization of the study of dualities using Structuration Theory.

The overarching research question asks what it takes for organizations to intentionally change themselves, by looking beyond normative prescriptions to the factors that influence the internal dynamics of the organizational routine(s) undergoing planned change.

The claimed duality between the ostensive (in principle) and performative (in practice) aspects of an organizational routine supports the need for a research design that is true to exploring dualities (simultaneously enabling and constraining drivers) as opposed to dualisms, where the inherent tensions are more easily separated. Gidden's Structuration Theory (1984) provides the theoretical basis for exploring dualities. The literature also suggests that the research design must consider the role, attitudes, rhetoric and actions of the change agents, change recipients and line managers involved in (1) performing and (2) changing the routine.

The challenges when studying dualities, operationalizing Structuration Theory, are significant and some argue impossible. Many researchers have used Structuration Theory as an interpretive lens after collection of their data using another method. Stones (2005), in his 'Strong Structuration' thesis, argues that operationalization of the exploration of dualities methodologically is possible with the proviso that the fundamentally interpretive (phenomenological) and explanatory (hermeneutic) nature of Structuration Theory is upheld.

A conceptual model that brings together the claims made about the internal dynamics of routines, and operationalization of Structuration Theory using a "*quadripartite model*" (Stones, 2005: 85) and "*composite research strategy*" (Stones, 2005: 126) is derived to explore (1) external structures, (2) internal structures, (3) habits and actions and (4) outcomes relating to change agents, change recipients and their line managers involved in a single planned change.

2.5.1 Studying dualities

The literature suggests that the operationalization of Structuration Theory is difficult at best (Whittington, 2010), with some claiming nigh-on impossibility (e.g. Parker, 2000).

A review of the management literature that refers to Structuration Theory identifies that it falls into four, broad categories.

The first category contains those papers that are essays, or argue conceptually for the use of Structuration Theory in a particular context e.g. Whittington (2010) in terms of strategy-as-practice based research; or Hung (2004) explaining innovation processes.

The second contains those papers that have used aspects of Structuration Theory as an interpretive framework to make sense of narrative and other qualitative data. This has happened across a range of disciplines including Barrett and Walsham (1999): impact of IT on work transformation; Sandfort (2003): impact on technology in human services organizations; Berends, Boersman and Weggeman, (2003): organizational learning; Edwards (2000): activities that mediate the innovation process; and Jayasinghe and Thomas (2009): how indigenous people engage with accounting practices.

The third contains the literature that seeks to re-frame or extend Structuration Theory into other areas, e.g. Callahan (2004) who explicitly addresses the impact of emotion in understanding the duality of structure, or Busco (2009) who builds on Giddens' later work (1990, 1991) and looks at how Structuration Theory can help understand how trust is developed in accounting systems in geographically dispersed social relationships.

Finally, there are the studies that have used a research design grounded in Structuration Theory, choosing to operationalize aspects of the theory but not the whole, e.g. Barley (1986); Orlikowski (1992) and Jarzabkowski (2008). Papers in this final category are argued to have adopted a partial rather than holistic exploration of structuration principles (Pozzebon and Pinsonneault, 2005).

To avoid this latter problem, where only aspects of the theory are operationalized, the chosen theoretical approach to studying the internal dynamics of organizational routines undergoing planned change is Strong Structuration (Jack and Kholeif, 2007; Stones, 2005). Strong Structuration is a methodological response to Giddens' 'ontology-in-general' theory. It embraces Giddens' original work and notable criticisms of this (e.g. Archer, 1982, 2003;

Mouzelis, 1991; Thompson, 1989) and, rather than declaring Structuration Theory as 'too hard' to operationalize and a "*tired, conventional wisdom*" (Parker, 2000:x) instead provides guidance on how to operationalize the theory to facilitate empirical research.

Giddens himself made few comments about methods of research using Structuration Theory, but did criticise institutional analysis that is not interpretive and treats institutions as "*chronically reproduced rules and resources, suspending the skills and awareness of actors*" (1984:375).

Stones' (2005) approach supports the challenge of "Putting Giddens into Action" promoted by Whittington (1992).

2.5.2 Strong Structuration

As outlined above, Strong Structuration provides an approach to operationalizing the principles underpinning Structuration Theory. Five key aspects of the Strong Structuration thesis (Stones, 2005) are explained next. These are (1) duality not dualism, (2) general transposable dispositions; (3) conjuncturally-specific assessments; (4) methodological brackets, and (5) position-practices.

Table 3 then brings together the quadripartite model from Strong Structuration with observations of how this applies to a planned change context.

2.5.2.1 Duality not dualism

The duality of structure at the heart of Giddens' (1984) work not only recognizes the inter-relationship and interdependency between structure and agency, i.e. that "*agents draw on structures to produce actions that change or reproduce structures*" (Stones, 2005:20), but that structures are "*both medium and outcome of the reproduction of practices*" (Giddens, 1979:5). The significance of this interpretive and hermeneutic core to studies using Structuration Theory empirically is that the method of data collection must recognise the role of structure as the embedded medium of agents' (actors') actions or practices, not

just its role as an input, or output. Duality suggests much more than interdependence between agency and structure, instead the impossibility of distinguishing one from the other.

Some argue that given this inseparable, recursive relationship, that Structuration Theory is a methodological dead-end. Stones argues not, and particularly emphasises the need to explore the notion of both external and internal structures.

As highlighted above, structures cannot be conceptualized as purely external to agents. The notion of internal structure is fundamental to the structuration thesis, in two respects, general transposable dispositions, and conjuncturally-specific assessments. These concepts are described next.

2.5.2.2 General, transposable dispositions

General transposable dispositions are akin to habitus (Bourdieu, 1977) and practical consciousness (Giddens, 1984). These are the judgements that people make prior to action based on habits or other 'taken for granted' guides to behaviour. They are pre-dispositions for action that may or may not lead to effective choices for action. They are the individual's internal sense of 'how to go on'.

2.5.2.3 Conjuncturally-specific assessments

Conjuncturally-specific assessments are assessments of power bases, cultural norms and interpretive schema used for communication. The term is interpreted as assessments 'at the specific point in time' - just prior to action.

Jack and Kholeif (2007:212) sum up the challenge of researching the structure part of structuration saying: "*Structure is a verb not a noun. It is not free-standing, like scaffolding on a building site, but a site of struggle, a relational effect that recursively generates and reproduces itself*" and *"Structure gives form and shape, but is not itself the form and shape*".

2.5.2.4 Methodological bracketing

Methodological bracketing is argued to be key to designing studies using a structuration perspective. However, the approach adopted by some (Barley, 1986; Jarzabkowski, 2008; Orlikowski, 1992) from Gidden's original work is claimed by Stones (2005) to be flawed by ignoring the point, made above, that structures have both external and internal manifestations. Methodological bracketing in Strong Structuration separates agents/actors' context from agents/actors' conduct, not the institutional realm from the individual realm. Giddens referred to the need for strategic conduct analysis that "*concentrates analysis on the contextually situated activities of actors*" (1984:288). Stones argues that the 'agents conduct' bracket is equivalent to Giddens' strategic conduct analysis.

2.5.2.5 Position-practices

Strong Structuration argues the need to embrace, not ignore position-practices. Position-practices are explained as (1) the practices expected of a person in a role that are independent of the incumbent of the role and (2) the relationships between the various 'positions' in the situation, referred to as the 'networked others'. The notion of position-practices has parallels with social network theory. Drawing on this theory, Battilana and Casciaro (2012) note interesting observations on the structural networks of change agents leading planned change and propose a contingency theory about the efficacy of tight, or loose social networks for different types of planned change. Stones (2005) uses the term position-practices in line with Bhaskar (1979), whereas Giddens (1984) referred to 'social positions', and Bourdieu (1977) to 'fields' in the same context.

2.5.2.6 Strong Structuration Summary

Bringing together these five key aspects of Strong Structuration, Stones argues that a quadripartite model is necessary to explore structuration empirically. Although Stones describes how such a quadripartite model can be used in different ways depending on the research question, it is proposed that for this

research a "*composite research strategy*" (Stones, 2005: 126) is most appropriate to reflect that during planned change to organizational routines structuration is happening "*in many places at the same time, with agents differently situated in relation to external structuration processes*" (2005: 126).

Table 3 depicts Stones' quadripartite model of structuration, elaborated here to relate to a planned change context based on his figure 3.3 (2005:85).

	About the Agent/Actor			
EXTERNAL STRUCTURES	**INTERNAL STRUCTURES** **Agent's judgements are latent until the point of action when they become manifest.**		**ACTIVE AGENCY (PRACTICES)**	**OUTCOMES**
Structure as medium for action				Structure as outcome
Action horizon of in-situ agents as perceived by that person. Informed by position practices (Bhaskar)/ social positions (Giddens)/ fields (Bourdieu), and independent causal influences. (Stones, 2005:111). External structures pre-exist agency and have a causal influences on practices according to Stones (2005:61) although this is one of main disagreements of critics. Availability of money is an external structure and a material lever for potential action, i.e. act to spend it now or not.	Agent's knowledge of the norms, resources and interpretive schema (Sewell)/ modalities (Giddens), that give rise to sanctions, power and communication at that point in time. The judgements that people make prior to action that draws together their understanding of the significance of specific aspects of internal structure, culture, process, rules, etc.	Agent's generalisable, transposable knowledge of "how to go on", how to behave in a particular situation. General disposition (Stones) used interchangeably with 'habitus' (Bourdieu) and 'practical consciousness' (Giddens). The judgements that people make prior to action based on habits or other 'taken for granted' guides to behaviour. Pre-dispositions for action that may or may not lead to effective choices for action.	Actual action – what the person does, that may or may not be consciously shaped by external and internal structures but is claimed to be potentially, sub-consciously shaped. Analytically distinguishable elements of active agency according to Stones (2005:101) are: • Shifting horizons of action • Creativity, improvisation and innovation • Degrees of critical distance and reflection • Conscious and unconscious motivations • The prioritisation of concerns and action.	Influence external structures, internal structures as well as events. Events may be change, elaboration, reproduction, preservation, success or not.

Table 3: Quadripartite model from Stones' Strong Structuration (2005) related to a planned change – page 1 of 2

	About the Agent/Actor			
EXTERNAL STRUCTURES	**INTERNAL STRUCTURES** Agent's judgements are latent until the point of action when they become manifest.		**ACTIVE AGENCY** **(PRACTICES)**	**OUTCOMES**
	Structure as medium for action			**Structure as outcome**
Example: how people perceive the process and temporary organisation/roles assigned to facilitate a planned change.	*Example*: a person's judgement about how the organisational/power structures, incentives and sanctions or methods of communication will influence their choice of action during the change process.	*Example*: a person may be used to working independently/ autonomously in a particular role at work but the arrangements for planned change ask for a different set of behaviours. How will the pre-disposition for action influence actual action?	*Example*: a person follows the process or adapts it; sticks to tried and tested methods or tries something new; speaks up in a meeting or keeps quiet.	*Example*: the purpose of planned change is facilitated or frustrated by the action.
Notes: Includes resources that actors can control, but they are conceptualised as external, plus those factors that are dependent on the compliance of others (see Stones, 2005:109)	**Notes**: This area reflects the model from Giddens, 1979, quoted and used exclusively in some research, but is only a part of the whole conception of structure.	**Notes**: As people have different 'roles' in life (with colleagues, family, friends) they have a whole range/plurality of different logics, principles and dispositions for action, hence tensions and conflicts in contemporary social organisations. (see also Whittington, 1997:378)	**Notes**: This is the area that is most understood, but that calls for actual observation of the outward expression of behaviour and action. No action is as significant as positive action. Action that leads to ineffective outcome is as significant as action that leads to an effective outcome in the situation.	**Notes**: The key to making sense of empirical data will be to track the influences of outcomes on perceptions of external and internal structures that guide future action.

Table 3: Quadripartite model from Stones' Strong Structuration (2005) related to a planned change – page 2 of 2

Literature that focuses on the study of dualities, empirically, suggests that the quadripartite model from Stones' Strong Structuration thesis is relevant, and overcomes problems encountered by other researchers who have attempted to operationalize Structuration Theory. This is now taken forward to the operationalization of the study of the internal dynamics of organizational routines undergoing planned change.

2.5.3 Conceptual model to study the influences on the internal dynamics of organizational routines undergoing planned change

Taking the conceptualization of the internal dynamics of routines from Pentland and Feldman (2005), see Figure 3, and combining this with the guidance on how to operationalize Structuration Theory using the quadripartite model of Strong Structuration (Stones, 2005), see Table 3, suggests a basic conceptual model as shown in Figure 4.

Figure 4: Internal dynamics of organizational routines, after Pentland and Feldman (2005), Giddens (1984) and Stones (2005)
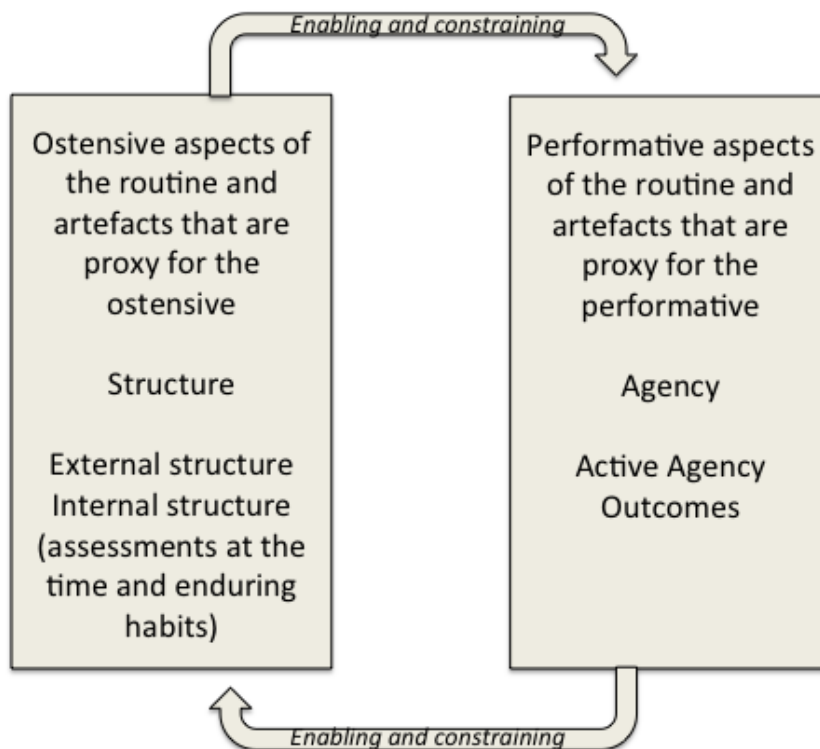
To provide a clear warrant for the propositions made in Figure 4, and to take this forward into a more granular conceptualization of the internal dynamics of organizational routines undergoing planned change, the following text elaborates on the meta-theoretical concepts within the theories of routine dynamics and strong structuration, and explains the connection between these and the substantive concepts to be studied.

2.5.3.1 Ostensive aspects of routines and links to the quadripartite cycle of structuration

Following Latour (1985), the ostensive aspect of routines is argued to be an embodied notion or abstract pattern of what the routine is about – the routine 'in principle' (Feldman and Pentland, 2003; Pentland and Feldman, 2005). As an abstract pattern, ostensive aspects of routines are likely to be fine-grained, context dependent and different for every individual involved in the routine in question. The embodied, ostensive provides internal 'guidance' to the person - constraining and enabling each performance of the routine. "*The ostensive aspect should not be conceptualized as a single, unified entity*" (Pentland and Feldman, 2005: 797).

Specific influences on the ostensive were not proposed in Feldman and Pentland's body of work to 2008, addressing this fact is part of the motivation for this research, yet they do point out the folly of assuming that artefacts (attempts to codify behaviour) can fully represent the ostensive (Pentland and Feldman, 2008). Although artefacts for the ostensive, for example standard operating procedures, may have some influence on the embodied ostensive, fine-grained and contextual gaps will remain. Conceptualizing routines as generative systems (Pentland and Feldman, 2005:793), artefacts for the ostensive are argued to be inputs to that system, available to everyone involved, yet interpreted differently by individuals as part of their ostensive 'understanding' of the routine at any particular point in time.

The ostensive is argued by Feldman and Pentland (2003) to have equivalence with structure in the structure/agency duality at the heart of Structuration Theory (Giddens, 1984).

"*We propose that organizational routines [also] consist of ostensive and performative aspects, which are closely related to the concepts of structure and agency, as found in structuration theory (Giddens, 1984). We adopt specialized terminology because, in the domain of organizational routines, structure and agency are mediated by the repetitive collective, interdependent nature of the phenomenon*" (2003:100).

In Giddens' body of work, the influences on structures are theorized clearly, yet not operationalized. Specifically Giddens (1979) discusses the structures of domination, legitimation and signification and how they relate to perceptions and judgements about power, sanction and communication.

In Stones' Strong Structuration Theory (2005), internal and external structures are conceptualized to separate those aspects of structure that exist only within an individual person from those that have an external to the person (and potentially shared by multiple people) aspect, and where the influence is potentially more concrete. This elaborates the work of Giddens to differentiate the source of judgements about power, sanction and communication between those that are internal to the person, and those that are external.

That external structures pre-exist and post-date internal structures is seemingly agreed by the proponents and critics of structuration theory (as reported in Stones, 2005:61-67). In the context of exogenous planned change to routines, it is clear that there are both (1) situations that occur that situated agents are unable to affect or change, and (2) features of the routine undergoing planned change that exist and are interpreted by multiple actors through the lens of their respective 'role' in the changing routine. Section 2.5.3.4. further elaborates the topic of 'roles' (position-practices in strong structuration) and their influence in terms of external structures.

Regarding the conceptualization of external and internal structures, an example during planned change is the availability and size of a budget that a person could spend to advance the intended change to a routine. Budget availability and size not only exists, but also influences the perceptions of the internalized idea of the routine at that particular moment because the availability of budget, and power to spend it, shapes the budget-holder's judgements of how to act. The presence of the budget and perceptions of the budget-holder's position may also influence the judgements of how multiple, related others might act. The budget is an external structure. The judgements relating to the budget and budget-holder are part of the internal structure of multiple actors.

Stones further separates internal structures into conjuncturally-specific assessments – those judgements made at a specific point in time about whether and how to act – and general, transposable dispositions – 'taken for granted' pre-dispositions about how to act in certain situations.

Although both conjuncturally-specific assessments and general, transposable dispositions are conceptualized as internal structures by Stones, it is also argued (2005: 121) that it is important when researching using strong structuration to methodologically separate agent's context from agent's conduct. Agent's context "*takes us on a journey from the agent and her hermeneutic frame of meaning, with a particular focus on the perceptions of conjuncturally-specific internal structures, out toward the external processes of structuration…*" (2005:122). In contrast, agent's conduct draws recursively on the agent's context where "*the conjuncturally-specific internal structures relevant to the context of immediate action force a reconciliation of sorts with the active agency and the general-dispositional frame of meaning of the agent*" (2005:122).

Similarly, Feldman and Pentland argue that the ostensive aspects of routines are 'in principle' assessments that are made (immediately) prior to action, but where action not only is constrained and enabled by the ostensive, but also influenced by more habitual aspects of action that span space and time. An example might be that a person has deeply held beliefs about showing respect to another person during a face-to-face interaction, in business or socially.

Such beliefs have shaped the person's behaviour in social situations over many years and resulted in habitual behaviour regarding eye contact, touch, the balance of listening and speaking etc.: a general, transposable disposition. However, in performing particular interactions associated with their work (repetitive, recognizable, multiple actors), the person judges that their 'normal' behaviour is not valued by others in authority and that, at a particular time, they should adjust to fit in more closely with the behaviours displayed by people they judge to be important: a conjuncturally-specific assessment. The ostensive narrative for the person might include the logic of adjusting 'normal' behaviour for a particular task, e.g. making a decision with the team. Actual performance of that task of may, or may not be altered, despite the 'logic' for doing so. The person may, or may not question or reflect upon the previously 'taken for granted' behaviour but this does not denote that the behaviour ceases to be a general, transposable disposition.

However, despite the arguments above that argue an analytical and substantive distinction between the conjuncturally-specific and general, transposable dispositional aspects of internal structures, Stones' direct advice is that these concepts belong together as part of internal structures and should not be separated.

Therefore, it is assumed in conceptualizing the internal dynamics of organizational routines undergoing planned change that the ostensive aspects of routines are more closely equivalent to internal structures. Artefacts for the ostensive are conceptualized as external structures, given that they are "*independent causal influences*" (Stones, 2005: 112) on the person's internal structures.

Performative aspects of routines are discussed in more detail next, as is a further exposition of the relationship between general, transposable dispositions, conjuncturally-specific assessments, and the ostensive aspect of routines.

2.5.3.2   Performative aspects of routines and links to the quadripartite cycle of structuration

According to Feldman and Pentland (2003), performative aspects of routines are the 'in practice' element of the "*repetitive, recognizable patterns of interdependent action carried out by multiple actors*" (2003:95). They argue that "*the performative aspect of routines is essential for the creation, maintenance and modification of the ostensive aspect in much the same way that speaking creates, maintains and alters a language*". (2003:107). As in Giddens' Structuration Theory (1984) "*performances enact the ostensive aspect of the routine, although this is largely an unintended effect of action*" (Feldman and Pentland, 2003:107).

In the same way that it is argued that artefacts for the ostensive should not be conflated with the ostensive, artefacts for the performative (e.g. performance metrics) should not be conflated with the performative.

The quadripartite model from Strong Structuration Theory is instructive in making sense of this as active agency is separated from outcomes. Outcomes (intended or unintended) are observable and available to all the people involved. Outcomes (as perceived by individuals) shape, as a matter of course, the conjuncturally-specific assessments made prior to the next performances (the ostensive as conceptualized here). External structures may also be adjusted as a result of the interpretation of outcomes.

Conceptualizing routines as generative systems (Pentland and Feldman, 2005:793), artefacts for the performative are argued to be outputs to that system.

As a result of this synthesis of routine dynamics and strong structuration theories, Figure 4 can be further elaborated to show more specifically how the meta-theoretical concepts of the ostensive and performative aspects of routines, and the quadripartite cycle of structuration work together in the conceptual model. This is shown below in Table 4.

Giddens Structuration Theory			
Structure		Agency	
Feldman and Pentland: Routine Dynamics			
Artefacts that are proxies for the ostensive (e.g. procedures)	**Ostensive** aspects of the routine	**Performative** aspects of the routine	**Artefacts** that are proxies for the performative (e.g. performance scorecards)
Stones – Strong Structuration			
External structures e.g. roles, job descriptions, plans, procedures <u>shared</u> by all actors' involved and conceptualized as inputs to the generative system.	**Internal structures** i.e. the conjuncturally-specific assessments and general-transposable dispositions that inform the embodied understanding of how to behave in that specific situation – held by specific actors <u>independently</u>.	**Active agency** i.e. the actions or inaction that specific actors <u>independently</u> perform.	**Outcomes** e.g. the specific results – intended or unintended – <u>shared</u> by all actors involved and conceptualized as outputs from the generative system.

Artefacts **may** be adjusted.   Outcomes **always** reinterpreted as part of the ostensive

Table 4: Synthesis of meta-theoretical concepts from routine dynamics (Pentland and Feldman, 2005) and the quadripartite model from strong structuration (Stones, 2005)

To further elaborate this synthesis the next sub-sections discuss (1) how general, transposable dispositions inform conjuncturally-specific assessments, and (2) the role of position practices and external structures, and their relationship to change agents, change recipients and their line managers (actors involved in a routine undergoing planned change). Following this elaboration the concepts from routine dynamics and strong structuration theories are related to the substantive features of accomplishing planned change, resulting in the final conceptualization of the organizational routine undergoing planned change.

2.5.3.3   How general, transposable dispositions inform conjuncturally-specific assessments

In this sub-section the relationship between these two elements of internal structure in the quadripartite model of structuration is discussed further.

General, transposable disposition is the term used by Stones (2005) interchangeably, for practical purposes, with Giddens' 'practical consciousness' and Bourdieu's 'habitus'. As noted in Stones (2005), "*Practical consciousness refers to the knowledgeability that an agent brings to the task of 'going on' in everyday life, a practical type of knowledge that is usually so taken for granted that it is hardly noticed, if at all, by the person exercising it*" (2005:28). Giddens distinguishes practical consciousness from discursive consciousness in a similar way to which the terms tacit and explicit knowledge are used following Polanyi (1958). With reference to Bourdieu's definition of habitus (1977), Stones draws on the work of Sewell Jnr (1992) to emphasize the "*lasting transposable dispositions which, integrating past experiences, function at every moment… …permitting the solution of similarly shaped problems*" (Stones, 2005:68). Sewell Jnr (1992) refers to 'cultural schemas' which include cultural meaning and result in deep, binary oppositions or conflicts. Stones builds upon this and refers to "*frameworks of signification, associative chains and connotations of discourse*", "*generalised worldviews*" and "*conventions, recipes and principles of action*" (2005:88)

Accordingly, for Stones, it is deduced that general, transposable dispositions are deeply embedded, taken for granted, tacit aspects of a person's knowledgeability and as such are practically impossible to distinguish from action. Whilst a practitioner may think simply of such (pre-) dispositions as habits, the basis of those pre-dispositions will be deeply rooted in culture, personality and other detailed micro-foundations of action. Note: where the term 'habit' is used in other parts of this thesis, it is used as short-form for general, transposable dispositions as explained here.

However, Stones goes on to argue that although the general, transposable dispositional aspects and conjuncturally-specific assessments are two parts of internal (virtual, latent until the point of action) structures in the quadripartite model, that a distinction was necessary given that judgements made, in the specific situation, were different in nature to general pre-dispositions that did not reflect the situation now. Although the conjuncturally-specific assessments of actors could be argued to be tacit, rather than explicit, the argument is that situational assessments are by nature less enduring than the general dispositional. Although it is possible to distinguish conceptually between these constructs, they are not separate and discrete in practice. Actions at a given moment are influenced both by deeply tacit pre-dispositions and situational assessments. Future situational assessments are influenced by the outcomes of previous actions, yet pre-dispositions, by their nature, are likely to be more resilient given their history, and will almost certainly be drawn upon during the enactment of other routines.

Accordingly, the argument adopted in the conceptualization of organizational routines undergoing planned change in this research is that it is whilst it is useful to try to separate the conjuncturally-specific and the general, transposable aspects of internal structures analytically, they are two aspects of internal structure and therefore more closely related to the ostensive aspects of routines than the performative.

2.5.3.4 The role of position-practices and external structures, and how these relate to change agents, change recipients and line managers.

In this section, another key concept from Strong Structuration is explored and further warrant provided for the conceptualization in this research of external structures as shared by all actors during planned change to organizational routines (as shown in Table 4).

In addition to external structures that (1) pre-exist (and post-date) internal structures and situated actions and (2) those situations that occur and exist without influence from situated agents; a further aspect of external structures relates to position-practices.

'Position-practices' is the term adopted by Stones (2005) in line with Bhaskar (1979). Giddens (1984) uses the term social positions in a similar way. All these authors agree that the term 'role' to explain institutional positions that people occupy (e.g. mother, professor, change agent) is inadequate and that it is necessary to elaborate the idea of 'role' to dispel any notion that this is passive or fixed. It is useful to think of 'roles', in this research pertaining to change agents, change recipients and line managers, as "*position-slots*" that can be "*identified independently of incumbents*" (2005:63). These position slots are filled by individuals who perform some element of "*patterned social relations*" conceptualized by Stones as external structures, i.e. separate from the individual actor. These are separate from the situated embodiment and understanding of the position by the in-situ actor, conceptualized by Stones as the internal structure of the agent-in-focus. For example, change recipients – those people performing the routine – when considered as the agent-in-focus will have the position-practices of change agents, and their own line manager forming part of their external structure as agents-in-context. This is an important point requiring a decision about how to conceptualize multiple agents, all involved in planned change to a routine, given that this will have implications for data collection and data analysis.

Three options exist. Probably the most 'pure' conceptualization and operationalization would be to focus on each individual actor 'in-situ' and to evaluate the influences on the internal dynamics of the routine they are performing (or supervising, or attempting to change) from their perspective with the other actors 'in-context', their position-practices conceptualized as external structures. Another option is to focus on collections of actors occupying the same 'position-slot' (role) and the position-practices of multiple members of other position-slots as external structure. This approach was considered to be optimal when designing the research method for the first empirical case studied (Chapter 4). Change recipients (the people performing the routine) were put in focus and the duality between the ostensive/internal structures and the performative/active agency explored assuming that the position-practices of their line managers (supervising them) and change agents (attempting to change the routine they performed) were one part of their external structure. In this conceptualization it would also have been possible to consider the overlap between two organizational routines – the routine(s) representing the work intended to change, and the routine(s) representing the change and boundary-spanning practices.

Having collected and analysed the data for the first case in this way, it was decided that a third conceptualization was possible and optimal in the situation, i.e. to study the internal dynamics of an organization routine undergoing planned change, all three categories of actor needed to be considered as being part of the same generative system, rather than one set of actors (change recipients) being integral to the generative system, and the change agents and line managers only being considered in terms of their (external) influence on the change recipient ostensive/performative duality. While it would be entirely appropriate for the ostensive/performative duality of an organizational routine to be considered only for the people performing the work if the research was interested in understanding the mechanisms for stability or endogenous change, it is argued that when trying to understand the mechanisms by which organizational routines are exogenously and intentionally changed it is important to consider the three categories of actor as being 'in' the routine

undergoing change. Accordingly, the conceptual model and research method does not seek to examine the structuration moments for each actor in turn. This does not imply that the position-practices for each agent-in-context are not external structures for the agent-in-focus, but the conceptual model deals with this by assuming that the actual practices of each person (what they do/do not do), influenced by their general, transposable dispositions, their conjuncturally-specific assessments and external structures including, but not limited to tangible artefacts, result in outcomes that are visible to all actors, and therefore will be interpreted, and selectively retained as internal structures (the ostensive) in the next enactment of the routine.

2.5.3.5 Summary of the link between meta-theoretical and substantive concepts

This sub-section links the elaboration of the meta-theoretical concepts within routine dynamics and strong structuration theory to the subject being research, i.e. planned change to work performed in a repetitive, recognizable way by multiple actors.

As previously discussed, in planned change to routines, three distinct sets of actors are of interest.

Bringing together the claims from the literature on planned change with the literature pertaining to organizational routines, and strong structuration theory, there are some specific concepts that it is argued are potentially significant influences on the ostensive aspects of the routine/internal structure for that actor.

Attitudes to change at cognitive, emotional and intentional levels are argued to be important as explained in section 2.3 and 2.4. It seems clear that such attitudes to change, and their attendant influence on situational assessments of power, sanction and communication would be important aspects of the ostensive/internal structure. With respect to communication, specific narrative/discourse referred to as 'the rhetoric of planned change' is also argued to have particular influence as explained in section 2.5. The specific rhetoric

used by actors, conceptualized as part of the performative (i.e. what they say or do not say) would likely influence outcomes and in turn enable and constrain future performances by its influence on future internal (and potentially) changed external structures.

With respect to the ostensive aspects of the routine undergoing planned change for line managers, the influences in principle are the same as for change recipients, although the interpretation and hermeneutic meaning attached to those influences may well be different. In addition though, line managers are 'expected' to represent the organizational intent, so their internal structure may well be influenced by those macro-contextual aspects (external structures) in a different way to change recipients.

For change agents, as previously explained the original conceptualization was that change agent behaviour was assumed to be part of the external structure for change recipients and line managers and that, in effect, the change agents' ostensive understanding of the routine intended to be changed was not relevant (i.e. would not impact on their behaviour). This approach in some ways plays into the current paradigm for planned change that change agents in a temporary organization, performing change and boundary-spanning practices in line with published 'success factors' for planned change are separate from the work being changed. The original analysis of the data from the first case showed that change agent behaviour (what they said and did) was part of the overall structuration, i.e. it constrained and enabled their actions and constrained and enabled the patterns of action of the other actors. However, in this case, the artefacts and other contextual factors for all the actors were the same, despite them being interpreted (potentially) differently in the ostensive, and resulting in (potentially) divergent internal structure leading to (potentially) different action. Similarly when considering the 'output' of the generative system, the outcomes were 'real' for all actors although these were (potentially) interpreted in different ways by different people prior to the next enactment of the routine.

Given that the research is interested specifically in the internal dynamics of organizational routines undergoing planned change, with change and boundary-

spanning practices contributing to the overall patterns of action associated with the generative system intended to change, it is argued that the conceptual model previously detailed as Table 4, and shown as a combined diagram/table in Figure 5 is relevant to:

(1) Explore change and boundary-spanning practices at a granular level, in terms of the degree to which they match normative advice, but more importantly the impact of artefacts (external structures) and change agent actions on the internal structures and subsequent actions of multiple actors.

(2) Explore internal structure (both conjuncturally-specific assessments and general, transposable dispositions)/ the embodied ostensive understanding of the routine, in depth, for change agents, change recipients and their line managers, each of which will have different cognitive, affective and intentional perspectives.

(3) Attend closely to the rhetorical devices used by change agents, change recipients and line managers to understand the interplay of progressive, stability and regressive narratives and how they influence progress, or otherwise, along the change transition.

In their entirety, Figure 5 and Table 4 represent the unit of analysis for this research: the organizational routine undergoing planned change. Two representations have been used as it is difficult to show the dynamic, iterative and recursive nature of the internal dynamics of an organizational routine performed by multiple actors undergoing planned change, in a static and two-dimensional figure. The claimed duality 'cycle' is simultaneously enacted by change agents, change recipients and line managers, with each performance of the routine having an effect on future performances (whether to introduce change or consolidate the current arrangement). This conceptualization is supported by Howard-Grenville's findings in her empirical work where she states, "*Each enactment of the routine produces artefacts and recreates or revises social expectations, which can influence subsequent enactments. Seen in this way, the routine is not a permanent, independent entity, but is an on-*

going accomplishment of the actors who engage it. In this sense, routines are structures as 'structurationists' define them; they exist as instantiations of practices and are recreated or revised with each enactment" (2005:629).

Figure 5: Conceptual model for studying the internal dynamics of organizational routines undergoing planned change.
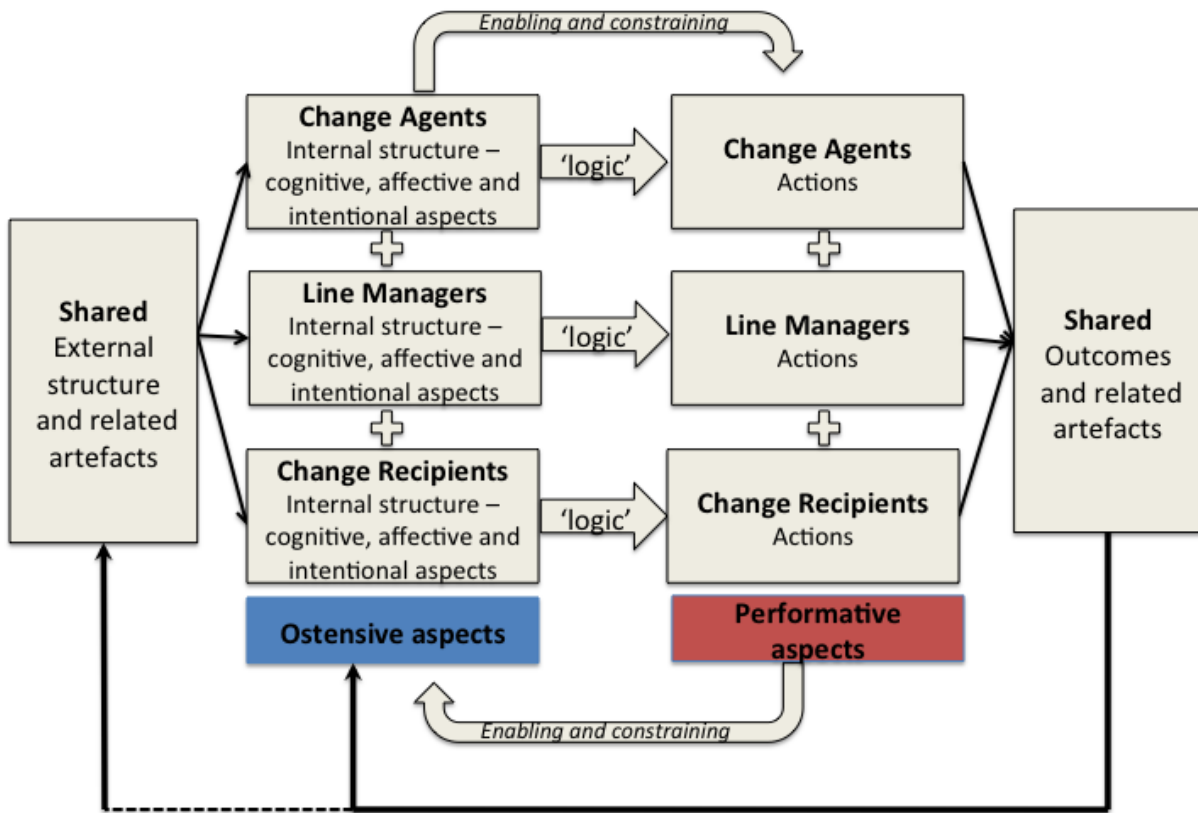
Shared external structures	Change recipient, line manager and change agent cognitive, affective and intentional conceptions	Change recipient, line manager and change agent actions	Shared outcomes
Routine and Change artefacts: plans, budgets, governance structures, role descriptions, etc.	**Perceptions of** **Power**: resource allocation, conflicts and choices **Sanctions**: consequences of choices **Communication**: specific narrative and interpretive schema **Habitual practices**: what deviations from 'normal' behaviour are appropriate	**Action, or inaction**	**Routine and Change artefacts:** results, intended and unintended outcomes, modifications to external or internal structures

2.5.4 Operationalization of the study of dualities: summary

The ideas underpinning Giddens' Structuration Theory are popular and have been referenced many times in the literature – resulting in both support and critique. A significant number of empirical studies have attempted to operationalize Giddens' ontological position, with mixed success in terms of the completeness of their analysis.

Stones argues in his Strong Structuration thesis that a *"composite research strategy"* (2005:126) is possible that operationalizes Structuration Theory using a *"quadripartite model"* (2005:85).

Adopting this approach results in a conceptualization of the internal dynamics of organizational routines undergoing planned change that focuses on:

- External structures that exist objectively (e.g. roles and resources) and their attendant artefacts (e.g. job descriptions and budgets). External structures are shared by all actors involved in the planned change;
- Internal structures (conjuncturally-specific assessments) that are latent, i.e. they exist only at the point that the agent acts (e.g. the perception of the power of a manager that influences the staff member's decision to perform the routine as always, or to adopt the change requested by the manager). The conjuncturally-specific assessments part of internal structures relate to the individual actor and are argued to represent the ostensive aspects of routines;
- Actions i.e. actual practices or performances informed by general, transposable dispositions. Actions relate to the individual actor and are argued to represent the performative aspects of routines;
- Shared outcomes, i.e. the intended and/or unintended results arising from actions, including adaptation of internal structures (and potentially external structures) as a result.

The relationship between these constructs is argued to be dynamic, iterative and recursive. To research the internal dynamics of an organizational routine

undergoing planned change and consistent with the advice of Stones (2005), and Pentland and Feldman (2005); it is essential that temporal and methodological brackets are used in the collection and analysis of data to facilitate the unpacking that is necessary to understand how planned change efforts are influencing the organizational routine, at a detailed level, and over time. In the next Chapter, the research method for achieving this is explained.

2.6 Summary of literature review

In this Chapter three distinct literatures have been reviewed and synthesized in order to define a conceptual model for studying the influences on the internal dynamics of organizational routines undergoing planned change. The three literatures are: (1) planned change from the perspective of change agents, change recipients, line managers and the strategically-significant work to be changed; (2) the interplay between stability and change in organizational routines and (3) the use of Structuration Theory in empirical studies.

The internal dynamics of routines are claimed to be a duality, akin to the duality between structure and agency in Structuration Theory. Accordingly, the conceptual model supports this ontological and epistemological stance.

In support of the overarching research question, 'what influences the internal dynamics of organizational routines undergoing planned change?' five supplementary research questions arise from the literature reviewed. All the research questions taken forward to the next stage of research are shown below in Table 5 alongside claims made in the literature.

The primary research question pertains to the internal dynamics of organizational routines undergoing planned change, focused on making a contribution to the organizational routines literature. The research themes and questions shown in Table 5 are included as they each have a distinct and specific relevance to the primary research question. They are not included to attempt to make contributions to planned change theory although the overall research is designed to contribute to planned change practice. All are claimed

to be important for making a contribution to knowledge about organizational routines undergoing planned change.

As a result, although Table 5 contains five supporting research questions and 14 claims from the literature relating to these; data collection, data analysis, the discussion of findings and conclusions drawn keep a primary focus on providing new insights into the influences on the internal dynamics of organizational routines undergoing planned change.

Table 5: Research questions and supporting claims

Research theme and question	Claims made in the literature
Spanning the temporary/host organizational boundary How do change agents, positioned in a temporary organization, manage across the temporary/host organizational boundary in practice?	10 'success factors' for planned change are claimed to always be relevant (as synthesized from the literature in Table 1).
	Integration practices are important – effective boundary spanning (Balogun et al, 2005).
	Isolation practices are important – justification of temporary team (Lehtonen and Martinsuo, 2008).
	The degree of embeddedness of change agents in change recipient networks is influential. More radical change is enabled by larger 'structural holes' in change agent networks, i.e. more distant relationships (Battilana and Casciaro, 2012).

Research theme and question	Claims made in the literature
Attitudes to change How do the attitudes to change of multiple actors embedded in internal structures/ ostensive aspects of routines impact on the delivery of desired benefits?	If change efforts are to deliver the benefits desired, change agents need to understand the positive and resistive attitudes to change of change recipients and their line managers at cognitive, emotional and intentional levels (Pideret, 2000).
	Cognitive, emotional and intentional aspects of structures must change before performances can follow in a sustained way (Espedal, 2006; Feldman, 2000, 2003, 2004; Howard-Grenville, 2005; Lazaric and Denis, 2005; Rerup and Feldman, 2010; Steen, 2009; Turner and Fern, 2012).
	Policy, rules and other artefacts have no influence unless embedded in the ostensive (Reynaud, 2005)
	The ostensive aspects of routines act as a guide to action, to justify actions and to consolidate actions such that variance in performance is selectively retained in the ostensive (Feldman, 2000, 2003, 2005; Feldman and Pentland, 2003, 2005; Howard-Grenville, 2005; Pideret, 2000).
Influence of rhetoric How is rhetoric (spoken and written communication) of multiple actors during planned change used to influence behaviour?	Progressive, regressive and stability narratives are used to make sense of, and narrate responses to planned change, but the interplay of these can cause strategic ambiguity (Sonenshein, 2010). Planned change 'success' depends on there being minimal ambiguity within and between multiple independent actors, facilitated by explicit understanding of internal and external rhetoric (Steen, 2009).
	There is utility in understanding explicit resistance to change (Ford and Ford, 2009; Pideret, 2000; Waddel and Sohal, 1998).
	Change agents have a vested interest in promoting the 'resistance to change' rhetoric (Ford et al, 2008).

Research theme and question	Claims made in the literature
Lewinian three-step model for planned change Does the Lewinian (1947) model of 'unfreeze-transition-refreeze' remain a useful guide to understanding planned change?	The equilibrium of driving and restraining forces for change needs to be disturbed (unfrozen) before old behaviour can be unlearned and new behaviours adopted (Lewin, 1947 as reported in Burnes, 2004).
	For continuous improvement to occur, patterns of action need to be made visible and 'frozen' (Abel and Sementelli, 2005; Weick and Quinn, 1999).
Utility in studying routine dynamics Is exploration of the internal dynamics of routines undergoing planned change necessary to understand how routines change or remain stable?	The performative and ostensive aspects of routines need to be distinguished and each studied specifically, because it is not possible to make sense of routines by only looking at actions and their outcomes (Zbaracki and Bergen, 2010).
Primary research question What influences the internal dynamics of organizational routines undergoing planned change?	The relationship between the ostensive (in principle) aspects of routines and the performative (in practice) aspects is simultaneously enabling and constraining with the routine representing the patterns of interdependent action of multiple actors (Feldman and Pentland, 2003). Researching the routine as the unit of analysis is necessary to focus on patterns of action rather than on any one of the individual micro-foundations of routines (Pentland and Feldman, 2005). Artefacts cannot represent patterns of action (Pentland and Feldman, 2008), but they are intermediaries in shaping the interaction between the ostensive and performative aspects of routines (D'Adderio, 2008, 2010; Hales and Tidd, 2009).

In the next chapter, the research method used to address these research questions is explained.

3 Research method

3.1 Overview of the chapter

This research is focused on planned change to organizational routines adopting a social practice perspective. The organizational routine intended to change is adopted as the unit of analysis (Pentland and Feldman, 2005). This is 'unpacked' to explore the iterative and recursive internal dynamics of the routine as enacted by change agents, change recipients and their line managers over time. This unpacking is enabled by the adoption of a *"quadripartite model"* (2005:85) and *"composite research strategy"* (2005:126) from Stones' Strong Structuration.

The conceptual model depicted in Figure 5 and Table 4 proposed the internal dynamics of routines undergoing planned change as derived from a synthesis of three literatures: (1) planned change from the perspective of change agents, change recipients, line managers and the strategically-significant work to be changed; (2) the interplay between stability and change in organizational routines and (3) the use of Structuration Theory in empirical studies.

In this chapter the research method is defined. Case-based research is explained and justified as relevant to the inquiry, principles of case selection are outlined and the method for data collection and analysis is explained with reference to the literature. To research in this tradition requires close attention to a range of factors existing within and between multiple actors, and within the wider context (in this case of the planned changes to the routines in question). As a result multiple data collection approaches are used to access different sources of data and narrative pertaining to the routine undergoing planned change.

Finally in this chapter limitations of the research method are discussed, in particular the trade-offs made between the time available for research, the depth of study of a single case, and wider exploration of a second, contrasting case. Figure 6 illustrates the structure of this chapter.

Figure 6: Structure of the research method chapter

3.1 Overview of the Chapter

3.2 Case-based research

3.3 Case selection

3.4 Data collection

3.4.1 Replicating strategies: temporal and methodological bracketing
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3.2 Case-based research

Drawing on Eisenhardt and Graebner (2007) it is proposed that a case-based approach is most relevant, using an interpretive epistemology. The unit of analysis for this research is the organizational routine undergoing planned change. This involves the complex interplay between multiple actors involved in recurring, interdependent actions. In support of this view, Jack and Kholeif (2007) argue that applying Strong Structuration relies on cases to inductively build or elaborate theory, rather than cases for deductive theory testing or as a framework for action research.

Eisenhardt and Graebner (2007) outline the challenges of building theory from cases that can never be representative or generalizable in a 'scientific' sense. They argue (2007:30) this issue can be *"mitigated through precise language and thoughtful research design; careful justification of theory building, theoretical sampling of cases, interviews that limit informant bias, rich presentation of evidence in tables and appendixes, and clear statement of theoretical arguments"*

This advice is support by Pratt (2009) whose tips on writing qualitative research include getting the right balance between telling the story of the data and showing it in tables and figures; not mixing inductive and deductive strategies inappropriately, and not presenting qualitative data as if it were quantitative.

In this research the case, and the unit of analysis, is the organizational routine undergoing planned change in question, not the wider organization within which the routine exists. This is an example of an instrumental case study (Stake, 1994), where the case is used to provide insight into a particular organizational routine that is intended to change, with the purpose of advancing the understanding of planned change to organizational routines in general, not the organization in particular.

Two case studies were selected. The routine dynamics literature is emerging and two in-depth cases add significantly to the body of empirical work that has

joined Feldman and Pentland's conversation (2003, 2005) about the internal dynamics of routines. In-depth cases are required to understand the complex, inter-related, internal dynamics of routines undergoing planned change.

3.3 Case selection

Cases selected were organizational routines undergoing planned change. In theory the cases (routines) could have been associated with the same planned change and same organization (as in Lazaric and Denis, 2005). However to build some contingency into the work programme, research was performed in two separate organizations.

Two cases were researched in series to enable sampling of contrasting cases.

Cases were selected to satisfy the following criteria:

- The organizational routine must be of strategic-significance to the organization, i.e. it is a routine that is essential to performing the core revenue-generating activity of the organization: the routine matters.
- A planned change to the routine is defined and supported by investment from senior management: changing the routine matters.
- The approach to planned change adopted by the organization could reasonably be assumed to be 'text-book', i.e. the organization has maturity of practice in this area.
- A temporary team (project/programme/initiative) is established to bring about the desired changes.
- Change agents, change recipients and their line managers can be defined, even if there is some blurring of role, e.g. line managers with some change-related objectives, or change recipients who take on some responsibility for realizing benefits in their area.
- The change has been in progress for a period of time, proposed as 24 months minimum, and is still in progress.

It is argued that the following case features are not relevant.

- The sector or organization.
- The content of the change. Although the content of the change is as relevant as the process of change in terms of change outcomes, this research is focused on what it takes to change work practices, irrespective of the content. Accordingly, the content of the change is interesting and each case will debate the relevance of change practices for the change content; but it is not a variable that has primary relevance for case selection as any change would suffice as long as it influenced a strategically-significant organizational routine.

Cases were researched in series. The first case (findings outlined in Chapter 4) found stability within a routine intended to change. As a result, a contrasting case was sampled (findings outlined in Chapter 5) where the organization believed change efforts to have been successful.

3.4 Data collection

In their literature review of Structuration Theory-based studies Pozzebon and Pinsonneault (2005) draw on Langley's (1999) seven strategies for theorizing from process data. They suggest that to cover the theoretical ground of Structuration Theory sufficiently in an empirical study, a repertoire of analytical approaches is required, including grounded analysis, narrative and temporal bracketing. In addition, Lazaric and Denis (2005) argue that in-depth exploration of individual views of multiple actors over time, supplemented by analysis of data and documents to link the qualitative data with actual outcomes, is necessary to study routines and routinization.

Figure 7 illustrates this link between the strategies outlined in Langley (1999) with a Structuration Theory-informed design.

Figure 7: Strategies for theorizing from process data, adapted from Pozzebon and Pinsonneault (2005) and Langley (1999)

Replicating Strategies	Grounding Strategies	Organizing Strategies
Temporal bracketing	Data-driven	Narrative
Methodological bracketing	Inductive	Visual mapping
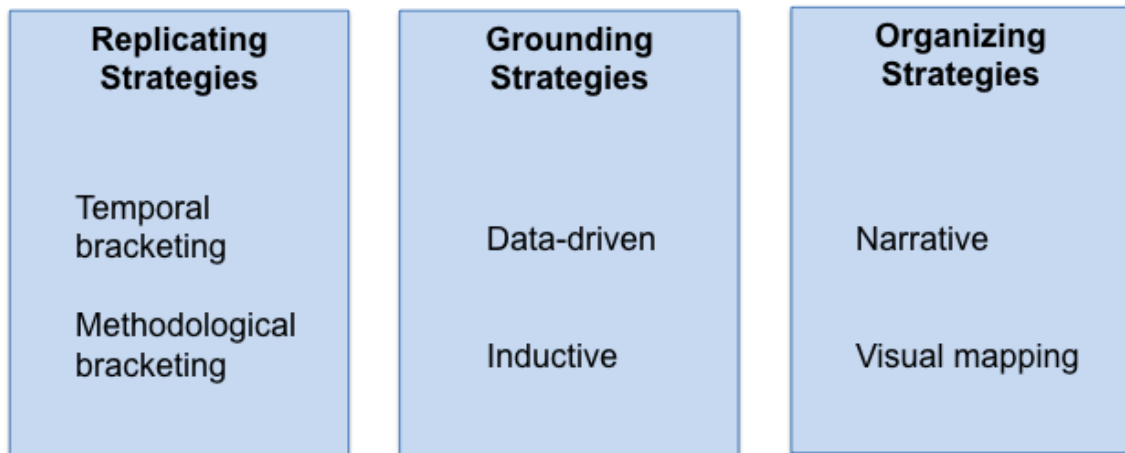
Building on this published work, replicating, grounding and organizing strategies were used for data collection as described below.

3.4.1 Replicating strategies: temporal and methodological bracketing

3.4.1.1 Temporal bracketing

The progression of the planned change to each routine studied was split into time-periods, each time-period represented a distinct phase or other significant temporal period in the case. Time-periods were defined by the research participants. These 'temporal brackets' (Langley, 1999) provide the first lens through which data on the progression of the change was analysed. The study of conjuncturally-specific assessments requires analysis of specific conjunctures in time and place.

3.4.1.2 Methodological bracketing

Primary data informed by the conceptual model (Figure 5 and Table 4) was collected using a reflective diary template, supported, where necessary, by a follow-up interview. In addition to requesting the definition of time-periods (see above) the template asked questions to encourage reflection on the following aspects of the conceptual model, over the period of change.

- External structures that exist objectively (e.g. roles and resources) and their attendant artefacts (e.g. job descriptions and budgets);
- Internal structures, i.e. conjuncturally-specific assessments informed by general, transposable dispositions that are latent existing only at the point that the agent acts (e.g. the perception of the power of a manager that influences the staff member's decision to perform the routine as always, or to adopt the change requested by the manager);
- Actions, i.e. actual practices or performances;
- Outcomes, i.e. the intended and/or unintended results arising from actions, including adaptation of internal structures (and potentially external structures) as a result.

This method of data collection follows Balogun et al, 2005 and ensured that reflections about the routine undergoing change were not divorced from the context of action. The questions posed in the diary template were informed by the literature review and research questions (primary and supporting) and were designed to encourage reflection on thoughts, feelings, intentions and actions relating to the person's involvement in the routine undergoing change. Questions were asked to try to separate habitual actions from assessments made in context at the specific time in the change process. Questions were also designed to prompt participant reflection on the influence of artefacts on their thoughts and behaviour. A draft version of the diary template was piloted for each case and modifications made in response to requests for clarification of the questions asked and format. Differences in the template used in each case were only the information put between the parentheses <…..>, for example the title of the planned change initiative in question. The generic template is included as Appendix A.

Following this a request to complete reflective diaries was made to staff involved in the planned change. People approached fell into one of three categories:

- People responsible for performing the organizational routine in question: the **change recipients**.
- People responsible for managing teams of people who perform the routine: **line managers** of change recipients. These people are responsible for routine operations, but also for supporting the changes desired by the organization.
- People responsible for managing change activities to transform the performance of the organizational routine: the **change agents**.

Participants were invited to take part based on a list of names of potential people by the host organization. Nothing was known of participant views on the change in question prior to starting research. Of the people invited, those who actually took part did so freely.

A representative sample was not required. Enough participants were required to provide evidence of the patterns of action enacted by each of the three categories of actor detailed above.

All participants were assured anonymity in this, and any other verbal or written accounts of the research.

Following submission and review of the reflective diaries, some participants were followed up with a short (30-minute) recorded telephone interview, with the objective of allowing clarification and exploration of particular themes by the researcher and/or elaboration of particular views by the participant. As a result no generic interview plan was prepared for these interviews, as each was expected to be quite different dependent on the information already provided in the reflective diary. Interviews were transcribed prior to analysis of the data.

3.4.2 Grounding strategies: content analysis of documentation and analysis of declared change practices

3.4.2.1 Content analysis of documentation

Content analysis of the formal change documentation was carried out in parallel to the primary data collection described above. Documentation reviewed included outputs of strategy workshops, programme and project documentation, metrics of defined key performance indicators, user feedback and formal review and audit of performance by external parties. The purpose of this element of the research was threefold: (1) to create a chronology of evidence of the drivers for the intended change to the organizational routine, (2) to note how these external drivers were documented and communicated through formal artefacts such as project briefs, and (3) to track the decision-making processes of the change team through formal meeting minutes. Content analysis was not used to interpret underlying motivations or meanings from documentation, nor was semiotics or other 'word-spotting' type analysis used. Reflective diaries and interviews provided access to personal perspectives. Document content analysis provided the audit trail of official decisions and communication – the formal narrative - and specifically identified artefacts at play, e.g. plans and metrics.

3.4.2.2 Evaluation of declared change practices

It was important, as part of the analysis of data, to gain an understanding as to what extent change practices were 'text-book', as declared by the organization. To determine this an assessment of 'compliance' with the 10 'success factors' for planned change derived from the literature, and detailed in Table 1, was conducted.

This assessment was compiled by the researcher from the primary data collected (reflective diaries, interviews, content analysis and focus groups, as described below). It is important to note that this part of the analysis was only done to give a sense of the degree to which the change practices used were

competent or deficient. This research is not focused on change routines as has been assumed by some reviewers of the work.

3.4.3 Organizing strategies: focus groups

Focus groups were held with a sub-set of the participants with three objectives:

(1) To validate the 'story' of the development of the organizational routine as exposed by the time-periods defined in reflective diaries and by the document content analysis.

(2) To articulate the organizational routine and its change over time - what happened and why. This activity allowed exploration of the organizational routine in term of its ostensive and performative aspects and the artefacts supporting each aspect (as shown in Figure 5 and Table 4).   A focus group was chosen for this work with the intention of trying to uncover those aspects of previously tacit knowledge of the organizational routine that have been accessed through reflection (in diaries) or can be accessed through a group process (Ambrosini and Bowman, 2002). Participants were encouraged to articulate their understanding of the routine undergoing change in words, or through the creation of a visual map;

(3) To explore the formal and informal rhetoric used by actors associated with the change.

To achieve these objectives, the focus group was the final step in data collection and took place following analysis of the initial primary and secondary data.

3.4.4 Summary of data collection approaches

Data collection was designed following the advice in Pozzebon and Pinsonneault (2005) to use replicating, grounding and organization strategies for analysing process data, based on the advice of Langley (1999)op. This resulted in five different approaches being used for data collection.

Temporal and methodological brackets (replicating strategies) were used to enable study of the change over time and to focus on the influences on the internal dynamics of the routine for multiple actors. These bracketing techniques enabled distinct phases of the change and associated patterns of action within the routine to be highlighted for actors in particular, and in aggregate.

Content analysis of the official documentation associated with the change, plus an analysis of the declared change practices (grounding strategies) used, enabled perceptions of individual actors to be compared with the 'official' documented story.

Focus groups (organizing strategies) were used as a device to validate aspects of the story told so far, to explore the rhetorical devices used by actors, and to uncover further narrative pertaining to the routine undergoing change. It was planned for focus groups to enable previously tacit perspectives on the routine and planned change to be accessed by participants, and to be articulated in words, or using visual-mapping techniques.

The five different approaches to data collection then informed the approach to data analysis.

3.5 Data analysis: a five-step approach

Data was analysed in the first instance using the following five-step approach derived directly from the data collection steps.

The five steps were:

1. Definition of temporal brackets (time-periods) based on participant diaries and analysis of the core storyline based on these temporal brackets.

2. Use of the methodological brackets of external structure, internal structure, action and outcomes to analyse reflective diaries and interviews.

3. Content analysis of documentation to create the detailed storyline and to validate, or otherwise, reflections in diaries and interviews (original content analysis was done in parallel with interviews).

4. Analysis of the 'compliance' of change practices during the change period as compared with the 10 'success factors' derived from the literature.

5. Exploration of the organizational routine using the conceptual model, based primarily on narrative from the focus groups (augmented with other insights from diaries and interviews).

Data is reported in the Findings section for each of these steps using a coding structure defined in the conceptual model (Table 4, Figure 5), these being constructs derived from the planned change, routine dynamics and strong structuration literatures.

The primary research question for this research is interested in the influences on the internal dynamics of organizational routines undergoing planned change. The conceptual model proposed the constructs relevant to the internal dynamics of routines undergoing planned change. The supplementary research questions were all defined to explore one or more potential influences on those constructs, or to provide a context for influences not already proposed in the literature to be discovered.

Accordingly, analysis of the data was not linear, nor prescribed. The step-wise part of the data analysis prompted continual thought and exploration of the links between the different data sources. Although data was collected in a particular order, data analysis was an iterative not linear process, guided by the conceptual model, but with analysis following an inductive process.

The primary 'tool' used during data analysis was a large whiteboard where the time-periods defined by participants for each change were mapped out, and the evidence of the physical and virtual influences on thoughts, feelings, behaviours mapped out for each participant based on responses to the reflective diary template. Interview and focus group data was used to augment this analysis. Early data analysis was done using NVivo software to code the data, but as a process, the physical task of connecting narrative to codes within a software package did not help the cognitive process of connecting and making sense of multiple sources of data. As a result this approach was retired and the data analysed again using a messy process of connecting themes as well as capturing specific data on the whiteboard augmented with a 'post-it™' notes.

Data is presented in the findings section for each of the five-steps defined above for ease of presentation. However, the discussion of each case draws on a synthesis of all the data collected, not separate pieces of it, relating this to the primary research question about the influences on the internal dynamics of routines undergoing planned change, and to the supplementary questions that connect the study of routine dynamics operationalized using strong structuration theory, with the study of planned change in action.

Accordingly, this process facilitated a comparison of the 'unpacked' organizational routine with an analysis of how the planned change to the routine proceeded over the change period.

3.6 Limitations of the research method

The key limitation of this research method is the reliance on participants' memories and reflections of the past, going back a number of years, and the relatively small amount of 'real-time' data. As suggested in Whittington (2010); Giddens' structuration is fundamentally a practice-based theory calling for capture of the minutiae of participant's actions as well as meso/mid and macro perspectives of the context. Studies conducted, for example by Barley (1986), Jarzabkowski (2008) and Orlikowski (1992) are praised for their detailed, longitudinal, real-time data collection; however these ethnographic studies used

methodological bracketing at the agency vs. structure level, an approach criticized as not getting to the fundamental issues of the impact of internal structures on action by Stones (2005), and by Pozzebon and Pinsonneault (2005).

Constraints associated with researching part-time meant that it was not possible to conduct longitudinal and real-time studies on this occasion. It is argued however, that the data collection methods used are suitable for the nature of the inquiry into the influences on internal dynamics of organizational routines undergoing planned change, specifically given the range of strategies used in line with Pozzebon and Pinsonneault (2005) and Langley (1999) as shown in Figure 7. This is supported by Jack and Kholeif (2007) who note that ethnographies don't automatically enable exploration of the structure/agency duality as they put their primary focus on agents in-situ. Further, insights provided in Lazaric and Denis (2005) suggest that research into planned change to routines needs participants to reflect on the past, and to connect the audit trail of documented evidence of the change to perceived outcomes.

It could also be argued that a further constraint was that the data analysis was done by a single researcher who was totally immersed in the data, but as a result could have been biased by the accounts of individuals, biased by past experience, or may have missed insights during analysis. The nature of doctoral research however does not permit techniques to ensure interrater reliability as is common in inductive, qualitative research performed for 'non-examination' purposes (e.g. in Balogun et al, 2005).

3.7 Summary of the research method

A review of the planned change literature in Chapter 2 identified the organizational routine undergoing planned change as a promising phenomenon to explore why the extensive advice on how to accomplish planned change is not more successful in practice. The literature argues that to study the organizational routine undergoing planned change, the internal dynamics of the routine must be 'unpacked' and the claimed duality between the ostensive and

performative aspects explored (Feldman and Pentland, 2003). To enable this the routine, rather than any of its micro-foundations need to be adopted as the unit of analysis (Pentland and Feldman, 2005).

The routines literature offers few examples of empirical studies that have contributed to this conversation, and none that have operationalized the claimed relationship between the ostensive and performative aspects of the routine, i.e. a duality akin to the relationship between structure and agency in Structuration Theory (Giddens, 1984).

The conceptual model (Figure 5 and Table 4) derived to inform empirical research of routines undergoing planned change is informed by Stones' Strong Structuration (2005) in addition to Feldman and Pentland's (2003, 2005) work on routine dynamics. Strong Structuration is a methodological response to Giddens' (1984) 'ontology-in-general' theory. It embraces Giddens' original work and critique of this, and provides guidance on how to operationalize the theory to facilitate empirical research. The relationships between multiple variables within the conceptual model are complex and require the study of multiple, interdependent actors involved in a single planned change, over time and in-detail.

The method used for data collection and analysis is informed by further literature (Langley, 1999; Pozzebon and Pinsonneault, 2005; Lazaric and Denis, 2005), and enables exploration of the internal dynamics of the organizational routine undergoing planned change in a way consistent with the principles underpinning the conceptual model.

Accordingly, exploration of the internal dynamics of organizational routines undergoing planned change, using a research method that explicitly addresses the claimed dualities as proposed in Structuration Theory, addresses both a theoretical and methodological gap in the literature. Findings from the two cases explored are described next.

4 FINDINGS CASE 1: ELIBRARY

4.1 Overview of the Chapter

In this chapter findings from a first case are detailed. This empirical study addresses the question 'what influences the internal dynamics of organizational routines undergoing planned change?' and the more detailed questions included in Table 5. Findings are presented using the five-step data analysis process outlined in Chapter 3, but as noted there data analysis was an iterative not linear process. The analysis is guided by the conceptual model depicted in Figure 5 and Table 4 but with coding following an inductive process. The five-steps facilitated an examination of the 'unpacked' organizational routine as it was changing. This was achieved by drawing on detailed individual accounts and the 'formal' story as documented in organizational artefacts.

Significant efforts to change the core routine in the target organization were largely unsuccessful over four years, despite compelling evidence of the need to do so being understood by all parties; and despite the change agents following change 'prescriptions' diligently.

The analysis that follows tells the narrative of the case drawing on different sources of data to 'unpack' the routine, and to examine the influences on the internal dynamics of the routine over time.

Figure 8 illustrates the structure of the chapter.

Figure 8: Structure of Chapter 4

4.1 Overview of the Chapter

4.2 Description of the target organization and the data collected

4.3 Definition of temporal brackets

4.4 Analysis of methodological brackets for each type of actor, and within each temporal bracket

4.5 Content analysis of documentation

4.6 Analysis of declared change practices

4.7 Summary of findings in response to the research questions and claims made in the literature as summarised in Figure 5, reflections on the research method and selection of the next case.

4.2 The target organization: ELibrary[4]

The organization selected for research for this first case is ELibrary, a consortium of seven universities formed to offer an on-line catalogue of freely available, academically robust resources for use in higher education learning, teaching and research. ELibrary was managed through an Executive Director based at one of the partner universities.

The ELibrary case satisfies all the criteria for case selection outlined in 3.2.

The intended change was to transform the core organizational routine in order for ELibrary as an organization to be efficient, credible (with users and funders) and sustainable for the future. The core organizational routine within ELibrary was associated with the discovery, description and presentation of (freely available, academically robust) resources to users. The articulation of the routine in the previous sentence is the researcher's own. Conceptions of the routine intended to change are explored from the perspective of research participants later in this chapter. In the data presented below, reference to the IRC (integrated resource catalogue) by participants pertains to the organizational routine intended to change.

Investment in change activities took place between the period late 2005 to early 2010 and findings cover this whole time period.

4.2.1 About ELibrary

This information is provided to help the reader to engage with the data provided by participants. The research is focused on the influences on the internal dynamics of the organizational routine undergoing planned change. The routine and change are clearly situated in an organisational setting, but the findings are related to the routine specifically, not the wider organisation. The organisational

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[4] The name of the organization and other details of the case have been disguised to protect client confidentiality.

influences on the routine undergoing change are conceptualized as external structures.

ELibrary is an organization that is part of nationally designated data centre based at a leading UK university. ELibrary is largely government funded via the Department for Employment and Learning and the Higher Education Funding Councils for England, Scotland and Wales. ELibrary provides a number of services for Higher Education, including an internet resource catalogue (IRC) that contains resources that have been quality assured by academics for use in teaching and research.

ELibrary is managed by an Executive Director who is referred to as the primary change agent in this study (CHG1). The Executive Director reports to a Board of Management that comprises senior representatives from the seven universities that make up the ELibrary consortium, plus representatives of the funders. The seven universities include one Oxbridge institution, five Russell Group institutions and one 'new' university. Each institution has a stake in ELibrary and the Executive Director is tasked with managing this consortium effectively to deliver value for money from the service for the tax payer.

Reporting directly to the Executive Director are the following 14 staff:

- A manager for each of the 7 universities (3 of these managers were participants in this study, MGR1, MGR2, MGR3 respectively)

- A team of 4 people who develop and support the IT underpinning the service, e.g. website design and interfaces for entering data into the internet resource catalogue (1 person from this team participated in the study, CHG2).

- A team of 3 people who provide project support, e.g. establishing standards for project plans and reports, collation and reporting of key performance indicator data including user feedback (1 person from this team participated in the study, CHG3).

Reporting directly to the Managers at each of the universities are staff that are referred to in this study as Cataloguers as they are all responsible for

performing the organizational routine in question in this study, namely the discovery, description and presentation of resources for the primary service offered by ELibrary. 7 cataloguers participated in this study (CAT1 to CAT7 respectively).

4.2.2 Access to data

The Executive Director of ELibrary was supportive of the research given that the planned change had been challenging to accomplish. Following piloting and amendment of the participant reflective diary based on the input of two people (one change agent, one change recipient), a request for all ELibrary staff to take part in the research was made at the staff conference in March 2010.

21 people showed an initial interest and were asked to spend up to two hours of effort on this task. These people fell into one of three categories:

> **Change recipients**, i.e. those people responsible for discovering, describing and presenting resources to users. These change recipients are referred to hereafter as **Cataloguers [CAT]** and can be viewed as the 'operational' resources within ELibrary.

> **Line managers** of change recipients. These people are referred to hereafter as **Managers [MGR]**. They are responsible for routine operations, but also for sponsoring the changes desired by ELibrary within their own institution.

> **Change agents [CHG]** responsible for changing the performance of the organizational routine, to make this more efficient, credible and sustainable for the future.

Data from the participants was collected in the following ways:

- Reflective diaries were completed by seven cataloguers, three managers and three change agents.

- A follow-up interview was conducted with four of the seven cataloguers and all of the managers and change agents.
- A further interview was conducted with a consultant who had worked closely with the whole team helping them to manage personal change.
- The single focus group was held with one cataloguer, one manager and one change agent.

4.3 Definition of temporal brackets

There was general agreement between the 13 participants that the four-year change programme divided into four distinct time-periods. Some participants defined six or seven time-periods; a more granular definition, but with the boundaries of those time-periods matching those of their colleagues.

The general story told by the participants is shown below as Table 6:

Table 6: ELibrary - summary of participant defined time-periods

Time-period	The collective story
Time-period 1 The period from **late 2005 to mid 2006** when ELibrary became one service and one organization: a merger of seven different services provided from seven different organizations.	Some people had a long history carrying out the core routine to discover, describe and present resources to users in a single organization and there was emotional attachment to this. The merger to form ELibrary brought great opportunities, better for users, cheaper for funders, but also frustration, confusion and a loss of autonomy for some key players who were *"fighting their corner"* [MGR3]. There was some new blood and an energy within the team to make this work. It was a fraught and difficult task to get agreement on core work instructions for collections policy and cataloguing standards to support the routine. *"So much energy went into this first change - was there the energy and heart to rock the boat further?"* (Observation from the change management consultant interviewed).
Time-period 2 The period from **mid 2006 to late 2007** when ELibrary was providing the new service and seeking to grow usage, harness new technology	The new team were *"getting on with it"* [CAT2]. Clear compromises were needed to order to be flexible enough to change. In an attempt to build 'one organization/one culture' decision-making was consensual and by committee. *"Difficult decisions were avoided"* [MGR2] and *"the lowest common denominator was embraced"* [CAT3]. Metrics were developed and usage and user satisfaction was shown to be growing

and create a value-for-money service for UK Higher and Further Education, despite a number of strategic dilemmas about who the user was and what they wanted and needed.	significantly. Many projects were started to change core practices in line with technological possibilities. Many thoughtful and creative options were delivered but decisions were not taken and few of these projects delivered any action or benefit. *"We were trundling along despite the shortcomings"* [CAT5]. The core routine persisted although the rest of the service was changing significantly.
Time-period 3 The period from **early 2008 when a 15% budget cut was announced to mid 2009** when ELibrary was attempting to focus efforts on three strategic imperatives for survival in its current form, in the context of fast-moving technological change and sociological expectations of digital information.	*"We had a funding cut and it was obvious we needed to change the way resources were discovered, created and presented"* [CHG2]. *"The hiatus was the market research, killer evidence for the need for change to the IRC"* [MGR2]. *"Last chance to make big changes, but still too embedded in own working practices to do so"* [MGR3]. *"Goal-post moving, what could have been a period of development and improvement was actually a period of consolidation and retraction"* [CAT3]. There was significant work to re-focus, re-plan and change working practices, resulting in a change to the way the routine presented information to users, but no fundamental change to the human-intensive and costly practices for resource discovery and description, because not everyone could agree and some members of the consortium were (still) seen to be too valuable to upset.
Time-period 4 The period from **mid 2009 when a further 50% budget cut was announced in 2010** where the consortia is being disbanded and the service continued from one university.	The service had a new look, but the underlying core routine was largely unchanged from January 2006. The budget cut was devastating news for many institutional users and for staff who lost their jobs. A sad time; but not a surprising result for anyone. There is great commitment to 'tidying-up' and *"leaving it as ship-shape as possible for future use of the information"* [CAT1]. The priorities were dissolving the consortium and designing the legacy and the next phase.

Broad temporal bracketing, as summarised above, provided a consensus of the key time-periods that punctuated the overall change implementation. These time-periods are used to explore detailed participant accounts obtained through reflective diaries and interviews. Methodological brackets defined by the research method and detailed in the conceptual model, articulated as Figure 5 and Table 4 are used to present this data.

4.4 Analysis of methodological brackets

Tables 7, 8, 9 and 10 that follow are used to bring together the accounts of multiple participants over the four time-periods using the methodological brackets (quadripartite model) from Strong Structuration to articulate the internal dynamics of the routine undergoing change.

Each table is presented linearly, for ease of reading, looking first at shared external structures and related artefacts, then individual perceptions of internal structure/the ostensive, then individual perceptions of habits and action/ the performative, then shared outcomes and related artefacts. Each table represents the whole time-period, within which there were many hundreds of enactments of the routine by change recipients, and many hundreds of enactments of change and boundary-spanning practices by change agents and line managers. The data is presented to provide an overview of the influences on the internal dynamics of the routine undergoing change, not a chronological account of how the routine changed (or didn't change), enactment by enactment.

Following each table (for each time-period) (1) summary observations are made to explore links between different parts of the conceptual model, in particular to observe relationships between the ostensive and performative, and the influence of external structures and/or outcomes on future patterns of action and (2) a third-person synthesis of direct quotes from selected participants is offered, put together to illustrate the quadripartite nature of the internal dynamics of the routine undergoing change.

All the data shared in the tables are direct quotations from participants.

4.4.1 Analysis of time-period 1: late 2005 to mid 2006

During this time-period, participants shared their views on the outcomes of the initial change to form ELibrary, and some of the antecedents for the outcomes. They then comment on their cognitive, affective and intentional perspectives on roles, power, sanctions and communication within the new organization and

how this influenced their actions, or inaction as changes to the core routine were planned.

Table 7: ELibrary - unpacking the routine during time-period 1: late 2005 to mid 2006

Evidence of <u>shared</u> external structures and related artefacts

"The CHEMS report (published late 2005) set out a clear agenda for increasing efficiency and innovation" [MGR1]

"The change to create ELibrary from the previous 7 separate services has been fraught with difficulties as autonomous subject groups (hubs) grappled with the reality of becoming one organization" [CAT3]

"There was a gap in planning and articulation of the work to be done to meet the strategic goals agreed with the Board of Management until the Lucidus consultancy helped us create the blueprint and programme plan – it filled a big hole and dependencies were identified." [CHG1]

"It was a clear plan to fundamentally change the organizational routine, i.e. the way that resources were discovered, described and presented but this wasn't communicated well enough" [CHG1]

"I remember when CHG1 first came to our site and we didn't know what to expect but it was just like – oh wow – this is what we've been waiting for" [CAT4]

Evidence of the ostensive /internal structures – relevant to the individual

Change agents

"Without the programme management approach, we may not have launched when we did in 2006. It allowed us to share responsibility for the management of the work and that made us kind of a happy and constructive group of people" [CHG1]

"Within the central change team, the staff who had led the transition [to ELibrary] formed a very close cohesive unit which has continued to be a great strength." [CHG1]

"At that time I was keen to retain all staff effort associated with the IRC despite the need for financial efficiencies. I didn't have a real understanding of how much it cost to create a catalogue record but believed it to be our core business so it had to be resourced" [CHG1]

"At the back of my mind I always thought that that would be something I could deal with later, if I could get the brand sorted and everybody working together in a more constructive way." [CHG1]

"I had a sense that there was only so much people could take and as a result prioritised the necessary changes. I know where it came from – it was all that stuff I'd read on my MBA about focusing on your core business, and getting buy-in from people before making a step change – my interpretation of those theories was very naïve as well." [CHG1]

"I thought, I'm not going to battle with that now, I'll come back to it later, but in

hindsight it was my real opportunity to change because everything else was up in the air, but I may have lost partners if I'd pushed it, it may have led to the complete collapse of everything. I felt I was walking a fine line between keeping the partners on board and initiating change – I had a sense that there was only so much that people could take and prioritised accordingly." [CHG1]

"I was involved in a management meeting in my second week of employment where I saw at first hand the effect of decisions by committee – slow and cumbersome. I thought we had a great opportunity to streamline everything and take away the need to spend an hour creating a record " [CHG2]

"If I had my way we were at risk of losing some of the key partners and their contacts" [CHG2]

"I felt a great weight of responsibility coping with the demands of the separate hubs. The main influences were the wishes of the CCM group because they steered the database design and metadata field content and format – although it was my decision how to design the IT in the end – so it was seen as my creation." [CHG2]

"I had effectively complete freedom to create the cataloguing and backend systems (IT), but within the constraints of the agreed metadata schema" [CHG2]

"…but I became more tolerant and realised change would take time." [CHG2]

Line managers

"I perceived my role in the change as follows: to positively and proactively engage in, implement and promote the exciting changes that we had agreed to as the ELibrary Policy and Strategy Group, to both staff and users; to listen to, support and engage different groups of people through the changes." [MGR1]

"I didn't always agree with some of the concerns of my team, it sometimes felt that they were based on the way things had always been done rather than trying to step back…but I had only just started so was getting to grips with a new environment." [MGR2]

"I didn't have the emotional attachment that others had to the old organizations." [MGR2]

"People knew the best thing would be to change the way we did cataloguing, but almost they couldn't." [MGR3]

"There were tensions and power struggles. My role was to ensure that staff could carry out their work efficiently, dealing with frustrations of staff who were used to a much more autonomous approach, and fighting our corner to some extent." [MGR3]

Change recipients

"It was good to become part of a national service and work with colleagues from other places, I hoped the service would go from strength to strength." [CAT8]

"The differing views and working practices and lack of shared history made it difficult to agree. In some situations I was able to influence decisions, in other instances I had to compromise and do extra work just to keep in line (e.g. change titles from title case to sentence case)." [CAT3]

"10 weeks might pass to get a decision-in-principle confirmed, no influence, it was frustrating. If we could find a user to say what 'we' felt about a change then that was taken on board, if we expressed that viewpoint it appeared worthless." [CAT1]

"If it would have been possible to force through a single IRC at this time then we would have stopped perpetuating issues that meant that users had to drill down through browse structures then pop back up the top level to drill down again." [CAT1]

"I felt quite small – we were one of the smallest and newest hubs and seemed to have little influence – some were very protective of their users, we didn't feel to have all that sort of baggage" (CAT 8)

"I felt my role was de-skilled – I didn't know what decisions I was empowered to make (about the part of the catalogue I looked after) and what choices were open to me – overall I felt ignored." [CAT2]

Evidence of the performative /action or inaction – relevant to the individual

Change agents

"I thought, oh right, the core business is the IRC, make sure resources are focused on that, and by doing that I kind of gave permission for the processes and routines to carry on as they had done. That wasn't quite my intention and it was naïve of me. I didn't really understand what signals I was sending out." [CHG1]

"I found it impossible to enforce decisions around the detail of catalogue system functionality and metadata and it was impossible to reach consensus decisions at meetings [CHG1]

"Even when things has apparently been agreed at meetings, if during discussion back at home sites managers encountered disagreement in their team, then the decision was not enforced – it came back which resulted in more compromise and accommodation of local requests." [CHG1]

"I put in place many changes from the previous cataloguing systems and database structures." [CHG2]

"There was too much metadata and faffing on issues such as resource types – which were changed after 6 months by one member of staff… [CHG2]

Line managers

"It was good to see that despite a lot of resistance to some of the changes from some staff, they were actually helping each other to solve practical problems and I

actively encouraged my local team to do this more than I had before." [MGR1]

"One of the things we got badly wrong was not doing market research, we should have focused our attention on that and forgot about the catalogue for a while." [MGR2]

"I was very keen to make sure that issues that were important to our user community (since 1995) were not lost – we had some deeply embedded working practices and we wanted to keep these" [MGR3]

"We were doing what we were comfortable doing, not what needed to be done." [MGR3]

Change recipients

"ELibrary was a vast improvement to users – we believed it should be a totally cross-disciplinary service – I think locally we came from the student's point of view rather than the academic's." [CAT8]

"I spent a lot of time creating incredibly complicated catalogue records but why are people coming to us – to find good websites – it was our experience that 95% of users did a simple key word search – but there was certainly a perception that users wanted something much more sophisticated – I had no evidence to argue against it – but I believed then and still believe that we need a minimal metadata set – sufficient to them to know whether it is worth them clicking through to the website – anything beyond that is superfluous" [CAT3]

"Still, things were trundling along okay and we were making some progress in sorting stuff out and working as a team locally. There was an opportunity for job satisfaction and for achieving things and producing a useful service in spite of the various shortcomings." [CAT2]

Evidence of <u>shared</u> outcomes and related artefacts (reinterpreted in internal structures)

"The launch of ELibrary as an integrated service went well. We had achieved the impossible and got the hubs merged" [CHG2]

"Very successful launch, new website and sense of coming together of the whole consortium" [CAT4]

What was created was *"a unique service for HE and large efficiency gains in the 120+ institutions from having a central service that they could use without having to set up their own collection. There were some small efficiency gains internally from having a single database/server but there were not staffing efficiencies as everyone was kept in employment (for which we were grateful)."* [MGR3]

"The initial change to create ELibrary meant there was lots to sort out for very good reasons. Some of the original services were conceived as serving researchers, others were focused on undergraduates, others on Further Education or vocational degrees. None of the individual services could be financially sustained alone – we

were able to continue our work because of the change to ELibrary" [CAT1]

"...so in the end, in terms of all the detail, the partner organizations got what they wanted." [CHG1]

"Unfortunately, it seemed that whatever else might be agreed, it was not going to be possible to simply agree to use different styles in different areas" [CAT1]

"It would have been helpful to have a well designed database input system, a database that was flexible and searchable in a variety of ways, and enough hardware to run it at a good speed. None of these things seemed to be priorities. Most of the high level discussion seemed to be about look and feel, with the occasional nod to retrieval times." [CAT2]

"At a micro level, if every institution freed up one teacher or librarian spending time maintaining lists of links then we saved thousands of man-hours" [CAT1]

"Well I guess it cost less, that was the object of the exercise, but the data was the same however it was presented" [CAT2]

"It didn't have much impact on quality, we were all cataloguing to similar standards pre ELibrary." [CAT3]

"We removed layers of bureaucracy and admin and (with very good nature) we worked well together, although our local group still came to decisions that were at odds with the whole of the rest of the organization." [CAT1]

"The database software itself had a lot fewer useful features and that caused us frustration. I think that a lot of problems could have been avoided by engaging with basic technical issues rather than spending so much time on the grand vision of a unified database that never materialized." [CAT6]

Table 7: ELibrary – unpacking the routine during time-period 1: late 2005 to mid 2006

4.4.1.1 Summary observations

There was a shared perception that the creation of ELibrary was necessary and had been achieved successfully, albeit with some evidence of conflicting perspectives and priorities. Change agents and managers knew that the creation of ELibrary was the start of a long change journey to transform the core routine, but the perception was that the power resided in each institution in the consortium and that it was too early to push an aggressive change agenda. As a result, a collaborative and consensual communication and decision-making process was adopted that built harmony and good-will on the surface, but failed to deliver lasting agreements. Some change occurred, but this was either non-

contentious items (e.g. new fields in a database) or was ignored if it did not suit local, historic working practices. During this time period it was slowly learned that there was no sanction for non-adoption of agreed changes.

Within the context of an external call for change resulting in the successful merger of seven institutional hubs to ELibrary and the supporting organizational structure, roles, responsibilities and governance; the core duality between internal structures /the ostensive and habits and actions /the performative at this time can be summarized as follows:

- Change recipients believed that some efficiencies had been made and these might be enough: that what they did was fit for purpose, that the alternatives being suggested by change agents and some line managers were not compelling and that no-one was going to enforce any significant change. As a result, they were prepared to implement minor change, even if it was seen as sub-optimal, but they were not about to do anything substantial until they were convinced it was the right thing.

The rhetoric promoted by change agents was 'we've done well so far, let's settle down and then have another push at more significant change'. This reinforced the belief that, at least for now, nothing major needed to change, thus reinforcing stable behaviours.

4.4.1.2 Specific illustrations of routine dynamics for specific actors

The text that follows is a third-person synthesis of direct quotes from participants, put together to illustrate the quadripartite nature of the internal dynamics of the routine undergoing change, in time-period 1.

Change agent [CHG1]

There was a clear plan to fundamentally change the routine, as supported by external reviews by the funders (*external structure*). CHG1 didn't have a real understanding of the cost of creation of an IRC record so was keen to retain all

staff at this time despite the need for financial efficiencies. She judged this was something she could deal with later once she had got everybody working together in a more constructive way (*conjuncturally-specific assessment*). Changes were made to the detail of the IRC database functionality and the metadata fields, but it was impossible to achieve consensus at meetings. CHG1 thought that consensus was important to keep the consortium working as One ELibrary. By continuing current resourcing for the IRC, CHG1 signalled permission for the work to carry on as before – this wasn't her intention – she didn't understand what signals she was inadvertently sending out (*active agency*) so in the end, the partner organizations got what they wanted – a continuation of the work by the same number of staff but with some minor efficiencies due to less metadata being provided (*outcome*).

Change recipient [CAT2]

The need to transform the routine overall, to grow the service and bring better value for money, and the immediate changes to the IRC database functionality and metadata fields were communicated to all change recipients via their line managers (*external structure*). CAT2 felt her role was de-skilled and that she didn't know what decisions she was empowered to make about the part of the IRC that she looked after – she felt ignored (*conjuncturally-specific assessment*), but she carried on 'as normal' and achieved job satisfaction from achieving things and providing (what was perceived to be) a useful service in spite of her view of the various shortcomings (*active agency*). The outcome for CAT2 was that the service might cost less, but the information for users was the same other than the 'look and feel' being different.

Line manager [MGR3]

In the context of the need for change, and the immediate changes made (*external structure*) people knew the best thing would be to change the way they did cataloguing, but almost they couldn't bring themselves to do so. MGR3 was very keen to make sure that issues that had been important to the user community since 1995 were not lost (*conjuncturally-specific assessment*). The

team in that institution wanted to keep deeply embedded working practices and MGR3 acted to support them (*active agency*). There were small efficiency gains from the database, and everyone was kept in employment for which MGR3 and her team were grateful (*outcomes*).

These three specific illustrations are indicative of the stories told by multiple participants during this time-period.

4.4.2 Analysis of time-period 2: mid 2006 to late 2007

During this time-period, participants shared their views on the priorities for change and the work that was done to try to make this happen. They also shared their perceptions of why change leading to beneficial outcomes during this time-period was more difficult to achieve than in the earlier time-period.

Table 8: ELibrary – unpacking the routine during time-period 2: mid 2006 to late 2007

Evidence of <u>shared</u> external structures and related artefacts
"We had three projects focused on the IRC in blueprint tranche 2 – they were split to try to make it more manageable – we were focusing on vision and strategy, systems and practices, and content. The aims were to achieve a more efficient and integrated system. I managed all three projects" [CHG1] *"All the project briefs were well articulated, but we just weren't well enough resourced or skilled to deliver them"* [CHG1] *"Later in this time-period the market research project delivered and said we could deliver more value for money through increased usage by aligning the IRC more closely with undergraduate courses (rather than concentrate on all learners and researchers)"* [CHG1] *"The Curtis+Cartwright review (on behalf of funders) reinforced a clear mandate for significant change to the IRC"* [CHG3] *"Key Performance Indicators were established at this time, but were they influential? – probably not"* [MGR2] *"We knew that ELibrary was being reviewed by funders and that future funding was not guaranteed"* [CAT3]
Evidence of the ostensive /internal structures – relevant to the individual
Change agents *"Some managers were supportive of rationalizing the IRC …"* [CHG1] *"I tried to move to decisions by consensus but I wasn't compelling in communicating the incentives to find new ways to deliver the IRC and I couldn't find it in myself to enforce decisions that would alienate teams"* [CHG1] *"I didn't feel it appropriate to criticize others for missing their deadlines when I was missing mine"* [CHG1] *"I was keen that the management team take this (alignment with undergraduate courses) on board with open minds and find a way forward. One of the forces for change had to be to reach non-users"* [CHG1] *"Although there was a clear mandate for change, the Board of Management could have done more to get buy-in from senior people in the community – it was a very closed group – they could have done more"* [CHG2] *"There was no support from outside, but no-one wanted to say no either"* [CHG2] *"I felt the mechanisms for change (blueprint, projects, user feedback, management meetings etc.) were too cumbersome and too short-sighted. I attended all the*

meetings but I wasn't a Manager and I didn't feel I could say what I thought very forcefully" [CHG2]

"I was uncomfortable with the small sample sizes used in the market research project, but everyone else said this was OK" [CHG2]

"There was a general sense of frustration at the time it took to agree on consistent data formats – endless meetings, papers etc. that were never finalized or resolved" [CHG3]

"The power was with individual subject groups (partners)" [CHG3]

Line managers

"Although everyone had come a long way in terms of sharing information and working together…" [MGR1]

"I think if we had focused on users we would have got that big message that actually 'we don't want huge great long catalogue records, what we want is a quick and easy way of finding top quality resources' – but in meetings the voice of the cataloguers remained the strongest – if you disagreed too loudly you would be side-lined from decision-making. However, I developed quite strong views that there were substantial efficiencies to be gained by cutting down on metadata provided" [MGR2]

"KPIs and other usage stats didn't seem to be fed into the projects that were reviewing the IRC strategy, practices and content" [MGR2]

"There were no sanctions for subject groups to stop doing what they wanted – partly borne out of the habit of having control. However, the change to funding at the end of this period made this situation even less tenable" [MGR3]

Change recipients

"There was nothing I could do to influence this other than make sure my part of the catalogue was well maintained with a steady stream of new resources" [CAT3]

"I felt a real tension between the amount of time being spent on projects, and the amount of time to work on the catalogue" [CAT3]

"I could put my views at meetings, but I felt I had little influence" [CAT3]

"I felt constrained by the frustrating progress (or lack of) that the IRC projects experienced. I felt I had no influence and that the lack of leadership had serious consequences for our team morale." [CAT5]

"I truly believed that cataloguing practices and processes must change – it didn't seem appropriate that we were cataloguing web resources in the same way we were in 1996 or earlier." [CAT5]

"I felt that the projects were mismanaged to such an extent that when the final report was published it did not accurately reflect what was agreed – but I felt I

couldn't do anything about it." [CAT5]

Evidence of the performative /action or inaction – relevant to the individual

Change agents

"*We weren't able to influence anybody else – we weren't able to get anybody to change their position*" [CHG1]

"*I believe that after the launch of ELibrary, old practices were re-introduced by stealth*" [CHG1]

"*Structured metadata is a big thing for the library community, we've had it engrained in us that you need your metadata so you can find stuff*" [CHG1]

"*I think that I was avoiding conflict, not facing things head-on, not really articulating that things weren't changing enough, that metadata was not becoming more streamlined*" [CHG1]

"*Getting decisions by consensus was rarely possible. If I made a decision there was often a backlash at the management meeting and implementation was halted. The alternative was to disenfranchise a partner institution and this would have posed a strategic risk for ELibrary*" [CHG1]

"*Managers didn't do enough – but some were only 0.1 or 0.2 FTE. The ones who were full time did more but they had to manage their staff too – so radical decisions were deferred*" [CHG2]

"*We knew we only had 9% HE student usage – but who was handing out leaflets during freshers week?*" [CHG2]

"*Decisions took weeks and months to make, then decisions weren't decisions because we continually changed things*" [CHG2]

"*I came under increased pressure to implement changes against my better judgement because they benefitted some and not the whole. I did what I was asked to do*" [CHG3]

Line managers

"*They were still too embedded in their local working practices to make necessary changes*" [MGR1]

"*Decisions were taken without data.*" [MGR2]

"*Many times I'd do a monthly report as requested, but then stopped because no-one else was bothering*" [MGR2]

"*Each subject group was still working as if they were separate rather than a consolidated whole – I tried, but failed to stop this from happening*" [MGR3]

Change recipients
"Regarding the change documentation – there were many times when this felt like when you were revising for exams at school – instead of revising you spent ages creating a beautiful revision timetable" [CAT1]
"I was part of the team that worked on the three IRC change projects. We created a very long and detailed report" [CAT3]
"Although it was really important to streamline the metadata and we were trying to go for fewer resource types, we ended up with more – it's been an on-going and complicated discussion." [CAT4]
"The slow, unresponsive system had had a huge effect on our productivity and job satisfaction and we complained via several channels" [CAT5].

Evidence of <u>shared</u> outcomes and related artefacts (reinterpreted in internal structures)
"The reward for my lack of authoritative leadership were not having too many difficult conversations and all partners remained allowing us to raise additional funding for other projects. Goodwill within the consortium grew and I was treated with respect" [CHG1]
"Usage stats were going up, positive feedback in the Times Higher and from users was received. This was interpreted as us moving in the right direction" [CHG1]
"The original single database and cataloguing interface was slowly changed – we ended up creating four cataloguing interfaces to accommodate creeping change requests from subject groups" [CHG2]
"This was emphasised by the IRC final report that encompassed a huge amount of work from a large group of staff, but at the end of the day didn't come to any consensus about fundamental working practices" [MGR1]
"Despite the advice we were given and the templates provided, we never really implemented proper management reporting – so it wasn't obvious that we weren't achieving what we planned" [MGR2]
"Once the IRC was moved to a new server it amazingly quick and responsive –that it took so long to resolve this problem was incredibly disappointing." [CAT5]
"We tried to get feedback from users but they weren't interested in the level of detailed feedback we wanted – it begs the question – if they weren't interested in that detail, why are we bothering to record it? – without naming names, some were being too precious and too traditional" [CAT6]

Table 8: ELibrary – unpacking the routine during time-period 2: mid 2006 to late 2007

4.4.2.1 Summary observations

The working style in ELibrary continued to be consensual during this time and a respectful and cooperative culture was established on the surface, but beneath this there was evidence of simmering frustration from all three groups of actors. There was no consensus on how to move forward, so despite a clear mandate for change from external funders that was understood by all, a clear change direction, change activity that involved many staff members, and evidence of low (although increasing) usage stats, behaviours did not change. Pressure was on ELibrary from the outside, but given that there was no consensus on the response to this, and no authoritative leadership across the consortium, non-adoption of agreed changes continued without obvious sanction. However, everyone knew the stakes were getting higher, although they did not quite know what to do about it at a collective level, so the cataloguers kept on doing what they thought was best based on limited feedback from supporters.

4.4.2.2 Specific illustrations of routine dynamics for specific actors

The text that follows is a third-person synthesis of direct quotes from participants, put together to illustrate the quadripartite nature of the internal dynamics of the routine undergoing change, in time-period 2.

Change agent [CHG1]

There was another external review, and market research was conducted that showed where ELibrary could deliver better value for money through the IRC. Project briefs were initiated to deal with three key aspects of changing the IRC (*external structure*). CHG1 decided to manage all three projects herself. She knew that some line managers were supportive of a big change to the IRC (rationalization, and structuring to reach non-users) but judged she needed to get decisions by consensus given the power bases in the consortium and strategic risks of disenfranchising a partner (*conjuncturally-specific assessments*). Given her professional background, she knew that structured metadata was a big thing for the library community – engrained into their, and

her 'DNA' (*general, transposable disposition*). She empathized too much and avoided conflict, failing to articulate clearly that work practices were not changing fast enough, and the consequences of this (*active agency*). The reward CHG1 perceived for her lack of authoritative leadership was avoiding difficult conversations and a growing goodwill within the consortium. She was treated with respect (*outcomes*), which, in retrospect, reinforced to her that she was doing the right thing.

Change recipient [CAT3]

Everyone knew that ELibrary was being reviewed by funders and that future funding was not guaranteed, and CAT3 was working on the projects to bring about change as well as going her 'day job' working to build and promote the IRC (*external structure*). She felt a real tension between time spent on projects and the time she spent on her 'day-job'. She perceived she had little influence at project meetings, so judged that all she could do was make sure her part of the IRC was well maintained with a steady stream of new resources (*conjuncturally-specific assessment*). This is what she did – continued working in the same way, yet trying to influence the projects (*active agency*). Her comment that the outcome of the projects was a 'long and detailed report' signals that despite this report, the work on the IRC was unchanged (*outcomes*).

Line manager [MGR2]

MGR2 worked on establishing key performance indicators (KPIs) for the IRC and it's usage – necessary to demonstrate progress in terms of reach, value for money etc. The KPI framework was developed and implemented (*external structure*). This data convinced MGR2 that if ELibrary focused more on users then the priorities for change would have been very clear, but she said that in meetings that the 'voice of the cataloguers' rather than the 'voice of the customer' remained the strongest and that if she disagreed too loudly she felt she would be side-lined from the discussion (*conjuncturally-specific assessment*). MGR2 did not have a professional library background (different

general, transposable dispositions) and tried to influence the team to work as a consolidated whole rather than separate subject groups (aligned to institutions) by outlining the 'prize' of more usage by more people if changes were made. She also acted as far as possible to show the (lack of) progress through the KPIs (*active agency*). She commented though that, despite the advice that had been provided and the KPI framework, 'proper' management reporting was never implemented with the *outcome* that it wasn't obvious that we weren't achieving what we'd planned, despite usage increasing rapidly.

These three specific illustrations are indicative of the stories told by multiple participants during this time-period.

4.4.3 Analysis of time-period 3: early 2008 to mid 2009

During this time-period, participants shared their perceptions of a few external changes, including a 15% funding cut, formulation of a revised strategy, positive feedback from users, and the appointment of a new programme manager to work in the change team. Changes were agreed and made during this time period, but with a sense of 'too little, too late'.

Table 9: ELibrary – unpacking the routine during time-period 3: late 2007 to mid 2009

Evidence of <u>shared</u> external structures and related artefacts
"It was the feedback from the market research, not the 15% funding cut that was the real force for change in the move to 19 subjects rather than 4 subject groups. We refocused our strategy into 3 very clear and prioritised strategic aims" [CHG1]   *"My focus was on efficiency and cutting costs associated with the maintenance and creation of the IRC – we needed to meet our funding reduction targets and the need to spent less on cataloguing staff was becoming more real. The bid for additional funding to research automatic metadata generation was successful and this was a real bonus to be awarded the value-in-metadata (ViM) project."* [CHG1]   *"A licence was secured for software (Autonomy) that had the potential to reduce cataloguing effort if introduced into the service – I was always convinced this was the way to go."* [CHG1]   *"I delegated the programme and project management of IRC projects to a new person who took a different approach in terms of consultation giving very tight deadlines and working up brief and succinct documents for comment without getting bogged down in detail"* [CHG1]   *"We were monitoring the usage stats carefully during this period…"* [CHG1]   *"The hiatus was the market research, killer evidence for the need for radical change to the IRC"* [MGR2]
Evidence of the ostensive /internal structures – relevant to the individual
Change agents   *"To key cataloguers to look at more automated ways of creating metadata was like asking "turkeys to vote for Christmas" – but we tried. I had a personal conflict between respect for people and their skills and the need for organizational efficiency with the IRC. The resistance to change remained – reasons included – different needs for different subject communities, academic credibility and inferiority of alternative approaches and solutions"* [CHG1]   *"We had our new focused strategy, but what cataloguers were interested in was strategic aim two – being the first port of call for discovery etc. – I guessed they assumed our number 1 aim of financial viability was nothing to do with them."* [CHG1]   *"Management meetings were constructive and more effective at decision-making but I had a sense that we hadn't reached the crunch points in terms of changes*

required" [CHG1]

"*Autonomy[5] is not intended for the purpose that we used it for in the ViM project – it is a search tool, not a metadata creation tool"* [CHG2]

Line managers

"*This felt a bit like our last chance to get it right – but the new blueprint was quite unwieldy."* [MGR3]

"*This was a frustrating time for me. I was busy with the technical work to release the new website, but there seemed little progress in terms of decisions and the things that needed to be in place for us to get the site launched."* [MGR3]

"*We expected the new person driving the projects to be our saviour – that's too strong a word – but someone who would really drive us on – but in the end it felt too much high level – not enough stuff on the ground although everyone was working flat out"* [MGR3]

"*It was our last chance to make big changes, but we were still too embedded in our own working practices to do so"* [MGR3].

Change recipients

"*I remember this period as shifting sands. We would do a lot of work towards a goal, to find the goal had been shifted"* [CAT1]

"*We were all aware that ELibrary was running down to its inevitable closure – we had tried to be self-funding in the past and we all knew it wasn't going to work"* [CAT2]

"*The work to align ELibrary to support course or subject themes seemed the right thing to do, although a bit late."* [CAT7]

"*I knew automatic metadata creation was seen to be the answer but I didn't expect it would work as it is too dependent on the quality of the websites that you're mining – it could only ever be of limited value in my view."* [CAT3]

Evidence of the performative /action or inaction – relevant to the individual

Change agents

"*I assigned one of the 19 subject headings to each and every resource in the database and also applied the new-look front-end to the website."* [CHG3]

"*There were no changes to the routine, cataloguing remained the same, and the back-end database structure was roughly the same (just one extra subject field).*

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[5] Autonomy is the name of a software product being evaluated.

No changes were required to daily procedures or practices." [CHG3]

Line managers

"I do remember saying at every single management meeting that if search is the problem why aren't we looking at that, but there was a pre-occupation with aligning to subjects as the answer, and that seemed quite attractive, so" [MGR2]

Change recipients

"Differences in metadata were ironed out, each group feeling they had given up more than they wanted to" [CAT1]

"It was frustrating. Consensus was getting us nowhere and it would have been nice to have decisions made and enforced" [CAT3]

"If we could streamline the cataloguing activities, and minimise the metadata we kept, it would benefit us all and be cost effective." [CAT4]

"I thought we were too short on staff to maintain the records we had to a good standard and still meet the demand for more new records." [CAT4]

"Metadata was increased to accommodate other groups, I could understand the reasoning but felt that people would not think 'outside the box' about how they could catalogue differently." [CAT4]

Evidence of <u>shared</u> outcomes and related artefacts (reinterpreted in internal structures)

"The rapid rise in usage of the previous period had stopped – it looked like usage was going to plateau – but there was a new focused strategy and blueprint and a new push for change. It would have been useful to see our levels of repeated use – we never had that – every visitor might have used us once and never again for all we knew" [CHG1]

"At the core of it, looking at the IRC, we didn't really make any changes at all from what we've been doing since the beginning – we weren't able to make the leap – it would have meant throwing away everything that we had been doing and people just couldn't do it." [MGR3]

"We delivered a better service to users through the change to 19 subject headings – our records were easier to find – but by restricting our searches to our metadata rather than the websites themselves (like a Google search) we restricted the value our users could get from us – we didn't focus enough on what users wanted." [MGR2]

"We did align on metadata – hurrah – that was how it should have been from the start." [MGR2]

"Redesign of the user interface and the website as a whole was a huge

Table 9: ELibrary – unpacking the routine during time-period 3: late 2007 to mid 2009

4.4.3.1 Summary observations

External pressure, a re-focused strategy and new programme management, all had some positive influence on change within the core routine, but the sense of 'too little, too late' was increasing. The sheer emotional effort to make the changes thus far gave a clear indication that further, step-wise change was going to be even more difficult. Automatic metadata creation was seen as being the answer for ELibrary and although there was academic interest in this, there was little commitment to risking pushing through this solution to see the effect. The team were happier to cling to what they had and hope that funders would continue to support them, despite massive technological advances in competitor services (e.g. Google Scholar).

4.4.3.2 Specific illustrations of routine dynamics for specific actors

The text that follows is a third-person synthesis of direct quotes from participants, put together to illustrate the quadripartite nature of the internal dynamics of the routine undergoing change, in time-period 3.

Change agent [CHG1]

KPIs were being monitored and reported and there was clear feedback from market research. Also Google Scholar was emerging as a major competitor, although funders in the UK did not want to believe this. It was obvious what needed to be done (although it hadn't been successful so far). A licence was secured for some software (Autonomy) that had the potential to significantly reduce cataloguing effort per record (*external structure*). CHG1 knew that a software solution for some of the current human activity on the IRC was controversial and would be 'like asking turkeys to vote for Christmas'. CHG1

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had a personal conflict between respect for the people and their skills and what she knew needed to be done. CHG1 also recognised the opposition to her plans that were put up by a large proportion of the team and had a sense that the 'crunch point' in terms of changes required had not yet been reached (*conjuncturally-specific assessments*). Nevertheless she continued to push the change agenda in all meetings and in frequent one-to-one interactions with line managers and their cataloguing staff (*active agency*). Evidence from KPIs and further market research was that records were easier to find, the team had aligned on what metadata to provide, but the rapid rise in usage of the previous period had stopped and a step-change in the way the IRC was populated was still needed if the service was to continue to have funder and user support (*outcomes*).

Change recipient [CAT3]

CAT3 remained closely connected to the change effort as well as running her part of the IRC. She was well aware of the roles and responsibilities of the change team, and their intentions. She was also well aware of KPIs and shifts in the wider market for free, quality-assured internet-based information (*external structure*). Although she knew that automatic metadata-creation (using Autonomy) was seen to be the answer, she judged that this would not work/would only be of limited value (*conjuncturally-specific assessment*). CAT3 was a long-standing member of staff, intelligent and aware of the context for change to the IRC and pre-disposed to support the organization (*general, transposable disposition*) therefore she acted in support wherever she could, but was clear (data from focus group) that she could and would not do anything that in her view was not the right thing for the academic user community, i.e. that put the quality and reliability of the information in the IRC at risk. As a result, her day-to-day actions were at odds to the direction of the change effort (*active agency*). CAT3 shared the knowledge, as evidenced by KPIs and further market research that things were getting better, but that there was still a huge question mark over ELibrary's future funding – that it was probably too late to make the change necessary (*outcomes*).

Line manager [MGR3]

MGR3 led the technical change aspects of the IRC, including the evaluation of Autonomy as an automatic meta-data creation tool. She was involved in all aspects of delivering and transforming the service offered through the IRC, as articulated in the latest version of the programme vision and blueprint of the future state (*external structure*). It felt like the last chance to get it right, but the vision and blueprint felt unwieldy to her and it was a frustrating time as she tried to do the work assigned to her judging it was still too difficult to get decisions from the management team to support that work. She expected new staff who were driving the change programme to be effective, but it didn't feel that way on the ground and she knew that her team were still too embedded in their own working practices to see what change was needed and how it would work (*conjuncturally-specific assessment*). MGR3 focused on the work she'd been asked to do, driving forward the change agenda as much as she could, but yet she did not intervene to stop her cataloguing staff doing the same things. She commented that no changes were required to daily procedures or practices intimating that as it was not required of her to make the changes, then she did not require her team to act differently (*active agency*). MGR3 observed that the outcome was that, at the core of it, the IRC routine was not changed at all from what had been done since the beginning. There were peripheral changes (new database, new metadata fields, new ways of communicating with users), but the core work practices were unchanged (*outcomes*).

These three specific illustrations are indicative of the stories told by multiple participants during this time-period.

4.4.4 Analysis of time-period 4: mid 2009 to mid 2010.

During this time-period, participants shared their perceptions of the decision by funders to cut budgets by 50% starting academic year 2010/11. Work was continuing to be focused on improving the efficiency and effectiveness of the

routine, but this became increasingly futile. By the end of 2009, a further decision was made by funders to end the service.

Table 10: ELibrary – unpacking the routine during time-period 4: mid 2009 to mid 2010 (end of service)

Evidence of <u>shared</u> external structures and related artefacts
"Although we would have another big funding cut, validation of the ELibrary concept by the market research gave the team hope for the future and really prompted some creative thinking for the first time." [CHG1]

Evidence of the ostensive /internal structures – relevant to the individual
Change agents *"We talk about an end, but it's not an end, it's a low point in funding – maybe this was needed to get a change to doing it differently?"* [CHG1] *"Knowing that people would lose their jobs and asking them to contribute ideas for the future was difficult – turkeys voting for Christmas again. I had to communicate in a more detached way when we were all angry, sad and terribly disappointed – I wanted to rant and rave rather than be constructive and motivate others to keep working and generate ideas."* [CHG1] *"I was conscious that cataloguers could have left en masse, or refused to engage with the work to be done – they could also have leaked information to users leading to PR problems. Partner institutions could have complained to our funders about me and my institution"* [CHG1]
Line managers *"Autonomy was a red herring – I'm convinced now that to have the sort of metadata we have, it has to be created by humans. Autonomy would have been great as a search tool though – we could have created the IRC in a completely different way"* [MGR3]
Change recipients *"The news of a further 50% funding cut was devastating – morale plummeted even further."* [CAT2] *"Now there's no more discussion about it, just do what you're told to do."* [CAT3] *"People were gradually getting more willing to change and to compromise and consider more unified options and in the last year there's been lots of innovative thought."* [CAT4] *"Someone might decide to re-invent ELibrary – people don't tend to value things until they're gone."* [CAT7]

Evidence of the performative /action or inaction – relevant to the individual

Change agents
"Although we moved to the new website/19 subject headings, we didn't implement our communication plans to users because we knew the funding was to be cut and we were worried about promoting a service that would potentially go – but actually my heart was also not in it." [CHG1] *"My own behaviour has been more formal and authoritative so that staff are clear what is going to happen."* [CHG1]

Line managers
"I'm just a bearer of bad news but I'm trying to keep staff upbeat and motivated in face of the threat of redundancy." [MGR2]

Change recipients
"We are concentrating almost exclusively on ensuring that our records have been reviewed in the lead-up to July 2010." [CAT1] *"We are leaving it as ship-shape as we can get it."* [CAT3] *"It's satisfying to tidy-up and deliver a working product."* [CAT5] *"Major focus on maintenance and tidying-up the catalogue."* [CAT7] *"Tidying up in case the database has some sort of future – if it doesn't librarians and academics will have to do it all again for themselves."* [CAT7]

Evidence of <u>shared</u> outcomes and related artefacts (reinterpreted in internal structures)
"The UK tax payer will save £1m but UK HE has lost years of investment in creating the service at a cost of many millions." [MGR3] *"A lot of people have said that what motivates them now is getting the legacy in as good a shape as possible – so it's left in a perfect way – so there's a real pride isn't there?"* [MGR2]

Table 10: ELibrary – unpacking the routine during time-period 4: mid 2009 to mid 2010 (end of service)

4.4.4.1 Summary observations

Major external decisions drove an urgency to act perhaps for the first time. There was a clearer focus, stronger decision-making and innovation. The short period of time (5 months) however, between the decision to cut funding by 50%, then to close the service, meant that dominant memories of cataloguers at this time were about leaving what they had created in as good a condition as

possible, in case someone ever looked at it in the future. Although the change agents could still see positive outcomes for ELibrary, the over-riding perception of managers and cataloguers was that they had tried hard, yet failed.

4.4.4.2 Specific illustrations of routine dynamics for specific actors

The text that follows is a third-person synthesis of direct quotes from participants, put together to illustrate the quadripartite nature of the internal dynamics of the routine undergoing change, in time-period 4.

Change agent [CHG1]

There was another big funding cut and there was further validation of the ELibrary/IRC concept by market research. This gave the management team hope for the future and prompted creative thinking for the first time. However, staff knew jobs were now very much at risk (*external structure*). CHG1 was conscious of the PR consequences if cataloguers leaked information to the user community. She commented that everyone was a mixture of sad, angry and disappointed. She was also conscious that the partner institutions could have complained to funders and her institution about her performance. She wanted to rant and rave but knew that would be counter-productive (*conjuncturally-specific assessments*). CHG1 communicated in a more detached way than previously but focused on being constructive and trying to motivate others to keep working and generate ideas at the start of the time period. In the latter part of the time period she moved into a more formal and authoritative mode so that staff were clear what was going to happen next. She worked to maintain jobs for individuals in their respective institutions as far as possible (*active agency*). In mid 2010 funding was cut for the service and the consortium and team was dissolved other than a skeleton staff in one university who had the remit of minimal maintenance and finding a new home for the data. Everyone who wanted to remain in employment in their own institution did so (*outcomes*).

Change recipient [CAT3]

In the context of the funding cut, and with the evidence of the previous time periods available (*external structure*), CAT3 judged that there was no point discussing things any longer and that the best course of action was to do what she was told to do (*conjuncturally-specific assessment*). However, the underlying pride in the IRC records and belief in the product from a librarian's point of view (*general, transposable disposition*) led to action to leave the existing data as 'ship-shape' as it could be left. Along with other colleagues, the action of tidying up before closure was cathartic to CAT3, supported by the view that the data may be used by someone else at some time in the future (*active agency*). The outcome was that when CAT3 left her job, she left 'her' data in as good a shape as possible.

Line manager [MGR 2 and 3]

In the context of the funding cut, and with the evidence of the previous time periods available (*external structure*), MGR2 and MGR3 were both focused on keeping staff upbeat and motivated in the face of the threat of redundancy (*active agency*), yet these actions were based on different conjuncturally-specific assessments of the situation. MGR2 had always fundamentally believed that the work to populate the IRC could have been done radically differently, yet her actions, in support of the change agents had been ineffective in bringing about change. MGR3 had always been more conflicted than MGR2, being more sceptical about alternative ways of working and wanting to recognise history and protect her staff from change. However, even MGR3 saw the potential of the Autonomy software to create the IRC in a completely different way. The final outcome from the perspective of MGR3 was that the UK tax payer would save £1m/annum by not funding ELibrary, but that UK Higher Education had lost years of investment in creating the service at a cost of many millions. How this experience has shaped the behaviours of these line managers during planned change in subsequent parts of their career is, of course, unknown.

These three specific illustrations are indicative of the stories told by multiple participants during this time-period.

4.5 Content analysis of documentation

The analysis using temporal and methodological brackets detailed so far, tells the story from the perspective of ELibrary staff, based on their recollection of what happened, and how they felt about it. Table 11 tells a summarised story of ELibrary from late 2005 to 2010 from the perspective of the documented artefacts: funder reviews, project plans, management meetings, metrics used to measure key performance indicators, feedback from market research, etc. It provides a validation of the human stories of the change to the ELibrary organizational routine in question, a reinforcement of the drivers for change, and response to those drivers. Only a small percentage of the documentation actually reviewed is included to cover the key events.

Table 11: Summary of documentation supporting the change to ELibrary

Date	Document
Funder review 2005	CHEMS report Merger of former hubs to ELibrary because of no evidence of penetration of existing services into user community. Therefore uncertain value for money, especially in the context of changing internet usage, e.g. Google etc. **Cost to UK taxpayer in 2000: £1m for 1.1m searches in year**
Early 2006	Strategic aims include: • Demonstrate impact and value for money • Cost effective technical infrastructure
Mid 2006	**<u>Time period 1</u>** Following merger and re-launch – ELibrary strategy and business plan 2007-2010 • Value demonstrated, cost saving to individual institutions via economies of scale provided by a national service • Promote quality assured resources for HE and FE: 'the hidden web' • Establish long-term sustainability **£1.5m/annum investment in ELibrary delivers £15m per annum benefit to HE based on time saved of 15 minutes per month across all HE staff and students**
Blueprint 1 mid 2006	Projects planned to deliver before October 2006 **Embedding**: technology to embed ELibrary in institutional library services – target 15% HEIs by February 2008, 25% by August 2008. (Actually achieved 66% by October 2007 and 81% by May 2008) **Collections policy and cataloguing interface** defined **Performance management framework** established
Blueprint 1 mid 2006	Projects planned to delivery by April 2007 Establish a **sustainable business model** informed by community contributions (e.g. Wikipedia) **Evaluate automatic metadata creation** tools and recommend

	streamlined working practices
	Baseline metrics in place
Funder review, November 2006	**Time period 2**
	Curtis + Cartwright report resulted in:
	• 15% funding cut per annum
	• Requirement for market penetration KPIs
	• Requirement to review the IRC, systems, process and content to improve efficiency, effectiveness and value for money
	• Requirement to evaluate alternative 'quality assured' delivery approaches
Blueprint 2 (v6a), mid 2007	Projects planned to deliver by September 2007
	Review of the IRC including new website structure based on market research and a modified collections and cataloguing policy
	Report on possibilities for **community participation in content creation**
	Create a **strategic technical development plan**
February 2008	**Time Period 3**
	Status of projects
	Little progress on any of the projects related to the IRC including modified collections and cataloguing policy, evaluation of automatic metadata creation and recommendations for community participation in content creation.
	Other projects delivered to plan. In particular the strategic technical development plan (v1) concluded that:
	"There is no evidence that rapidly advancing technology will replace human intervention to determine quality assured resources, thus ELibrary can capitalise by becoming more efficient in internal practices and extending functionality and breadth in line with global trends in Internet usage".
	Cost to UK taxpayer in 2008: £1.5m for 48m searches in year (40x increase in usage for same investment compared to 2000)

July 2008 strategy workshop	**From strategic dilemmas to strategic choices - context:**
	15% funding cut,
	New guidance from market research including vision of "when Google isn't good enough" but based on 9% HE students and academics using ELibrary with low repeat usage,
	External context changing fast, especially re: web 2.0 (community generated content) and Google Scholar.
	Usage growing – but enough?
	Strategic priorities for next year:
	• Efficiency of IRC processes
	• Grow funding
	• Ease of access and use
	• Recognition for authoritative identity
	• Exploit technical innovations
Blueprint 3 (v2) October 2008	Projects planned to deliver by January 2009
	• Streamline working processes (IRC)
	• Catalogue streamlining and evaluation of tools
January 2009	Outcomes of organizational culture survey.
	Priorities for change were identified by staff as being:
	• Alignment of priorities, and clarity on relative priorities – in particular time spent on change vs. time spent on business as usual
	• Clarity about project leadership and responsibility for decisions
	• Focus on what is important to funders – usage, user perceptions, and innovation.
January 2009	Management meeting, decisions included:
	• Catalogue streamlining given priority but excluding evaluation of automatic metadata creation tools and excluding any reference to business process re-engineering or cost benefit analysis.
	• Evaluation of technical solutions to be deferred.
	• Subject theme/course orientation is supported and should deliver by August 2009.

March 2009	Programme review commissioned – clear evidence of a lack of focus with many staff not having a clear idea of dependencies between projects and what was supposed to deliver when.
June 2009	**<u>Time period 4</u>** Primary funder cut budget by 50% commencing academic year 2010/11 for three years A proposal for how to deliver the service differently within this budget to be delivered by September 2009 Minuted comment from the group included: *"We mustn't get entrenched any longer in the IRC delivery method, delivery is key."*
August 2009	New website and 19 subject headings navigation launched on time.
September 2009	Market research to support proposal for next 3 years, highlights include: • Greatly valued service by those consulted, but • Most undergraduates, postgraduates and academics had not heard of or used ELibrary in advance of focus groups • Strong profile within the library community, but this doesn't translate into widespread adoption or even awareness with students • The impetus must come from lecturers if ELibrary is to deliver actual rather than potential value for money to UK HE
November 2009	Primary funder rejects both proposals for continuation with 50% funding cut and proposes dissolution of the consortium and continuation of the IRC on a maintenance only basis for 1 year on 10% with the objective of finding a new home for the data. Funder requires a steering group to govern the service for the first time
February 2010	Usage stats show a 35% reduction in visits and number of searches compared to the previous year. On current usage cost of ELibrary to UK taxpayer is 33p per visit

Table 11: Summary of documentation supporting the change to ELibrary

Content analysis of the 'official' documentation supporting the change demonstrated that in the early time-periods, usage of the service was growing rapidly and users appeared content. This brought a 'sense of security' that was misleading given that rival services, including Google Scholar, were advancing rapidly. The only way to transform the reach and efficiency of the service was to embrace different ways of performing the core routine. Automatic metadata software was not favoured, and all other technological ideas were rejected; change recipients believing that their skills in selecting and cataloguing the 'best' free web resources for scholarly use would continue to have a value that would be supported by government funding. Given the pressures on government funding in 2009, support for the service was withdrawn early. Although the service had increased efficiency and cost 33p per search in 2010, from £1 per search in 2007, the value proposition for the service was not clear enough to funders.

4.6 Analysis of implementation of change vs. 'success factors' derived from the literature

In section 2.1.4 1, the literature was synthesized as a set of 10 'success factors' for planned change. These are repeated in the left-hand column of Table 12 below. Based on evidence from participant diaries, interviews and content analysis of documentation, an analysis of how well the ELibrary change 'complied' with the 10 'success factors' is presented. Following the analysis in the Table, its implications are discussed. The question posed in this step of the overall analysis of the ELibrary case is whether the 10 'success factors' from the literature are complete enough to guide change and boundary spanning practices.

Table 12: Commentary on ELibrary change practices vs. 'success factors' derived from literature in Table 1.

'Success factors' derived from literature (Table 1)	Positive evidence from the ELibrary case	Lack of positive evidence, or evidence of confounding conditions from the ELibrary case
1. The business case must be aligned with corporate strategy, understood in terms of measurable benefits and be championed and funded by sponsors at the most senior level.	External reports and internal strategy clearly set out the need for change, updated over the four-year period. What was needed was very clear throughout, and it was communicated, but…	The 'how' was not compelling at all to people doing the work. Patchy evidence within institution champions across seven partner universities. The Director said, *"If I made a decision there was often a backlash that halted implementation. The alternative would have been to disenfranchise a partner institution and this would have posed strategic risk to ELibrary"*
2. A powerful vision and set of key performance indicators of how the organization will look following the change must be developed and communicated to all stakeholders.	Verbal and visual expressions of the vision were always there, backed up with a clear performance framework, but…	The vision was not powerful enough to change deeply embedded practices and data was not absorbed. Said one key cataloguer, *"I wasn't sure what the metrics were and why they mattered – sorry"*
3. The first steps into the transition must be understood and made easily accessible, with a sense of urgency created to help overcome any inertia.	Motivation was maintained throughout – no-one stopped trying to change, but…	The urgency was not felt as usage and user satisfaction was increasing for the first three years - just not by enough.

'Success factors' derived from literature (Table 1)	Positive evidence from the ELibrary case	Lack of positive evidence, or evidence of confounding conditions from the ELibrary case
4. The first steps must include some quick wins in order to ensure continued investment in the change and to motivate people to want to continue with the transformation.	Early steps were implemented more or less successfully (in first two years), but early wins did not strike at the heart of the challenge – more automated metadata creation – so same number of people could have been more productive.	Fundamentally, prioritising productivity over quality was the sticking point. *"We had our new focused strategy, but what cataloguers were interested in was strategic aim 2 – being the first port of call for discovery… etc. – I guess they assumed our No.1 aim of financial viability was nothing to do with them?"* [CHG1]
5. Change leaders must be appointed who are skilled in engaging people's hearts and minds.	Great efforts were made to connect with people through various means – storytelling, dealing with change workshops, coaching – a big investment in people.	Hearts and minds were engaged, but with no resolution of issues.
6. The performance gap between the 'as is' and 'to be' states must be understood and communicated, to prevent inertia and to spread dissatisfaction with the current situation.	Very clear, from external reports, from usage stats (although they were growing) and from feedback from market research. *"The market research was killer evidence for the need to change…"* [MGR2]	Everyone knew the situation, but there were varying ideas of what to do about it. A manager commented that *"KPIs and other stats didn't seem to be fed into the IRC projects so decisions were taken without data"* [MGR2]

'Success factors' derived from literature (Table 1)	Positive evidence from the ELibrary case	Lack of positive evidence, or evidence of confounding conditions from the ELibrary case
7. Appoint visionary, creative and empowered leaders to drive the change.	The primary change agent was recognised by the whole team as visionary and creative, albeit with a very consensual management style.	Most of the next layer of line managers were more closely aligned with their staff and the status quo. *"Some managers were supportive…but weren't able to influence anybody else to change their position."* [CHG1]
8. Create a powerful, guiding coalition and supporting governance arrangements to ensure that decision-making is focused moving the organisation forward towards its goals.	All the decision-makers within ELibrary were engaged and empowered, but…	They could not agree so were not decisive enough. A cataloguer said: "*It was frustrating. Consensus was getting us nowhere and it would have been nice to have decisions made*"
9. Put in place a change management plan that maps out activity along the whole transition curve. The plan must include activities to re-energise the change work if/when inertia strikes, learn from experience, plan for consolidating improvements and plan for institutionalising new approaches during the 're-freeze' stage.	Plans were in place, maintained, flexed to deal with emergent change, visible, colourful, words and pictures, discussed, but…	Not good enough in terms of planning what needed to happen to change behaviour. Perceived by many as too granular. *"This felt like our last chance to get it right – but the new blueprint was quite unwieldy" "It felt like revising for exams at school – instead of revising you spent ages creating a beautiful revision schedule".* [CAT1]
10. Ensure that attitudes to change are continually understood and addressed to respond to any resistance and to overcome any complicity.	Absolutely understood – the long history and what that meant for staff was completely appreciated.	But addressed? Not quickly enough. *"After four years, people were gradually getting more willing to change and to compromise and consider more unified options and in the last year there's been lots of innovative thought"* [CHG1].

The ELibrary change team were educated and aware of organizational change management 'best practice', and programme and project management 'best practice', through the four-year period of change. They engaged a range of specialist consultants to assist with the work, deploying state of the art practices and techniques. The challenge, to fundamentally change the way librarians, across seven partner institutions work, to provide value-for-money services in an age where scholarly digital literacy in higher education is essential, was always recognised as difficult. It was however, essential for the survival of the service.

Analysing the data from the case retrospectively, it is clear where there were shortcomings in change management practice as compared with the 'success factors' as currently understood. It is proposed, however, that at the time of implementation, change management practice was as good as it could have been without the more granular understanding of the organizational routine that was being changed, as conducted by this study. Interviewed again in April 2011, the primary change agent for ELibrary said:

"If only we had done your research after two-years not four – we would have understood so much more about what we needed to do to get an agreement on the way forward. Doing the research now has taught me so much about what I'll do differently in my current role, but we could have learned those lessons in the middle and saved the service."

From a practitioner perspective it is a compelling idea that the accomplishment of planned change in practice, in many organizations, would be significantly enhanced if the interplay between change practices and the organizational routine being changed were better understood. Armed with this information the 'prescriptions' for planned change would serve the situation more effectively, ensuring that the balance between stability and change was tipped in the right direction, through more granular crafting of context specific solutions.

4.6.1 Unpacking the change to the organizational routine in the focus group

The following text summarises the focus group discussion involving the primary change agent (the Director of ELibrary), the manager who led the project to create a unified collections policy and cataloguing guidelines and interface, and a long-standing and respected cataloguer. These people are referred to as CHG, MGR and CAT respectively. The purpose of the focus group was to further 'unpack' the organizational routine intended to change and understand the value of this to the company. The researcher facilitated the discussion.

4.6.1.1 Narrative from the focus group

The participants discussed what they saw as the routine as follows:

Search and select a website, then create a record through the cataloguing interface, to present it as a record in the presentation layer.

They went on to talk about whether the record would be accessible by users through a search, browse or list.

"…what struck me is that we did decide that a big part of the organisation routine was going to be about creating a database. It could have been slightly 'Delicious' (an internet technology of creating useful lists of resources through social bookmarking) but (in the end) it was about feeding that database wasn't it?" [CHG]

But was there one routine?

"Although we're talking about 'the' routine in actual fact there are probably lots of different sub-routines. If we start at the end with the actual presentation of the resources to the user, what tends to happen across ELibrary is you get quite different styles of record, some with very short descriptions, some with very long descriptions, some with lots of key words, some with no key words which means that for the user some groups of records will be easier to search, some

subject areas will be easier to browse, this is partly historical, it's partly to do with different perceptions of the user needs" [CAT]

The reality was that 10+ sub-routines existed across ELibrary reflecting the different habits, and beliefs about what would constitute a usable record for different academic and student usage.

"However, the whole purpose of creating ELibrary was about rationalisation and one database, creating the one database and one system with associated processes and practices and … there was one database behind the scenes but everybody worked in ways that they wanted to work. The database or the cataloguing system had to change to meet their needs, rather than people having to change to rationalise their behaviour." [CHG]

"We were beginning to get there in 2008/9 with the rationalising metadata project. There was actually beginning to be a consensus that yes maybe we can have one cataloguing interface now and maybe we are ready to ask the tech team to rewrite it so there's just one for all of us, so I think very, very slowly people were working round to this perspective." [CAT]

There was evolutionary change, but following the big change to create a unified brand, the integration of practices behind that brand was a slow process. The rate of change was entirely governed by the cataloguers doing the work given the deeply routinized views about the 'right way' to do the job given their subject matter experience – the ostensive aspects of the routine.

From the Change Agent's perspective:

"I always thought that we could separate off the delivery part of the routine, you know, finding, selecting, creating the record, from display of the record. So you could search, browse, list, depending on which view you wanted but behind the scenes we'd be flexible and responsive to providing those different views. To me it was always about rationalising behind the scenes and also making it cheaper but that goes against the mind-sets of people who were so close to their subjects that they wanted, right from the creation point, it to be different,

*rather than just different at the presentation point because the people who
wanted to work with us were subject experts."* [CHG]

The vision of the Change Agent was proven technology, as used by other
national and global services, so MGR asked if the persistence of sub-routines
was due to the user's perception of the subject or the ELibrary staff's perception
of the subject, particularly influenced by a stable work-force of many years
working for established and powerful universities.

*"If you think about how we did ELibrary when we came together, we got
everyone together from very different backgrounds, very different working
practices and wrote a set of guidelines, it's like CHG said - try and rationalise
but it got then stretched and pulled so many different ways, whereas if we'd
been starting from scratch and might have said right these are the rules, these
are the guidelines."* [MGR]

*"But I'm sure they would have been adapted to be customised for the different
subjects."* [CAT]

A single collections policy, cataloguing guidelines and cataloguing interfaces
were established in late 2006, but never revisited.

"I think we used it as a foundation for each of the subject groups to write subject
specific guidelines, I don't know about the other subject groups but we as a
group did update our guidelines periodically, I don't know whether the central
ones were ever updated were they?" [MGR]

"I don't think so." [CAT]

Even within subject groups, teams of 10+ people across two universities
maximum:

*"we would have meetings with our counterparts, even agree things, both parties
would then go away and do different things."* [CAT]

The MGR said: *" I was struggling to get my head round the idea of the routine not as just as a black box but really to start to look at it and I guess we did that in the joint meetings but I guess we didn't unpack and talk about our psychological take on it, you know you'd be having a discussion and agreeing but in your head you're thinking oh no I'm not going to do that, when I go back …"*

The group discussed the time, in 2008, when a person was appointed in the central team to try again to establish central processes, with a view to increasing efficiency of the overall routine. After heavy consultation and involvement of people doing the work, documentation was created, and notionally agreed in team and management meetings, but this was largely ineffective.

Said CAT, *"there was no penalty for not doing it, I don't mean penalty in a bad way, there were no consequences"*

The general observation is that this situation persisted not because people were not performing, or being awkward, but because the idea of what was needed to be done to serve users in that community was so strong that this is what always remained at the end. Remarked CAT *"…you know however much you pushed and shoved, what people, scholars in this area need is this, therefore, why wouldn't we give them what they wanted, I'm not going to do a lesser job"*

So what about what users thought?

"Even when we were systematic about asking users, whether it was the research into researchers or whether it was the market research and their feedback, if there was anything that came up then that conflicted with people's perceptions with what we should do, it didn't happen, so even when we had evidence…" [CHG]

In the reflective diaries and also in the interviews, quite a lot of people talked about the user feedback but in very different ways, some people said that the user feedback was absolutely clear, that change was needed and this was how

we needed to change. Other people said the user feedback wasn't clear at all because it was this sub set of users and the wrong questions were asked. There were some real differences of opinion.

"But you could read user feedback both ways, it was never that conclusive and when we did get masses of positive feedback from things like the user surveys, it was self selecting, it was people incentivised with vouchers and then when we went to market research to try and get something a bit more impartial, the results that we found were people like what you do but there's a bit of a gap here or something a bit wrong there, so a few minor tweaks kind of feedback. The only other thing I would say is we never had very much information about non use and to me there was always a sense of ok well our users say X, Y and Z, therefore we should continue doing A, B and C but the fact that that was such a small percentage of the potential market never seemed to kind of make people stop and think" [CHG]

"I think they probably did but they didn't voice it, some may have. It was scary you didn't really want to go there" [MGR]

"Well if everything in your subject area, the feedback from the people who do use you is positive, it's actually quite difficult to even rationalise how it could be different isn't it?" [CAT].

So if what actually existed were multiple sub-routines; as many as there were people, you might argue that the feedback from the users that each person saw was reinforcing of what was being done so there was nothing in that feedback loop that would have triggered any change, it was reinforcing that this is the right way.

"Usability based on dodgy market information or not dodgy, limited" [CAT]

By mid 2007, the team had established baseline metrics for Key Performance Indicators that provided good data about how the service was performing in the context of the wider world.

CAT was asked, how those metrics influence her.

"Not at all, I wasn't even sure I knew what they were. I must have thought of it at some point – sorry" [CAT]

"It's just hard to take because they mattered so much to me…' [CHG]

It appears that there is evidence of a duality between the ostensive and performative aspects of the routine, supported (or not) by rule-based artefacts and metrics: mutual reinforcement of what people do based on what they believe should happen. The idea of what this work should be/is was so strong in the minds of the people doing the work that something like KPI's that would inform this to the contrary had no impact other than to reinforce the status quo.

Really committed people doing what they thought was the right thing, getting feedback that it was the right thing from within the subject group, so why would they do something else?

"I guess the history was just really enforcing this and I guess that's the bit that, in all the conversations we had, we never even contemplated that there was just such a clear idea of what needed to be done by people – but yet we shared lots of different ideas of how to do it differently" [CHG]

"…but I also see when I look at all the partners, I see that managers never had any power to change behaviour of the individuals, it wasn't just me that couldn't do it…" [CHG]

If you were to ask - where was the power?

"With individual cataloguers…" [CAT]

Because ultimately they were the only ones creating anything, that's what ELibrary is, it is the internet-resource catalogue.

* * * * *

At this point in the discussion a high-level representation of the time-periods that participants identified in reflective diaries was shared (as outlined earlier), and the fact that although some people identified 6 or 7 time-zones, and others 3 or 4, that there was unanimous agreement where the lines were drawn between the time-periods.

CHG remarked, *"…but you know this time-period (2), when I look back I can remember how I felt and I can remember the blueprints and project briefs and describing the work that needed to be done but when I look back and remember how I felt, when we got that news of the 15% year on year cut, I actually thought that's impossible without another massive change and I didn't have the stomach to lead on that, after what we'd just done, I actually thought if I try and start another major change programme which probably at that time it would have been about automating the metadata, that would have meant the end of the cataloguer which probably now with hindsight that's what we're doing now isn't it, but at that time I didn't have the stomach to do that but that's what should have been, what we're doing now basically, what we've been forced to do now should have been done then (end of 2007) and we could have had loads of amounts of money for R&D and publicity and comms instead but I just didn't have the stomach for it but I knew, I know now when I look back, I knew that's what we should have done."*

But will you ever know whether to build the resources in a different way would have been valuable to anybody?

"Yes, we will find that out because now we'll bung it all in Delicious or something and see what happens - so we will know" [CHG]

"But also we're three years down the line and things like Delicious and so on have only really come on in the ELibrary years, so there may not have been the options back then that there are now" [CAT]

Also, at that time (in 2007) usage was going up. It peaked at the start of the 08/09 academic year, then dropped sharply following a two-month long operational problem with servers and access.

In terms of artefacts the cataloguing guidelines, KPI's, and to some extent, roles have been discussed. Were there any other documents or systems or things that influenced how the catalogue was built, such as the cataloguing interface?

"There was no single cataloguing interface from the start of ELibrary. How much that was because none of us cataloguers at the beginning when it was being created, never thought about the fact that we only needed one and how much it was a case that everybody told the tech team that they needed different things so that's what they did" [CAT]

The really interesting time-period is this third one where some of the comments from reflective diaries were, "it was obvious we needed to change", "there was killer evidence we needed to change the IRC", "we were hopeful but it wasn't enough", "re-launch yet still indecision", "what could have been a development and improvement was a period of consolidation and retraction", "good in principle", "frustrating and disappointing", "last chance for big changes but still too embedded in our practices", "hopeful but too little too late".

The message seems to be that efforts to bring about the necessary step-change in performance were recognised, but yet dominant practices persisted within the routine.

"I might be wrong in saying this, we get all these good ideas but in practice it wasn't possible to implement them" [CAT]

"I think for me it really is coming down to the fact that we're all different, we all have a standard routine that might have some guidelines written down around it that we're supposed to follow but we all deviate to different degrees from it, that's it in a nutshell" [CAT]

"I wonder, when I look back, I wonder whether if we knew that this is the point we would be at now, you know back at the end of 2007, would you have been prepared to change and I still think the answer is no" [CHG]

We discussed the strategy workshop in July 2008 when the team said "we've got to get off the fence here, we've got to stop talking about strategic dilemmas and make some tough strategic choices". Stories were shared at that session about what would happen if that was successful, and then unsuccessful. *"…I remember, people begging on the street and all that"* [MGR]

It was at this time that the strategic aims that went into the re-draft of the blueprint and new projects in time-period 3 were devised. Looking at the documentation, it's clear that although there were new and clear strategic aims and projects formally initiated to address all of them; actually there were only a subset of them that were ever really progressed and they were the ones that fitted where people were comfortable.

The change to the routine to present information in 19 subjects (aligned with courses of study in HE) rather than 4 subject groups came from strategic aim 2 – to become the first port of call for the discovery of academic internet-based information - but that project was successful in delivering because that's the work that the team felt they could do – to change the presentation of the information, but none of the underlying search, select and creation routines.

The number one strategic aims were all about money, either finding more of it or doing what was done more cheaply and that seemed to be placed in the 'too hard' category. All the data was perceived as reinforcing that what was right, was right, so then there was short-term sanity because the picture matched.

4.6.1.2 Summary of focus group

The focus group discussion was successful in promoting an in-depth conversation about the organization routine, it's sub-routine variants, and the many attempts to change the situation over four years. Artefacts including written policy and guidelines, the man/machine interface for presenting records,

key performance indicators/metrics and user feedback were discussed in the context of the deeply embedded 'idea' of the routine (ostensive aspects), the influence of this on performances of the routine and the reinforcing nature of feedback, such that the core routine remained largely stable over four years, despite significant attempts and investment of funds to change it.

The focus group did not create a visual map of the routine during the session – the group being much more motivated to discuss what they understood the routine and sub-routines to be in depth. It would be possible to create a visual map from the narrative, but is not judged to be necessary. Visual mapping was intended to be a technique to help the participants' access previously tacit knowledge, but in the situation they were able to do that through discussion.

4.7 Summary of findings from the ELibrary case

Data analysis for the ELibrary case followed the five-step approach defined in section 3.5. This was designed to explore the influences on the internal dynamics of the core ELibrary routine undergoing planned change from a number of perspectives, and to build as complete a picture as possible from the data by considering replicating, grounding and organizing strategies for theorizing from process data (Figure 7). Underpinning this was the conceptual model for the research defined in Figure 5 and Table 4.

4.7.1 Overall findings

Findings from the ELibrary case show clearly that the various attempts over four years to change the way that the core routine was performed were unsuccessful in changing the inbuilt idea of what the routine should be, and should create, by the people doing the work. Clearly there were patterns of action embedded in the routine that were stronger than the influences exerted by change agents and their change and boundary-spanning practices.

Table 13 below summarizes the findings in relation to the research questions and related claims in the literature as detailed in Table 5.

Research question	Claims made in the literature	Summary of findings from ELibrary case
Spanning the temporary/ host organizational boundary. How do change agents, positioned in a temporary organization, manage across the temporary/ host organizational boundary in practice?	10 'success factors' for planned change are claimed to always be relevant (as synthesized from the literature in Table 1).	**Claims in the literature are confirmed and extended** – There was positive evidence of all the 'success factors' being in place, albeit with some areas for improvement in hindsight, but with no obvious deficiencies that could explain the challenges in bringing about change. The synthesis of 'success factors' from the literature provided a useful starting point, they were relevant, but were not enough. 'Success factors' are not sufficiently granular and context-specific to reliably guide change and boundary-spanning practices.
	Integration practices are important – effective boundary spanning (Balogun et al, 2005).	**Claims in the literature are confirmed.** Boundary spanning that effectively aligns players in the change and influences them through 'hard' means e.g. performance management, and 'softer' means e.g. relationship management, is vital. Change agents need to be close enough to understand perspectives and to respond dynamically to concerns as they arise.

Research question	Claims made in the literature	Summary of findings from ELibrary case
	Isolation practices are important – justification of temporary team (Lehtonen and Martinsuo, 2008).	**Claims in the literature are confirmed.** Too much involvement of disparate parties too early reduces the change agent's power to influence. See point below also. Evidence to justify isolation practices for temporary change teams was not expected in this case, yet there is evidence that it was easier to get things done when change agents were able to plan what to do before trying to do it.
	The degree of embeddedness of change agents in change recipient networks is influential. More radical change is enabled by larger 'structural holes' in change agent networks, i.e. more distant relationships (Battilana and Casciaro, 2012).	**Claims in the literature are confirmed tentatively.** Evidence that change agents were too close and larger 'structural holes' in the change agent's network with change recipients' was needed. There was a significant overlap between the temporary and host organization (large shared domain between multiple actors) that was seen at the time as helpful given the degree of change needed, but in retrospect made unpopular change difficult to achieve.

Research question	Claims made in the literature	Summary of findings from ELibrary case
Attitudes to change How do the attitudes to change of multiple actors embedded in internal structures/ ostensive aspects of routines impact on the delivery of desired benefits?	If change efforts are to deliver the benefits desired, change agents need to understand the positive and resistive attitudes to change of change recipients and their line managers at cognitive, emotional and intentional levels (Pideret, 2000)	**Claims in the literature are confirmed, and extended.** Understanding is not enough. Change agents did understand but empathised too much with the change recipients' position that a good job was being done already. This perspective, embedded in the internal structures of change agents and line managers, constrained their ability to champion a route to change. Exploration of internal structures/ the ostensive for *all* actors is necessary to make sense of the situation.

Research question	Claims made in the literature	Summary of findings from ELibrary case
	Cognitive, emotional and intentional aspects of structures must change before performances can follow in a sustained way (Espedal, 2006; Feldman, 2000, 2003, 2004; Howard-Grenville, 2005; Lazaric and Denis, 2005; Rerup and Feldman, 2010; Steen, 2009; Turner and Fern, 2012).	**Claims in the literature are confirmed strongly.** There was compelling evidence that despite everyone understanding why change was vital, they 'almost couldn't bring themselves' to do something that they perceived would be of lower quality for users. All actors were aware of exogenous pressure to change and were willing to change in principle. As a result performances changed to some extent, but in the areas that were perceived as having minimal impact on the routine overall. The case primarily highlights the sustained energy that is needed to create a compelling enough vision to change routines that are deeply embedded in practice. Drivers for change that appeared obvious to people working outside the routine (including economic, sociological and technological factors) could not be translated into a changed reality for people working with the routine.
	Policy, rules and other artefacts have no influence unless embedded in the ostensive (Reynaud, 2005).	**Claims in the literature are confirmed**. Policy, plans, reducing budgets (shared external structures) were noted but not internalised. Similarly, performance metrics (shared outcomes) were noted but not internalised.

Research question	Claims made in the literature	Summary of findings from ELibrary case
	The ostensive aspects of routines act as a guide to action, to justify actions and to consolidate actions such that variance in performance is selectively retained in the ostensive (Feldman, 2000, 2003, 2005; Feldman and Pentland, 2003, 2005; Howard-Grenville, 2005; Pideret, 2000).	**Claims in the literature are confirmed tentatively.** There is some evidence that when presented with contrary evidence to embodied ostensive aspects arising from market research and user feedback, that the data was selectively interpreted to justify and consolidate the status quo. Remorse was almost shown in retrospect by the people responsible for managing the routine – a real sense of 'we needed what we have now, three years ago - and we could have done it…'.
Influence of rhetoric How is rhetoric (spoken and written communication) of multiple actors during planned change used to influence behaviour?	Progressive, regressive and stability narratives are used to make sense of, and narrate responses to planned change, but the interplay of these can cause strategic ambiguity (Sonenshein, 2010). Planned change 'success' depends on there being minimal ambiguity within and between multiple independent actors, facilitated by explicit understanding of internal and external rhetoric (Steen, 2009).	**Claims in the literature are confirmed.** In time-period 1 the dominant rhetoric was 'stability is OK for now', and this made it more difficult for the progressive (things are not OK) rhetoric in later time periods to be heard. There was clear strategic ambiguity caused by the interplay of progressive, regressive and stability narratives.

Research question	Claims made in the literature	Summary of findings from ELibrary case
	There is utility in understanding explicit resistance to change (Ford and Ford, 2009; Pideret, 2000; Waddel and Sohal, 1998).	**Claims in the literature are confirmed, and extended.** Understanding and acknowledging perspectives is not enough. Change agents were close to change recipients and their line managers and heard resistive attitudes to change. These were fully understood but seen as naïve given the weight of exogenous pressure to change. However, the depth of empathy with resistive attitudes compounded the challenges of bringing about change.
	Change agents have a vested interest in promoting the 'resistance to change' rhetoric (Ford et al, 2008).	**Claims in the literature are confirmed.** Some evidence that this rhetoric was used when change agents were exasperated and their plans weren't working – a defensive mechanism that is understandable but serves little positive purpose.

Research question	Claims made in the literature	Summary of findings from ELibrary case
Lewinian three-step model Does the Lewinian (1947) model of 'unfreeze-transition-refreeze' remain a useful guide to understanding planned change?	The equilibrium of driving and restraining forces for change needs to be disturbed (unfrozen) before old behaviour can be unlearned and new behaviours adopted (Lewin, 1947 as reported in Burnes, 2004).	**Claims in the literature are confirmed.** Exogenous driving forces for change were not significant enough to change endogenous restraining forces. This was compounded by the fact that patterns of action had significant variation across different change recipient teams. The situation was never 'unfrozen'. It is a useful guide but not enough to guide improved planned change practice.
	For continuous improvement to occur, patterns of action need to be made visible and 'frozen' (Abel and Sementelli, 2005; Weick and Quinn, 1999).	**Claims in the literature are confirmed.** Patterns of action were made visible and 'frozen' and some continuous improvement did occur, but this was not the objective - a step change was needed requiring a greater imbalance between driving and restraining forces.

Research question	Claims made in the literature	Summary of findings from ELibrary case
Utility in studying routine dynamics Is exploration of the internal dynamics of routines undergoing planned change necessary to understand how routines change or remain stable?	The performative and ostensive aspects of routines need to be distinguished and each studied specifically, because it is not possible to make sense of routines by only looking at actions and their outcomes (Zbaracki and Bergen, 2010).	**Claims made in the literature are confirmed, and extended.** Understanding routine dynamics is a powerful explanatory approach – to make sense retrospectively of routines. There is no evidence in this case to show that the approach might be useful prospectively as part of planning and delivering planned change although this possibility is promising. i.e. to explore internal dynamics of existing routines as a precursor to deciding how to try to change that routine.

| Primary research question

What influences the internal dynamics of organizational routines undergoing planned change? | The relationship between the ostensive (in principle) aspects of routines and the performative (in practice) aspects is simultaneously enabling and constraining with the routine representing the patterns of interdependent actions of multiple, actors (Feldman and Pentland, 2003).

Researching the routine as the unit of analysis is necessary to focus on patterns of action rather than on any one of the individual micro-foundations of routines (Pentland and Feldman, 2005).

Artefacts cannot represent patterns of action (Pentland and Feldman, 2008), but they are intermediaries in shaping the interaction between the ostensive and performative aspects of routines (D'Adderio, 2008, 2010; Hales and Tidd, 2009). | **Claims in the literature are confirmed.** Overall in ELibrary, researching the routine as the unit of analysis and unpacking it served to demonstrate why seemingly competent change efforts over many years were not successful. In ELibrary, the strategically-significant routine was recognised by all actors. Artefacts representing the routine itself, and those artefacts representing the planned change to the routine only served to consolidate unchanged patterns of action through a selective retention mechanism. This confirms that artefacts cannot be relied upon to change behaviour. Primary influences on the internal dynamics of routines undergoing planned change are the cognitive, emotional and intentional attitudes to change held by multiple, interdependent actors, as informed by their perceptions of organizational power, incentives/sanction and methods of communication. Staff were focused, purposefully and genuinely, on carrying out the work in a way that matched their understanding of what was needed for ELibrary to fulfil its strategy. The 'idea' of what the routine was and needed to be (internal structures/ ostensive aspects) reinforced habits and drove actions (performative aspects). Outcomes from action were seen to reinforce that the 'idea' was correct, so validating stability. Understanding the influence of internal structures/ the ostensive aspects of the routine undergoing planned change is critical to make sense of actions and outcomes. |

4.7.2 Reflections on the research method

Using the Strong Structuration informed design (Stones, 2005), the cognitive, affective and intentional 'perceptions' and the actions of multiple actors within

the same planned change, were codified. The shared 'inputs' (external structures and related artefacts) and shared 'outputs' (outcomes and related artefacts) were uncovered. The data shows the requirement (if planned change is to proceed as planned) for external structures, including roles and resources as well as change and boundary-spanning practices, to be effective in changing the judgements that people make prior to action. Such judgements, conceptualized as internal structures in Strong Structuration/ostensive aspects of routines influence how organizational/power structures, incentives and sanctions or methods of communication will influence habits and choice of action (or inaction) during the change process (performative aspects). Outcomes arising from the combined action of multiple actors were highlighted, and the relationship between these outcomes and subsequent reinforcement or change of external and internal structures, can be seen in the data.

Adopting Stone's (2005) quadripartite model of Strong Structuration, and a composite research strategy, was achievable based on the advice offered in the literature. In this case, it proved easy to access relevant data using a pre-designed reflective diary template, with follow-up individual interviews, and a focus group.

It could be argued that the design would have been stronger if more real-time data had been collected. However, the researcher made a trade-off between this, the demands on a part-time researcher's time and the need to study the case historically and processually using participant accounts, and documented evidence of outcomes as suggested by the literature (Pozzebon and Pinsonnealt, 2005; Lazaric and Denis, 2005).

Few empirical studies exist that explore routine dynamics; fewer still for routines undergoing planned change. As noted by Lazaric and Denis (2005) and Becker (2005), studying routines in this tradition is difficult. This first case provides insights that progress the conversation about the influences on the internal dynamics of organizational routines undergoing planned change.

4.7.3 Selection of the next case

Based on experience in researching the ELibrary case, the same research method was adopted for a second case. Given, however, that the experience in ELibrary was that planned change was not accomplished despite competent attempts to do so over a number of years; the next case was selected to study a planned change that was perceived by the host organization to be successful, over a similar period of time. The choice of a contrasting case was judged to be appropriate to see if similar influences on the internal dynamics of the routine were at play, despite the outcomes.

5   FINDINGS CASE 2: CITY TRANSPORT

5.1   Overview of the Chapter

In this chapter, findings from a second case are detailed. In the same way as in Chapter 4, this empirical study addresses the question 'what influences the internal dynamics of organizational routines undergoing planned change?' and the more detailed questions included in Table 5. Findings are presented using the five-step data analysis process outlined in Chapter 3, but as noted there, data analysis was an iterative not linear process, guided by the conceptual model depicted in Figure 5 and Table 4, but with coding following an inductive process. The five-steps facilitated an examination of the 'unpacked' organizational routine as it was changing. This was achieved by drawing on detailed individual accounts and the 'formal' story as documented in organizational artefacts.

Investment in planned change over the past five years has been successful from the perspective of the host organization, and as confirmed by externally published, maturity model-based analysis. The external narrative is of significant improvement with a 'bottom-line' value to the organization.

The analysis that follows tells the narrative of the case building on different sources of data to 'unpack' the routine primarily influenced by the change, and to examine the influences of the internal dynamics of that routine over time.

Figure 9 illustrates the structure of the chapter.

Figure 9: Structure of Chapter 5

5.1 Overview of the Chapter

5.2 Description of the target organization and the data collected

5.3 Definition of temporal brackets

5.4 Analysis of methodological brackets for each type of actor, and within each temporal bracket

5.5 Content analysis of documentation

5.6 Analysis of declared change practices

5.7 Summary of findings in response to the research questions and claims made in the literature as summarised in Figure 5, reflections on the research method and next steps,

5.2 The target organization: CityTransport[6]

The organization selected for this second case is CityTransport, an organization that manages the public transport network in a major UK city. The part of CityTransport that the research focuses on is that concerned with 'asset renewal', i.e. managing the investment in new infrastructure, vehicles, systems and organizational capabilities.

The CityTransport case satisfies all the criteria for case selection outlined in 3.3. It is also provides a contrast to the ELibrary case given that CityTransport believed the planned change in question to have been very successful.

The intended change was to transform the routines associated with the governance of capital investments to renew assets. Governance of such projects relies on appropriate decision-making at each stage of the investment process. According to CityTransport, effective governance is perceived to have a tangible value that can be measured in terms of cost certainty, schedule certainty, productivity, quality and customer satisfaction. The organizational routine associated with 'gate management' (a term used by CityTransport) is the one that has been researched. This involves the preparation of documentation to enable the sponsor of the investment to decide what actions the wider organization should take in terms of continuing the work, or not, and under what conditions. Conceptions of the routine intended to change are explored from the perspective of participants later in this chapter.

Investment in change activities started in late 2007 and is on-going. Findings cover the period from late 2007 to early 2013. The original case for change asserted that an increase in the maturity of governance to support capital investment at decision gates from level 1 to level 4 (as measured against a 5-

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[6] The name of the organization and other details of the case have been disguised to protect client confidentiality.

level UK government maturity model) would equate to £422m of value (8% of capital spend over 5 years).

The acronym used for the change within CityTransport was PMF, i.e. the PMF programme was focused on changing the 'gate management' routine and in doing so creating significant financial value. The PMF programme was extended to a wider set of transport businesses in 2012 and rebranded, however, the acronym PMF is used throughout this analysis for ease.

5.2.1 About CityTransport

This information is provided to help the reader to engage with the data provided by participants. The research is focused on the influences on the internal dynamics of the organizational routine undergoing planned change. The routine and change are clearly situated in an organisational setting, but the findings are related to the routine specifically, not the wider organisation. The organisational influences on the routine undergoing change are conceptualized as external structures.

CityTransport is a publicly-owned organization that exists to implement transport strategy on behalf of the elected mayor of the City. CityTransport operates multiple modes of transport in the City and manages (1) the means of paying for those services, and (2) collecting funds from schemes designed to reduce private transportation and encourage public transport. A large directorate within CityTransport is that associated with 'asset renewal', i.e. managing the investment in new infrastructure, vehicles, systems and organizational capabilities.

Decision-making associated with capital investments into asset renewal is complex. There are many requirements to attend to and at any one time approximately £5bn is committed to capital projects and programmes. The organization needs to exercise suitable control over the allocation of these funds, and how the funds are spent over time, to ensure that money is spent on the right schemes. In line with 'normal' project-based governance, CityTransport operate a managed life-cycle with decision 'gates' established at

key points, e.g. to approved concepts, designs, implementation plans and benefits realization. The work intended to change in this case relates to the organizational routine used for 'gate management' (a CityTransport term). This should be understood as being associated with preparing information and communicating this to relevant stakeholders in such as way as to enable optimal decisions to be made about funding, and control of expenditure. Within CityTransport the planned change to this work was referred to as the PMF programme.

5.2.2 Access to data

Senior managers in the Programme Management Office (PMO) within CityTransport were interested in the research, and enabled access, because they were motivated to learn lessons about their work to date and to identify areas of improvement for the future.

Following piloting and amendment of the participant reflective diary, based on the input of two people (one change agent, one change recipient), a request to a number of change agents, change recipients and their line managers was made by one of the senior PMO managers.

30 people were asked to spend up to two hours of effort on this task. These people fell into one of three categories:

> **Change recipients**, i.e. those people responsible for managing the investment projects, and for preparing documentation to enable sponsors and other senior managers to make decisions at each gate. In this change, they can be viewed as the 'operational' resources within the asset renewal part of CityTransport.

> **Line managers** of change recipients, i.e. those people responsible for managing large portfolios of investment projects and in some cases sponsoring investment projects and making recommendations of how best to progress CityTransport's capital investments at decision gate

meetings. Note that in all cases, line managers/sponsors identified with the role of change recipient.

Change agents responsible for changing the performance of the organizational routine, to make governance of investments, and the investments themselves more efficient and effective.

Data was collected in the following ways:

- Reflective diaries were completed by three change recipients, three line managers and four change agents. Note that two of the participants spent the time of the change in different roles. One line manager was part of the change team for one of the four time-periods identified – transferring in, then back out of the change agent role. One change recipient transferred to the central change team for time-period 3 and remained in that role. This has been reflected in the analysis of their reflective diaries.

- A follow-up interview was conducted with five of the 10 participants.

- Two focus groups were held. The first focus group involved two line managers including the one person who had spent time in the change team mid-change. The second focus group involved three change agents, including one person who was a change recipient for the early part of the change.

5.3 Definition of temporal brackets

Although the change team can identify at least five distinct time-periods that correspond to the change plan they devised, starting with the case for change and progressing through to full implementation and continuous improvement; the consensus of all participants is that the change had three distinct time-periods.

These are described below, as recounted by participants, in Table 14:

Table 14: CityTransport - summary of participant defined time-periods

Time-period	The collective story
Time-period 1 The period from **mid 2007 to mid 2009** when the case for change was made, benefits defined and the first release of the PMF was developed and implemented. Baseline 'maturity' was assessed internally prior to implementation of PMF v1 in July 2009.	The change began at a turbulent time in CityTransport's history, during the re-merger of transport businesses that had been managed as separate entities for a few years previously. There was wide buy-in from staff for the re-merger activities, but the years previously had introduced significant complexity into the capital investment aspects of asset renewal, and how the people involved in this work engaged with the operating parts of the business. The case for change proposed the adoption of an externally developed maturity model to measure, and then drive the improvement of the project management of capital investments. The size of benefit (declared as £420m but with some confusion about what this represented, and over what timeframe) was seen as 'worth-it'. Moreover, the people responsible for delivering the asset renewal programme knew that the lack of consistency and transparency in decision-making was causing inefficiency, and stress. The PMF programme 'pushed on an open door' and was welcomed, particularly as the approach taken was to build on exemplars – *"the best of what you've had before"*. Baseline maturity was assessed at level 1 (chaotic) with some pockets of practice approaching level 2 (disciplined practice locally).
Time-period 2 The period from **July 2009 to early 2011** when CityTransport operated in line with PMF v1 whilst in parallel developing, then implementing, v2.	Creation of a product that *"brought the iceberg out of the water"* and enabled transparency and consistency of decision-gate management practices was welcomed, but was seen as too bureaucratic. There was motivation to simplify. The benefits were clear to change recipients and their line mangers, but wider organizational conflicts associated with the role of sponsor existed and were seen to be limiting effectiveness. Existing good practice was continually discovered and incorporated. There was good-will to continue.
Time-period 3 The period from **early 2011 to early 2013** when PMF v2 was embedded into the organizational culture and the next release worked upon and implemented (this time for a wider	In March 2011, an external benchmarking organization led a process that resulted in declaration of level 3 maturity against the external model. Level 3 represents an organization-wide consistency of practice. This was an PR success. No-one quite remembered what level of maturity was originally anticipated after 3 years of change effort, or what this represented in terms of a measurable return on investment. This did not seem to matter and a target to achieve level 4 by 2014 with a further circa. £400m of savings was communicated in an externally circulated report. The change was extended

organization). The time period started with the assessment of maturity by an external benchmarking organization.	to a wider set of transport businesses, now addressing asset renewal investment of >£2bn per annum and affecting 3000 people. Attitudes to change remain generally positive. In parallel, an embedment framework was devised, with the objective of embedding ownership and continuous improvement to achieve level 4 in the businesses. There remain varying perceptions of whether planned changed work is now complete.

Table 14: CityTransport - summary of participant defined time-periods

Broad temporal bracketing, as summarised above, provided a consensus of the key time-periods that punctuated the overall change implementation. These time-periods are used to explore detailed participant accounts obtained through reflective diaries and interviews. Methodological brackets defined by the research method and detailed in the conceptual model, articulated as Figure 5 and Table 4, are used to present this data.

5.4 Analysis of methodological brackets

Tables 15, 16 and 17 that follow are used to bring together the accounts of multiple participants over the three time-periods using the methodological brackets (quadripartite model) from Strong Structuration to articulate the internal dynamics of the routine undergoing change.

Each table is presented linearly, for ease of reading, looking first at shared external structures and related artefacts, then individual perceptions of internal structure/the ostensive, then individual perceptions of habits and action/ the performative, then shared outcomes and related artefacts. Each table represents the whole time-period, within which there were many enactments of the routine by change recipients, and many enactments of change and boundary-spanning practices by change agents and line managers. The data is presented to provide an overview of the influences on the internal dynamics of the routine undergoing change, not a chronological account of how the routine changed (or didn't change), enactment by enactment.

Following each table (for each time-period) (1) summary observations are made to explore links between different parts of the conceptual model, in particular to observe relationships between the ostensive and performative, and the influence of external structures and/or outcomes on future patterns of action and (2) a third-person synthesis of direct quotes from selected participants, put together to illustrate the quadripartite nature of the internal dynamics of the routine undergoing change.

All the data shared are direct quotations from participants. Participants are identified according to their role, e.g. CA = change agent, SP = line manager/sponsor, PM = project manager – the change recipient.

5.4.1 Analysis of time-period 1: mid 2007 to mid 2009

During this time-period, participants shared their views on the organizational context for the change, and the work done to release, then use, PMF v1, and perceptions of antecedents for the outcomes. They then comment on their cognitive, affective and intentional perspectives on roles, power, sanctions and communication during the change, and how this influenced their actions, or inaction as changes to the gate management routine were planned and implemented.

Table 15: CityTransport – unpacking the routine during time-period 1: mid 2007 to mid 2009

Evidence of <u>shared</u> external structures and related artefacts
"We developed a case for change which showed a shortfall in performance across a number of areas. PMF was designed to bring consistency and transparency" [CA1] *"The official case for change wasn't very visible – it was kept in the background to justify the change – I'm not sure who believed the numbers?"* [SP1] *"PM was unstructured with no deliverable timescales, no checks or reporting"* [SP3] *"The change team was very close to the business – we knew the problems and the frustrations – we were solving a problem that needed to be solved – there was a demand"* [CA1] *"We were grappling with a whole range of complexities in the business context (formation of CityTransport from previously disconnected parts)"* [SP1] *"It was organizationally a very turbulent time, with or without PMF"* [SP1] *"Prior to PMF, I had developed by own stage gate process within a programme of 25 projects I was managing as there was an absence of a corporate approach at the time"* [SP2] *"PMF v1 had, I think, 180 products"* [SP3] *"Prior to PMF, my programme had set up its own project governance and gates process – this had the rigour of PMF"* [SP3] *"Prior to PMF project reviews prior to gates were established and poor performance aggressively criticised by senior management with little help or guidance to improve"* [SP3] *"We have a structured regime that wasn't there before"* [PM1] *"The website created by the change team is great – I used it, although I know many of my colleagues didn't and wouldn't"* [PM1]
Evidence of the ostensive /internal structures – relevant to the individual
Change Agents *"I didn't perceive any conflicts – this was a change that appeared to be welcomed at the working level – but I knew I didn't have influence at senior levels – I felt it unwise to be bold in obtaining this support– so I didn't"* [CA1] *"I felt that top level buy-in was never there – although the right words were always spoken…"* [CA1]

"I knew that I needed to build trustworthy relationships with PMs and Sponsors if this was to succeed – they would trust me if the PMF 'product' was good" [CA3]

"Relationships with subject matter experts – the people from around the business who own a part of the PMF documentation would be critical going forward" [CA3]

"It was supposed to be mandatory, but it wasn't really – application was really open to negotiation – we said it was mandatory or else we'd be ignored – we used the word to get attention but we're not a police force – we didn't want to be heavy-handed" [CA4]

Line Managers

"PMF was a minor but welcome distraction for my team – it immediately seemed to me that it would introduce some welcome structure" [SP1]

"A structure and standard approach – any standard approach – was needed" [SP1]

"However I acted, there was no consequence" [SP1]

"Relationships with the change team were cordial" [SP1]

"PMF added to the credibility of the work we were doing so it was an enabler for my objectives and not a constraint in any way" [SP2]

"A more structured approach across the business was definitely required – I was keen to be involved – I enjoyed it – it provided an opportunity to prove that what we were doing already was right – to show our maturity compared to others" [SP2]

"Relationships with the change team were fair" [SP2]

"PMF v1 products were generated from the change team's point of view and there was a kickback – the culture wasn't ready for a governed environment even though I felt it was the right thing to do – many so called PMs did not actually understand what governance was needed" [SP3]

"I didn't perceive any corporate support, but I had freedom to implement these initiatives" [SP3]

"A lot of the success was down to how PMs reacted when it was in truth bureaucratic and over-engineered" [SP3]

"The power is with the sponsor – without an active sponsor it could just be a tick-box exercise" [SP3]

"The senior management approach was definitely the use of a stick – the culture was adversarial at the start – but improved" [SP3].

Change Recipients

"The gate management plan cannot be ignored – there are mandatory products and the network of roles is very defined – a whole group of people would need to

be in cahoots to ignore the system" [PM1]

"Sticking to the system is the lesser of two evils – it costs more and is bureaucratic but the risk is lower" [PM1]

"I personally felt that the change was long overdue and was necessary to bring what I termed as "the iceberg out of the water" – for too long you could be doing what you thought was the right thing only for something to come out of the woodwork and stop you getting on to site for construction" [PM3]

"I was one of the first keen ones to say look lets do this because I saw it as an opportunity not to get turned away from site because with 548 products you did get turned away from site because you'd get there and somebody would say' well what about ABC145 and you'd say what's an ABC145, well its this, well I've never seen that before, well you can't come back on site until this is done and you'd find you'd have to go out and get another eight signatures somewhere - so it made absolute sense to me because you'd trawl through and you're eliminating your risks because aborting shifts is quite a costly game - it really is - so for me it made sense, for a lot of my colleagues it made sense" [PM3]

"A few colleagues thought I was mad for welcoming what some perceived was additional work – some didn't see the value of having a project management framework" [PM3]

Evidence of the performative /action or inaction – relevant to the individual

Change Agents

"PMF was released without any fanfare and with no significant launch. It was slipped out in a very low key fashion because of a lack of visible top level support" [CA1]

"I spent most of my time talking to people" [CA3]

"It was slow, hard work" [CA3]

"I inputted to the planning and control handbook – it was a synthesis of the best examples we had of good practice" [CA4]

"I reviewed – commented – supported and challenged in use – in my area of expertise" [CA4]

Line Managers

"I was relatively passive, though happily participating in the workshops I was invited to" [SP1]

"I shared my work as exemplars of the PMF approach" [SP2]

"I was a receptive client and told my team to just do it" [SP3]

"I had freedom to implement these initiatives, so I did" [SP3]
Change Recipients *"I know the requirements, I agree the way forward with my sponsor and I do what's asked – it protects me"* [PM1] *"I wanted to lead by example so I 'walked the talk' – but it was all about making life easier for myself and my team – I worked hard to get earlier buy-in from my stakeholders and getting action in a timely manner from the so my projects could succeed"* [PM3]
Evidence of <u>shared</u> outcomes and related artefacts (reinterpreted in internal structures)
"Extended effort by the change team was needed to support implementation given that communication was low key" [CA1] *"Over 2-3 months trust was built with the Sponsors and Programme Managers"* [CA3] *"There was a positive response on the whole"* [CA3] *"PMF v1 really enabled me to stabilise, get consistency and strip out wasteful process and products"* [SP2] *"It saved me time – if governance is right a lot of the day to day stuff just happens – it makes my job easier – I have time to focus more strategically"* [SP3] *"It costs us money – the system is bureaucratic – the money is hidden in contractor prices – but it fits the culture of how to do this type of project – and it prevents problems that would cost more"* [PM1] *"The initial gate management plan was a bit clunky and a little unwieldy but it was easier to have access to all 548 products and make a professional judgement on what was and was not required"* [PM3] *"It was a good news story so far – things were so chaotic before than anything would have been welcome"* [SP1]

Table 15: CityTransport – unpacking the routine during time-period 1: mid 2007 to mid 2009

5.4.1.1 Summary observations

There was overwhelming agreement that change was needed to provide structure, transparency and consistency. There was no recognizable gate management routine in the first place, with haphazard decision-making processes relating to the scope, pace and direction of capital investments in the

renewal of assets. The pitfalls associated with current practices were significant for change recipients and their line managers, so there was a desire for change.

The change team adopted a low-key approach, drawing on exemplars, and offering large scale support through various channels of communication, including training, website, 'help-desk' type service and local coaching. The benefits achieved were not particularly visible, other than a widespread belief that there was value in having stability and reliability in the gate management routine.

Within the wider-organizational context of post-merger integration of multiple transport businesses into one, the core duality can be summarised as:

- Change recipients were so confused and conflicted by the pre-change, chaotic routine that the introduction of PMF v1 had support. The bureaucracy was tolerated and because 'something was much better than nothing', change recipients and their line managers complied to adopt more stable patterns of action. As they perceived local benefit, progress continued: a virtuous cycle.

The rhetoric promoted by change agents was a progressive narrative, 'we can do much better if we standardize, it's a big job but we are here to help, to reveal the iceberg and implement the best of what exists'. This narrative was accepted by the change recipients; no strategic ambiguity existed.

5.4.1.2 Specific illustrations of routine dynamics for specific actors

The text that follows is a third-person synthesis of direct quotes from participants, put together to illustrate the quadripartite nature of the internal dynamics of the routine undergoing change, in time-period 1.

Change agent [CA1]

The case for change was approved by the organization with big number benefits attached to it, but this was not made very visible and was not needed to communicate what was necessary. Change recipients and line managers were

struggling and were ready for change, particularly because CityTransport had recently been formed from multiple smaller transportation agencies in the City and there was much confusion (*external structure*). CA1 knew he did not have influence at senior levels and judged it would be pointless to attempt to get this support (*conjunturally-specific assessment*), so he focused his action on understanding current problems that needed to be solved with the (low maturity) gate management routine (*active agency*). This judgement was supported by his past experience in CityTransport over a number of years that to make progress on change initiatives it was better to establish champions in the business rather than rely on a cohesive top-down vision and approach (*general, transposable disposition*). This approach meant that more people were needed in the change team, connecting with people doing the work at multiple levels (*active agency*) and CA1 did feel influential enough to get these resources from within his own line management (*conjuncturally-specific assessment*). The *outcome* from this time-period was a change programme that was delivering value in terms of creating a less chaotic, more predictable gate management routine.

Change recipient [PM1]

Changes to the gate management routine were communicated to change recipients through multiple routes. Some people were involved in influencing the changes, but many others (including PM1) had no influence on what they were being asked to do (*external structure*). PM1 thought the changes increased bureaucracy, and increased costs, but the risks (associated with not being able to progress your project) were reduced so he judged that sticking to the system was the lesser of two evils (*conjuncturally-specific assessment*). PM1 did what he was asked to do (*active agency*). The outcome was a routine that was more costly and bureaucratic, but that was perceived to work better (although no-one was attempting to measure that).

Line manager [SP1]

As with change recipients, line managers were aware of changes and some were involved in influencing them. SP1 had no involvement but people who SP1 trusted were involved (*external structure*). SP1 felt that however he acted – to support the change, or not - there would be no direct consequence for him in his role, however he was mindful to support the changes because the pain factor from the current situation was so great (*conjuncturally-specific assessment*). SP1 said he was relatively passive in this time-period although he happily participated in the workshops he was invited to, and he supported the change with his staff (*active agency*). The outcome was a goods news story as far as SP1 was concerned. Preparing for and 'passing' decision gates was a less chaotic process.

These three specific illustrations are indicative of the stories told by multiple participants during this time-period.

5.4.2 Analysis of time-period 2: mid 2009 to early 2011

During this time-period, participants shared their views on working with the newly consolidated routine, improving it, and (for the change team) attempting to embed it everywhere across the business. PMF v2 was successfully launched. The change team aimed to achieve level 3 maturity in early 2011, but change recipients and line managers were largely oblivious to this objective.

Table 16: CityTransport – unpacking the routine during time-period 2: mid 2009 to early 2011

Evidence of <u>shared</u> external structures and related artefacts
"PMF v1 in place – now what?" [CA1] "We were focused on project delivery to support the major sporting event – stakes were high – and we needed to reduce unit costs" [SP1] "The embedment framework gave all the change team an aide-memoire and helped me guide actions of the whole team" [CA1] "We had some governance in place to guide the change – but we needed to be responsive so had to plan in small chunks – hence my recollection that the change programme documentation was not always up to date" [CA2] "Programme documentation was what you'd expect for this sort of organizational development – some of it noise – some of it beneficial" [SP2] "PMF was high profile now with presentations being carried out at various meetings, workshops and drop-in clinics" [PM3] "A mandatory training session (Achieving Project Excellence) was run in late 2010 designed to help us to apply professional judgement by looking at a real project as a case study" [PM3]
Evidence of the ostensive /internal structures – relevant to the individual
Change Agents "I knew we needed to embed new practices into standard routines – there is a large amount of literature on the front end of change but not about long term implementation – as one PM put it to me "this is the fourth time in seven years that we have been in a room like this with someone like you telling us we have to change – what is different this time?" [CA1] "I was fearful of whether we would be allowed to have the resources to carry out the on-going change in the right way" [CA1] "There were no consequences if PMs didn't comply – this was a softly softly implementation" [CA1] "I wasn't sure how heavy-handed to be about the change – how flexible – getting the balance right between not impacting performance and yet definitely getting switch over to new practices" [CA2] "I believed it was important we had consistency, e.g. if PMF pointed to some procurement documents then the procurement function had better be using them or there would be dissonance" [CA1]

"I was aware that we were trying to change rigid practices that had grown up over decades – this is how we've always done this – interpretations of engineering standards that had never been challenged" [CA2]

"I was conscious that we didn't know if senior managers, or programmes would validate or reject the changes" [CA2]

"We would be frustrated by some teams who resisted for no good reason" [CA2]

"I needed to be seen as a walking PMF agent" [CA3]

"I felt that I was a member of a successful delivery team – that upper management could see that I was trying to improve delivery" [CA3]

"My view is that project teams like ticking the box – they want to get stuff done – they don't necessarily agree, but they'll do what they need to do to tick the box" [CA4]

Line Managers

"PMF imposed new burdens on my team and we all worried about resourcing implications" [SP1]

"This was a chance to get more control of the work I was sponsoring – and where I only had a tenuous grip upon at the time – I could stop projects progressing through gates – I had new found power as sponsor to stop things but I wondered how real that power was in truth" [SP1]

"I felt increasing pressure to follow governance processes more carefully and fastidiously than had previously been the case – talking to others there was a general feeling that although PMF was a good thing, it was perhaps too bureaucratic" [SP1]

"In my area our projects were in delivery and we had implemented something sufficiently similar to PMF to be compliant" [SP2]

"My team gained in confidence" [SP2]

"I felt the change team were working hard to be seen as helping not hindering" [SP2]

"I still find people moaning that they are forced to do things when in reality every PM with their sponsor is able to make a professional judgement on the products they use – it makes me wonder just how much the PM community has really matured in this area" [SP2]

"There was an evolving process and I adopted the changes as they were rolled out – the change team pulled – they didn't impose" [SP3]

Change Recipients

"I got it that the philosophy was one of embedment – not just introducing a new framework then running away as in the past" [PM3]

"I'm aware that many of my PM colleagues did not quite understand the 'professional judgement' philosophy" [PM3]

"I provided feedback and very much felt I was listened to" [PM3]

"An unwanted consequence for me would be the wrong outcome of a gate review – but PMF was great as it made sure this was less likely but without me being micro-managed by my sponsor" [PM3]

"On my project I felt that the gate process is just a word in the background – just a box to be ticked – I am much more motivated by using innovative practices" [PM2]

Evidence of the performative /action or inaction – relevant to the individual

Change Agents

"I searched and searched for a framework for embedment. I like frameworks so that I can tie down work to the literature. This led to adaptation of the Eckes Model for 6-sigma implementation" [CA1]

"Different change agents worked in different ways – some in significant detail with project teams who had questions. I worked at a more general level and made more use of local (reinforcing) sponsors and essentially created local change agents" [CA1]

"I worked hard with other functions to ensure that there was consistency" [CA1]

"As a team we have consulted widely with the business to understand its needs for our design process" [CA2]

"I have worked on improvement of the PMF based on feedback from users and subject matter experts" [CA2]

"Best practice that was working in a particular area was retained and consolidated into the PMF methodology where appropriate" [CA2]

"I tried to make it as easy as possible for those who had to change – supporting them – removing obstacles where I could – giving consistent messaging over an extended time – being responsive – demonstrating commitment to making the change" [CA2]

"I completed PMF implementation plans with Sponsors and Programme Managers in their local area – this level of plan was intended to get buy-in" [CA3]

"I dealt with feedback when I was out with the delivery teams, I also showed them how to channel their questions to a central point for when I wasn't there" [CA3]

Line Managers
"I felt it was important that I supported and encouraged others to do so" [SP1]
"I argued for the reduction in scope/quantity of some of the PMF products" [SP1]
"In practice decisions at gate review meetings were always a 'qualified pass' – but we also knew the issues so we had a way of making things better" [SP1]
"I shielded my PMs from the change team – so they could concentrate on delivery, and so we had a consistent message across the projects in my area" [SP2]
"Some of my projects were leading examples and enabled close liaison with the change team" [SP3]

Change Recipients
"One of the messages that I took on board immediately was that of using professional judgement instead of slavishly doing all the products – I could discuss with my team and sponsor what would actually add value to the project" [PM3]
"Whenever I asked for help I got it – the change team were highly active and doing what they needed to do to support people" [PM3]

Evidence of <u>shared</u> outcomes and related artefacts (reinterpreted in internal structures)
"The vision was that the business would take over the running of PMF by September 2010. This was achieved" [CA1]
"Our project has changed the way people work in that there is now a formalised output – the gate management plan – supported by defined roles and responsibilities, and mechanisms such as the application of professional judgement" [CA2]
"There were lots of queries, and some resistance – but also some level of acceptance of PMF" [CA2]
"Upper management and delivery teams were positive about PMF" [CA3]
"Delivery was improved as key people had to think about delivery earlier in the lifecycle" [CA3]
"There was some push-back from senior management about the sponsorship model" [SP1]
"Projects were gradually coming under more control – whether or not due to PMF" [SP1]
"Life became more settled and less confrontational than pre-PMF" [SP2]

> *"We had an economic and efficient change to bring consistency in a way that rightly treated individual capital projects as having particular needs – all credit to the change team – not an easy task"* [SP2]
>
> *"De-duplication was happening – the number of products was coming down"* [PM3]
>
> *"The feedback line remained available as the message coming down from the change team was one of continuous improvement"* [PM3]
>
> *"I don't know anyone it doesn't suit – it fits the culture of how to do the sort of capital investments we do"* [PM1]

Table 16: CityTransport – unpacking the routine during time-period 2: mid 2009 to early 2011

5.4.2.1 Summary observations

The organizational stakes for individual asset delivery were high at this time, largely due to the focus on the hosting of a major sporting event in the City. The change team continued with a 'softly, softly' approach, but with awareness of the higher profile of the PMF programme. However, the organizational stakes for non-compliance with PMF were perceived as low. The key influence on change progress was perceived to be the line manager, and the attitude of the sponsor. The culture of the PM community within asset renewal was one of 'mandatory compliance'. This is understandable given the industry, but an effective and efficient routine was recognised as requiring increased 'professional judgement' to determine the appropriate management action.

Within this context, and at this time, the core duality between internal structures /the ostensive and habits and actions /the performative can be summarized as:

- Change recipients perceived personal net benefits in continuing to adopt new and changing practices, despite challenges with bureaucracy and the dubious power of the sponsor to make decisions. The outcomes from gate reviews allowed work to continue even if there were bureaucratic hurdles to overcome in getting there. Some change recipients perceived autonomy in shaping future change and took that opportunity. Others were happy to follow the rules. The change team was perceived as listening, helping and

focused on building a network for local change agents, and these actions created further good-will to continue. A virtuous cycle continued, despite some emerging, deep-rooted challenges with (1) the sponsor role, and (2) the culture and competency of change recipients to exercise professional judgement.

The rhetoric promoted by change agents was 'we're doing well, but we're not there yet. We are here to support you and embed PMF in a way that helps you and delivers value'. This progressive narrative reinforced the belief by change recipients that there was only positive benefit to be achieved by continuing, so line managers responded with their own progressive narratives. No strategic ambiguity existed.

5.4.2.2 Specific illustrations of routine dynamics for specific actors

The text that follows is a third-person synthesis of direct quotes from participants, put together to illustrate the quadripartite nature of the internal dynamics of the routine undergoing change, in time-period 2.

Change agent [CA2]

This time-period was characterized by the creation of the next version (formal development) of PMF and within the context of a close focus on asset renewal because of a major sporting event in the City (*external structure*). The success in the first time-period consolidated views in the change team that a flexible, rather than 'heavy-handed' approach was needed to bring about change. CA2 expressed this directly. He was concerned about the balance he needed to strike between flexibility and 'pushing' the change given that he felt that he needed to facilitate a switch to new practices without impacting buy-in. He was aware that the change was challenging ways of working that had never been challenged before, and was conscious that he didn't know if change recipients and/or their line managers would validate or reject the changes (*conjuncturally-specific assessment*). CA2 tried to make it as easy as possible for those who

had to change – supporting them – removing obstacles where he could – giving consistent messaging over an extended time – being responsive – demonstrating commitment to making the change (*active agency*). Outcomes were a high level of queries, and some resistance, but also some level of acceptance and changed practices.

Change recipient [PM3]

PM3 saw that the PMF programme was high profile by now with presentations being carried out at various meetings, workshops and drop-in clinics. PM3 also knew the consequences of a gate review not going smoothly so was motivated to avoid this (*external structure*). PM3 felt that the change was here to stay and that it needed to be as good as it could be (*conjuncturally-specific assessment*). PM3 therefore was proactive, providing feedback to the change team (*active agency*). The outcome was that she was listened to and this creative a virtuous spiral of participation in designing and embedding the changes for her portfolio of projects.

Line manager [SP2]

SP2 was managing a high profile programme of projects for a well-known station. He remarked that the programme documentation for the (PMF) change was 'what you'd expect' in the organization – some of it beneficial – some of it 'noise'. However, he knew that the change was necessary (*external structure*). In his programme, which was in delivery, SP2 felt his team were gaining in confidence as a result of implementing PMF, but he did not want them to be distracted from their work by the noise from the change programme (*conjuncturally-specific assessment*), so SP2 acted to shield his team of PMs from the change team, so they could concentrate on delivery and so SP2 could ensure a consistent message across his programme. The *outcome* was that consistency was brought to SP2's programme in a way that rightly (in his view) treated individual capital projects as having particular needs.

These three specific illustrations are indicative of the stories told by multiple participants during this time-period.

5.4.3 Analysis of time-period 3: early 2011 to early 2013

Participants shared their views on the period beginning with external assessment of maturity at level 3 (although this was invisible to some change recipients) through to the release of PMF v3. It is notable in this time period that the change team were very active in development and implementation of PMF v3, engaging with a wider set of businesses, and attempting to embed local PMF champions. Line managers were influential in their local area, but where the routine was now stable, any further improvement was dispersed. It is notable that change recipients who had lived through the introduction of PMF in earlier time-periods, had nothing to say about this time period. Perhaps the change had finished from their perspective?

Table 17: CityTransport – unpacking the routine during time-period 3: early 2011 to early 2013

Evidence of <u>shared</u> external structures and related artefacts

"*We have released PMF v2, done a fair amount of embedment and achieved external recognition of level 3 against the P3M3 (Portfolio, Programme and Project Management Maturity Model). This means that our capital investment processes are defined and normalized across the organization. The next step is that continuous improvement is embedded*" [CA1]

"*I have created a framework now focused on 'No fall-back, improvements and knowledge*" [CA1]

"*There are not enough templates or examples – we are always starting from scratch – but I am conscious that we don't want to 'tick the box' we want to add value – but we also need to do this as quick and painlessly as possible*" [PM1]

"*We need to extend PMF to include other businesses that are now part of CityTransport – there are new challenges – political agendas and issues at senior/mid-management levels – we are managing issues tightly, documented by a transparent issues register*" [CA2]

"*Governance documentation for this stage of the change is more up to date as scrutiny is higher/need to be fully prepared for interrogation*" [CA2]

"*We've got a PMF champion who's allocated to our particular business unit that I can go and talk to if I don't understand something and usually he can answer the question, if not give us some guidance, if not he'll find someone who can and so it is well supported I think*" [SP3]

Evidence of the ostensive /internal structures – relevant to the individual

Change Agents

"*One of my ambitions was to devolve ownership of PMF to the business via special interest groups – this has only been partially successful*" [CA1]

"*I wanted all the programmes to take PMF and customize to their needs, whilst effectively operating business as usual*" [CA1]

"*Behavioural and cultural improvements can be made – but these are less likely to come from the centre – they must come from users – we need to find subject matter experts who will 'own' PMF and its improvements and take ownership in the business*" [CA2]

"*I arrived from my delivery area to the change team – I struggled to adjust and became quite frustrated by it, but I was a leader of the change and had an opportunity to stamp my own mark on how I felt we should be working*" [CA6 formerly SP2]

"*I saw an opportunity to be much less deterministic, without losing necessary*

controls and compliance requirements" [CA6 formerly SP2]

"I made a real effort to learn something new – the skill of blending listening to others, making a judgement, then writing this down for use by others – this may sound simple but very different from leading construction-based change where I am more confident" [CA6 formerly SP2]

"Governance documentation had no great influence on me" [CA6 formerly SP2]

Line Managers

"I've fought lots of battles in this organization – but not on this one because things were so bad before that the change made sense" [SP1]

"I really didn't take notice of formal change documents – I'm not very good at reading them" [SP1]

"I learned that gate reviews were not the place to express real problems – no-one likes the sponsor being independent of the delivery unit – unresolved tensions have reduced the sponsorship role to a transactional activity" [SP1]

"The culture of the organization is one that avoids open conflict, and agreements are made behind the scenes – a kind of truce where 'I won't criticize you in public if you don't criticize me'" [SP1]

"My worry is that now the P3M3 level 3 box has been ticked that complacency will set in – we need to be more thoughtful going forward" [SP1]

Change Recipients

No comments offered.

Evidence of the performative /action or inaction – relevant to the individual

Change Agents

"I tried to mitigate the risk of not have input/collaboration/devolved ownership by choosing enthusiastic 'friends' of PMF from the business" [CA1]

"I lobby staff to join special interest groups and to propagate the concept of the business owning an improving PMF going forward" [CA2]

"I am looking at knowledge management, lessons learned and sharing of best practice" [CA2]

"I spend less time with teams and address direct queries to the generic email address" [CA3]

"I collected metrics for gate reviews happening within each delivery area" [CA3]

"My habits changed – from telling people, to listening more" [CA6 formerly SP2]

"I stopped overcomplicating things, writing the same information in multiple documents – I was really trying to help the business have control in a really efficient way – we do complex things at one level – but they are quite simple at another" [CA6 formerly SP2]

"I came into the change team and starting reviewing projects and their implementation of PMF" [CA5 formerly PM3]

Line Managers

"My plans are a lot more simple and direct – less wordy, more succinct" [SP2]

"All big decisions about projects are made outside of PMF. PMF is actively used for the volume of straightforward things" [SP1]

Change Recipients

No comments made.

Evidence of <u>shared</u> outcomes and related artefacts (reinterpreted in internal structures)

"Our core intranet page gets 1000 unique hits a month from an effective population of 1500 people" [CA1 – comment relates to early in the time-period]

"It is satisfying that delivery teams are using PMF independently" [CA3]

"Life is much easier and simpler, everyone knows PMF and everyone is following it – no fighting against the grain, or fighting for recognition of your own way of doing things. The change is embedded – it's maturing – I support it [SP2 back in a delivery role after a time as CA6]

"There is more to do – improving the capability of the PM community to make better value decisions about their project and how best to apply the PMF to that context – another step of maturity is needed – work in progress" [SP2 back in a delivery role after a time as CA6]

"There is varying adherence and quality based on my reviews of projects prior to decision gates" [CA5 formerly PM3]

"This has always been an organization where it is quite difficult to do things – never enough resources and lots of stakeholders in every decision with the role of the sponsor being constantly debated – PMF has helped with that somewhat" [SP1]

"There has been great benefit to capital delivery – but the measure should probably be related to throughput, not efficiency as first claimed – that increasing maturity of practice enables direct cost savings is probably an entirely spurious argument – but there is great benefit in terms of internal efficiency" [SP1]

"The business has been supported well – performance is improving although as always with occasional setbacks and messiness" [SP1]

5.4.3.1 Summary observations

A further step-change to PMF v3 and extension to a wider group of transport businesses was achieved, with apparent success. This enabled a further refresh of the artefacts that support the routine, keeping PMF on the agenda and supporting beneficial patterns of action. However, if the aim of the change was really to achieve level 4-maturity (measurable performance with continuous improvement embedded) then it was not visible to change recipients. In local areas further improvement potential can be seen, but there was some evidence of 'stalling' at the time (mid 2013).

Within this context, and at this time, the core duality between internal structures /the ostensive and habits and actions /the performative can be summarized as follows:

- Change recipients and their line managers believed considerable gains had been made so there was commitment to continuing to act to support the routine that has been consolidated. In particular, line managers could see, and had enthusiasm for incremental benefit so they proactively continued discussions with their staff and promoted further maturity of practice. The possibility that complacency could set in was perceived by line managers. They were motivated to prevent this. Change agents (and some line managers) could see that without resolution of some organizational issues, and the embedment of systems for measurement and continuous improvement, that the gains made could well dissipate so they acted proactively to keep the conversation alive and to push forward within their shrinking resources. The lack of corporate vision and associated rhetoric in support of the change was, for the first time, potentially beginning to influence attitudes to further change across the whole population.

The rhetoric promoted by change agents had started to be internally ambiguous with resulting wider ambiguity emerging. The rhetoric associated with 'ownership and embedment of PMF in the business' was perceived as a stability

narrative in terms of planned change by change recipients and line managers. The commitment to senior leadership to achieve level 4-maturity had been made but this was not visible in change agent rhetoric to change recipients and there were some hints at concerns about achieving this. In this context however, change agents knew that there were further benefits to be achieved through the application of professional judgement and clarification of the sponsor role. They felt that they needed to find a message that continued to be progressive. Strategic ambiguity of the rhetoric for continued planned change was beginning to emerge.

5.4.3.2 Specific illustrations of routine dynamics for specific actors

The text that follows is a third-person synthesis of direct quotes from participants, put together to illustrate the quadripartite nature of the internal dynamics of the routine undergoing change, in time-period 3.

Change agent [CA1]

External recognition of PMF version 2 as level-3 maturity against the government defined, five-step maturity model was achieved signifying that capital investment processes (and the gate management process routines as part of this) were defined and normalized across the organization. He was now tasked with embedding continuous improvement. As a result of this, CA1 had an ambition to devolve ownership of PMF to the business but his early attempts to do this had only been partly successful (*external structure*). CA1 judged that he did not have the influence to devolve ownership 'en mass' (*conjuncturally-specific assessment*) so he acted to try to mitigate this risk by working with enthusiastic 'friends' of PMF from across the business (*active agency*). By the end of the research period this strategy was having little success.

Change recipient

Of the PMs that took part in the research, no-one had specific comments about time-period 3. As noted in the summary above, maybe from their perspective the change had already been implemented?

Line manager [SP1]

SP1 observed that preparation for decision gates was now stable but there was some conflict with senior leaders about the sponsorship role and the degree to which sponsors were empowered to make decisions at decision gates (*external structure*). SP1 perceived that unresolved tensions have reduced the sponsorship role to a transactional activity, so although the information that was being brought to decision gates was much more robust, decision-making at the gates was still immature. SP1 perceived the organizational culture to be one that avoids open conflict, with a truce in place where no criticism is ever implied in public. SP1 believed that now level-3 maturity had been gained for PMF, then organizational complacency would set in (*conjuncturally-specific assessment*). As a result SP1 supported the change gate management routine for all non-contentious, 'regular' decisions, but big decisions were progressed outside of the PMF-related routine (*active agency*). The overall outcome however was improving performance for the bulk of the business, with occasional messiness and setbacks that needed to be managed by exception.

These three specific illustrations are indicative of the stories told by multiple participants during this time-period.

5.5 Content analysis of documentation

The analysis using temporal and methodological brackets detailed so far, tells the story of planned change to the gate management routine from the perspective of CityTransport staff, based on their recollection of what had happened, and how they felt about it. Table 18 tells a summarized story of the CityTransport change from late 2007 to the mid 2013 from the perspective of the documented artefacts: case for change, programme plans, stakeholder engagement, metrics used to measure key performance indicators, external assessment of maturity, etc. It provides a validation of the human stories of the change within CityTransport, and a reinforcement of the drivers for change, and response to those drivers. Only a small percentage of the documentation actually reviewed is included here covering the key events.

In particular, this content analysis starts to highlight the gap between the official change story and the one perceived by change recipients. This gap had not appeared to matter until recent times, but there was evidence that this was changing.

Table 18: Summary of documentation supporting the change in CityTransport

Date	Document
October 2007	**Case for change** The Portfolio, Programme and Project Management Maturity Model (P3M3) was agreed as a way to track benefit. This maturity framework looks at management control, finance management, risk management, stakeholder management, governance, resource management and benefits management and was judged to be a suitable proxy for maturity of the routine to progress projects through the decision-gate process efficiently and effectively. Approach chosen has a robust pedigree (Carnegie-Mellon University) with supporting data, e.g. reference TeraQuest for Gartner 2006, organizations at level 3 maturity (defined – standardization) could expect that schedule variance would be 15%, from 24% at level 2, and 145% at level 1. Actual schedule variance at start of change was reported at 16% (SPI[7]=0.84 across whole portfolio). Cost variance at start of change was reported at 10% (CPI=0.90 across whole portfolio). Attrition rate for permanent staff was reported at 15%, with a target of 11%. Value of schedule variance, cost variance and attrition rate variance from targets was estimated to be worth £420m but the timescales for achieving this return unclear, and the same number was also derived by taking an 8% slice of the value of investments. The official documentation on expected benefits is not very transparent. Evidence from external sources provided showed that 9% of the organizations that use the P3M3 maturity model approach were level 3, 4% were level 4, 2% were level 5. In this context, the case for change was ambitious with targets of level 2 by March 2009, level 3 by March 2010 and level 4 by September 2010.

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[7] SPI is a measure of schedule variance, or productivity. An SPI of 0.84 shows that productivity was 16% lower than planned. Similarly CPI is a measure of cost variance, or efficiency. A CPI of 0.90 shows that efficiency was 10% lower than planned.

	(Note: these targets did not assume the extension of the change to the wider transport businesses resulting in PMFv3).
May 2008	**Baseline Maturity Assessment** In-house assessment of maturity at level 1, with some pockets of level 2-maturity in some areas.
October 2008	**Asset Renewal Conference** Presentation of the vision and how to embed PMF delivered to circa. 300 change recipients and their line managers.
May 2009	**Business representatives engaged to steer and own the change** Steering group of 17 senior change recipients. 14 special interest groups established each involving 10-12 people. Owners group of 15 change recipients established. 20 Business User Groups established.
January 2010	**Embedment framework released putting in place arrangements for:** - PMF business owners in each asset renewal programme - Stage gate monitoring and reporting (% of planned dates achieved, and results) - Independent pre-gate audits - Aligning with wider systems (e.g. corporate capital allocation lifecycle) - Project Excellence Workshops - Visible communication across functions
March 2011	**P3M3 maturity assessment performed by a 3rd party** Overall level 3 awarded. Sub-set of data as follows: - Management control: level 3 (consistently implemented) - Finance management: level 3 - Governance: level 2-3 (defined and almost consistently implemented) - Risk management: level 2-3 - Stakeholder management: level 2 (defined but not consistently implemented) - Resource management: level 1-2 (not yet fully defined) - Benefits management: level 1-2 (not yet fully defined).

Content analysis of the 'official' documentation supporting the change showed the original case for change and how change agents engaged with representatives of change recipients and their line managers through various channels. Improvement targets (as measured by P3M3) were ambitious given the low number of higher-maturity organizations that exist. Actual improvement as compared to this target was not achieved, although, despite this, the change was reported by the participants in the change change as a major success. A further step-change remains if level 4-maturity against the P3M3 model is the CityTransport target. The actual target is unclear.

5.6 Analysis of implementation of change vs. 'success factors' derived from the literature

In section 2.1.4 1, the literature was synthesized as a set of 10 'success factors' for planned change. These are repeated in the left-hand column of Table 19 below. Based on evidence from participant diaries, interviews and content analysis of documentation, an analysis of how well the CityTransport change 'complied' with the 10 'success factors' is presented. Following the analysis in the Table, the implications are discussed. The question posed in this step of the overall analysis of the CityTransport case is whether the 10 'success factors' from the literature were influential in guiding change and boundary spanning practices.

Table 19: Commentary on CityTransport change practices vs. 'success factors' derived from literature in Table 1.

'Success factors' derived from literature (Table 1)	Positive evidence from the CityTransport case	Lack of positive evidence, or evidence of confounding conditions from the CityTransport case
1. The business case must be aligned with corporate strategy, understood in terms of measurable benefits and be championed and funded by sponsors at the most senior level.	The case for change was sold to senior managers using logical arguments, i.e. that consistency has a tangible value in terms of reduction of waste, and timely progression of capital investments in assets through the life-cycle.	Senior level sponsorship was not particularly visible, no doubt exacerbated in part by organizational churn/re-merging of previously outsourced transport businesses. Some confusion or suspicion about the benefits officially claimed. However – this has not appeared to have a significant effect on progress to date.
2. A powerful vision and set of key performance indicators of how the organization will look following the change must be developed and communicated to all stakeholders.	The vision for level 3 of 'revealing the iceberg' (consistency and transparency) was very clearly communicated.	The vision for level 4 is not clearly articulated, nor understood by change recipients.
3. The first steps into the transition must be understood and made easily accessible, with a sense of urgency created to help overcome any inertia.	Massive progress was made in the first time period, to release and implement PMF v1. A critical mass was established.	It is interesting, however, that change recipients did not need to be convinced that no change was worse that the change. The mind-set assumed by the 'success factors' is that change recipients will need to be convinced.

'Success factors' derived from literature (Table 1)	Positive evidence from the CityTransport case	Lack of positive evidence, or evidence of confounding conditions from the CityTransport case
4. The first steps must include some quick wins in order to ensure continued investment in the change and to motivate people to want to continue with the transformation.	Change made things better, even if perceived as overly bureaucratic. The pre-change position was too fraught with problems. It was an open door.	No lack of positive evidence.
5. Change leaders must be appointed who are skilled in engaging people's hearts and minds.	The change team were seen as helpful and responsive and they engaged line managers/sponsors well – this is where the change happened – on the ground.	In the current phase this is a challenging area. Resistors to the change effort in terms of the sponsor role are not being tackled within the programme. A wider group of stakeholders is needed to address some of the deeper on-going challenges with PM competence/application of professional judgement.
6. The performance gap between the 'as is' and 'to be' states must be understood and communicated, to prevent inertia and to spread dissatisfaction with the current situation.	Dissatisfaction was felt acutely by change recipients so it was an easy sell.	No lack of positive evidence.
7. Appoint visionary, creative and empowered leaders to drive the change.	The power to drive change was with line managers and sponsors.	No lack of positive evidence.

'Success factors' derived from literature (Table 1)	Positive evidence from the CityTransport case	Lack of positive evidence, or evidence of confounding conditions from the CityTransport case
8. Create a powerful, guiding coalition and supporting governance arrangements to ensure that decision-making is focused moving the organisation forward towards its goals.	Despite the lack of corporate level, visible support, the PMO leader created enough space and funding for the change team to operate. The change team created effective governance and engagement of line managers and sponsors.	On-going change will require a different approach and appointment of a wider, and perhaps more senior guiding coalition.
9. Put in place a change management plan that maps out activity along the whole transition curve. The plan must include activities to re-energise the change work if/when inertia strikes, learn from experience, plan for consolidating improvements and plan for institutionalising new approaches during the 're-freeze' stage.	The change team were very aware of the plan through PMF v1, v2 then v3 – each time improving usability as well as extending the scope of implementation. The embedment framework was introduced early. Plans were amended in response to emergent change, feedback and learning throughout.	A big question-mark remains where the transition really ends – what is the vision really? Early work on establishing ownership in the business has had patchy success.
10. Ensure that attitudes to change are continually understood and addressed to respond to any resistance and to overcome any complicity.	The change team persistently invited interaction in multiple, small ways to try to uncover attitudes and any resistance.	Some evidence that a culture-led truce existed at decision-gates where real problems were not exposed. Hints at complicity with the new status-quo between decision-makers at gate reviews. The change team appears not to be engaged with this.

The CityTransport change team were educated and aware of organizational change management 'best practice', and programme and project management 'best practice', through the five-year period of change. The primary change agent was thoughtful and progressive in searching for the optimal way to bring

about change in a way sensitive to the organizational culture and context, itself changing rapidly. Progress has been significant against ambitious targets.

Despite this, the change to consolidate the gate management routine was so obviously needed from the perspective of change recipients, that a number of the 'success factors' were not needed to get to the current stage of maturity, most notably those associated with senior level champions, a measurable business case, and a clearly communicated vision.

If the next target is level 4-maturity, this is a very different end-state to level 3 and a focus on all of the 'success factors' might help to support a suitable design of the change, alongside continued understanding of attitudes to change of change recipients and their line managers.

It is also notable that, as is typical in planned change, the focus of change effort was not explicitly on the strategically-significant organizational routine intended to change. A keener focus on this would support the development of a measurable business case, clear vision and empowered guiding coalition for the change.

5.6.1 Unpacking the change to the organizational routine in the focus groups

Two focus groups were held.

The following text summarises the first focus group discussion where two line managers (leaders responsible for delivery of large programmes of work) discussed the change in terms of the routine that was intended to change and the benefits realized so far, or to be realized in future. The purpose of the focus group was to further 'unpack' the organizational routine intended to change and understand the value of this to the company. The researcher facilitated the discussion.

5.6.1.1 Narrative from the first focus group

The participants first discussed what strategically significant routine the PMF programme had influenced. This took a while to come to a clear view –

the line managers themselves associated with the idea that the change had introduced a common life-cycle model, but the conversation uncovered some deeper perspectives…

"If we take routines to be recognisable and a repeatable patterns of action then I would suggest that the whole structure around standardising the gates and formalising the stages that you go through, and the process you go through to move from one gate to another has generated a more recognisable and repeatable pattern of action that all the independent participants now recognise and get engaged with. It doesn't take a great deal of rethinking and effort every time we get to a stage" [SP2]

"I think its fair to say now that because we have PMF it is very much the accepted life cycle model and I assume that everybody throughout the company now adheres to it. Maybe there are some patches where it's not that good but I think the majority of people I come across do adhere to it quite well and it is a benefit to the company having a structured methodology that is the same for all projects, you know what you should be looking for and it enables external stakeholder levels of expectation to be right for the project. If we're trying to align project participants and move people in that direction we have a reference guide that we can go back to within the management system, so we're not having to always repeat the mantra or keep explaining things to people. We can make direct reference to that management system and it puts everyone on a common playing field" [SP3]

"If you think about the life cycle model that's been established here, do you see that the routines that have been changed are about preparing for stage gates in the life cycle, so making sure things are in place, or is the routine about the decision making in meetings at stage gates - or both - or something else?" [Researcher]

"I think it might be a little bit of both, it's difficult for me to say what sort of decision making goes on in all the different gates because clearly I'm not at them. I think it is probably more about the preparation and decision-making

leading up to a gate. I think it changes the routine in terms of bringing most or all participants together at early days within the stage. Preparing the gate management plan to start thinking about what products you are going to produce, what influence they're going to have on the projects, are they really needed, what size and complexity they need to be, who's going to be signing them off, who's engaged with them, so its starts to create more of a routine if you like, but I think its probably as much about what goes on leading up to a gate and what happens post a gate having prepared for the gate management plans. I think the actual meeting itself is probably relatively short and sweet, everything is signed off by the time you get there, so I think its drawing everyone together as you come to the end of a gate and drawing everyone together as you move out again to create the common point of focus" [SP2]

"So the actual decision point might be sort of a rubber stamp because the work's been done in advance by the decision makers?" [Researcher]

"I agree with that, I think that certainly the way that I encourage my team to work towards a gate is that you know what they're expecting because its written out, you're completing a particular phase of the project so you know what you've got to achieve and so essentially what you want to be able to do at that gate review is basically present the evidence that you've done what you said you were going to do during the previous stage. Because PMF clearly sets out what the deliverables are and you've previously agreed those, what they should be, they're all the enablers to help you to get to that point, I think it must help you focus on what stakeholders and which stakeholders you need to satisfy, so the way to get to the gate is to make sure you have everybody lined up and really agree to what you're doing and you've produced all the documents and had them signed off and you've produced the evidence so that actually when you go to the gate its almost a formal thing of saying you see all this, we've done all this, here's a quick summary of what we've achieved, are you all happy, quick nod, good sign here" [SP3]

"Is what you describe the mechanism for all decisions related to getting that scheme from an 'in principle' decision to invest through to something that's signed off and operational?" [Researcher]

"Yes, within the limitations of the corporate capital allocation process" [SP3]

"That's one of the things that we are trying to align better going forward - so that there is even better alignment, so you don't end up in a position of needing to pass multiple gates to get higher level corporate authority to go and spend money" [SP2]

"So you've got a different process for getting the money and then PMF helps you spend the money efficiently and deliver on time and safely and to the right level of quality? [Researcher]

"Yes" [SP2]

"Yes it is actually the life cycle process for the project that enables you to have a well structured project that gives you evidence to prove to senior management that you're doing everything right, that you're delivering the benefits to the company" [SP3]

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The conversation then moved to the benefits to the company of adopting a changed routine to govern the investment in projects through a defined life-cycle model. The case for change had clearly related investment in PMF to improved productivity and efficiency, as measured by schedule variance (SPI) and cost variance (CPI) respectively. Perspectives on this were explored, and contrary views expressed about the organizational benefits of the change.

"I think you need to be really careful with SPI and CPI – they are two measures that we use – but they aren't the whole picture" [SP3]

"Well, if you dig down the industry generally is very poor establishing true cost and schedule baselines – so absolute SPI and CPI is not that reliable –

although trends are an indicator, but many things can affect this. What I see as beneficial is in terms of the capabilities of the individuals, moving people round from one project to another, we're all talking about the same thing when we talk about something, we have a baseline to work from and challenge certain products as to why we're doing them in order to become more efficient and get a greater flow through the whole system. I think the difference is that PMF gives us that opportunity now so that people can really start to now get engaged with" [SP2]

OK so let me try and summarise that. I'm interested in how the PMF planned change influenced routines that were already there and what I'm hearing from what SP2 said is that actually what PMF has done is establish or maybe consolidate, a consistent and transparent routine for getting through stage gates in projects that wasn't there before. Its created the routine where actually there were multiple disparate routines before and so its been focused so far in creating reliability and stability and a level of capability, I think that's what you're saying?" [Researcher]

"That's exactly what I'm saying" [SP3]

"So I just wanted to tease out whether the claims made to justify spending the money in the first place, might be quite different to the benefits that are perceived on the ground by the people doing the work" [Researcher]

"Yes I think to justify the investment you've got to try and show how much better your projects are performing as a result so more right first time and delivering better value for money etc. There's all sorts of ways that I guess we can achieve that. I can only say from personal experience of working in an environment previously where its very disparate, haphazard management, where very little was delivered, and moving into a much more structured environment where we've got good governance and generally speaking we're getting things right first time and we're delivering things with no surprises. That has come about because of the structure and there's no doubt about it that that structure and that governance significantly helped and its given everybody a

common platform to work from and a common reference. If you take somebody externally you can put them in a context and they'll know how to move forward. Some of the finer detail in terms of its actual benefit, I think depends on the scale of the project. Just going back to the SPI and CPI, the experience I've had within our projects is that it's a good indicator to show a trend but I wouldn't necessarily believe it as being accurate but its useful as a trend and in that respect its helpful to have those as a KPI but I wouldn't use it as the absolute measure of getting value out of a project because I don't think it has the detail and we don't have the time and the money in some cases to put a level of detail in to make it that accurate or in some cases the amount of resource and the competence to do it" [SP3]

"I agree with everything SP3 said, I would be cautious I think about making a direct relationship between investment in PMF and an improvement in SPI and CPI, I would be very, very cautious about that because I think exactly as SP3 has said we all work off the same wavelength and that must surely have brought ways and efficiencies in the throughput of projects through the system. I have to put less effort in getting them from one stage to the next because there is the stage gate process there. That doesn't necessarily reflect in better SPI's and CPI's but maybe it just reflects a more efficient throughput of projects through the whole investment programme" [SP2]

"Yes I think SP2 has put everything very eloquently there and I totally agree and I think the point of PMF is that it gives you a framework, but it doesn't override the competence of a good project manager to deliver a good project, what it does it gives them a standard framework to work within which makes things a lot easier" [SP3]

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The conversation was then moved on to the future – future ownership of PMF by the business. The plan is to embed PMF in business as usual and hand over, but expecting continuous improvement to be embedded (necessary for P3M3 level 4). It is also a key theme mentioned in reflective diaries that fit

for purpose execution depends on professional judgement. The participants were asked to share how they see the future, and any issues, or risks they perceive.

"The professional judgement bit is critical I think, I think we should be very wary of continuing to promote maturity modelling as a way of defining the management system. I'm not saying we shouldn't do it but I'm suggesting that it shouldn't be primary driver. I've heard a lot of people continue to complain about the products within PMF and continue to grumble about certain elements of it but there comes a point when it has to be professional judgement and it has to be a consensus amongst those interdependent participants about joining up that professional judgement together to move the project forward. Therefore, we bring into the whole issue the capability of the project managers and the other individuals involved, continual training and gaining different experiences and you move into a whole sort of other realm of learning and discussing the learning and everything like that" [SP2]

"In future, we rely on the competence of the project managers to guide work through the process" [SP3]

"And there's got to be a relationship there, somehow, between developing the capability of people and doing continuous process improvement on some of the individual products, because taking all the usual project management terminology, one size doesn't fit all blah, blah, blah, we could end up continually making iterations of these products but whatever iteration of it you make its never going to satisfy the next project that comes along because they're all different. The advantage of a big organisation like this regularly doing projects is that if you can do a bit of that product refinement and develop the professional capability, you'll get to a point where there's a much smoother flow of work, because you'll be able to rely much more on people and less on process" [SP2]

"Exactly, exactly yes and that's more to do with professional judgement as opposed to continually refining the product" [SP3]

"I think you're both saying that the future change is different in nature to the change that's gone in the past. It was pretty much process and governance focused, but now needs to shift into much more about competence of staff in exercising professional judgement? You seem to believe there are diminishing returns from continuous improvement of process, products and artefacts? So, what are you communicating to your team about the future?" [Researcher]

"I'm asking my project team to stick their hand up to get more engaged at the interface between their tasks and what the process is telling them to do, so they can start to say why am I doing this? I think if we did it this way it would be better and to try and open up the opportunity for them to be a little bit more engaged and have ownership of some of those individual processes within PMF. I think that certainly on longer term projects like the one I'm on enables not only a more efficient project but professional development of the individual, an opportunity to feel that they're really part of what we're doing, so I think there needs to be a lot more bottom-up engagement into PMF rather than solely top down maturity modelling" [SP3]

"I'm in a slightly different position where I've been trying to embed the governance into a new project team that have really not been familiar with a well 'governanced' environment, so they're starting to pick up the benefits of it now and complying with it, so that starts to encourage the feedback. I've tried to encourage them to look at the process and to tailor it accordingly and use it to their benefit and say this is for your benefit, not for you to go and tick every box, so lets think about it intelligently and how we want to use it. My focus has been on getting intelligent use of the process and how they use it and get that feedback, rather than any more fundamental changes at this stage. The other area that I'm looking at directly is the alignment between PMF and the corporate gate process and trying to make that a much easier transition so that we're not doing things twice and what we can do for the line so that is my own personal strive to try and get that to work better within my programme" [SP3]

"Do you think the future improvements to what you have would be better led from within so that it is very much continuous improvement of the business-as-

usual of project business rather than a project led by the PMO? I'm not trying to lead the witness here, my view doesn't matter, I'm interested in your views" [Researcher]

"A little bit of both. I'm not trying to get out of giving you an answer, the problem I perceive is if you solely leave it in projects is that we're too focused on our day to day and our individual project to take a business view - that would be partly my concern about that, however, you've got to find the right balance I think. Something that's solely lead from the centre unless its led by the right people, if its led solely from the centre, it might get less traction. It really needs people in the PMO who've maybe just come from a delivery environment, that have the respect of delivery people in terms of knowing what we do on a day to day basis. So I think its probably a little bit of both, I wouldn't like to sit it solely out in projects, there should definitely be some central coordination in the PMO, but not too centralised PMO top down stuff" [SP2]

"I totally agree, that's virtually what I would say, you've got to have a bit of both, but you've got to have the respect of someone who's got real project management experience in the PMO. In turn, you can't leave it totally to the projects as you'd only get one view" [SP3]

5.6.1.2 Summary of first focus group

This first focus group clarified the view of change recipients and line managers, that the gate management routine was not changed so much by the PMF programme, but established, or maybe consolidated in the first place from a disparate set of 'invisible' practices that could not be described as a routine in the way defined in the literature (repetitive, recognisable patterns of interdependent actions by multiple actors). Although the case for change talked about project management benefits such as increasing productivity (schedule performance), efficiency (cost performance) and attrition rates of project staff; the actual benefits perceived were more closely related to efficiency of work practices through the reduction of confusion and waste. Although not measured or perhaps measurable, this was perceived to have made a positive contribution

to project throughput through the lifecycle. For the future, the two line managers in the focus group were keen and committed. They agreed that people, not process, capability was the next step and that there was, as yet, no visible plan to achieve this from the central change team. They were of the view that this is a further 'step', i.e. planned, change and that the routine was not yet ready for endogenously-led continuous improvement.

5.6.1.3 Narrative from the second focus group

The participants firstly discussed their perceptions of how change recipient behaviours had changed as a result of the PMF programme.

"If we talk anecdotally to people then there is no doubt that PMF helped the project management community. I'll come to KPI's later on, so for example at a recent steering group meeting, Graham Shaw was there, who was a programme manager in stations at the time and he said I manage projects from 20,000 pounds to 50 million pounds using PMF. Mike Kitchen who's a senior project manager, we had our first meeting at user group level and he said I think PMF is brilliant, it helped us to manage ourselves and everything else. So these are all real quotes from people who to us are our main customers, the actual project managers in the project teams and the sponsors who do all the work. So in terms of did PMF take root? Did PMF get onto people's agenda? Are people using PMF? The answer to all of those are yes, there are weaknesses but we do have usage…" [CA1]

"You were asking about how PM behaviours have changed. For me my biggest experience was in training staff so I ran a PMF overview course over a year and a half or maybe even two. For me the narrative that we told in that definitely had quite a lot of impact on people's approach. I told a particular story about the overall P3M3 journey and how as a business we really needed to have a method to get to level 3 and it needed to be central and defined and everybody needed to buy into that. People seemed to accept that it was a very powerful tool because the logic of it was based on 50 years of research and evidence of what happens in an organisation if you do this. The logic of it really hit home so

people said OK, I understand the overview principal there and then how do I fit into it? Then when you go through the minutiae of the tool and the different products and stuff, of course there's a little bit of people saying OK well that's a little bit much for what I'm doing whatever but when they understand how they can tailor it and whatever, I felt that that was a powerful narrative as a whole and that people were generally predisposed to yes if I can do that, I will" [CA2]

"For me, the change highlighted just how many processes were out there that we weren't aware of. The boot was on the other foot for me as I was on the pilot scheme to use PMF as a PM. We certainly had senior management buy in from our programme but I think the message that didn't fully get across the first time out was that of professional judgement. I jumped on that because it made my life easier but there were a lot of others who didn't. I had a senior manager only recently say that 'when you do a gate management plan it throws up all these products that are all mandatory' and I was like, just go and get me a brick wall please, what part about professional judgement do you not understand. People have great difficulty I think in applying that professional judgement because we're asking people perhaps to take more risk. If I don't do this product then what happens? and that's where I think the professional judgement message has come out much more clearly and strongly that it did at first. Its been repeated and repeated and people are actually beginning to understand that that is the key message, its scalable and tailorable to the risk and complexity of the project that you're on" [CA5]

"I agree with you that's the biggest issue and I think that's why we really pushed it in the most recent training - how do you scale it and how do you apply professional judgement. It's not something that everybody was necessarily that comfortable with but we started to give guidelines and started to try and articulate what that actually means" [CA2]

"We have built up a map of about 20 different roles that are looking over the shoulders of the project team and so all we tried to do in PMF was to bring this iceberg out of the water. It's a very constrained context for asset renewal, there are lots of things you can do, there are lots of things you can't do and all this

does is bring that out in the open. After that you have to negotiate with people and work it out and that's where professional judgement comes in That's where also the thing comes in of, OK, the machine is telling me I have to do this number of products, that means I have to do this number of products, actually what we really try to stress is the philosophy is do the minimum number of products and never do one if it doesn't add value" [CA1]

They also discussed the role of the sponsor and their perceptions of changes in the gate management routine both within, and outside of actual gate review meetings

"One of the things I've been exploring with the PM's and programme managers that I've talked to is about the role of the sponsors - the head of the delivery team –and how the methodologies have helped with decision making at actual gate reviews – how these meetings have been changed or not changed by the increased transparency and consistency and rigour that happens in preparation for the gates and thereafter" [Researcher]

"Having been a PM, then done six months as a gate review manager with the investment PMO when PMF was in place, I noticed that people get very defensive preparing for a gate and I have to say at times I did too. The expectation is 'I'm going to get hammered because I haven't got that ninth signature on this document, am I going to fail the gate because our approval process is so onerous?' I think there is still that defensive element in some programmes. Not all programmes because we think some work really quite well now, but project managers have to go through a lot of hoops and jump through rings of fire sometimes, we were being hammered time and time again rather than being left to do the actual job" [CA5]

"So how critical was the sponsor's behaviour in all this?" [Researcher]

"I think there's a massive issue with sponsor competency or consistency across the organisation and actually its interesting because there is a piece of work going on for sponsor competency which is outside of our domain but we're

trying to interact with it right now because while we were out launching the last version of PMF over the last couple of months we've had a lot of comments back from project teams saying - this is all very well and you're telling us the sponsor is central to everything but who are they? Or things like that. So actually we're just completing today a survey that we sent to 2,500 people saying, right this is what we've heard back from you, validate this for us and we've asked them five questions in a 30 second survey. Do you know who your sponsor is? Do they attend your meetings? Which part of the business are you in? And then rate them in certain ways and then I'll ask questions e.g. Are you a sponsor? Do you know what you're supposed to be doing? Do you have the time or resources to do it? and that kind of thing. The information that's come in so far is a little bit different from the anecdotal stuff that came in. The perception of sponsorship is that it's certainly inconsistent although some people definitely say, ' our sponsor is really good' but that's come back in from the survey from about 550ish people (25%) so that's not too bad a return. There is an appetite for the dialogue I think" [CA2]

"It depends a lot on sponsor competence I think but if I look around we do deal with the top layer of sponsors and if I think about (list of names) - I have a lot of confidence in them and I think the projects and programmes in turn have a lot of faith in them – even though they don't have budgetary responsibility – so it's difficult to really play the sponsor role. The head of capital programs would do away with sponsors tomorrow if they could, they see no value in them, it's the business that's keeping them going and PMF has helped them to be part of the business" [CA1]

"Its quite interesting that, aside from the role of the sponsor, a view that I've heard really clearly from the PM's and the programme managers that I've talked to has been – whilst you might think that PMF had enabled actual gate review meetings to be better, more well informed and you get better decision making in that meeting - the perspective is that the meeting is almost of a lesser importance because actually the decision has been pre-prepared in the run up to it, so the stakeholders have been engaged, and its working well, so you might

get a qualified/conditional pass through the gate because there are some issues to resolve or whatever" [Researcher]

"Multiple conditional passes are actually a problem – they can be lazy decisions – some good sponsors would not let any project come to a gate unless he was certain that it would pass - so he's saying look what's important is the work not the gate. Other sponsors take a different view and say no you have to come to a gate on that predetermined date because its in your plan and if you fail, you fail but we want to look then. I think we are still losing the public relations battle on the purpose of gates because there are too many people who say that PMF is just a check-list and actually stage gates are just an opportunity for wise old men (and they generally are men) to sit around and throw rocks at the project team. I'm still convinced that that is the perception of what many people think stage gates are" [CA1]

"Some areas asked me to include a document they had put together locally together about stage gate reviews in the training. It was a whole list of specific questions that the sponsor might ask, it was quite a useful document" [CA2]

"We built that into the stage gate scenario in the training. So that's a real example of the business taking something from the centre, improving it, sending it back and we've now incorporated that which is just the way…" [CA1]

"It's sort of saying right, as a sponsor, if you're at this stage then these are the kinds of things we need to focus on, make sure these products are done and ask these questions and it gave them a bit more confidence when they go into their reviews to do their job I think" [CA5]

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The conversation then moved on to a discussion of business benefits arising from the PMF change.

"In terms of benefits we have a slight divergence between me and my boss. I think P3M3 is a very reasonable model, its well understand and its intuitive and so on" [CA1]

"It focuses the mind doesn't it?" [CA5]

"It focuses on all the right questions, plus the latest P3M3 will include commercial and asset management, so that's all good. When we did the certification survey in March 2011 we did 30 interviews face to face, and we sent out 660 questionnaires of which we had a 30% response so I joke that I could have fixed the 30 interviews but I suspect I couldn't have fixed the 220 responses, so that was OK, and was relatively rigorous. In terms of the benefits, we have sold to a lot of very senior people, and to the Treasury, it would be wrong of me not to share that although going up the maturity scale by one or two levels undoubtedly has huge implications for efficiency, no one quite defines what efficiency is" [CA1]

"Is it unit cost or is it delivery speed or..?" [Researcher]

"Basically what we sold was that if you go up one level you have 15% efficiency gains and we said that we're going to be very conservative about that so we're going to take it down to 8% and do our calculations on that which gave us 442 million but it's impossible to demonstrate and in my opinion that's too big a number because actually most of our spend is not our spend, most of our spend is a sub contractor's spend and so we're not really affecting their processes and procedures and so on. So if I go back to very empirical data then I would say that in speaking to a few project teams they said, OK we did a few calculations, so this particular signalling project, it got to a stage gate 2, the operations team failed it and said actually what you're proposing won't work, so that put an extra six months onto the project which meant that yes there was a delay, however they came back, they rejigged it and then that project became a bit of an exemplar. They said that if PMF hadn't been there, they would have gone on for another six months without being told you couldn't do it, so they would have maybe lost another 600K or something like that! Other depot projects had the

same issue, so whereas we're selling it to the outside world at about 8% I think it would be true to say maybe we've saved 1% overall, if those two or three projects are indicative - but its impossible to define really" [CA1]

"All our earned value indicators are better than they were three years ago so when we started PMF our CPI was .85 and our SPI was .91, they're now both up to .98 so for such a large delivery portfolio this represents a huge bunch of money" [CA1]

"That's if the figures are accurate" [CA5]

"Yes – if figures are accurate but if you're going for a baseline then that's as good as any but how much of that was down to PMF impossible to say" [CA1]

"For me the other benefit of PMF was the whole of the iceberg coming out of the water because out of 548 products there were originally in there - a lot of them had standards, a lot of them were conflicting. What PMF has just done is bought everything out into the open and we're now down to about 120 products so you can imagine what was going on with the balance of that the other 330 something. It's forced the business as a whole I think to have a look at why have we got this conflict. So I was putting in communications equipment in a platform area. One standard said I couldn't have the door opening out onto the platform and the next standard said I couldn't have it opening in because it will be dangerous if somebody got locked in and I could not get the concession from either of the technical authorities - so I just had to go with whatever was best for the maintenance people on site and then just say it's here - deal with it - but that's no way to run a business so for me that was one of the biggest benefits of the introduction of PMF" [CA5]

"The removal of pain must have a value to it, and there seems to be a perception that throughput must be better…" [Researcher]

"And the collaboration needed, which is also one of our values" [CA5]

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The next conversation focused on time-period 3 and how experience of PMF v3 had shaped thoughts about the future

"We have genuinely engaged - so last year we had these 14 special interest groups, each one of them with about 10/12 people, we had my steering crowd of 17, we had owner's group of about 15, business user groups of about 20, so we genuinely built …" [CA1]

"We were ready to hear that other people were doing things better" [CA2]

"You've clearly done great work but so far the change was a door that you didn't have to put your boot on to open, it was the right thing at the right time and the benefit of bringing the iceberg out of the water, consistency and transparency into the gate management route – that's clear. The next step is potentially going to be more challenging do you think?" [Researcher]

"We wouldn't want to go back - I think our task was to develop a deliverable product and then make sure that we help people through the transition, but you're right it was a virtuous change as I define it, so its good for the business and good for the people" [CA1]

"The real trick we will need to pull off going forward is knowledge management and special interest groups and ownership in the business, we haven't pulled it off yet, so actually what we're saying is we don't own any of this stuff, you own this stuff" [CA1]

"Level 4 P3M3 is all about being able to measure performance then continuously improve – it's a massive undertaking - we're working on trying to get tools, they're not there yet, how are we really going to be able to measure stuff? You can make progress with the knowledge management and all the rest of it, but definition of level 4 in my understanding is accurate measurement" [CA5]

"Level 4 is all about working with the data so why are there change notices coming through, what is the common theme in the change notices, what are the

repeated risks that are turning into issues and so on. PMF of itself cannot do that - so that's where our controls people need to come in" [CA1]

"As a PMF team we have to be careful that we don't do other people's jobs, I'm very conscious of that, we can do a lot of things but actually its other people's job to look at the risk, at benefits, at controls, at reporting and so on. I am very, very hesitant that we can meet level 4, I don't think we can" [CA1]

"Do we have even the tools to measure the stuff we need to measure?" [CA2]

"No I don't think we do" [CA1]

"Maybe there's an argument that maturity models per se always fall down at that level, that levels 4 and 5 are hypothetical?" [Researcher]

"I had a presentation two years ago from AMEC and I still have it and they go into every change notice, why did it happen etc. so we can do some of that lessons learnt and we have a nice analysis to be able to do that but our reporting processes are just not good enough and we don't have the intelligence to go into that. I'd be very surprised if we reach level 4" [CA1]

"And I think also the other side of the coin is, do we concentrate on bringing the whole of the business up to level 3 so we've got consistency across the whole of the organisation rather than just part of it" [CA5]

"It's been declared to board level that everyone needs to go to level 5, I don't think that's realistic or it's necessary or will do anything, I think it's a set of slogans but that's what we have declared" [CA1]

"But solid level 3 everywhere is achievable and has increased value from where you are - but then the rhetoric around maturity models is that that's not enough to hold the gains, it would slip away so what you have to put in place to just keep at level 3 - that's an innovation in itself. How might you do that?" [Researcher]

"Well, we had what I call the boring year which was after we'd got the level 3 certification in March 2011 so then we had our 'keep it stable' year if you like – answering 900+ emails – letting people know we were still here - that we could chase things down and focus on little bits of continuous improvement and so on, so that's the sort of year we will probably trend to in the year 14/15 because I'll be losing half my team - so that's our next year's project - just keep the whole thing going…" [CA1]

5.6.1.4 Summary of the second focus group

The second focus group heard change agent views on how change recipient behaviours had changed through the introduction of PMF. They echoed line manager views that behaviours to support the establishment of a consistent routine had been generally positive, but that there was a challenge in embedding professional judgement rather than blind rule following in some areas. Knowledge of the actual gate review meeting part of the routine was not really understood by change agents and there may be utility in studying these meetings specifically as a sub-set of the wider routine. The reflections on future benefits and the challenges of achieving level 4-maturity shared by participants in the focus group were surprising. The size and shape of future change activity will clearly be influenced by whether there is a corporate appetite to actually achieve level 4-maturity, or whether consolidation at level 3 everywhere is the medium-term goal. The strong rhetoric focused on achieving transparency and consistency, what was necessary to get to level 3-maturity, has perhaps been counter-productive if the corporate goal is really level 4.

5.7 Summary of findings from the CityTransport case

Data analysis for the CityTransport case followed the five-step approach defined in section 3.5. This was designed to explore the influences on the internal dynamics of the routine influenced by the PMF planned change from a number of perspectives, and to build as complete a picture as possible from the data by considering replicating, grounding and organizing strategies for

theorizing from process data (Figure 7). Underpinning this was the conceptual model for the research defined in Figure 5 and Table 4.

5.7.1 Overall findings

Findings from the CityTransport case show clearly that when a change makes complete sense to change recipients, widespread change can be achieved relatively easily. This comment does not suggest that the change team could not have jeopardised progress if they had failed to adopt change and boundary spanning practices that fitted the organizational culture and context. Good work was done to ensure that change recipients' attitudes to change remained positive throughout the period studied. The PMF programme, rather than changing an existing routine, actually established a routine for gate management. This is working overall but there are clear areas for further improvement that will require another step change in behaviour and performance if the gains so far are to be held.

Table 20 summarizes the findings in relation to the research questions and related claims in the literature as detailed in Table 5.

Table 20: Summary findings for CityTransport case – page 1 of 9

Research question	Claims made in the literature	Summary of findings from CityTransport case
Spanning the temporary/ host organizational boundary. How do change agents, positioned in a temporary organization, manage across the temporary/ host organizational boundary in practice?	10 'success factors' for planned change are claimed to always be relevant (as synthesized from the literature in Table 1).	**Claims in the literature are refuted.** Evidence would suggest that not all 'success factors' are needed if the 'logic' for change was obvious to change recipients.
	Integration practices are important – effective boundary spanning (Balogun et al, 2005).	**Claims in the literature are confirmed.** Large-scale change was achieved with good evidence of change practices to gather intelligence, align agendas, and provide support.
	Isolation practices are important – justification of temporary team (Lehtonen and Martinsuo, 2008).	**Claims in the literature are confirmed.** Large-scale cross-business change depended on a dedicated change team having the time and space to think, listen, consolidate and spread learning. Change recipients and line managers focused on their own work deliverables and could not have engineered such extensive cross-business change alone.

Table 20: Summary findings for CityTransport case – page 2 of 9

Research question	Claims made in the literature	Summary of findings from CityTransport case
Spanning the temporary/ host organizational boundary. How do change agents, positioned in a temporary organization, manage across the temporary/ host organizational boundary in practice?	The degree of embeddedness of change agents in change recipient networks is influential. More radical change is enabled by larger 'structural holes' in change agent networks, i.e. more distant relationships (Battilana and Casciaro, 2012).	**Claims in the literature are confirmed tentatively.** Evidence that change agents got close enough to change recipients to be seen as helpful and responsive, but the scale of the change meant that relationships were inevitably distant. Also the initial change was not radical so less persuasion was needed in earlier time-periods than was needed. The principle of future change being enabled from within the business with no temporary organisation may work if the change desired was evolutionary/continuous improvement but not if another step-change in performance was required.

Research question	Claims made in the literature	Summary of findings from CityTransport case
Attitudes to change How do the attitudes to change of multiple actors embedded in internal structures/ ostensive aspects of routines impact on the delivery of desired benefits?	If change efforts are to deliver the benefits desired, change agents need to understand the positive and resistive attitudes to change of change recipients and their line managers at cognitive, emotional and intentional levels (Pideret, 2000).	**Claims in the literature cannot be confirmed or refuted based on the evidence.** It was difficult to tell if the 'need for consistency and transparency' rhetoric advanced by change agents was a result of understanding the frustration with the 'as is' situation or not. Similarly were PMF artefacts, and the support model designed as a result of understanding attitudes to change, or was this design disconnected?
	Cognitive, emotional and intentional aspects of structures must change before performances can follow in a sustained way (Espedal, 2006; Feldman, 2000, 2003, 2004; Howard-Grenville, 2005; Lazaric and Denis, 2005; Rerup and Feldman, 2010; Steen, 2009; Turner and Fern, 2012).	**Claims in the literature are confirmed.** As noted above, the change made perfect sense to change recipients so this was not difficult to achieve. Interesting that 'mandatory' was a positive notion for some change recipients, and negative for others. In future it is likely to be important to influence ostensive aspects of the routine to encourage those for who 'mandatory' was positive to exercise professional judgement to flex responses from the standard routine where this will add value.

Research question	Claims made in the literature	Summary of findings from CityTransport case
Attitudes to change How do the attitudes to change of multiple actors embedded in internal structures/ ostensive aspects of routines impact on the delivery of desired benefits?	Policy, rules and other artefacts have no influence unless embedded in the ostensive (Reynaud, 2005).	**Claims in the literature are confirmed.** This case offers good evidence of change artefacts, e.g. plans and key performance indicators having little or no influence on change recipients. It was interesting to note that the change itself has produced many artefacts relating to the gate management routine, but that future benefit was seen by participants as coming from the patterns of action associated with applying professional judgement.

Research question	Claims made in the literature	Summary of findings from CityTransport case
Attitudes to change How do the attitudes to change of multiple actors embedded in internal structures/ ostensive aspects of routines impact on the delivery of desired benefits?	The ostensive aspects of routines act as a guide to action, to justify actions and to consolidate actions such that variance in performance is selectively retained in the ostensive (Feldman, 2000, 2003, 2005; Feldman and Pentland, 2003, 2005; Howard-Grenville, 2005; Pideret, 2000).	**Claims in the literature are confirmed tentatively.** More data was needed to explore the point about selective retention further, but what was clear was the pivotal role of the line manager and sponsor in changing practices within asset renewal programmes. For the people preparing for the decision-gate using PMF, following the guidance makes total sense as it allows them to comply and move on with their work with least pain. It would be interesting to look further and specifically at patterns of action within a programme team where the line manager and/or sponsor was not personally committed to the value of PMF, given that it was a possibility that the people interested in participating in the research were 'self-selecting' supporters. In addition, there was some evidence of complicity at decision-making gates where investments get a qualified 'pass' to proceed and there was little perceived power to influence a different outcome.

Research question	Claims made in the literature	Summary of findings from CityTransport case
Influence of rhetoric How is rhetoric (spoken and written communication) of multiple actors during planned change used to influence behaviour?	Progressive, regressive and stability narratives are used to make sense of, and narrate responses to planned change, but the interplay of these can cause strategic ambiguity (Sonenshein, 2010). Planned change 'success' depends on there being minimal ambiguity within and between multiple independent actors, facilitated by explicit understanding of internal and external rhetoric (Steen, 2009).	**Claims in the literature are confirmed.** All parties in the first two time-periods, resulting in the level 3-maturity assessments being achieved, used a progressive rhetoric. There was evidence that this had implicitly flagged a stability narrative (all is now well) that the change team need to address to move forward to achieving level 4 – maturity. Some evidence of strategic ambiguity being caused by non-aligned rhetoric in the current period.
	There is utility in understanding explicit resistance to change (Ford and Ford, 2009; Pideret, 2000; Waddel and Sohal, 1998).	**Claims in the literature are confirmed tentatively.** Change agents engaged closely with change recipients, listened and diligently responded to a large volume of questions and feedback. Evidence that seeking out the voices of change recipients has benefit. However, in time-period 3 and into the future, to achieve continuous improvement, the stakes are higher and other voices need to be heard if the change is to deliver further value beyond reliability.

Research question	Claims made in the literature	Summary of findings from CityTransport case
Influence of rhetoric How is rhetoric (spoken and written communication) of multiple actors during planned change used to influence behaviour?	Change agents have a vested interest in promoting the 'resistance to change' rhetoric (Ford et al, 2008).	**Claims in the literature are confirmed tentatively.** Some evidence that this rhetoric was used when change agents were exasperated and their plans were not working: a defensive mechanism that serves little positive purpose.
Lewinian three-step model Does the Lewinian (1947) model of 'unfreeze-transition-refreeze' remain a useful guide to understanding planned change?	The equilibrium of driving and restraining forces for change needs to be disturbed (unfrozen) before old behaviour can be unlearned and new behaviours adopted (Lewin, 1947 as reported in Burnes, 2004).	**Claims in the literature are confirmed.** Endogenous driving forces for change were so real to change recipients that the situation was 'unfrozen' at the start of the change programme. The challenge in the final time-period in CityTransport is getting enough of a transition before behaviours are frozen. The programme remains in transition, but do change recipients understand this?
	For continuous improvement to occur, patterns of action need to be made visible and 'frozen' (Abel and Sementelli, 2005; Weick and Quinn, 1999).	**Claims made in literature cannot be confirmed nor refuted.** No evidence from this phase of the change, but a key point for the next phase of the programme for CityTransport if they are to balance local benefit with sustained organizational benefit.

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Table 20: Summary findings for CityTransport case – page 8 of 9

Research question	Claims made in the literature	Summary of findings from CityTransport case
Utility in studying routine dynamics Is exploration of the internal dynamics of routines undergoing planned change necessary to understand how routines change or remain stable?	The performative and ostensive aspects of routines need to be distinguished and each studied specifically, because it is not possible to make sense of routines by only looking at actions and their outcomes (Zbaracki and Bergen, 2010).	**Claims made in the literature are confirmed, and extended**. Understanding routine dynamics is a powerful explanatory approach, to make sense retrospectively of routines. In addition, evidence suggests utility in differentiating shared external structures and shared outcomes from internal structures/ostensive and habits and actions/performative. This shows how different perceptions of external structures embedded in the ostensive lead to different actions, and how shared outcomes influence future perspectives and performances differently for different actors. There is some tentative evidence in this case, to support the proposition in the first case, that the approach might be useful prospectively, as part of planning and delivering planned change, i.e. to explore internal dynamics of existing routines as a precursor to deciding how to try to change that routine.

Table 20: Summary findings for CityTransport case – page 9 of 9

Research question	Claims made in the literature	Summary of findings from CityTransport case
Primary research question What influences the internal dynamics of organizational routines undergoing planned change?	The relationship between the ostensive (in principle) aspects of routines and the performative (in practice) aspects is simultaneously enabling and constraining with the routine representing the patterns of interdependent action of multiple actors (Feldman and Pentland, 2003). Researching the routine as the unit of analysis is necessary to focus on patterns of action rather than on any one of the individual micro-foundations of routines (Pentland and Feldman, 2005). Artefacts cannot represent patterns of action (Pentland and Feldman, 2008), but they are intermediaries in shaping the interaction between the ostensive and performative aspects of routines (D'Adderio, 2008, 2010; Hales and Tidd, 2009).	**Claims in the literature are confirmed.** Overall in CityTransport, the perspective that the change has been very successful can be explained through examination of the 'unpacked' dynamics of the routine. There was clear evidence of routine dynamics having an enabling and constraining relationship at face value. Artefacts for the routine were conflated with the routine. On closer inspection, underlying patterns of action varied depending on whether change recipients were taking the PMF artefacts as being mandatory or whether they were flexing their action based on application of professional judgement. There was little evidence that artefacts for the planned change had any influence. Focusing on the organizational routine undergoing change as the unit of analysis has shown that there were differing perceptions of what the routine was between different actors, and therefore its purpose. The change programme that focused on preparing for decision-gates was disconnected to some extent from the part of the routine that includes such preparation and the actual decision-making at gate reviews. This could usefully be joined up in the current phase of work within CityTransport. Further, focusing on the routine as unit of analysis, was useful to bring together various macro-contextual and micro-foundational aspects of routines including perceptions of culture, measurement systems, roles, work content, motivations, habits etc. Understanding context and micro-foundations is interesting in isolation, but this doesn't help with the practical task of crafting interventions to bring about planned change to the whole routine.

5.7.2 Reflections on the research method

As in the first case, adopting Stone's (2005) quadripartite model of Strong Structuration and a composite research strategy, was achievable based on the advice offered in the literature. It once again proved easy to access relevant data using a pre-designed reflective diary template, with follow-up individual interviews, and focus groups to supplement the documented 'official' story of the planned change.

As noted in Chapter 4, it could be argued that the design would have been stronger if more real-time data had been collected. However, the researcher made a necessary trade-off between this, the demands on a part-time researcher's time and the need to study the case historically and processually using participant accounts and documented evidence of outcomes as suggested by the literature (Pozzebon and Pinsonnealt, 2005; Lazaric and Denis, 2005).

In this second case, however, change is on-going and it is hoped that the change team themselves will adopt aspects of the research method to provide them with improved information on which to base their decisions about optimal change and boundary-spanning interventions.

In this chapter, and in Chapter 4, data from empirical studies has been shared and findings evaluated. In Chapter 6, a cross-case discussion about findings from empirical studies, and their relevance to claims made in the literature, will be outlined.

6 DISCUSSION OF FINDINGS

The research has explored the influences on the internal dynamics of organizational routines undergoing planned change adopting a social practice perspective. To do this, a conceptual model and research questions have been derived following the principles of Strong Structuration (Stones, 2005).

Chapter 2 synthesised three distinct literatures in order to derive the conceptual model. These were (1) planned change from the perspective of change agents, change recipients, line managers and the strategically-significant work to be changed; (2) the interplay between stability and change in organizational routines and (3) the use of Structuration Theory in empirical studies. Research questions and associated claims arising from review of these literatures were outlined in Table 5.

Chapter 3 defined the research method. Case-based research was used to generate rich data through which to examine the influences on the internal dynamics of organizational routines undergoing planned change; using the routine intended to change as the unit of analysis. This approach enabled close attention to a range of factors existing within and between multiple actors, and within the wider context (in this case of the planned changes to the routines in question). Multiple data collection approaches were used to access different sources of data and narrative pertaining to the routine undergoing planned change.

Chapters 4 and 5 then detailed the findings from two cases, following the research method as defined. The data presented for each case is extensive, including much original data to enable detailed understanding of participant perspectives. Findings have been summarized for each case using the research questions and claims from the literature in Table 5 as a basis for discussion.

6.1 Structure of this chapter

In this chapter, each of the research questions are discussed with reference to the findings from both empirical cases. Through this cross-case discussion, contributions to theory and practice are highlighted. Section headings for this chapter focus on the theme from which research questions were derived in Table 5.

Accordingly the discussion starts with questions arising from the planned change literature and how change agents span the temporary/host organizational boundary. This is the point of departure for this research underpinned by a practitioner observation that the advice offered by the literature is necessary but not sufficient.

This discussion is followed by exploration of attitudes to change of multiple actors embedded within internal structures/ the ostensive aspects of the routine.

The third issue discussed is the influence of the rhetoric used during planned change. This draws on findings from the empirical cases designed to address two areas; (1) rhetoric in planned change in general, and (2) rhetoric during planned change to routines in particular. Findings related to the populist idea that change recipients 'resist change' are also explored in this section.

The discussion continues by examination of a core idea in planned change - the three-step model for planned change described by Lewin in 1947. In this research, the question is asked whether this remains a useful guide to understanding planned change considering the 60+ years of research that has followed Lewin's seminal insights. Some interesting ideas enabled by thinking about routines during planned change are discussed here.

Finally, the discussion returns to the central inquiry of the utility in studying routine dynamics during planned change. This discussion looks to answer the primary research question, 'what influences the internal dynamics of organizational routines undergoing planned change?'

Findings from the two empirical cases researched have enabled a number of contributions to be made to both theory and practice. These contributions are suggested throughout each section of this chapter. Chapter 7 then draws conclusions and consolidates the contributions of this research, its limitations and areas for further research arising from this study.

The section headings and associated research questions and sub-section references in this Chapter are summarised as Table 21 as follows:

Table 21: Structure of Chapter 6

Research theme and section number	Research question	Sub-section references drawing from claims in the literature
Section 6.2 **Spanning the temporary/ host organizational boundary.**	How do change agents, positioned in a temporary organization, manage across the temporary/ host organizational boundary in practice?	6.2.1 – 'success factors' for planned change
		6.2.2 – integration practices for boundary spanning
		6.2.3 – isolation practices
		6.2.4 – degree to which change agents are embedded in change recipient networks
		6.2.5 – summary findings regarding spanning of the temporary/host organizational boundary
Section 6.3 **Attitudes to change**	How do the attitudes to change of multiple actors embedded in internal structures/ ostensive aspects of routines impact on the delivery of desired benefits?	6.3.1 – understanding change recipient attitudes to change
		6.3.2 – the impact of attitudes to change on action/performances
		6.3.3 – the influence of artefacts
		6.3.4 – variance in performance selectively retained in the ostensive
		6.3.5 – summary findings regarding attitudes to change

Section 6.4 **Influence of rhetoric**	How is rhetoric (spoken and written communication) of multiple actors during planned change used to influence behaviour?	6.4.1 – avoiding strategic ambiguity caused by confused rhetoric
		6.4.2 – utility in explicit resistance to change
		6.4.3 – change agent 'vested interest' in promoting the resistance to change rhetoric
		6.4.4 – summary findings relating to the influence of rhetoric
Section 6.5 **Lewinian three-step model for planned change**	Does the Lewinian (1947) model of 'unfreeze-transition-refreeze' remain a useful guide to understanding planned change?	6.5.1 – planned change requires patterns of action to be unfrozen
		6.5.2 – continuous improvement requires patterns of action to be frozen
		6.5.3 – summary findings relating to the Lewinian three-step model for planned change
Section 6.6 **Utility in studying routine dynamics**	Is exploration of the internal dynamics of routines undergoing planned change necessary to understand how routines change or remain stable?	6.6.1 – the necessity to unpack routines
	What influences the internal dynamics of organizational routines undergoing planned change?	6.6.2 – three primary claims from literature relating to the study of organizational routines undergoing planned change
		6.6.3 – what influences the internal dynamics of organizational routines undergoing planned change?

Table 21: Structure of Chapter 6

6.2 Spanning the temporary/ host organizational boundary.

As discussed in the literature review, much of the past research into planned change has focused on the actions of change agents positioned in a temporary organization. It focuses on what they do, and what change and boundary-spanning practices have efficacy.

6.2.1 'Success factors' for planned change

10 'success factors' for planned change are claimed, in the literature, to be always relevant (as synthesized in Table 1).

In the ELibrary case, all 10 'success factors' were in place, with no obvious deficiencies that could explain the challenges in bringing about change, albeit with some areas for improvement in hindsight. The synthesis of 'success factors' from the literature provided a useful starting point, they were relevant, but were not enough. In contrast, in the CityTransport case, there was less positive evidence of all 'success factors' being in place, yet the change, particularly in the early time-periods, was very successful. Evidence suggests that not all 'success factors' are needed if the 'logic' for change is obvious to change recipients. However, looking forward to the on-going change in CityTransport suggests that the 'success factors' should be one set of information considered when crafting planned change interventions.

Any claim that the 10 'success factors' are *always* relevant in terms of influencing planned change performance is refuted from this research. However, the claim that these are always relevant points to consider when planning intentional change is confirmed and extended by pointing out that 'compliance' with such prescriptions is not enough. 'Success factors' are not sufficiently granular and context-specific to reliably guide change and boundary-spanning practices.

6.2.2 Integration practices for boundary-spanning

As shown in Figure 2, an underpinning paradigm for literature and practice relating to planned change is the creation of a temporary organization that separates change agents from 'business-as-usual' in the host organization. This intentional organizational separation then creates the need to 'span the boundary' between the temporary /host organization.

Some literature has focused on how change agents successfully span the boundary; the practices they use and which have efficacy (e.g. Balogun et al. 2005).

Regarding integration and boundary spanning. The ELibrary case provided evidence of how change agents worked to align change recipients and their line managers, and to influence them through 'hard' means e.g. performance management, and 'softer' means e.g. relationship management. It was clear in this case that change agents needed to be close enough to understand perspectives and to be able to respond dynamically to concerns as they arose. In the CityTransport case, different approaches were necessary, given that the change was being played out on a much larger scale. Similarly though, there was good evidence of change practices to gather intelligence, align agendas, and to provide support.

Both cases provide positive evidence to support the claims in the literature, yet one change was accomplished and the other not. As with the 10 'success factors', the arguments for the positive influence of integrative boundary-spanning practices are confirmed, but such generic insights are insufficient to guide the accomplishment of planned change.

6.2.3 Isolation practices

Also focusing on the temporary/ host organizational boundary, other literature (e.g. Lehtonen and Martinsuo, 2008) has argued the efficacy of the temporary organization in providing isolation; a haven for change agents to protect the boundaries during planning and implementation of intended change.

Here the contrasting nature of the two cases provides interesting findings that again support the utility of temporary teams, but for different reasons. In ELibrary there was significant overlap between the temporary and host organization (a large shared domain), with line managers identifying equally with change agents and their staff. There was evidence that too much involvement of disparate parties too early in the change, reduced the change agent's power to influence. This is discussed further in the next sub-section. The interesting point within ELibrary was that the boundary-spanning literature would suggest that close integration would yield superior results, yet this was counter-productive at some stages of the change. It was not expected to find evidence to justify isolation practices for temporary change teams in this case, yet there was evidence that it was easier to get things done when change agents were able to plan what to do before trying to do it.

In CityTransport, large-scale cross-business change depended on a dedicated change team having the time and space to think, listen, consolidate and spread learning. In this case, line managers identified more closely with their staff and were focused on their own work deliverables. They were in no position to engineer such extensive cross-business change alone. Some change agents worked in close proximity to change recipients at stages in the change, but their 'home base' was physically and intellectually removed, and this isolation allowed re-grouping and sense-making to occur.

Again both cases provide positive evidence to support the claims in the literature, yet one change was accomplished and the other not. The arguments for the positive influence of isolation practices when managing across a temporary /host organizational boundary are confirmed, but such insights are insufficient to guide the accomplishment of planned change.

6.2.4 Degree to which change agents are embedded in change recipient networks

One notable study in the literature claimed that the degree of embeddedness of change agents in change recipient networks is influential in accomplishing planned change objectives. The claim is that more radical change is enabled by

larger 'structural holes' in change agent networks, i.e. more distant relationships (Battilana and Casciaro, 2012).

As suggested above, in ELibrary there was evidence that change agents were too close to change recipients, and that larger 'structural holes' in the change agent's network with change recipients' was needed. There was a significant overlap between the temporary and host organization that was seen as helpful at the time given the degree of change needed. However, in retrospect this made unpopular change difficult to achieve. In CityTransport, the evidence is that change agents got close enough to change recipients to be seen as helpful and responsive. The scale of the change meant however that relationships were inevitably distant. Also, in CityTransport, the planned change was not as radical for change recipients as the ELibrary change. Less persuasion was needed to accomplish objectives in early time-periods.

This part of the literature would suggest that the principle within CityTransport, of future change being enabled from within the business, with no temporary organisation, would only work if the future desired change was evolutionary/ continuous improvement. If another step-change in performance is required, findings confirm the value of the temporary organization, particularly if the next stage of change would be challenging for change recipients to understand and act upon.

Findings provide some tentative support for the claims in the Battilana and Casciaro (2012) study, although the study in this thesis was not designed to address social network theory.

6.2.5 Summary findings regarding spanning of the temporary/ host organizational boundary

Both empirical cases provided interesting insights into the practices that change agents adopt when managing inevitable tensions across the temporary /host organizational boundary during planned change. The claim that the 10 'success factors' for planned change are always relevant is confirmed and extended for ELibrary (necessary but not sufficient), but refuted for CityTransport (not

necessary if the logic for change is obvious to change recipients). The need for change agents to integrate with change recipients across the temporary/host boundary is confirmed in both cases, as is support for change agents in the temporary organization to have some degree of isolation. This is a somewhat unexpected finding from ELibrary, where change agents that were closely embedded in change recipient networks was expected to be a benefit. This is explained tentatively by confirmation of the claim made by Battilana and Casciaro (2012) that more radical change is enabled by more distant relationships between change agents and change recipients. Overall the claims in the literature relevant to this research question are supported, but on the premise that these are necessary, but not sufficient if change agents are to be successful consistently in crafting change and boundary-spanning practices that provide a return on the investments made in planned change.

The discussion continues with an examination of perspectives that may shed light on how the 'traditional' planned change literature can be augmented to provide more value to change agents in practice.

6.3 Attitudes to change

The research question discussed in this section is 'how do the attitudes to change of multiple actors embedded in internal structures /ostensive aspects of routines impact on the delivery of desired benefits?'

Four different, but closely related claims from the literature are discussed in turn.

6.3.1 Understanding change recipient attitudes to change

Pideret (2000) claimed that if change efforts are to deliver the benefits desired, change agents need to understand the positive and resistive attitudes to change of change recipients and their line managers at cognitive, emotional and intentional levels.

Within ELibrary it was demonstrated that understanding is not enough. Change agents did in principle understand attitudes to change of change recipients and their line managers at cognitive, affective and intentional levels. There is evidence of deep understanding of attitudes at cognitive and affective levels. Intentions however were not sufficiently explicit for any party. What was significant in ELibrary is that change agents and line managers empathised too much with the change recipients' position that change, in the way proposed, was not necessary. This perspective, embedded in the internal structures of change agents and line managers constrained their ability to champion a route to change. This case suggests that the progression of any change is influenced by change agents as much as it is by change recipients and their line managers. As a result, the exploration of internal structures/ the ostensive, for *all* actors, during planned change to a single organizational routine is necessary to make sense of the situation.

The CityTransport case was less insightful in this particular respect. It is difficult to tell if the actions of change agents were crafted as a result of understanding attitudes to change of change recipients and their line managers or not. Similarly were PMF artefacts, and the support model designed as a result of understanding of attitudes to change, or was this design disconnected? The suggestion is that anecdotally, attitudes to change were understood, but this was not at a granular level.

These findings suggest that understanding change recipient and line manager attitudes to change are important, but also, that during planned change, change agent attitudes to change are equally important. This finding contributes a further perspective to the conversation in the literature to date.

6.3.2 The impact of attitudes to change on action/ performances

The major contribution of extant research into routine dynamics is the claim that cognitive, emotional and intentional aspects of structures (the ostensive aspects of routines) must change before performances can follow in a sustained way. Warrants for this claim can be found in Espedal, 2006; Feldman, 2000, 2003,

2004; Howard-Grenville, 2005; Lazaric and Denis, 2005; Rerup and Feldman, 2010; Steen, 2009; Turner and Fern, 2012. Some of this work was focused on routines undergoing planned change (Espedal; Lazaric and Denis; and Steen). Other work was focused on routines as sources of stability yet undergoing continuous endogenous improvement (Feldman; Howard-Grenville; Rerup; and Feldman, Turner and Fern).

In ELibrary, there was compelling evidence that despite everyone understanding why change was vital, change recipients 'almost couldn't bring themselves' to do something that they perceived would be of lower quality for users. All actors were aware of exogenous pressure to change and were willing to change in principle. As a result performances changed to some extent, but in the areas that were perceived as having minimal impact on the routine overall. Primarily, the case highlights the sustained energy that is needed to create a compelling enough vision to change routines that are deeply embedded in practice. Drivers for change that appeared obvious to people working outside the routine (including economic, sociological and technological factors) could not be translated into a changed reality for people working with the routine.

In contrast in CityTransport, the change achieved so far made perfect sense to change recipients so was not difficult to achieve. In the CityTransport case the change introduced artefacts for the routine, some of which were mandatory, and others where professional judgement was needed to decide whether to use them. There was evidence that for some change recipients and their line managers, 'mandatory' was a positive notion that introduced bureaucracy for a useful purpose. For others it had negative connotations. This has implications for the on-going change in CityTransport where the application of professional judgement is required. It will be important to influence the ostensive aspects of the routine to encourage those for who 'mandatory' is positive to be able to exercise professional judgement, to flex responses from the standard artefacts where this will add value.

Findings from this research contribute some additional, small insights to confirm the claims made in this conversation.

6.3.3 The influence of artefacts

This research focuses on the role of artefacts during planned change to organizational routines. Other research into the role of artefacts in routines is discussed in the literature review, but the research question brought forward to empirical studies here pertains only to artefacts during planned change. Reynaud (2005) argues that policy, rules and other artefacts have no influence unless embedded in the ostensive.

The findings in the ELibrary case confirmed this claim. Policy, plans, reducing budgets (shared external structures) were noted but not internalised. Similarly, performance metrics (shared outcomes) were noted but not internalised by change recipients and (some of) their line managers in the case.

Similarly, the CityTransport offered good evidence of change artefacts, e.g. plans and key performance indicators having little or no influence on change recipients. Of further interest in this case, as previously noted, was that the planned change itself produced many artefacts relating to the gate management routine, but that future benefit is seen as coming from the patterns of action associated with applying professional judgement, rather than blind compliance with the artefacts.

Undoubtedly, artefacts that are proxy for the ostensive, or the performative aspects of routines are important in organizational life. In a later part of this chapter, the role of artefacts as intermediaries in shaping the patterns of action between the ostensive and performative is further discussed. For this section of the discussion however, both empirical studies confirmed that change agents should not rely on artefacts having influence unless they are internalised, and shape attitudes to change embedded in the ostensive/ internal structures.

6.3.4 Variance in performance selectively retained in the ostensive

The final sub-section of this 'attitudes to change' section focuses on a more detailed claim arising from Feldman, 2000, 2003, 2005; Feldman and Pentland, 2003, 2005; Howard-Grenville, 2005 and Pideret, 2000. Literature claims that the

ostensive aspects of routines act as a guide to action, to justify actions and to consolidate actions resulting in performance variation being selectively retained in the ostensive. This research is interested in how this claim might manifest itself during planned change to routines, where attitudes to change are pivotal to the ostensive aspects of the routine undergoing change.

In ELibrary there was some evidence that when presented with contrary evidence to embodied ostensive aspects arising from market research and user feedback, that the data was selectively interpreted to justify and consolidate the status quo. Remorse was almost shown in retrospect by the people responsible for managing the routine – a real sense shared during discussions of 'we needed what we have now, three years ago - and we could have done it'

In CityTransport there was also some tentative evidence relating to the role and behaviour of line managers and sponsors in changing the routine. From the data generated, it was seen that for the people *preparing* for decision-gates using the artefacts for the routine, following the guidance made total sense as it allowed them to comply and move on with their work with least pain.

It would be an interesting area of future research to look specifically at patterns of action within a programme team where the line manager and/or sponsor was not personally committed to the value of the changed routine. This is suggested as there is a possibility that the people who chose to participate in the research were 'self-selecting' supporters.

In addition to this point, there was some evidence in CityTransport that suggests complicity, or a truce, at decision-making gates where investments are 'passed' conditionally at a gate review, and where there was little perceived power to influence a different outcome. This suggests that variances in performance of asset renewal projects and programmes that were presented at gate reviews were selectively retained, i.e. the possibility that perceptions of the power of the sponsor resulted in a 'blind eye' being turned to unsatisfactory performances. The role of 'routines as truce' is one of the arguments in the seminal work of Nelson and Winter (1982) that discusses routines as sources of

stability and reliability. This argument was progressed by Zbaracki and Bergen (2010) and claims from this latter work are part of this discussion in a later sub-section.

6.3.5 Summary findings regarding attitudes to change

Findings from both cases provide evidence supporting claims in the literature that understanding attitudes to change, as embedded aspects of internal structure/ the ostensive, is vital if performances are to be understood. With regard to the claimed need for change agents to understand attitudes to change of change recipients and line managers at cognitive, emotional and intentional levels, the ELibrary case confirms and extends this by pointing to the necessity for change agents to also understand the impact of their own attitudes to change on the routine undergoing change. In CityTransport, change recipient and line manager attitudes to change were so positive that change agent understanding of these was potentially irrelevant. Evidence from both cases confirmed the need for internal structures/ the ostensive to change before performances can follow in a sustained way. Also, both cases confirmed that relying on artefacts to influence attitudes to change has little efficacy. Finally, there is tentative confirmation that performances of routines, conceptualized as outcomes in this work, always influence the ostensive aspects of routines for future performances, and there is some evidence that a 'selective perception' mechanism is prevalent in practice.

The discussion continues with examination of the influence of rhetoric on behaviour during planned change.

6.4 Influence of rhetoric

A small literature discusses how rhetoric during planned change influences behaviour. Some of this literature focuses on rhetoric during planned change in particular (Sonenshein, 2010). Other literature focuses on planned change to routines and comments on the influence of rhetoric (Steen, 2009). Further the large literature that discusses 'resistance to change' also speaks of specific

instances where the rhetoric related to resistance is helpful (e.g. Ford and Ford, 2009; Pideret, 2000; Waddel and Sohal, 1998), or unhelpful (e.g. Ford et al, 2008).

Three different, but inter-related claims from the literature are discussed in turn.

6.4.1 Avoiding strategic ambiguity caused by confused rhetoric

Sonenshein's work claimed that progressive, regressive and stability narratives are used to make sense of, and narrate responses to planned change, but the interplay of these can cause strategic ambiguity. Steen's research of routines undergoing planned change independently suggested that planned change 'success' depends on there being minimal ambiguity within and between multiple independent actors, facilitated by explicit understanding of internal and external rhetoric.

In ELibrary, there was good evidence of different guiding rhetorics being used in different time periods. In time-period 1 the dominant rhetoric was 'stability is OK for now', and this made it more difficult for the progressive (things are not OK) rhetoric in later time periods to be heard. There was clear strategic ambiguity caused by the interplay of progressive and stability narratives through this case.

In CityTransport, a progressive rhetoric was used by all parties in the first two time-periods, resulting in the level 3-maturity assessment being achieved. There was evidence that this has implicitly flagged a stability narrative (all is now well) that the change team need to address to move forward to achieving level 4-maturity. Some evidence exists of strategic ambiguity being caused by non-aligned rhetoric in the current period within the CityTransport change.

Claims made by Sonenshein (2010), and Steen (2009) are supported by this research.

6.4.2 Utility in explicit resistance to change

Literature argues that ambivalence is more dangerous during planned change than expressed 'resistance', and that the notion of resistance is often perceived as being unfounded or illegitimate in some way by change agents. Accordingly, empirical data was examined to seek evidence of the utility of explicit attitudes to change that could be conceived as resistance.

Within ELibrary, evidence was that understanding and acknowledging attitudes to change, particularly perspectives that could be conceived as resistance was not enough. Change agents were close to change recipients and their line managers and heard resistive attitudes to change (regressive rhetoric). These were fully understood but seen as naïve given the weight of exogenous pressure to change. However, the depth of empathy with resistive attitudes from change agents compounded the challenges of bringing about change.

Within CityTransport, change agents engaged closely with change recipients, listened and diligently responded to a large volume of questions and feedback that could be perceived in some instances as explicit resistance. Evidence in this case was that providing the mechanism to explicitly hear the voices of change recipients had benefit. However, in time-period 3 and into the future, to achieve further change the stakes are higher and other voices will need to be heard if the change is to deliver further value to the organization beyond reliability.

6.4.3 Change agent 'vested interest' in promoting the resistance to change rhetoric.

Ford et al (2008) propose that although seeking out attitudes to change, and any resistive rhetoric is vital during planned change, change agents can often promote the 'resistance to change' rhetoric as a type of defensive routine.

There was some evidence from both the ELibrary and City Transport cases that change agents used the 'resistance to change' rhetoric explicitly when they were exasperated because their plans weren't working as well as they had

hoped. Evidence supports Ford et al's (2008) views that this is a defensive mechanism that serves little purpose other than to allow the change team to 'let off steam'.

6.4.4 Summary findings relating to the influence of rhetoric

It can be seen from both cases, that the rhetoric used by multiple actors during a planned change can be influential in shaping perspectives that, in turn, enable and constrain action. Evidence exists to show how change progresses more smoothly when there is aligned rhetoric, i.e. no strategic ambiguity caused by competing rhetorics. Where there is evidence of competing rhetorics, the accomplishment of change seems to be influenced, or at least the perspectives of change recipients influenced in an unhelpful way.

The claim in the literature that is extended by this research is that relating to the utility in explicit resistance to change. In ELibrary, the depth of change agent empathy with resistive attitudes compounded the challenges of planned change. This finding is linked to the finding about the degree of embeddedness of change agents in change recipient networks and the need for greater isolation to support divergent changes.

In the next section, a further core idea in planned change is explored, that of the three-step model for planned change described by Lewin (1947). In this research, the question is asked whether this remains a useful guide to understanding planned change given more than 60 years of on-going research on this topic.

6.5 Lewinian three-step model for planned change

Lewin's (1947) work suggested that during planned change situations need to be unfrozen, before they can be transitioned, then re-frozen. To facilitate 'unfreezing', the equilibrium of driving and restraining forces for change needs to be disturbed. This idea makes sense when considering the object for planned change to be the organizational routine. Routines exist to embed organizational capabilities and to bring stability, reliability, and continuous improvement when

the conditions for such endogenous change are right. It follows that during planned change it could be expected that routines must be unfrozen, before they can be changed, then consolidated once more.

Weick and Quinn (1999) take this idea and theorize a logical extension whereby, if patterns of action are not stable or 'frozen' in the first place, then endogenous continuous improvement cannot take place. Abel and Sementelli (2005) support this idea in their work by suggesting that reliable routines are 'sticky', i.e. that patterns of action are consolidated across multiple interdependent actors.

Two claims, (1) that planned change requires patterns of action to be unfrozen and (2) that continuous improvement requires patterns of action to be frozen, from the literature were considered during analysis of findings from empirical work. These are discussed next.

6.5.1 Planned change requires patterns of action to be unfrozen

As reported in Burnes 2004, Lewin argued that the equilibrium of driving and restraining forces for change needs to be disturbed (unfrozen) before old behaviour can be unlearned and new behaviours adopted.

Within ELibrary, exogenous driving forces for change were not significant enough to change endogenous restraining forces. The situation was never 'unfrozen'.

Within CityTransport, endogenous driving forces for change were so real to change recipients that the situation was already unfrozen at the start of the change programme, indeed some participants argued that the achievement of the planned change was actually to establish or consolidate a stable routine. The challenge now in CityTransport is getting enough of a transition before behaviours are frozen.

The Lewinian ideas do remain a useful guide, but in isolation are not enough to guide improved planned change practice.

6.5.2 Continuous improvement requires patterns of action to be frozen

The other claim from the literature explored in this section is that for continuous improvement to occur, patterns of action need to be made visible and 'frozen' (Abel and Sementelli, 2005; Weick and Quinn, 1999).

Interestingly in ELibrary, during the first time-period, patterns of action were made visible and 'frozen' and some continuous improvement did occur, but this was not the objective - a step change was needed requiring a greater imbalance between driving and restraining forces.

Within CityTransport there was no evidence from the change to date. However, it is a key point for the next phase of the programme for CityTransport if they are to balance local benefit with sustained organizational benefit. There is an emerging perspective that the routine is becoming re-frozen before enough change has occurred.

Insights into this latter point come from Turner and Fern (2012) and their study that showed how the performance experience of actors shapes the stability and variability of routine performances. They demonstrated that experience enables stability, then yet further experience enables flexibility. The need for CityTransport to embed the concept of 'professional judgement' into the routine is clear from the data. The Turner and Fern (2012) study suggests that to enable this, the change programme must address how change recipients gain experience more quickly than they would otherwise do 'on the job'.

Again, there is some tentative confirmation of the claims made in the literature and this is an interesting area for further research, linked to the work already done on the relationship between stability and change proposed in Farjoun 2010.

6.5.3 Summary findings relating to the Lewinian three-step model for planned change

This research has focused primarily on studying planned change to organizational routines as a detailed level. However, the core ideas underpinning the high-level planned change paradigm still resonate for practitioners and academics alike and it seemed appropriate to look whether the Lewinian (1947) model still served as a useful guide to understanding planned change.

Some unexpected insights have emerged from this part of the enquiry that will form part of the on-going research agenda. Within ELibrary evidence was seen of routines becoming more tightly frozen through the work done in the first time-period, but these routines were never unfrozen thereafter. Within CityTransport, the purpose of the change itself was to freeze patterns of action within the routine, but the current challenge in this case is to achieve enough of a transition before the routine is re-frozen – this may already be too late. Claims in the literature that (1) planned change requires patterns of action to be unfrozen and (2) that continuous improvement requires patterns of action to be frozen are confirmed, but findings provide a more nuanced understanding of these claims. It seems that during planned change, it may not be possible to understand the degree of 'frozen-ness' of routines prior to change without paying more granular attention to the routine to be changed than is typically done in practice.

6.6 Utility in studying routine dynamics

This final section examines the utility in studying routine dynamics. The two aspects discussed are (1) the necessity to unpack routines and (2) the three primary claims from literature on this issue.

6.6.1 The necessity to unpack routines

In addition to the primary research question that asks what the influences on the internal dynamics of organizational routines might be; this research also

fundamentally supports, in principle, the claim by Zbaracki and Bergen (2010) that routine dynamics must be unpacked (distinguished and studied separately) to make sense of routinized behaviour.

The conceptual model underpinning empirical studies, derived itself from synthesis of literature in Chapter 2, is designed to take forward Zbaracki and Bergen's (2010) claim. The research method to study the ELibrary and CityTransport cases was focused on how actual planned changes had progressed over time. The research method was used retrospectively and clearly showed the utility in unpacking routines to make sense of the perspectives of the multiple interdependent actors involved in performing the routine, and trying to change it.

In both cases, understanding routine dynamics was found to be a powerful explanatory approach to make sense of routines. In addition, evidence suggests utility in differentiating shared external structures and shared outcomes from internal structures/ostensive and habits and actions/performative. This supports the unpacking of organizational routines undergoing planned change using the Stones' (2005) quadripartite model (as in the conceptual model for this research) rather than relying on studying internal dynamics solely as the inter-relationship between ostensive and performative aspects of routines. This claim is warranted as both cases shows how different perceptions of external structures embedded in the ostensive lead to different actions, and how shared outcomes influence future perspectives and performances differently for different actors.

It is argued that analysis of routines in the way researched here *prior* to planned change would provide valuable insights to those charged with crafting planned change interventions. It would also provide a means of carrying out periodic reviews of planned change efforts with the objective of validating or adjusting approaches.

Next, three claims from the literature are explored together to shed light on the primary research question. This analysis builds on the findings discussed so far

but enables a summary position to be taken on the utility of studying routine dynamics during planned change.

6.6.2 Three primary claims from literature relating to the study of organizational routines undergoing planned change

The primary conversation progressed by this research is underpinned by three strands from the organizational routines literature, as follows:

1. The relationship between the ostensive (in principle) aspects of routines and the performative (in practice) aspects is simultaneously enabling and constraining with the routine representing the patterns of action of multiple, interdependent actors (Feldman and Pentland, 2003).

2. Researching the routine as the unit of analysis is necessary to focus on patterns of action rather than on any one of the individual micro-foundations of routines (Pentland and Feldman, 2005).

3. Artefacts cannot represent patterns of action (Pentland and Feldman, 2008), but they are intermediaries in shaping the interaction between the ostensive and performative aspects of routines (D'Adderio, 2008, 2010; Hales and Tidd, 2009).

The innovation in this research has been to take these claims from the organizational routines literature and apply them directly to the study of organizational routines undergoing planned change. Unpacking the routine as a unit of analysis, to explore the routine undergoing change simultaneously from the perspective of change agents, change recipients and their line managers has enabled interesting findings from two in-depth cases of planned change in practice.

Overall in ELibrary, researching the routine as the unit of analysis and unpacking it served to demonstrate why seemingly competent change efforts over many years were not successful. In ELibrary, the strategically-significant routine was recognised by all actors. Artefacts representing the routine itself,

and those artefacts representing the planned change to the routine served only to consolidate unchanged patterns of action through a selective retention mechanism. This confirms that artefacts cannot be relied upon to change behaviour. Primary influences on the internal dynamics of routines undergoing planned change are the cognitive, emotional and intentional attitudes to change held by multiple, interdependent actors, as informed by their perceptions of organizational power, incentives/sanction and methods of communication. Staff were focused, purposefully and genuinely, on carrying out the work in a way that matched their understanding of what was needed for ELibrary to fulfil its strategy. The 'idea' of what the routine was and needed to be (internal structures/ ostensive aspects) reinforced habits and drove actions (performative aspects). Outcomes from action were seen to reinforce that the 'idea' was correct, so validating stability. Understanding the influence of internal structures/ the ostensive aspects of the routine undergoing planned change was critical to make sense of actions and outcomes.

Overall in CityTransport, the perspective that the change had been very successful can be explained through examination of the 'unpacked' dynamics of the routine. There was clear evidence of routine dynamics having an enabling and constraining relationship at face value. In CityTransport, artefacts for the gate management routine were conflated with the routine. On closer inspection, underlying patterns of action varied depending on whether change recipients were conceiving the routine's artefacts as being mandatory, or whether they were flexing their action based on application of professional judgement. There was little evidence that artefacts for the planned change had any influence. Focusing on the organizational routine undergoing change as the unit of analysis showed that there were differing perceptions of what the routine is between different actors, and therefore its purpose. The change programme that focused on preparing for decision-gates is disconnected to some extent from the part of the strategically-significant routine that includes this preparation plus the actual decision-making at gate reviews. This could usefully be joined up in the current phase of work within CityTransport. Further, focusing on the routine as unit of analysis was useful to bring together various macro-contextual

and micro-foundational aspects of routines including perceptions of culture, measurement systems, roles, work content, motivations, habits etc. Understanding context and micro-foundations is interesting in isolation, but this doesn't help with the practical task of crafting interventions to bring about planned change to the whole routine.

Together these two, very different cases have enabled exploration of a range of research questions arising from synthesis of the literature.

6.6.3 What influences the internal dynamics of organizational routines undergoing planned change?

In summary, evidence from two empirical cases confirms the claims in the literature that the primary influence on the internal dynamics of routines are the perspectives embodied in internal structures/ the ostensive aspects of the routine. In the case of an organizational routine undergoing planned change, this means that the attitudes to change of change recipients, line managers *and* change agents themselves are influential. Actions and outcomes reflect the internalized perceptions of the routine of all actors. Also in line with claims in the literature, artefacts for the ostensive (external structures) and the performative (outcomes) are demonstrated to have little value unless their effect is retained as part of the internal structures.

6.7 Summary of this chapter

In this chapter, findings from both empirical cases have been discussed by comparison with the literature. Findings are summarized below in Table 22.

Summary of claims in literature (from Table 5)	Summary of ELibrary findings (from Table 13)	Summary of City Transport findings (from Table 20)
How do change agents, positioned in a temporary organization manage across the temporary/ host organizational boundary in practice?		
10 'success factors' for planned change are always relevant.	Confirmed and extended. All are relevant, but not enough to guide practice.	Refuted. Not all are needed if the change is obvious to change recipients.
Integration practices for boundary spanning are important.	Confirmed. Change agents need to understand change recipient perspectives and to respond dynamically.	Confirmed. Change agents need to understand change recipient perspectives and to respond dynamically.
Isolation practices are important.	Confirmed, unexpectedly. Change agents did not have the necessary distance.	Confirmed. Change agents had distance, but also stayed close in order to support.
More radical change is enabled by more distant relationships between change agents and change recipients.	Confirmed tentatively. Closely embedded change agents in change recipient networks made unpopular change difficult to achieve.	Confirmed tentatively. Change was not radical. Change agents had distance, but stayed close enough in order to support.
Summary cross-case findings. In both cases, change agents attempted to follow the advice in the mainstream planned change literature regarding 'success factors', integration practices and isolation practices. Evidence from the cases shows that such advice is not sufficient to enable suitable change and boundary-spanning practices to be crafted. Findings support recent work looking at the extent of 'embeddedness' of change agents in change recipient networks. This is a potentially important finding for practice, and an area worthy of further research.		

Summary of claims in literature (from Table 5)	Summary of ELibrary findings (Table 13)	Summary of City Transport findings (Table 20)
How do the attitudes to change of multiple actors embedded in internal structures/ the ostensive aspects of routines impact on the delivery of desired benefits?		
Change agents need to understand attitudes to change of change recipients and line managers at cognitive, emotional and intentional levels.	Confirmed and extended. Change agent understanding of change recipients and line managers not enough. Change agent attitudes to change also significant. Attitudes to change of all actors need to be understood.	No evidence to confirm or refute. Change recipients and line managers attitudes to change were so positive that change agent understanding of them was potentially irrelevant.
Internal structures/ the ostensive must change before performance can follow in a sustained way.	Confirmed strongly. A sustained energy is needed to create a compelling enough vision that can be internalised by actors experiencing change.	Confirmed. The change made perfect sense to change recipients so was not difficult to achieve. The next step will potentially be different in nature and more difficult to achieve.
Policy, rule and artefacts have no influence unless embedded in the ostensive.	Confirmed. Artefacts for the ostensive and performative noted, but not internalised.	Confirmed. Artefacts for the routine were internalised and drove change. Artefacts for the change had no effect.
The ostensive acts as a guide to action, to consolidate action and to selectively retain variation in performance.	Confirmed. Outcomes selectively interpreted by change recipients and line managers to maintain the status quo.	Confirmed. Outcomes were perceived as positive to change recipients and line managers – a virtuous cycle.
Summary cross-case findings. In both cases it was clear that the attitudes to change of all actors was influential in shaping internal structures/ the ostensive aspects of the routine and so guiding action, interpreting outcomes and shaping future performances. The interesting aspects of the research, in this respect, are that (1) the influence of the ostensive is the same irrespective of whether attitudes about the change are positive or negative, (2) change agent attitudes are equally as relevant as change recipient attitudes, and (3) artefacts have an important mediating role to play, but in themselves have little influence.		

Table 22: Summary of findings from ELibrary and CityTransport cases – page 3 of 6

Summary of claims in literature (from Table 5)	Summary of ELibrary findings (from Table 13)	Summary of City Transport findings (from Table 20)
How is rhetoric (spoken and written communication) of multiple actors during planned change used to influence behaviour?		
The interplay of progressive, regressive and stability narratives can cause strategic ambiguity.	Confirmed. Different rhetoric in different time-periods caused confusion and led to the wrong behaviours.	Confirmed. Aligned rhetoric in time-periods 1 and 2, but some evidence of strategic ambiguity caused by non-aligned rhetoric in the current period.
There is utility in understanding explicit resistance to change.	Confirmed and extended. Understanding is not enough. The depth of change agent empathy with resistive attitudes compounded the challenges of planned change.	Confirmed tentatively. Evidence that seeking out the voice of change recipients has benefits.
Change agents have a vested interest in promoting the 'resistance to change' rhetoric.	Confirmed. Defensive mechanisms adopted when plans weren't working - relieving tension was only positive purpose.	Confirmed. Defensive mechanisms adopted when plans weren't working - relieving tension was only positive purpose.
Summary cross-case findings. There is evidence in both cases that rhetoric matters and needs to be carefully chosen to prevent confusion and 'mixed messages'. The change agent-centric perspective that 'change recipients resist change' has little or no purpose; other than as a defensive mechanism to preserve change agent sanity at tough points in the change. However, where resistive attitudes to change do exist, understanding them is important, but empathising too closely with them limits change agents' ability to make unpopular decisions. This finding is consistent with the finding in page 1 of this table regarding the degree of embeddedness of change agents in change recipient networks.		

Table 22: Summary of findings from ELibrary and CityTransport cases – page 4 of 6

Summary of claims in literature (from Table 5)	Summary of ELibrary findings (from Table 13)	Summary of City Transport findings (from Table 20)
Does the Lewinian model of 'unfreeze – transition – refreeze' remain a useful guide to understanding planned change?		
Unfreezing routines is necessary before new behaviours arising from planned change can be adopted.	Confirmed. The routine was consolidated in the first time period and thereafter was never unfrozen enough for step change to happen.	Confirmed. Routines were unfrozen at the start and so could be changed relatively easily. The challenge is to make enough of a transition before the routine is 'refrozen'
For continuous improvement to be successful, patterns of action need to be made visible and 'frozen'.	Confirmed. The routine was consolidated in the first time period and this enabled continuous improvement to occur, but not the step change in performance that was required.	No evidence from CityTransport case.
Summary cross-case findings. The Lewinian (1947) model resonates with practitioners and academics and remains a useful metaphor. This research has revealed some interesting findings across the two claims from the literature regarding organizational routines and change. This is an area worthy of further research to explore the mechanisms by which patterns of action embedded in routines become 'unfrozen' enough for changed performances to be sustained. From this research, the key would appear to be in the attitudes to change of change recipients and line managers and how change agents influence those through their change and boundary-spanning practices. Neither case in this research enabled this to be taken further. A third case is required to research successful change where an existing routine was 'unfrozen' and transformed. This was hoped for in the CityTransport case, but was not the situation that was discovered.		

Summary of claims in literature (from Table 5)	Summary of ELibrary findings (from Table 13)	Summary of City Transport findings (from Table 20)
Is exploration of the internal dynamics of routines undergoing planned change necessary to understand how routines change or remain stable?		
There is a need to 'unpack' routine dynamics. It is not possible to make sense of routines from observing actions and outcomes.	Confirmed and extended. Unpacking a routine undergoing change is shown to be powerful explanatory approach. Numerous findings have been uncovered because the routine was unpacked rather than treating it as a 'black box'. It is also promising as a prospective approach for practice, to explore the internal dynamics of an existing routine as a precursor to deciding how to craft change and boundary-spanning practices.	Confirmed and extended. As for ELibrary but with the opportunity for CityTransport to use the learning from this research prospectively for the next stage of the planned change.
Summary cross-case findings. Studying the internal dynamics of the routines undergoing planned change enabled an in-depth exploration of the perceptions and actions of multiple actors involved, and to explore the impact of (1) exogenous factors, (2) artefacts and (3) outcomes. This granular exploration of the routines undergoing planned change enabled a level of understanding of each of the changes that was not previously available to actors involved with the change. The method used to study the internal dynamics was practical, yet very insightful, which confirms it's potential as a prospective approach to be used by practitioners in future.		

Summary of claims in literature (from Table 5)	Summary of ELibrary findings (from Table 13)	Summary of City Transport findings (from Table 20)
What influences the internal dynamics of organizational routines undergoing planned change?		
The relationship between the ostensive and performative aspects of routines is simultaneously enabling and constraining with the routine representing the patterns of interdependent action of multiple actors.	Confirmed. The mutually reinforcing relationship between the ostensive and performative for all actors was demonstrated in both cases. Further, the influence of shared external structures and outcomes on the ostensive was shown, enabled by developing a research method based on the quadripartite model within Strong Structuration.	
Researching the routine as the unit of analysis is necessary to focus on patterns of action rather than on any one of the individual micro-foundations of routines.	Confirmed. It would not have been possible to uncover the insights from this research if it had focused on any one of the macro-contextual, or micro-foundational aspects of routines, e.g. culture, measurement systems, roles, work content, motivations, habits etc. Adopting the routine undergoing change as the unit of analysis enabled a focus on all the macro-contextual and micro-foundational aspects relevant to the planned change.	
Artefacts cannot represent patterns of action but they are intermediaries in shaping the interaction between the ostensive and performative aspects of routines.	Confirmed. Artefacts representing the routine itself, and the change to the routine only served to consolidate unchanged patterns of action though a selective retention mechanism.	Confirmed. Artefacts representing the routine itself were influential in consolidating patterns of action, although the organization requires change recipients *not* to conflate these artefacts with the routine itself. Artefacts representing the planned change had little influence, other than to generally support a change that was welcomed anyway.
Summary cross-case findings. The innovation in this research has been twofold. (1) To take the claims above from the organizational routines literature and apply them directly to the study of organizational routines undergoing planned change, adopting the routine as the unit of analysis, and considering change agents in		

addition to change recipients and their line managers as relevant actors, and (2) to operationalize the research of the routine as the unit of analysis, adopting a research method (based on Strong Structuration) that is directly suitable for studying the claimed dualities between the ostensive and performative aspects of the routine. Adopting this research method demonstrated the efficacy of considering external structure and outcomes, that are shared by all actors, separately from embodied internal structures (the ostensive) and habits and actions (the performative), held by individual actors. When studying the organizational routine undergoing planned change, the primary influence on the internal dynamics of routines is confirmed as being the attitudes to change held by multiple actors at cognitive, affective and intentional levels. Artefacts are confirmed as having an influence on the ostensive aspects of routines, where they are judged to support the internalized rationale for the routine by the actor. For artefacts for the planned change to be influential in changing patterns of action, they need to have influence on the perceptions of sanctions, power and communication embedded in the attitudes to change of the actors.

In Chapter 7, conclusions from these findings are drawn, contributions for theory and practice distilled, limitations of this research discussed, and areas for further research identified.

In addition, my personal journey as researcher over the past five years is explored.

7 CONCLUSIONS

7.1 Overview of the Chapter

Review of three distinct literatures in Chapter 2 resulted in a conceptual model and set of research questions being derived for the research. These literatures were: (1) planned change from the perspective of change agents, change recipients, line managers and the strategically-significant work to be changed; (2) the interplay between stability and change in organizational routines and (3) the use of Structuration Theory in empirical studies.

This research is focused on planned change to organizational routines adopting a social practice perspective. The organizational routine intended to change is adopted as the unit of analysis (Pentland and Feldman, 2005) and in both cases this has been 'unpacked' to explore the iterative and recursive internal dynamics of the routine as enacted by change agents, change recipients and their line managers over time. This unpacking was enabled by the adoption of a *"quadripartite model"* (2005:85) and *"composite research strategy"* (2005:126) from Stones' Strong Structuration.

Research questions and associated claims in the literature were summarised in Table 5, and these have been used to analyse and then summarize findings for each individual case in Chapters 4 and 5 (Tables 13 and 20 respectively), and to analyse, then summarize cross-case findings in Chapter 6 (Table 22).

In this chapter, conclusions are drawn from the summarized cross-case findings and contributions to theory and practice distilled. Further, limitations of the research are discussed, and areas for further research identified.

Finally, my personal journey as researcher over the past five years is explored.

7.2 Conclusions from cross-case findings

Drawing from Table 22 in Chapter 6, the summarized findings against each of the research questions are as shown below.

7.2.1 How do change agents in a temporary organization manage across the temporary/ host organizational boundary in practice?

In both cases, change agents attempted to follow the advice in the mainstream planned change literature regarding 'success factors', integration practices and isolation practices. Evidence from the cases shows that such advice is not sufficient to enable suitable change and boundary-spanning practices to be crafted. Findings support recent work looking at the extent of embeddedness of change agents in change recipient networks, i.e. more radical change is enabled by greater distance between change agents and change recipients. This is a potentially important, and somewhat counter-intuitive finding for practice, and an area worthy of further research.

7.2.2 How do the attitudes to change of multiple actors embedded in internal structures/ the ostensive aspects of routines impact on the delivery of desired benefits?

In both cases it was clear that the attitudes to change of all actors was influential in shaping internal structures/ the ostensive aspects of the routine and so guiding action, interpreting outcomes and shaping future performances. The interesting aspects of the research, in this respect, are that (1) the relative influence of the ostensive is the same irrespective of whether attitudes to change are positive or negative, (2) change agent attitudes to change are equally as relevant as change recipient attitudes, and (3) artefacts have an important mediating role to play, but in themselves have little influence.

7.2.3 How is rhetoric (spoken and written communication) of multiple actors during planned change used to influence behaviour?

There is evidence in both cases that rhetoric matters and needs to be carefully chosen to prevent confusion and 'mixed messages'. The change agent-centric

perspective that 'change recipients resist change' has little or no purpose; other than as a defensive mechanism to preserve change agent sanity at tough points in the change. However, where resistive attitudes to change do exist, understanding them is important, but empathising too closely with them limits change agents' ability to make unpopular decisions. This finding is consistent with the finding in 7.2.1 regarding the degree of embeddedness of change agents in change recipient networks.

7.2.4 Does the Lewinian model of 'unfreeze – transition – refreeze' remain a useful guide to understanding planned change?

The Lewinian (1947) model resonates with practitioners and academics and remains a useful metaphor. This research has revealed some interesting findings across the two claims from the literature regarding organizational routines and change, i.e. (1) that planned change requires patterns of action to be unfrozen (Burnes, 2004; Lewin, 1947) and (2) that continuous improvement requires patterns of action to be frozen (Abel and Sementelli, 2005; Weick and Quinn, 1999). This is an area worthy of further research to explore the mechanisms by which patterns of action embedded in routines become 'unfrozen' enough for changed performances to be sustained. From this research, the key would appear to be in the attitudes to change of change recipients and line managers and how change agents influence those through their change and boundary-spanning practices. Neither case in this research enabled this to be taken further. A third case is required to research successful change where an existing routine was 'unfrozen' and transformed. This was hoped for in the CityTransport case, but was not the situation that was discovered.

7.2.5 Is exploration of the internal dynamics of routines undergoing planned change necessary to understand how routines change or remain stable?

Studying the internal dynamics of the routines undergoing planned change enabled an in-depth exploration of the perceptions and actions of multiple actors involved, and to explore the impact of (1) exogenous factors, (2) artefacts and (3) outcomes. This granular exploration of the routines undergoing planned change enabled a level of understanding of each of the changes that was not

previously available to actors involved with the change. The method used to study the internal dynamics was practical, yet very insightful, which confirms its potential as a prospective approach to be used by practitioners in future.

7.2.6 What influences the internal dynamics of organizational routines undergoing planned change?

The innovation in this research has been twofold. (1) To take the claims from the organizational routines literature and apply them directly to the study of organizational routines undergoing planned change, adopting the routine as the unit of analysis, and considering change agents in addition to change recipients and their line managers as relevant actors, and (2) to operationalize the research of the routine as the unit of analysis, adopting a research method (based on Strong Structuration) that is directly suitable for studying the claimed dualities between the ostensive and performative aspects of the routine. Adopting this research method demonstrated the efficacy of considering external structure and outcomes, that are shared by all actors, separately from embodied internal structures (the ostensive) and habits and actions (the performative) held by individual actors. When studying the organizational routine undergoing planned change, the primary influence on the internal dynamics of routines is confirmed as being the attitudes to change held by multiple actors at cognitive, affective and intentional levels. Artefacts are confirmed as having an influence on the ostensive aspects of routines, where they are judged to support the internalized rationale for the routine by the actor. For artefacts for the planned change to be influential in changing patterns of action, they need to have influence on the perceptions of sanctions, power and communication embedded in the attitudes to change of the actors.

7.3 Contributions

The contributions from this research to theory and practice are outlined in the following four sub-sections. Primary theoretical contributions are to the organizational routines literature. Secondary theoretical contributions are methodological, in terms of the how to operationalize the study of routines in a way commensurate with the claimed mutually constitutive nature of the internal dynamics of routines. Finally, contributions to the practice of planned change are made, specifically in terms of guidance to practitioners who desire to understand the routines intended to change, as a precursor to crafting change and boundary-spanning practices.

7.3.1 Organizational routines undergoing planned change

Primary contributions from this research are to the organizational routines literature, specifically that part of the literature interested in (1) studying routine dynamics adopting a social practice perspective, and (2) understanding the role of routines in stability and change.

Studying routine dynamics, adopting a social practice perspective, is reported in the literature to be difficult (e.g. in Lazaric and Denis, 2005) and there are few empirical studies that have been published that have done this. Given that this literature is young, two additional and contrasting empirical cases makes a meaningful contribution to the body of evidence in itself.

More specifically however, most of the published literature has focused on routines that were expected to be stable, but were found to be endogenously changing. Only four published cases of organizational routines undergoing planned (exogenous) change were discovered by the literature review, and none of these attempted specifically to 'unpack' the organizational routine undergoing planned change using the routine as the unit of analysis as called for in Pentland and Feldman, 2005.

Accordingly, the research is unique as a study of the internal dynamics of a routine undergoing planned change. Adopting the organizational routine as the

unit of analysis also enabled the study of planned change from the perspective of all actors involved – something not hitherto seen in the literature.

7.3.2 The primary influence of attitudes to change

Literature has already established the role of the ostensive aspects of routines in guiding action, justifying action and consolidating future patterns of action (Howard-Grenville, 2005; Pideret, 2000; Feldman, 2000, 2003, 2005; Feldman and Pentland, 2003, 2005). The contribution of this research is to demonstrate that in the case of routines undergoing planned change, the primary influence on routine dynamics are the attitudes to change of multiple actors embodied in the ostensive aspects (conjunturally-specific assessments using the language of strong structuration). It was expected that the attitudes to change (at cognitive, emotional and intentional levels) of change recipients and their line managers would have a primary influence. It was not expected that the attitudes to change of change agents would have an equally influential role. Adopting the conceptual model derived from the literature enabled this contribution to be made.

7.3.3 Unpacking routines

The claimed necessity to 'unpack' routines, to understand internal dynamics, in order to understand routine behaviour was taken seriously in this research (Zbaracki and Bergen, 2010). Literature clearly claimed that the relationship between the ostensive and performative aspects of routines is a duality: simultaneously reciprocal (Feldman and Pentland, 2003, 2005). This claimed duality was a guiding principle for the research, but the research did not set out to prove or disprove such a relationship, if this is indeed possible. Instead, research set out to devise a practical research method for exploring the claimed duality. A "*quadripartite model*" (2005:85) and "*composite research strategy*" (2005:126) from Stones' Strong Structuration was adopted and this thinking was built into the conceptual model. The resulting research method to operationalize the conceptual model was practical, yet enabled insightful data that supported the claims in the literature. Further, this approach enabled additional insights by

differentiating external structures and outcomes shared by all actors from the conjuncturally-specific assessments part of internal structures (the ostensive) and general, transposable dispositions and actions (the performative) held by individual actors. It is argued that the method for unpacking routines could be re-used for future research into routine dynamics. In future, the practical nature of the method has exciting possibilities for use by practitioners in diagnosing routines intended to change prior to crafting change and boundary spanning practices.

7.3.4 Guidance for change agents

As noted above, one contribution of this research for planned change is the potential for the research method to be used prospectively to guide the design of planned change approaches. In addition, a further contribution for planned change practice is made as follows.

As discussed in the literature review, much of the advice to change agents on planned change is normative, for example that related to 'success factors', integration practices for boundary spanning, isolation practices for managing across the temporary/ host organizational boundary, rhetoric used and the value of the Lewinian three-step model for planned change.

The contribution of this research is to demonstrate that this advice is necessary and useful, as far as it goes, but is not sufficiently specific to craft planned change interventions. Rather than the research offering new or amended normative advice, instead the contribution to practice is to sensitize practitioners to the level of analysis that they need to carry out to ensure that their planned change interventions are suitably designed.

7.4 Limitations of the research

As previously discussed in Chapters 4 and 5, the main limitations of the research relate to the research design focusing primarily on participant reflections, relying on their memory of the progression of the planned change over time. Literature supports that this retrospective view is necessary (Lazaric

and Denis, 2005) however, it may have been better to have supplemented this retrospective view with a period of real-time ethnographic observation. Jack and Kholeif (2007) however warn against only focusing on the actions of the 'agent in situ' in ethnographic research when to understand the duality at the heart of the internal dynamics of routines requires a focus not only agency, but also on structure.

A further limitation was that the contrasting case selected (CityTransport) was intended to be an example of an established routine having been successfully changed. This was the view of the organization prior to research. It was both interesting, and disappointing to learn that the successful change implemented served to *establish* a stable routine from previously disparate practices. As a result it would have been of further interest to research a third case of an established routine being changed successfully – this is the obvious area for further research.

7.5 Areas for further research

Three areas for further research are clearly identified in this research.

(1) As mentioned above, research of a third case of an established routine being changed successfully would provide additional, valuable evidence. It is argued that the research method used in this research should be re-used, but extended by a period of real-time ethnographic study. Given that in CityTransport, the change has resulted in a stable routine being created, the next stage of this research would be an interesting third case. It is possible that the change team at CityTransport might carry out this research themselves with guidance from myself.

In addition, there are two particularly interesting findings from this research that warrant further exploration.

(2) The ELibrary case tentatively confirms the findings of Battilana and Casciaro (2012) that more radical change requires a greater separation of change agents from change recipients, i.e. greater 'structural holes' in the network between

change agents and change recipients. This perspective adds to the conversation about boundary spanning across the intentional separation of change agents into a temporary team. Literature explores integration and isolation practices across the temporary/ host boundary (e.g. Balogun et al, 2005 and Lehtonen and Martinsuo, 2008), but the Battilana and Casciaro (2012) study advances thinking on this topic. Research that specifically adopts the theoretical perspective in the Battilana and Casciaro research (social network theory) combined with the research method used here would be interesting to pursue.

(3) Regarding claims in the literature (1) that planned change requires existing patterns of action to be 'unfrozen' and (2) that continuous improvement requires existing patterns of action to be made visible and 'frozen' (Abel and Sementelli, 2005; Lewin, 1947; Weick and Quinn, 1999); there is interesting further research that could be pursued regarding the interplay of change and stability within organizational routines, and what differences might exist between the mechanisms for exogenous planned change, and endogenous continuous improvement, further to those uncovered in this research. Farjoun (2010) theorized the interplay of change and stability as a duality, and further research to add empirical evidence to Farjoun's propositions would be advantageous to theory and practice.

7.6 My personal journey as a doctoral researcher

In parallel to the research process documented in this thesis, I have been tracking my personal learning through a learning log and a video diary at key points on the doctoral journey. Key points relating to this personal journey are shared here.

It is with some embarrassment that I look back on my research proposal to Cranfield prior to interview and acceptance. My reading of the literature I was familiar with was shallow, and my research questions wildly ambitious.

I was grateful to the late Professor Alan Harrison that he could see the potential for this consultant to be turned into a competent researcher.

The first year of the doctoral journey at Cranfield was an amazing experience. Through our study of the philosophies of research, and research methods, I was stimulated to read widely, and to make sense of my own personal philosophy. This resonates with a social constructivist perspective. In addition, I thoroughly enjoyed exploring and synthesizing the literature and crafting the conceptual model for my research. I was clear at the end of the first year that the organizational routine undergoing planned change was the right unit of analysis, and was adamant that I wanted to study this phenomenon in a way that was true to the claimed dualities between the ostensive and performative aspects of routines. Cranfield is not a place that is full of sociologists, or management researchers with an affinity to Structuration Theory. My supervisor and supervisory team encouraged my work, but warned against me attempting to focus more on the operationalization of my research to unpack routines, rather than on providing insights for theory and practice about organizational routines undergoing planned change. I listened, but believed then and believe now that devising a research method to unpack routines was an important strand to my work. I recognised that as a risk.

Study of the ELibrary case in my second year went well and I was excited about the results. I had a long hard journey to follow, however, to write up my work in a way that others understood it. I recognise that my skills as a consultant mean that I communicate more effectively verbally than in writing. My natural style is to write as I speak – a trait that I have worked hard to overcome in this thesis.

A highlight of the second year was presenting my research method to the Fourth Organizational Routines conference in Nice where my organizational routine 'heroes', including Martha Feldman, Sid Winter and Michael Cohen were in attendance. I was encouraged by their feedback on my work.

The third and fourth year of my doctoral studies were more difficult. I struggled to communicate my thinking and findings from the first case in writing in a way that my supervisory panel could accept. The richness of my data was acknowledged, but it was felt that my conceptual model was getting in the way. The version of the conceptual model included here as Figure 5 and Table 4 had

multiple previous reincarnations. I was stuck in a place where I had no support to press ahead with a second case.

I was also really busy at work, but although this had also been the situation in the first two years, it was a useful excuse to put my research to one side and contemplate just how to go forward. At this time I seriously considered not continuing with the DBA. I knew that I had developed significantly as a researching consultant thus far. Maybe this was enough?

The breakthrough came when it was agreed that I write up my work as a single thesis, rather than the normal structure of the DBA, as three projects with a linking document. I was also further encouraged when a paper based on the ELibrary case was accepted as part of the proceedings for the European Group for Organization Studies (EGOS) conference in Helsinki in 2012. Again, I received very encouraging feedback from this session, and this gave me the motivation to finish in one more year.

This final year has once again been enjoyable. Researching the CityTransport case was interesting, although the case was not as insightful as I'd hoped in advance. I have, once again, enjoyed writing this year, although I am continually encouraged to 'value engineer' my writing style.

I have been asked to talk about my doctoral journey at a forthcoming open day for prospective DBA students. I will be telling them that, whether I graduate with a DBA or not, the journey has been invaluable to me as a consultant. I read differently, I listen differently, I am much more discerning with my analysis. Normative claims increasingly annoy me and I am sensitized to the complexity of human endeavour in business.

I will also tell them that I have learned lots about myself – about when and how I work best, about how to motivate myself to achieve a long-term and difficult goal, and about how I deal with critique and come back stronger. This was most evident following my *viva voce* examination. The 'success' of a conditional pass at that stage was significantly marred by the feedback of my

examiners and the thought of returning to the thesis to do corrections. I know that my ability to be resilient – to take feedback and come back stronger – has been tested once again by the doctoral process. I am hopeful writing this that the corrections will be acceptable to my examiners and that the 'floppy hat' photographs will follow.

I can say however, that I am grateful for the opportunity to undertake this doctoral research whatever the final outcome.

7.7 Summary of the conclusions chapter

This research was conceived with a practitioner problem to explore what it takes to accomplish planned change more effectively. Through a detailed synthesis of literature relating to (1) planned change, (2) organizational routines, and (3) the use of Structuration Theory empirically; a research method was devised to study two cases of organizational routines undergoing planned change.

Findings from this empirical study have made contributions to the emerging theory on routine dynamics, with a particular contribution to knowledge of how the internal dynamics of organizational routines behave during planned change. The research method itself provides further contributions; (1) to knowledge of how to 'unpack' organizational routines to study their internal dynamics, and (2) to practice as a practical method of studying the organizational routine to be changed in order to inform change practices.

Suggestions on how to overcome the limitations of the research in future studies are made, and areas for further research are suggested, drawing on interesting insights from this work.

My personal journey as a doctoral student concludes the thesis. I started this work knowing that planned change is difficult to accomplish in practice. The planned change to my own skills as a researcher has borne out this fact. I end the journey, however, knowing that although planned change remains difficult to accomplish, the learning from this research has provided me with a method for

analysing routines that are intended to change in a way that will inform my future change practices.

I hope that my work will enable other researchers interested in routine dynamics or planned change to build on this thesis and develop their own contributions to theory and practice.

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APPENDICES

Appendix A: Reflective diary template

This Appendix includes a generic version of the reflective diary template used to collect primary data from change agents, change recipients and their line managers.

What is this document and what do you need to do?

This document is a template for you to capture your thoughts and reflections on the impact of changes to the way you manage <name of routine> as a result of the implementation of <name of planned change>. You may have been involved in changes associated with this work at any point between <start date> and the current time. We are interested in your reflections and perceptions on any part of this timeline, and from the perspective of your particular role in the change.

The template contains some questions that are intended to help you think about certain situations, or perspectives. There are no 'right' or 'wrong' answers and I encourage you to reflect and write as much or as little as you want in response to each of the prompts. Try to think of it as an opportunity to write your reflections, rather than a questionnaire to answer. Your thoughts might be memories, opinions in retrospect, feelings – then or now, bad or good in your view.

Anything you write will be confidential between you and me as the researcher. Anything I write will be entirely anonymised. Nothing of what you say will be traceable to you in any way.

In addition to your reflections, I would be pleased if you could take part in a focus group that will last 2 hours. This will provide you with an opportunity to elaborate on your thoughts, share ideas with your colleagues who are in a similar role, or for me to check my understanding or explore particularly points you made further.

So – the key things are to reflect, share your thoughts as expansively as you wish to in the knowledge that you will be helping the research, but that what you share will be kept confidential.

Doing this is likely to take about 2 hours – but not necessarily in one session.

What is your role with respect to <name of routine>, and how has the <name of the planned change> affected this work?

In the row below and in your own words, please describe your role and responsibilities with respect to this work

- Some of you are responsible for delivering elements of the planned change. Where this is the case, please describe your understanding of how the project has changed the routine work of people in the business.
- Some of you are on the receiving end of the business changes, i.e. the planned change directly affects your work. Where this is the case, please describe the part of your work that the change affects – what are you doing differently as a result of the change so far? What further changes do you expect?
- Some of you are line managers of the people whose routine work will be influenced by the project. What are your team members doing differently as a result of the change so far? What further changes do you expect? Has your role changed as a result of the project, if so how?

Write as little or as much as you wish in the box provided below.

Key time periods during the time of investment in change in the <name of planned change>, from <start date> to the current day.

I invite you to reflect upon the period since formal investment in change started in <start date>.

If you came into your role later than <start date> that's OK – just start your story at the point you joined.

I am interested in your story of how the work associated with the changes introduced by the <name of planned change> impacted on your work.

You may see the change so far as one phase or time-period, or you may think and feel that the change has had more than one phase or time-period from your perspective.

I am interested to hear your views as to what the distinct time periods or milestones have been. If it feels like one long time period, that's fine. If you recognise multiple phases, but not the ones listed above, that's also fine. I'd like to hear **your** story of how this work has progressed.

In the row below, please describe the time periods that are relevant from your perspective. You can use as many or as few time periods as you wish. Please end with a time period that describes the current situation in your words.

Once you have described the distinct time periods that make up your particular story please consider the following questions for EACH time period.

There are 13 questions for each time period that we'd like you to consider. Your answers may change from time-period to time-period, or may not. **You can have as many or as few time-periods as you think is relevant in addition to the starting point (or when you joined) and the end point at the current day**. Again, it's really important for you to answer based entirely on your personal views. Please write as much or as little as you wish. Pages are already created for 4 time periods. Either delete pages, or add new pages as you wish to reflect the time periods that are relevant to your story.

Time-zone 1: Start of change from your perspective – \<month and year\>
Please describe the key habits, or routines relating to your existing work that were in your mind as the change started. These might be things that you thought should change, or things you thought should not change?
Write here
How did you perceive your role in the change - the important things that you needed to do?
Write here
Did you perceive any conflicts between aspects of your role, things that created dilemmas, or choices you needed to make?
Write here
What opportunities did you perceive at this time?
Write here
What constraints did you feel? To what degree did you feel you could influence these constraints?
Write here
What potential sanctions or consequences did you perceive - these could be rewards of some kind, or restrictions or punishments, or some less overt yet still perceived consequence for your actions.
Write here
What specific actions do you recall taking at this time? (actions could be things you did, or things you decided not to do)
Write here
What were the outcomes for you in this time-period? (these could be things that had changed for the better, or the worse)
Write here
Did any of your thoughts, feelings, intentions, habits or ways of doing the work change as a result of these outcomes?
Write here
How do you recall the 'formal' project documents or governance influencing you at this time, e.g. business case/budgets, plans, metrics, meetings, reporting

requirements, roles and responsibilities of the change team
Write here
How would you describe the relationship and 'conversations' (in person or in writing) that took place between the people working in the change team, the people whose routine work would be affected by the change and the managers of those affected?
Write here
What do you believe were the key things for the organisation to focus on at this time?
Write here
What other points would you like to make about your work at this time?
Write here

Time-zone 2: defined by you – this could be when you became involved in/affected by the change if this was after <start date>.
(list key features of time-period 2 – why is this a distinct period for you)
Your responses to these questions may be the same, or different to your responses for the previous time period. If you want to put 'no change' then that's fine but we'd encourage you to think carefully about your views as this time-period unfolded.
Please describe the key habits, or routines relating to your existing work that were in your mind as the project started. These might be things that you thought should change, or things you thought should not change?
Write here
How did you perceive your role in the change - the important things that you needed to do?
Write here
Did you perceive any conflicts between aspects of your role, things that created dilemmas, or choices you needed to make?
Write here
What opportunities did you perceive at this time?
Write here
What constraints did you feel? To what degree did you feel you could influence these constraints?
Write here
What potential sanctions or consequences did you perceive - these could be rewards of some kind, or restrictions or punishments, or some less overt yet still perceived consequence for your actions.
Write here
What specific actions do you recall taking at this time? (actions could be things you did, or things you decided not to do)
Write here
What were the outcomes for you in this time-period? (these could be things that had changed for the better, or the worse)

Write here
Did any of your thoughts, feelings, intentions, habits or ways of doing the work change as a result of these outcomes?
Write here
How do you recall the 'formal' project documents or governance influencing you at this time, e.g. business case/budgets, plans, metrics, meetings, reporting requirements, roles and responsibilities of the change team
Write here
How would you describe the relationship and 'conversations' (in person or in writing) that took place between the people working in the change team, the people whose routine work would be affected by the change and the managers of those affected?
Write here
What do you believe were the key things for the organisation to focus on at this time?
Write here
What other points would you like to make about your work at this time?
Write here

Time-zone 3: defined by you
(list key features of time-period 3 – why is this a distinct period for you)
Your responses to these questions may be the same, or different to your responses for the previous time period. If you want to put 'no change' then that's fine but we'd encourage you to think carefully about your views as this time-period unfolded.
Please describe the key habits, or routines relating to your existing work that were in your mind as the project started. These might be things that you thought should change, or things you thought should not change?
Write here
How did you perceive your role in the change - the important things that you needed to do?
Write here
Did you perceive any conflicts between aspects of your role, things that created dilemmas, or choices you needed to make?
Write here
What opportunities did you perceive at this time?
Write here
What constraints did you feel? To what degree did you feel you could influence these constraints?
Write here
What potential sanctions or consequences did you perceive - these could be rewards of some kind, or restrictions or punishments, or some less overt yet still perceived consequence for your actions.
Write here
What specific actions do you recall taking at this time? (actions could be things you did, or things you decided not to do)
Write here
What were the outcomes for you in this time-period? (these could be things that had changed for the better, or the worse)
Write here
Did any of your thoughts, feelings, intentions, habits or ways of doing the work

change as a result of these outcomes?
Write here
How do you recall the 'formal' project documents or governance influencing you at this time, e.g. business case/budgets, plans, metrics, meetings, reporting requirements, roles and responsibilities of the change team
Write here
How would you describe the relationship and 'conversations' (in person or in writing) that took place between the people working in the change team, the people whose routine work would be affected by the change and the managers of those affected?
Write here
What do you believe were the key things for the organisation to focus on at this time?
Write here
What other points would you like to make about your work at this time?
Write here

Time-zone (last): defined by you
Leading to the current day
Your responses to these questions may be the same, or different to your responses for the previous time period. If you want to put 'no change' then that's fine but we'd encourage you to think carefully about your views as this time-period unfolded.
Please describe the key habits, or routines relating to your existing work that were in your mind as the project started. These might be things that you thought should change, or things you thought should not change?
Write here
How did you perceive your role in the change - the important things that you needed to do?
Write here
Did you perceive any conflicts between aspects of your role, things that created dilemmas, or choices you needed to make?
Write here
What opportunities did you perceive at this time?
Write here
What constraints did you feel? To what degree did you feel you could influence these constraints?
Write here
What potential sanctions or consequences did you perceive - these could be rewards of some kind, or restrictions or punishments, or some less overt yet still perceived consequence for your actions.
Write here
What specific actions do you recall taking at this time? (actions could be things you did, or things you decided not to do)
Write here
What were the outcomes for you in this time-period? (these could be things that had changed for the better, or the worse)
Write here
Did any of your thoughts, feelings, intentions, habits or ways of doing the work

change as a result of these outcomes?
Write here
How do you recall the 'formal' project documents or governance influencing you at this time, e.g. business case/budgets, plans, metrics, meetings, reporting requirements, roles and responsibilities of the change team
Write here
How would you describe the relationship and 'conversations' (in person or in writing) that took place between the people working in the change team, the people whose routine work would be affected by the change and the managers of those affected?
Write here
What do you believe were the key things for the organisation to focus on at this time?
Write here
What other points would you like to make about your work at this time?
Write here

Appendix B: Terminology used in this thesis

This Appendix outlines key terms used in the thesis that may be unfamiliar to a reader who does not themselves study organizational routines in the social practice theory tradition.   The explanations of the terms used are not definitions from the literature, but rather attempt to explain complex ideas using plain English as far as possible. Definitions from the literature are provided in the main text of the thesis where relevant.

Term used	Explanation
Planned change	Change that an organization has decided explicitly to invest in. Could also be referred to an intentional change, or intended change. Planned change is typically, although not exclusively, implemented by a temporary organisation such as a project or programme (program in US).
Routine	Used as a short-form of organizational routine – see below.
Organizational routine	"*Repetitive, recognizable patterns of interdependent actions carried out by multiple actors*" (Feldman and Pentland, 2003:95) This term is not used to mean an organization-wide routine.
Ostensive	Literally meaning to guide, to instruct, to enlighten, or to inform. Ostensive aspects are one part of the internal dynamic of a routine according to Pentland and Feldman (2005). It is the part of the routine that provides the 'in principle' understanding of what the routine is/should be to the people involved in enacting the routine. According to Feldman's discussion of this concept verbally - it is not just a cognitive understanding, but an embodied notion or abstract pattern of what the routine is about.
Performative	Literally meaning an utterance in language that infers an act, like saying "I promise" and by doing so infer that you do really promise. Performative aspects are one part of the internal

	dynamic of a routine according to Pentland and Feldman (2005). It is the part of the routine that provides the 'in practice' understanding of what people performing the routine actually do. According to Feldman's discussion of this concept verbally is it not just about behaviour, but is also an embodied notion that includes embedded habits as well as actions. As such it is not the same as performance, although closely related to performances.
Routine dynamics	An alternative expression, used by Feldman verbally, for the internal dynamics of organizational routines, i.e. the duality between ostensive and performative aspects as described above.
Artefact	Alternatively spelled artifact. A man-made thing. In routines, examples would be procedures, measurement systems, job descriptions etc.
Outcome	An end-result or consequence. In Strong Structuration Stones (2005) separates outcomes from actions and this tradition is followed in my work. Specifically, multiple, different people act (or fail to act) in a situation, but the collective outcome at a point in the time is the shared consequence of multiple actions.
Exogenous	Originating or produced from outside of…. (in my work the organizational routine that is the focus of the research).
Endogenous	Originating or produced from inside of… (in my work the organizational routine that is the focus of the research).
Strategically-significant	Related to organization routine. A routine that is used by the organization to deliver outputs that matter if the organization is to achieve its strategy. Used because my research is not looking at any organizational routine, e.g. a salary paying routine, but rather at routines that matter strategically, and therefore where the planned change matters strategically.
Structuration	Literally meaning the interrelationship of parts in an organised whole. Also the term used by Giddens (and described by him as "an unlovely term at best") to signify the relationship between structure and agency (capacity of a person to act) in a social system.

Strong Structuration	The term used by Rob Stones to describe a version of Gidden's Structuration Theory that can be used as a method for social inquiry, rather than just an idea.
Dualism	Twofold division where the parts are distinct and conceptualized as opposing in some way.
Duality	Twofold division where the parts are distinct yet conceptualized as being inseparable. The relationship between structure and agency in Gidden's Structuration Theory is said to be a duality, where structure and agency are enabling and constraining each other at the same time (simultaneous reciprocity).
Actor's context	The term used by Stones in Strong Structuration to describe a set of factors and circumstances that form a person's ostensive understanding of the situation and how to act in that situation.
Actor's conduct	The term used by Stones in Strong Structuration to describe a set of habits, actions and outcomes that form a person's performative capacity in a situation that will lead to performances (and maybe/hopefully performance as defined and measured by benefits).
Change practices	The material or symbolic actions that change agents take to bring about change.
Change agent	People who are charged with bringing about change, typically in a role that is organizationally external to the routine being changed.
Boundary-spanning practices	The material or symbolic actions that people perform to communicate across an organizational boundary. In my work, the boundary between the temporary change organization and the host organization.
Business-as-usual	A way of describing the host organization/ operations, or the ordinary/normal/usual way of doing things.
Benefit	Literally, an advantage or good outcome. Used in my work as defined in project and programme management texts as a "measurable outcome of value to stakeholders".
Emergent	Used in my work to describe a situation that becomes reality, maybe unexpectedly, maybe suddenly, but

	always without intention or planning.
Embedded	Enclosed and integral.
Embodied	Possessed or existing in bodily form (as opposed to an idea which exists only at a cognitive level). A key idea in practice theory where practices are assumed to be embodied – see below. Argued verbally as an essential aspect of ostensive and performative parts of routines by Feldman.
Practice theory, or Practice-perspective, or Practice turn	The point of view that social action is created by embodied, interwoven practices organised around shared practical understandings (understanding derived from Schatzki, 2001)