THESIS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

INSTITUTIONAL WORK ACROSS MULTIPLE LEVELS

The case of strategic public facilities management in the making

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Ingrid Svensson

Abstract

The research in this thesis deals with the implementation of strategic planning measures in public facilities management organizations (PFMOs) and the development of strategic public facilities management (SPFM). The aim is to increase the understanding of how individual and organizational actors work with strategic public facilities management and how this influences both public facilities management organizations and the institution of public facilities management.

Data were collected through interviews, observations, shadowing, a survey, notes from a workshop and readings of organizational documents. The practice-oriented theoretical lenses of institutional work, institutional logics and sociomateriality have been applied when analyzing the data.

In the thesis it is discussed how old practices, characterized by short-term measures as response to urgent maintenance needs of buildings, is associated with negative connotations. Together these practices constituted the old practice of public facilities management (PFM) and associations to *lack of planning* makes it an unwanted practice. On the other hand, the new practice of PFM, characterized by *planning for the future*, is associated with positive connotations of strategic and long-term planning measures. For SPFM to be realized, it is argued that these two practices, and the logics associated with them, can co-exist. The institutional logics of PFM are discussed in relation to when the new and the old practice of PFM are imbricating each other. The findings show how it is not the logics presence per se that is of importance for actors and for how practices change and develop, but how these logics are understood and acted upon.

In addition, findings show how different types of actors engage in different types of institutional work, at different organizational levels, in both external and internal dimensions during the implementation and development of SPFM. Positioning work, a specific type of institutional work prevalent in PFMOs, has been highlighted. Positioning work includes taking new space and placing it in the organizational nexus and is aimed at providing PFMOs with a new position within their institutional field. Moreover, together with humans, several objects were found to be part of the change processes in several ways; objects were shown to attack and, thereby, disrupt established institutions and were also found to justify preferred routes. Through acts of safeguarding and emotional regulation, objects also took part in maintaining practices.

The focus has been on conceptualizing current challenges for PFM as a multi-logic challenge, i.e. the challenge is to integrate different perspectives in practice. The importance of recognizing the aspects of pre-reflexive agency for successful change work in an institutional setting constituted by several different logics and professional backgrounds is acknowledged. How actors' levels of agency are not constant but dependent on their social positions and their abilities to identify and combine different forms of institutional work has also been shown. Different objects were shown to be part of the change processes studied as institutional implements and emotional implements and, as such, actively involved in institutional work.

Keywords: changing practices, institutional change, institutional logics, institutional work, public facilities management, qualitative research, sociomateriality.

This thesis is based on the work contained in the following papers:

Paper I: Gluch, P., & Svensson, I. (2018). On the nexus of changing public facilities management practices: Purposive and co-creative actions across multiple levels

Published in Construction Management and Economics (2018), (5), 259–275.

An earlier version was included in the Proceedings of the 32nd Annual ARCOM Conference, 5–7 September 2016, Manchester, UK. Vol. 2, 1141–1150.

Gluch and Svensson designed the study. Svensson conducted all the interviews and all but one of the observations, which was done by Gluch. The paper was written jointly by Gluch and Svensson as an equally shared effort.

Paper II: Svensson, I., & Löwstedt, M. (2021). Navigating the logics of changing public facilities management

Published in *Facilities* (39) 11/12 p. 737–758.

An earlier version was peer-reviewed and included in the Proceedings of the 35th Annual ARCOM Conference, 2–4 September 2019, Leeds, UK, Association of Researchers in Construction Management.

Svensson was the lead author and developed the focus for the paper and was primarily responsible for its theoretical framing. Both Svensson and Löwstedt were actively involved in writing the paper.

Paper III: Svensson, I., & Gluch, P. The role of objects in change processes in public built environment organizations

Under the third round of review for possible publication in *Construction Management and Economics*.

Svensson was the lead author, developed the focus for the paper and wrote and conceptualized two of the three case descriptions. The third case description was written and conceptualized by Gluch. Both authors were actively involved in writing the paper.

An earlier version was peer-reviewed and included in the Proceedings of the 33rd Annual ARCOM Conference, 4–6 September 2017, Cambridge, UK, Association of Researchers in Construction Management.

Paper IV: Svensson, I., Brorström, S., & Gluch, P. Institutional work in public facilities management organizations: Organizational repositioning during institutional change

Under the second round of review for possible publication in *Public Management Review*.

Svensson was the lead author, collected the data and developed the focus for the paper and was mainly responsible for the data analysis and theoretical framework. All authors were actively involved in writing the paper.

Paper V: Svensson, I. Exploring the connection between emotions, artifacts, and institutional work: The case of institutional change for public facilities management

Svensson was the sole author.

Manuscript to be prepared for second round of review for possible publication in *Construction Management and Economics*.

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Other publications by the author

Gluch, P., Svensson, I., & Fischer, F. (2021). Practitioners' perceptions on strategic public facilities management

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Working with strategic public facilities management is considered the most important change for our organization. Everyone, from top to bottom agrees on this and likes the idea. Yet, to be able to implement new work practices has been really hard. Not much is happening in practice..."

Project manager in a Public Facilities Management Organization (2016)

1 Introduction

Despite the importance of the proper management of public buildings, in Western countries including Sweden their maintenance has been 'down-prioritized' for several years (Hopland & Kvamsdal, 2016; Klumbyte, 2020; Uotila, 2019, 2020) ¹. As a result, a substantial amount of the municipal building stock has depreciated, with only minor renovations performed (Vermiglio, 2011). Inadequate maintenance of public buildings is harmful as it leads to a backlog of costs that must be covered in the future. Covering this backlog is costlier than maintaining buildings in a timely manner because poor maintenance leads to more-rapid decay (Hopland & Kvamsdal, 2019). Generally, this practice has resulted in a need for large-scale and expensive maintenance and repair work (Uotila et al., 2019). To avoid future expenses and to meet long-term sustainable and financial goals, practitioners as well as researchers have argued for the need for a more strategic type of public facilities management (PFM) for organizations responsible for the management of the public building stock (Junghans, 2013; Olsson et al., 2015; Ramskov-Galamba & Nielsen, 2016; Atkins & Brook, 2017; Jensen et al., 2018; Bröchner et al., 2019; Pardalis et al., 2019; Hopland and Kvamsdal, 2019). Thus, there is a need to avoid acute measures and develop more long-term strategic practices that govern and align different perspectives such as financial, social and environmental sustainability. This also requires a 'cultural change... a significant turnaround that leads to a rethinking process of public facilities management practices and organizational behaviours' (Vermiglio, 2011; p. 440).

Responsible for the management of public buildings are public facilities management organizations (PFMOs). These organizations, their members and their practices are the focus of this thesis. PFMOs are responsible for supplying and maintaining public buildings in their role as public construction clients. PFMOs need to ensure that buildings are resilient and sustainable while also meeting the core needs of those who use them (Lindkvist et al., 2020). PFMOs serve cities and/or whole municipalities, which are characterized by the complexity of stakeholder interests (Lindkvist et al., 2020). This thesis focusses on the collaboration between PFMOs and their user organizations (schools, preschools, hospitals, etc.) and other stakeholders.

¹Also, see Office of the Legislative Auditor (2000) for a discussion from the US, Audit Scotland (2009) from the UK, Borge and Hopland (2017) for a discussion on Norwegian data, Uotila et al. (2019) from Finland and Svensson (2018) for data from Sweden.

In line with the above, many PFMOs have recently begun to change their practices to work more strategically and for the long term (Hopland & Kvamsdal, 2019). The measures taken include a movement towards centralized organizations and organizing, together with the introduction of measures for long-term planning and an articulated need for different and new competencies to be able to work strategically (Hopland & Kvamsdal, 2019). According to Valen and Olsson (2012), long-term objectives and a strategy including maintenance and management plans, in addition to political commitment, are key factors for achieving and maintaining a desired standard for municipal buildings. Municipalities that state that there is a dialogue between the strategic and operational levels report sufficient facilities management and building performance over the long term. Such organizations can develop the building stock so that it supports users and serves the community at a lower cost (ibid.).

Despite its central importance for societies, research on PFM and PFMOs has, in general, been scarce (Hopland & Kvamsdal, 2019), and more specifically, such research has not been attentive to the organizing of PFM, including the distinct context of PFM and its related challenges (Nielsen et al., 2016). Theories on evolving changes within the organizational settings of PFMOs have, to a large extent, been foreseen, and thus far, there has been only a limited ability to link action to learning or to reflect upon practice (Campbell, 2017). In sum, few in-depth investigations of PFMOs and the work of their officials² have been conducted focussing on how they adapt to organizational and institutional changes and new requirements (Galamba et al., 2012). Recent calls are, therefore, encouraging a turn towards local PFM practices and situated contexts to understand change in relation to long-term measures (Palm & Reindl, 2016, 2017; Campbell, 2017). This thesis intends to contribute to this call by specifically exploring the practices and work of the actors engaged in ongoing changes in PFM, i.e. changes related to what has been labelled strategic public facilities management (SPFM).

1.1 Research interest and focus

The research presented in this thesis takes an interest in how SPFM is conducted in practice within its specific context, i.e. how the change for PFMOs and PFM is taking place, the impact on officials' day-to-day practices and how the work in relation to implementation and the development of SPFM is conducted. This enables

-

² In this thesis kappa, the collective name for the actors working in PFMOs are: PFMO officials. PFMOs refers to public facilities management organizations.

PFM refers to public facilities management and to the institution of public facilities management, i.e. it is a reference to the broader institutional landscape in which PFMO officials operate.

an understanding of why, where, and how it is possible (and difficult) to change public facilities management.

In previous research, researchers have proposed different (isolated) keys to achieve strategic facilities management, where strategic facilities management has been the desired 'end'. For example, by informing early design phases of a building through using life-cycle data (Saridaki et al., 2020), by the means of in- or outsourcing specific facilities management services (Bröchner, 2003), or by using smart ICT tools to improve the effective and efficient use of premises (Valks et al., 2019).

In the same vein, it has been noted that the role of the facilities manager has changed considerably in recent years (Goulden & Spence, 2015) and evolved from basic equipment maintenance to a profession with the responsibility of adapting and improving the facility to serve the primary objectives of the building's users (Curtis et al., 2017). However, previous research has taken a static view of facility managers and their roles, with researchers stating that the facility manager's role should evolve and that his/her knowledge needs to be included at earlier stages of the planning process (Valen & Olsen, 2012; Rock et al., 2020; Elmualim, 2010).

Likewise, previous studies regarding the status of the public building stock and the challenges facing PFMOs have often emphasized what needs to change (Hopland & Kvamsdal, 2019; Vermiglio, 2010; Atkins & Brook, 2017) rather than how changes are manifested in practice.

The research presented in this thesis involves with understanding how the work with SPFM emerges over time, i.e. SPFM in the making, acknowledging both the material and human dimensions of this work. When I use the abbreviation SPFM herein, I refer to the work conducted in the PFMOs studied related to strategic measures and the term used by respondents in my studies when they describe the type of facilities management they are working on and towards. While the 'doing of PFM' has previously focussed on responding to the needs of the building ad hoc, the changes taking place in PFMOs towards SPFM are a result of a will and quest to become strategic, which includes (increased) planning for the future in different ways. It can be stated that SPFM is to be constituted by two general practices as detailed in Figure 1. The old one: respond to the needs of buildings and the new one: planning for the future. It is in the intersection of these two general practices that constitutes SPFM as studied in this thesis.



Figure 1. Overview of the two different practices that constitute strategic facilities management

The thesis work is founded on an empirical phenomenon (Van de Ven, 2016), i.e. the development and implementation of SPFM. Theory is used to increase the understanding of the empirical phenomenon in question. Here, a practice perspective serves as a theoretical lens whereby I can view my data to identify and name things and processes that have previously been 'hidden' from practitioners in order to 'uncover that, behind all the apparently durable features of our world, there is always the work and effort of someone' (Nicolini, 2013, p. 3). Practice theory provides a framework fit for grasping how organizational practices unfold within a specific context, how these are organized and the objects with which these are entangled (Sandberg & Tsoukas, 2015). This perspective helps focus on the practical manifestation and consequences of the idea of SPFM.

The development of SPFM is conducted against the backdrop of a previously established and long-standing way of conducting PFM. Thus, it can be assumed that changing PFM will depend on how it was done earlier. As such, theories that acknowledge the importance of the presence and effect of institutionalized settings and practices when investigating change will be applied. Supplementary to practice theories, theories based on institutional theory are used: institutional work (Lawrence & Suddaby, 2006) to increase the understanding of the work conducted and the agency of actors working with SPFM and institutional logics (Thornton & Ocasio, 1999) to increase the understanding of the different perspectives within the organizational context of PFMOs and SPFM and how they affect actors' work.

These theories are complemented by theories on sociomateriality (Jones, 2014) to highlight the involved object's role in the change processes studied.

1.2 Aim and research questions The aim of this thesis is to:

Increase the understanding of how individual and organizational actors work with strategic public facilities management and how this influences both public facilities management organizations and the institution of public facilities management.

The first research question revolves around the context in which PFMOs operate and where the enabling conditions for working with (and implementing) practices associated with SPFM are located. The question involves organizational aspects related to SPFM on different levels ranging from the individual to the organizational and to institutional field levels. It focusses on SPFM within its organizational context and sets the scene for the rest of the research. Thus, research question 1 is as follows:

RQ 1: How can the organizational nexus of changing practices for SPFM be described and conceptualized?

The organizational nexus is to be understood as the multi-level context in which PFMOs and PFMO officials operate and where work with SPFM is conducted.

For research question 2, the aim was to study how change for SPFM is made possible within this context.

RQ 2: What work is conducted within the organizational nexus of changing practices for PFM in relation to developing and implementing SPFM?

In this thesis, it is acknowledged that agency is shared between humans and objects. Objects in this thesis, can, in line with recent research on materiality, take different forms and be both tangible and non-tangible (Cooren, 2020) as well as imaginative (Gherardi, 2012).

The third research question targets agency and focusses on how human agency is intertwined with objects and their roles in the change towards SPFM.

RQ 3: How do human actors and objects within the organizational nexus of changing practices for SPFM pursue agency to change PFM?

The research process has been iterative. Research conducted in my first study helped to conceptualize the organizational nexus for SPFM and to identify key actors within this nexus using a practice view of institutional work. These findings laid the foundation for research questions 2 and 3, which further elaborate on how individual and organizational actors work with strategic public facilities management and how this influences both public facilities management organizations and the institution of public facilities management.

1.3 Outline of the thesis

First, the thesis introduces the empirical phenomenon and a short presentation of the theoretical framework for studying this phenomenon. Thereafter, the aim and questions are presented. Chapter 2 details the organizational characteristics of PFMOs, and thereafter, the theoretical frame of reference is presented in greater detail. Following that, the research methods are detailed followed by a summary of the included papers. Then, I discuss my findings with reference to the research questions. The thesis concludes with a chapter that discusses contributions and suggestions for future research. The thesis is based on research from four studies (Study Ia and Ib, Study II, Study IIIa and IIIb, Study IV) presented in five included papers.

2 Public facilities management organizations within their context In this thesis, the work with SPFM is studied focussing specifically on work conducted by officials in PFMOs. PFMOs are public organizations specialized in facilities management. As such, in this chapter, I present previous research in relation to both public sector organizing and earlier research on facilities management.

The PFMOs studied herein have typically been responsible for the public building stock in a municipality, as such they are responsible for the supply and maintenance of public buildings, including, for example, schools, nursing homes and libraries. In Sweden, approximately half of all non-residential premises are public, with municipalities as the largest owners (Eriksson & Nilsson, 2017).

Several different types of officials work in PFMOs including facility managers, strategists, financial managers and development managers, with varying educational backgrounds. Most work as facility managers, and the responsibilities of facility managers vary; some act as custodians, whereas others work on a more strategic level with planning and financial responsibilities. Their educational background also vary, ranging from no higher education to master's degrees.

Similar to all public organizations, PFMOs operate within a political and public context (Kuipers et al., 2014) that involves both aspects of democracy (politics and politicians) and the juridical context of legislation, rules and bureaucracy (Hartmann, 2008; Galamba & Nielsen, 2016). Public organizations include, for example, local, municipal and regional (province, county) governments.

Municipalities in Sweden are usually organized in different administrative silos, such as health care and school administration. Some administrations are, however, centrally located and operate across organizational boundaries, which places them, in a sense, 'above' other administrative units within the municipal hierarchy, such as the 'city administration' in many municipalities. PFMOs are generally organized as administration 'among others', meaning that they are not centrally located; however, they do serve several different administrations.

In recent years, the challenges encountered by public sector organizations have been described as 'wicked', meaning they are complex, open-ended and intractable (Head, 2008). To solve such problems, standard public-management responses such as outsourcing seem to be insufficient and, instead, cross-sectoral collaboration and conflict reduction responses are proposed as a way forward. In the same vein, a trend

can be seen to move away from the previous dominant logic, New Public Management (NPM), that offered a 'product-dominant' approach to the delivery of public services. NPM applied a manufacturing logic to public services and concentrated on intra-organizational efficiency and dyadic relationships between public service organizations and their users (Radnor et al., 2014). While NPM may be on its way out, research has shown that one reform does not necessarily replace a former; instead, different reforms are 'layered' on each other, creating public organizations that must respond to conflicting logics and perspectives in practice (Christensen & Lægreid, 2011).

Public sector organizations are constantly subjected to various reforms and changes, and these create organizations within which officials need to respond to conflicting logics and perspectives (Christensen & Lægreid, 2011; Noordegraaf, 2015). For PFMO officials, multiple logics and conflicting goals are also manifested in that PFM is, by nature, multi-dimensional (Vermiglio, 2011), and the decision making processes regarding maintenance and renovation of public facilities include, but are not limited to, political, financial (Galamba & Nielsen, 2016), social, environmental and organizational aspects (Uotila, 2019). Recent studies have shown how professionals in the PFM sector must increasingly balance traditional public practices with business-like practices (Galamba & Nielsen, 2016). In addition, the management of the existing building stock is considered to play a key role in achieving the 2050 decarbonization goals for the construction sector in the EU (Mjörnell et al., 2104; Nielsen et al., 2016).

Increased sustainability demands have caused built-environment organizations to radically reconsider their ways of and corresponding working roles (Heiskanen et al., 2019; Reindl & Palm, 2020; Hughes & Hughes, 2013). According to Utveckling av fastighetsföretagande i offentlig sektor (Development of business in relation to facilities in the public sector (UFOS), 2013), technical solutions as well as tools and methods for meeting the goals for 2050 are available. However, a tendency to rely on ad hoc measures together with difficulties gaining recognition for the importance of long-term planning may hinder PFMOs from reaching their energy-efficiency goals (Hopland, 2019) and implementing new practices.

Moreover, building conditions are influenced by a wide array of factors that interact (Valen & Olson, 2012), such as available information regarding the building, the organization of facilities management and the competence within the PFMO in charge of the building. Here, the different stakeholders involved often pull in

different directions and prioritize different goals in practice, which complicates the implementation of long-term practices; for example, short-sighted politicians care mainly about winning the next election and pay too little attention to maintenance activity that may save costs in the long run (Hopland & Kvamsdal, 2016). Representatives from user organizations (for example, school principals) are mainly focussed on the services their organizations provide and may lack sufficient competence regarding how to best maintain buildings (Borg & Hopland, 2016).

Aside from the multi-dimensional nature of PFM, another organizational characteristic impacting the ability to work strategically and long term is the lack of knowledge about the building stock and of sharing such knowledge between parties in cases where it exists. Such aspects have been listed as reasons for the deterioration in public building stock (Hopland, 2016). In decision-making concerning a damaged building, the condition of the building plays a major role from a financial perspective, as well as in terms of planning for its future use including space demands (Vermiglio, 2011) and environmental and social demands (Lindkvist, 2020). However, many municipalities have lacked sufficient knowledge of their current building stock size and status (Hopland, 2019; Vermiglio, 2010). Moreover, in cases where information is available, many PFMOs lack the organizational capabilities to share it (Uotila, 2019). As public organizations are increasingly characterized by complex webs of interaction, it is difficult to identify exactly what is meant by 'one organization' (Kuipers et al., 2014). Similarily, a divisional structure (separate silos) can make it difficult to share knowledge and information between organizational units (Mulgan, 2007). Organizational challenges in terms of overlapping work between departments and lack of proper communication together with political challenges and public pressure for swift action have been several reasons identified for the lack of adequate maintenance (Uotila, 2019, 2020).

Organizational issues have been shown to impact the facilities manager's possibility to carry out change. It has been argued that, for realizing long-term goals and practices, targeting facilities managers (FMs) would be a viable path (Curtis et al., 2017) since they are the ones who are present during a building's life cycle (Kaya et al., 2005). However, facilities managers have typically been undervalued when it comes to their capability to contribute to an organization's success in relation to long-term planning (Elmualim, 2010). It has also been shown how the organizational context of PFMOs has prevented them from working long term and strategically. In their study, Curtis et al. (2017) revealed that complex building-ownership arrangements, poor communication skills, isolation from key decision-making processes, lack of credible business cases and information, split incentives

and the prospect of business disruptions all negatively impacted FMs' abilities to drive organizational change. Thus, for them to pursue agency (being, in this thesis, the capacity to influence one's surroundings [Battilana and D'Aunno, 2010]), it has been suggested that they need to be included in decision-making, operate in a simplified environment and improve their communication skills (Curtis et al., 2017: Elmualim, 2010). This corroborates the findings of Ludvig et al. (2013), who determined that, for long-term measures to be implemented in PFMOs, implementors need good communication skills and a knowledge of the organizational context.

Thus, although many earlier studies have stated what needs to change, few have elaborated on how this can be accomplished in practice, given the distinct characteristics of PFMOs. Studying context from a practice perspective implies studying analytically and processually how different practices are associated and what the practical implications of their relationship are for the practice at hand (Nicolini, 2013), such as the relationship between practices that constitute 'old' PFM and new (strategic) PFM (see Figure 1).

In the next chapter, I describe in greater detail the theoretical frame for understanding and analyzing the empirical issues described above in relation to the work conducted by members of PFMOs in developing and implementing SPFM.

3 Theoretical frame of reference

To study SPFM in practice, a micro-level institutional perspective is applied in this thesis. This perspective brings the notion of practice and individuals to the institutional analysis of organizations (Greenwood et al., 2008). Institutional theory and especially sub-theories such as practice-oriented institutional work and institutional logics are suitable when studying changing practices on local levels but, at the same time, connecting them to a wider institutional context.

Institutions are defined as 'those (more or less) enduring elements of social life that affect the behaviours and beliefs of individuals and collective actors by providing templates for action, cognition and emotion, nonconformity with which is associated with some kind of costs' (Lawrence, Suddaby, & Leca, 2011, p. 53)such as an industry sector with its shared belief values and norms (Friedland & Alford, 1991). In the present research, the institution in focus is PFM. This institution belongs to both the construction industry, which is highly institutionalized (Kadefors, 1995), and the public sector, also a highly institutionalized sector (Christensen & Lægreid, 2011). As such, the construction industry, including PFM, is a suitable context for studying how actors are conducting various forms of work aimed at creating, disrupting, or maintaining institutions and institutional practices (Lawrence & Suddaby, 2006) as they adapt to changes in and outside of their organizations (Bresnen, 2017; Gluch & Bosch-Sijtsema, 2016).

When an entire institutional field is changing, i.e. when when how things are done is changing in, for example, the institution of PFM, it is called an 'institutional change'. It has often been assumed that new plans, policies or technical systems will change established practices (i.e. institutions); however, research has shown that changing institutions requires work and 'situated negotiations' in practice between several different actors including humans and objects (Cooren, 2020; Hemme et al., 2020: Lawrence & Suddaby, 2006; Smets et al., 2012). Structures and practices cannot emerge immediately and directly from mere shifts in belief systems but need to be translated and put to work (Hemme et al., 2020) for and by different types of actors (Cooren, 2020). The practice-based theoretical constructs of institutional work (Lawrence & Suddaby, 2006), institutional logics (Thornton & Ocasio, 1999) and sociomateriality (Orlikowski & Scott, 2009) are, therefore, used to inform the exploration of the work of developing SPFM, in this thesis.

Traditionally, institutional theory has foregrounded 'embeddedness' over 'situatedness' (Smets et al., 2017). However, with an interest in institutional work and institutional logics, a shift can be seen within institutional theory that can be

summarized in the notion that 'Change and stability are both effortful accomplishments of multiple actors engaged in a practice' (Schatzki, 2012). Here, institutional change is recognized as something that emerges from and in practice (Lounsbury & Crumely, 2007; Smets et al., 2017; Smets et al. (2012)) In the seminal study conducted by Smets et al., (2012), the actors did not intend to change the institution; rather, it was shown how mundane day-to-day practices in real-world situations contributed to shifts in logics on the field level. Specifically, practice-based institutionalism seeks to advance our understanding of how the multiple institutional logics that constitute any given context are linked to the actual institutional work required to create, change or maintain practices under those conditions (Smets et al., 2017).

3.1 Institutional work

Despite offering much potential to understand change processes in the built environment, until very recently, institutional theory has been rather absent in literature related to the built environment (Bresnen, 2017). Moreover, it has usually been used to understand stability rather than change (Bresnen, 2017; Chan, 2018). However, according to Chan (2018), using institutional work to examine change processes pertaining to the built environment offers significant promise. This perspective opens up the possibility for analyses of practices beyond the realm of individual actions and focusses on the so-called mundane actors, i.e. those other than the professional elites who have been a common focus for studies of change pertaining to the built environment (ibid.). In addition, it enables a processual understanding of change where the focus is not on a desired 'end'. In many accounts of organizational change within management literature, change has been concretized as an end point for researchers and practitioners to make sense of (ibid.). Thus, there is a need to understand institutional change through everyday practices and as emerging from everyday work (Smets et al., 2012). Previous research has shown that how change is portrayed in research pertaining to the built environment through documents and formal narratives is different from the lived experiences of the involved actors (Löwstedt & Räisänen, 2012). These lived experiences include descriptions of a discontinuous process of discrete contingencies demanding immediate short-term responses, whereas the formal narrative described a proactive incremental strategic plan. Clearly, there is also a need to further acknowledge the 'messy', lived realities of change processes (Löwstedt & Räisänen, 2012; Chan, 2018).

3.1.1 *Institutional work to create, maintain and/or disrupt institutions*

Institutional work is defined as 'the purposive action of individuals and organizations aimed at maintaining and disrupting institutions' (Lawrence & Suddaby, 2006, p. 215). An institutional work perspective focusses on understanding how, why and when human actors work to shape institutions. It also takes an interest in factors that affect individuals' abilities to shape institutions and the experience of those efforts for those involved (Hampel et al., 2015). Institutional work refers to work that is aimed at a certain outcome. Whether or not this is reached is not the primary interest for scholars of institutional work. Instead, it is the study of actions rather than accomplishments, success as well as failures, and acts of resistance and transformation (Lawrence, Suddaby, & Leca, 2010).

This focus of the institutional work perspective on 'ordinary' actors in their day-to-day work and struggles (Lawrence et al., 2010) involve focussing on workers who are not always calculated and rational but may respond to unanticipated situations (Powell & Colyvas, 2013). In terms of the relationship between institution(s) and action(s), the analytical focus for institutional work is, foremost, on the study of how action and actors affect institutions (illustrated by the lower arrow in Figure 2). Nevertheless, the upper arrow (Figure 2) is neither denied nor ignored; on the contrary, those effects are crucial for the understanding of the nature of institutional work (Lawrence, Suddaby, & Leca, 2010).

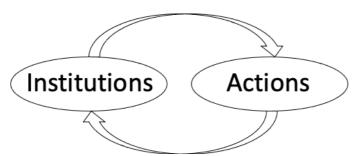


Figure 2. The recursive relationship between institutions and actions (Lawrence, Suddaby, & Leca, 2010)

Therefore, taking an interest in institutional work entails looking at individual actors as well as their (institutional) context. This relates to the idea of 'paradox of embedded agency' (Battilana & D'Aunno, 2010, p. 36), which refers to how individuals are influenced by—but also influence—the institutions that regulate the organizational field in which they operate.

Institutional work can help capture how new concepts and ideas (such as the idea of SPFM) are imported into organizations (Gond et al., 2017; Cloutier et al., 2016) and how such ideas unfold in practice. It focusses on not only how change is experienced

or how new practices are created but also on how old practices are actively destroyed and/or maintained (Lawrence et al., 2011). For example, to implement long-term practices in private organizations, actors need to create, disrupt and maintain practices (Dahlman & Grosvold, 2017). Besides classifying institutional work according to whether an actor is destroying, disrupting and/or creating new practices, additional ways to increase knowledge about institutional work have been elaborated and are detailed next.

3.1.2 Institutional work and institutional change

Gawer and Philips (2013) highlighted the need to coordinate external and internal institutional work when implementing new practices in an organizational field. They argued that, although the external work, for example promoting new practices, is usually more obvious in its effect, the internal institutional work is what makes the external work possible. Internal institutional work refers to the creation of both new organizational practices and identity work, i.e. work to align the organizational identity with the individual's own understanding of her or his professional identity. This work revolves around enabling the formation of new identity claims in light of ongoing changes.

Cloutier et al. (2016) elaborated on the different types of institutional work needed and conducted by managers when implementing public sector reforms. They developed a model that details four forms of institutional work and their relations in the enactment of policy reforms: structural work, conceptual work, operational work and relational work. Research has shown that, when implementing new ways of working, such as SPFM, actors need to engage in different types of institutional work. Although managers, as 'institutional workers', may strive to disrupt previous institutionalized forms and create new ones when implementing new practices, other agents in the field may reciprocally strive to maintain previous arrangements that appear to favour them. This calls for different types of work to make change happen.

Structural work refers to efforts to establish formalized roles, rule systems and organizational principles in relation to new reforms or ways of working and organizing. Conceptual work refers to efforts to establish new belief systems and norms. Operational work refers to efforts to implement concrete actions affecting the everyday behaviours of front-line officials. Finally, relational work, which underpins the other three, refers to efforts aimed at building linkages, trust, and collaboration between people involved and affected by the implementation(s). These four types of work typically flow into and around each other in an iterative manner. However, it is important to note the significance of all types of work and especially

the relational work that facilitates the other types of work. Cloutier et al. (2016) further highlighted that, when implementing new practices, while some actors strive to disrupt previous institutionalized forms and create new ones, others may reciprocally strive to maintain previous arrangements, thereby making change difficult.

Within the definition of institutional work lies the idea that actions taken to create, disrupt or maintain institutions are purposive. Some authors, such as Smets and Jarzabkowski (2013) and Smets et al. (2017), have argued that the definition of institutional work as purposive actions aimed at creating, maintaining and disrupting institutions is far too narrow and heavily implies planned change and projective agency (see Battilana & D'Aunno, 2010, and this thesis chapter 3.1.3). In this thesis, I point to the importance of investigating all three forms of agency (Battilana & D'Aunno, 2009), (iterative, practical-evaluative and projective) and how some actions can have unintended consequences. Also important to highlight is that the continual reproduction of practices and subsequent maintenance of institutions may often appear to be unconscious, unintended and nonreflexive (Geiger, 2009; Hampel et al., 2017). However, that does not mean that acknowledging the intentionality behind such institutional work becomes insignificant. Rather, it becomes interesting to study why, despite good intentions, attempts to change institutional practices do not produce the intended result(s). Especially, research directed toward the work of maintaining institutions: institutional maintenance work have had a 'rational' focus (Townley, 200x). This research has emphasized the cognitive features of this phenomenon rather than the emotional. Institutional maintenance has been studied as routine work leading to the reproduction of a world view (Zilber, 2002; Zilber, 2009), however, a more fine-grained picture would be gained through the exploration of failed or unintended consequences (Lawrence, Suddaby, & Leca, 2009; Lawrence et al., 2013).

3.1.3 Agency and institutional work

According to Battilana and D'Aunno (2010), three forms of agency have been identified in institutional studies, each of which operates within the institutional work of creation, maintenance and disruption: iterative, practical-evaluative and projective. Iterative agency refers to small-scale decisions that can reinforce institutions or move them in a new direction, such as choosing one institutionalized practice over another. Practical-evaluative agency refers to self-conscious actions to reinforce, or remake, institutions within existing ideational frameworks, such as using bricolage to bring elements of different institutionalized systems together for new purposes. Projective agency refers to actions designed to reimagine, or

retheorize, the institutional terrain, such as challenges to taken-for-granted institutional logics.

From an institutional work perspective, it is not likely that one actor alone can change an entire institution. Rather, the study of institutional work highlights the need to examine agency as a distributed phenomenon, i.e. distributed agency. The focus on distributed agency (Lawrence et al., 2010) has led to an interest in how several actors together contribute to institutional change (Lawrence, Suddaby, & Leca 2011) and the legitimacy of new practices. Institutional work directs our attention to an agency that is not a heroic institutional entrepreneur but more fragmented and distributed (see also, for example, Hampel et al., 2015; Lok, 2010; Raviola & Norbäck, 2013). Thus, agency, from an institutional work perspective, is something often accomplished through the coordinated and uncoordinated efforts of a potentially large number of actors (Suddaby & Greenwood, 2009).

For individual actors to pursue agency, enabling conditions need to be in place (D'Aunno 2010). Gluch and Bosch-Sijtsema (2016) pointed to difficulties implementing long-term practices in the built environment. For example, environmental managers who try this often lack the legitimacy needed to implement new organizational practices that support the sustainability agenda. Instead, they get 'locked in' and are merely allowed to participate in work that maintains current institutions. For PFMO officials to be able to carry out the work they want to, they must be allowed and enabled to pursue agency and perform institutional work to create institutions that support SPFM.

New practices, rules and/or technologies cannot be fully diffused and institutionalized immediately, and during the time in which they are developed and redefined, they can be referred to as proto-institutions that might become full-blown institutions (Lawrence et al., 2002). Thus, proto-institutions are 'institutions in the making' and are created by different actors conducting parallel institutional work (Zietsma & McKnight, 2009). Through interorganizational co-creation and collaboration, this institutional work may converge into one fully institutionalized, coherent institution (ibid.).

3.2 Institutional logics

On a day-to-day basis, the range of actors who work in any given institutional context continually face situations that call for various actions, and these actions, in turn, are guided by a multitude of embedded institutional logics (Fred, 2019, based on Lindberg, 2014). Thornton and Ocasio defined institutional logics as 'the socially

constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality' (1999, p. 804). The theoretical notion of institutional logics underscores the power of logics that govern the understandings and behaviours of individuals and collective actors within a particular institutional sector (Smets et al., 2017).

3.2.1 *Institutional logics in practice*

Since institutional logics have previously been studied from the outside, from a 'far distance', and little is known about the ways they are worked out in real-world contexts, in day-to-day behaviours and experiences of actors (Zilber, 2013). Therefore, researchers are encouraged to turn to practice to understand the emergence and adaptations of institutional logics (Smets et al., 2017).

Organizational fields, i.e. sets of organizations that, in the aggregate, constitute a recognized area of institutional life, often encompass multiple logics (Currie & Spyridonidis, 2016). A recent stream of practice-based studies has highlighted that institutional change is to be characterized by the dynamics among a multitude of different institutional logics that co-exist in different ways in practice (Zilber, 2013; Lindberg; 2014; Venkataraman et al., 2016). It has been suggested that plural logics co-evolve within a profession or between professions as multiple (institutional) logics co-exist (Dunn & Jones, 2010). It has also been argued that multiple logics can both compete and cooperate (facilitate one another) in practice (Goodrick & Reay, 2011). The complexity stemming from these multiple logics can be particularly challenging in sectors where individuals in professions informed by different institutional logics need to collaborate and coordinate (Jarzabkowski et al., 2009), such as the public sector. As an example from the public sphere, Hemme et al. (2020) examined how changing field-level logics were encoded and enacted in a major North American public recreation organization. Focussing on the micro-level processes that affect the filtering and sedimentation of logic shifts into individual sensemaking and practice, Hemme et al. (2020) concluded that logics cannot be easily categorized according to the centrality of their component parts to explain their power and impact on organizational functioning. Instead, how actors develop their personal understanding of constitutive logic elements and how they encode their understanding of incumbent or novel logics affects subsequent enactment. Logics are representations of principles by which actors can be organized. However, the extent to which actors act on those principles is empirically distinct and should be described and analyzed as such. Following Hemme et al. (2020) and Lindberg (2014) and focussing on the level of practice, it is possible to increase the

understanding of how actors situated in PFMOs work to manage a multitude of different institutional logics. While Hemme et al. (2020) focussed on how logics were encoded and 'made sense of', this thesis focusses on how they are navigated and managed through institutional work.

3.2.2 *Institutional logics and pre-reflexive agency*

'Successfully' undertaking institutional work requires an understanding of the underlying fabric of the rules, norms and frameworks (i.e. logics) of institutions and the relationships between them. However, recent theorizing in the field of institutional theory has pointed to the fact that reflexivity is not enough for actors to be able to pursue agency (Cardinale, 2018). Often in the course of their day-to-day activities, they are neither choosing a course of action among alternatives posited as such nor being forced (structurally constrained) to act in a certain way. Rather, they may be drawn towards several courses of action over others (Cardinale, 2018, p. 134). Institutions not only constrain and enable actions but also actively orient actions and actors towards some possibilities over others (Cardinale, 2018). Building on different perspectives/logics in practice becomes possible due to an actor's previous (or current) social position. Thus, these earlier positions make actors more or less likely to conduct certain actions. For example, being accustomed to certain logics makes it easier to 'use' and navigate through them (ibid.). Moreover, many factors taken together orient actors to create practices associated with SPFM and not with another type of management. This view also implies that it is easier for some actors to navigate the multiple logics of public facilities managers than others. However, it also implies that it can be possible for many actors, presented with relevant information or experience (Hemme et al., 2020), to pursue agency if they aware of both themselves and their institutional surroundings. Thus, agency is not constant; actors' levels of agency and possibility to enact change depend on the context they are in and can shift over time, based, for example, on contextual conditions that can work as enabling conditions for agency.

3.3 The role of the material in and for institutional work

Recent research on institutional work suggests that the integration of the material dimension reveals that social reality is far less compliant than previously assumed. Instead, it has shown that institutional work needs to address material aspects such as space and place (Dover & Lawrence, 2010), architecture (Jones & Massa, 2013) or existing artefacts and how they affect institutional change (Raviola & Norbäck, 2013). However, while researchers have acknowledged the importance of the material (Lawrence et al., 2013; Lawrence & Suddaby, 2006), this dimension needs to be considered continuously within the analysis of institutional work (Monteiro &

Nicolini, 2012; de Vaujany et al., 2019) in order to comprehend and understand such work. To do so, combining institutional work with theories on materiality has been suggested (Hampel et al., 2017). According to de Vaujany et al. (2019), a paradox of current research on institutional work is that it is presumed, theoretically speaking, to be difficult and most likely to fail, yet almost all research presents successful accounts of surprisingly skilful actors who shape social constructions through discourse.

3.3.1 The sociomateriality concept

To highlight the distributed agency in the analysis of the work conducted in and by PFMOs in relation to SPFM, in this thesis I draw from the notion of sociomateriality to understand how human and material agency combined enact institutional work.

The term 'sociomateriality' can be traced to the work by Orlikowski (2007), for example, and draws upon ideas from Actor Network Theory (Latour, 2005; Law, 1992) as well as ideas presented by Barad (2003). However, there is an inconsistency in the studies associated with sociomateriality, with several concepts and ontological standpoints being used (Jones, 2013, 2014; Putnam, 2015). In this thesis, I follow the call from Pentland and Singh (2013), who stated that in many cases when researchers try to understand the relationship between the social and the material, the underlying distinction between humans and objects is, in fact, reinforced. Rather, it is suggested that researchers focus on the actions that come about as a result of the relation between the material and the social. This is also in line with the reasoning of so-called weak sociomateriality, which is the perspective that is applied in this thesis and is detailed below. While weak sociomateriality focusses on how social and material agencies are combined as independent entities in shaping a situated practice (Jones, 2014; Leonardi, 2013a), strong sociomateriality bears a resemblance to agential realism. Scholars adhering to the 'strong' sociomateriality perspective acknowledge that a specific phenomenon is only 'becoming' in a sociomaterial intra-action (Barad, 2007). Humans and objects do not pre-exist one before the other but are rather constituted as the entanglements of the social and the material as they are configured. However, it is argued that in weak sociomateriality objects exist prior to (or without) being, for example discussed, and it is through discussions that we see their effect on the phenomenon studied. Moreover, the weak perspective takes an interest in the broader social context in which actions take place (Jones, 2014).

Prior to the introduction of sociomaterial theorizing (according to Jones (2013) and first mentioned by Orlikowski and Scott in 2001), the relations between technologies

and organizations have mostly been conceived as a two-sided dialectic process (Schuber & Bruni, 2017) in much the same way as the relationship between institutions and actors (Lawrence et al., 2010) was for a long time. Technology was seen as something that came from outside of organizations, forcing members either to comply, adapt or resist the new artefacts or infrastructures (Schubert & Bruni, 2017). In the same vein, institutions were thought to impact organizational structure and practice in a non-recursive manner (Lawrence et al., 2010). However, in recent theorizing, there is a stronger focus and emphasis on how humans and the material together affect each other and produce results.

Similar to scholars of institutional work, scholars of sociomateriality acknowledge that agency is more fluid (and distributed) than previously acknowledged in materiality studies. According to Jones (2014) 'sociomateriality may be argued to extend practice-based approaches, showing not just the entwinement of the social and material, but their mutual constitution, not just how practices are enacted, but how, in doing so, they serve to construct the phenomena they address' (p. 92).

3.3.2 What is to be counted as material/objects?

In recent years, the scope of what counts as 'material' has been widened (e.g. Cooren, 2020). Cooren advised researchers to stop thinking in terms of either/or (either social or material, either representation or action, either things or processes, etc.); instead, the world is both social and material, but materiality is a matter of degree. Moreover, he argued that researchers need to stop automatically associating matter with something that can be touched or seen, that is, something tangible or visible such as rocks, trees, tables, or a computer (Cooren, 2020). Instead, he (Cooren, 2020) has shown how various entities (such as a procedure, mission statement, organizational chart, strategic plan, CEO, spokesperson, organization, idea, etc.) come to appear and make themselves present throughout space and time ('a strategic plan, for instance, materializes through the discussions managers begin to have about it at some point'. p. 12). Likewise, objects that are tangible but not visible have been shown to take part in organizational processes (Biersteker et al., 2021) in addition to imaginative objects (Gherardi, 2012).

Cooren (2020) used the term 'other-than-humans' instead of the more common 'nonhuman' because he stated that the expression non-human seems too radical. For instance, calling a document a nonhuman is problematic as a text is, in many respects, very human in its conception and expression. The same thing could, according to Cooren (2020), be said of a building, a tool, etc. since things exist to larger or smaller degrees, according to how much they are talked about or used.

Using the term 'other-than-human' allows one to speak of the existence of things that have been at least partially produced by human beings while at the same time recognizing their relative autonomy and agency. Coreen's (2020) reasoning has inspired the view on objects held in this thesis, although they are labelled objects and not 'other-than-humans'.

3.3.3 Previous research on materiality in relation to institutional work and institutional logics

Scholars have elaborated on the active role of objects for institutional work (Jones & Massa, 2013; Lawrence & Dover, 2015; Monteiro & Nicolini, 2015; Munir & Phillips, 2005; Raviola & Norbäck, 2013). Raviola and Norbäck (2013) investigated what happened when the institution of business news was enacted through and with a new technology. They showed how the old technology (paperback edition of a newspaper) was used to give meaning to new actions related to a new technology (a website). Later, a study by Monteiro and Nicolini (2015) highlighted how institutional work by awards/prizes depends on the joint work of human and material entities. Other research demonstrated that places (the interaction of locations, material forms, meanings and values) have been shown to play three key roles for institutional work: they contained institutional work by establishing and maintaining boundaries around institutions; they mediated institutional work by providing an interpretive lens through which people could understand the institutions that actors are working to affect; and they complicated institutional work (Lawrence and Dover, 2015). It was also suggested that places complicated institutional work through their 'concreteness', meaning their materiality, association with day-to-day routines, and geographic locations (ibid). In another study that examined the role and agency of the BIM (Building Information Modelling) coordinator from an institutional work perspective, the implementation of new technology was found to introduce a new role that became an actor who was expected to employ and diffuse agency to change the current institution through technology (Bosch-Sijtsema & Gluch, 2016). Moreover, how it is not the technology per se that induces institutional change but rather revised working practices, including the development of new professional roles, was discussed (ibid). Lindberg (2014) showed how the process of translating logics into practice is dependent on and conditioned by material arrangements and objects, in a study that focussed on what happens when established grocery stores start to sell non-prescription (also called over-the-counter) medications. The study revealed that not only did the practice include different views about the appropriate way to organize work, but the products themselves, as both medicinal items and consumer (patient) goods, represented several logics. One conclusion of the study is that, when the logics were acted upon in practice, they lost their invisibility and

came under scrutiny, resulting in new objects (signs) and procedures as well as discussions about the physical location of the products in the store.

3.3.4 *Emotions and materiality*

Thus, there is increasing interest in the role of materiality and objects in challenging institutional beliefs and behaviours. However, to increase understanding of institutional work, this line of research requires further development (de Vaujany et al., 2019). In recent years, emotions have become widely researched in organization studies. Nevertheless, little attention has been given to emotions in relation to sociomaterial arrangements and institutional work; humans' intentionality is typically discussed only in relation to goals and plans (cf. Suddaby & Greenwood, 2005; Voronov & Vince, 2012). Moreover, humans have been shown to use emotions at their own will, and emotions are not mentioned within the sociomateriality paradigm (Stein et al., 2014). According to Stein et al. (2014), although sociomateriality is a useful concept for understanding the interaction of the social and material, in its current form, it lacks the possibility to inform the understanding of what it feels like to be a human being as well as how emotions guide actions and interactions with the material. Therefore, Stein et al. (2014) introduced the concept of 'felt quality' of practice in sociomateriality research and, thereby, contended that, in line with Gherardi, (2012) 'context is not a neutral container, but an "equipped context" (p. 174). Taking this into consideration means, for example, that the researcher is aware that negative emotions can stabilize around a particular sociomaterial assemblage and, thereby, make it extremely difficult for a productive practice to emerge. It also implies the importance of considering the organizational setting and the emotions attached to it when studying changing practices. This approach enables an understanding of the emotive 'colouring' that sociomaterial associations have, as well as the organizational (and/or institutional) context.

3.4 Summary and focus based on theoretical framework

In this thesis, it is the recursive relationship between the context and the everyday practices that is of interest. Foremost, the interest lies in describing and analyzing the institutional work conducted in a complex institutional milieu consisting of several different logics that require management in practice (Smets et al., 2017). To achieve this, a contemporary, practice-based, institutional perspective, with a specific focus on institutional work (Lawrence & Suddaby, 2006) and institutional logics (Thornton & Ocasio, 1999) has been applied as theoretical frame of reference.

In this thesis, institutional work that spans both the organizational and institutional levels is investigated. However, the focus is foremost on institutional work that aims to legitimize practices associated with SPFM and, hence, change the boundaries of PFM so that a new view of what is to be considered PFM becomes regarded within the PFMOs studied, their closest collaborators and potentially in multiple organizational settings, i.e. the institution of PFM (Gond et al., 2017).

The concept of distributed agency enables an exploration of a multitude of actors involved in the change process towards SPFM. Here, the different forms of agency as presented by Battilana and D'Aunno (2010) and Cardinale (2018) and the different types of work put forward by Cloutier et al. (2016) will help to detail the institutional work conducted and the relationship between different actors and their institutional work.

Furthermore, institutional work is argued to be shared between humans and objects. To highlight the distributed agency in the analysis of the work conducted in and by PFMOs, the notion of sociomateriality (cf. Jones, 2014) is used to understand how human and material agency are combined in enacting institutional work. Following recent calls of materiality studies, the interest lies in counting both intangible and tangible things as objects as well as including emotions in the analysis (Stein et al., 2014). For my thesis, the interest lies in the implications for SPFM practices related to the entanglement between humans and objects in and for institutional work.

The choice to use and to focus on the theories presented in this chapter and their associated concepts has implications for the methods used. The method and research approach are presented in the next chapter.

4 Research methodology

This chapter begins with a presentation of the research approach and, thereafter, the five PFMOs that have been studied in depth are presented. Following that, the four research studies that form the basis of this thesis are presented, followed by the methods used for data collection and analysis. Then, the quality of the research and reflections on ontology and epistemology and of the research process is discussed.

4.1 Research approach and process

To capture the experiences of change processes from the view of involved actors in relation to their complex daily work life, a qualitative research approach was adopted (Flick, 2014). In addition, as the analysis of practice calls for an emergent and 'bottom-up' research approach (Gherardi, 2012), the overall research process and design adopted in this thesis adheres to what Wiedner and Ansari (2017) called an 'emergent research design'. This entails that, during the research process, the researcher has been willing to respond to emerging issues that have arisen along the way, which entails a reflexive stance towards theories, empirical surroundings, and methodologies.

The design of the first study, Study I, was inductive, and the decision to use the theoretical frame of institutional work and institutional logics when analyzing the data was not applied from the outset. Rather, it arose during data collection and early inductive analysis. With the findings of Study I as a foundation, it was decided to focus on objects in Study II, and here I used different streams in the current literature on materiality to form a theoretical frame for analysis. Thus, Study II was less inductive than Study I, yet I remained open to what the data told me and had no predefined roles that I was looking for in terms of objects' interactions with humans. During Studies III and IV, I kept the institutional work, logics and materiality frameworks at the back of my mind while conducting the data collection and designing the studies. Thus, in a sense, these studies were deductive in that I had certain theories and questions in mind from the outset; at the same time, I was interested in 'letting the data surprise me' and went back to the literature during the data analysis. The research can be said to be abductive (Bryman & Bell, 2015).

All four studies have been informed by a practice-based approach. Adhering to a practice-based theoretical approach means that one is realizing the complexity of PFM as well as recognizing the extensive changes that are needed in order for SPFM to become a reality and that these changes are not only technical in nature but also encompass social relations (Karvonen, 2013). In addition, it implies recognizing that change is a process during which, for example, social relationships can change

(Palm & Reindl, 2018; Nicolini, 2013; Karvonen, 2013). According to Karvonen (2013), the practice approach can be especially useful when attempting to understand the complexity of facilities management since it reveals interdependencies between different stakeholders and local contingencies. Practice theories are useful in this context since they '...remind researchers that there is often a large gap between how organizations behave and how they explain that behaviour. It is the tendency toward pragmatism that asks researchers to attend, not to what organizations say they are doing, or to what economic theories predict they might do, but rather to what organizations (or managers, employees or other actors) actually do' (Suddaby, 2013, p. 332). Central to a practice theory lens is the notion that social life is an ongoing production and, thus, emerges through people's recurrent actions (Feldman & Orlikowski, 2011). It further implies that the focal object of inquiry is the activities of different actors, i.e. not solely the individual actors themselves (Nicolini, 2013). When practices are the lenses through which organizations are observed, one sees the finer details of how people use the resources available to them to accomplish actions and how they give those actions sense and meaning (Gherardi, 2012).

Taking a practice theory approach means doing more than just describing what people (or objects) do; the actions of different actors are understood in relation to and within their social contexts (Feldman & Orlikowski, 2011). Thus, during data collection and analysis, I have been aware of the context in which PFMOs operate. Theoretical frameworks that take an interest in practices support a view in which there is a recursive relationship between organizations as well as institutions and the actors who populate them (Nicolini, 2013). Taking this perspective means that practices are understood to be the primary building blocks of a social reality; the world is brought into being by everyday activity. Thus, practice is doing, and not just doing in and of itself; it is doing in historical and social contexts that give structure and meaning to what people do (Wenger, 1998, p. 47), which is reflected in this thesis's frame of reference. When I collect and analyze my data, I am aware that the way PFM is performed today depends on how it was done previously. In understanding this and putting names to these processes, I contribute to increasing the understanding of changing practices for PFMOs.

In this thesis, I have chosen to focus on PFMOs as the main organizational actors for introducing and implementing SPFM and how they contribute to changing PFM. While for PFMOs, the 'doing of PFM' has previously focussed on responding to the needs of buildings in an ad hoc manner, the changes described in the different papers are all a result of a will and quest for PFMOs to become 'strategic', which includes

planning for the future in different ways. Based on the findings in this thesis, practices associated with SPFM include but are not limited to the following: long-term planning, seeing the building stock as 'a whole', creating better knowledge of the building stock and increasing collaboration with stakeholders (user organizations, such as schools and nursing homes), specifically regarding long-term planning. New roles and tools have also been implemented in PFMOs, such as 'strategists' and different IT systems that will help to calculate current and future needs. My role as a researcher has been to investigate what consequences this has for practice.

4.2 Overview of research studies

This thesis is based on research conducted through four studies (Study Ia and Ib, Study II and Study IIIa and IIIb, Study IV); three are empirical studies (Study I, III and IV) and one is a desktop study (Study II). All focus on change processes in which PFMOs are involved. The results of these studies are presented in five papers. An overview of the studies and papers can be seen in Table 1.

Table 1 – Overview of studies and how they have been included in the papers

Time of study	Study	Purpose of study	Included in paper
February 2016- November 2016	Study I a Case study	To obtain a detailed view of the actions and actors involved in one case working with changes in relation to current challenges for PFMOs by closely following the creation and implementation of a strategy project (including a pilot project) in a PFMO (PublicPrem).	I, II, III
Autumn 2017	Study I b Case study	To follow up on the strategy projects' implementation in PublicPrem	II
January – October 2017	Study II Desktop study	To study the role of objects in change processes within PFM in relation to strategic work	III
November 2019	Study III a Workshop	To gain an understanding of current issues for members of PFMOs and some of their collaborators To follow SPFM as an institution in the making	II, V

March- November 2020	Study III b Interview study	To gain an understanding of current issues for members of PFMOs and PFM in general in Sweden, focussing on strategic and long-term measures To follow SPFM as an institution in the making	IV, V
March- November 2020	Study IV Case studies / Shadowing	To acquire a detailed understanding of the everyday work practices and actions of officials involved in strategic work in PFMOs, specifically targeting the newly installed roles of strategists	IV, V

4.3 Presentation of the five public facilities management organizations studied in depth

To capture practices as they unfold within the institutional setting of PFM, in-depth studies of five case organizations, i.e. five PFMOs, were included in the research. Case studies are suitable for studying complex structures (Dubois & Gadde, 2014) such as the organizing of SPFM. Moreover, in order to explore institutional change, case studies have been perceived necessary to understand and explore how complex and nested activities occur over time (Maguire et al., 2004). Using a case study research design allowed for the exploration of actors' intentions and their relationship with their context and the social dynamics, which in turn enabled the possibility to generate theory and develop a conceptual model (Dyer & Wilkins, 1991) in Paper I, which formed the basis for the following studies (and subsequent papers).

Choosing case organizations, sampling was purposive, which is common for qualitative case studies (Flick, 2014). Selecting the cases, the criterion was that the organizations in various ways were working with changing practices in relation to SPFM. In their own words they 'wanted to change their practices as to work more long-term and proactive with the management of their facilities in regard to various challenges e.g., energy efficiency)'. For details of the organizations see paper I–V. Both primary and secondary data have been used in the exploration of the three organizations.

For overview of the three PFMOs studied using primary data, PublicPrem, FacilityUnit and FacilityDep, see table 2.

 $Table\ 2-Overview\ of\ three\ PFMOs\ studied\ in\ depth\ with\ primary\ data$

PFMO	Study object	Focus for study	Description of study
PublicPrem	Strategy Project	Actions and actors in relation to strategy project	The study object of focus was the development of a new way of working strategically with the renovation and maintenance of premises from the 1950–1970s within PublicPrem, in the form of a project. The organization called the new way of working 'strategic facilities planning', and the project is named 'the strategy project'. It aimed to move the organization's decision horizon from a short-term time perspective to a longer one. Initially, the project focussed on energy efficiency but later developed to encompass diverse measures related to strategic and long-term public facilities management.
FacilityDep	Strategist	Actions conducted by the strategist	The study object was the newly implemented 'strategist' role. FacilityDep has recently been given an assignment from politicians to work with inventorying the building stock. For this reason, a strategist role was implemented that would lead the work in developing strategic management of the public building stock.
FacilityUnit	Strategist	Actions conducted by the strategist	The study object was the newly implemented 'strategist' role. FacilityUnit has recently undergone a major organizational change that was initiated a few years ago when a new manager was hired from the private sector. This change included implementing new work roles that would focus on future needs. The background for the change was that the political layperson responsible for the facilities management in the city wanted to have a manager who was able to think strategically.

Two additional case organizations are included in the thesis: AHome and MedHouse. These are based on secondary data. For overview see table 3.

Table 3 – Overview of two PFMOs studied in-depth with secondary data

PFMO	Study	Focus for	Description of study object and
	object	study	context
AHome	Strategy project	Actions and actors in relation to strategy project	The study object of focus was a change project in which AHome was set out to renovate a million-program ³ multifamily housing area in an "energy efficient" and sustainable way. The aim of the project was to create a sustainable living area and also, the owner of AHome, the municipality of Atown, has stated that the energy consumption should decrease by 20 % until 2020.
Medhouse	Strategy project	Actions and actors in relation to strategy project	In this organization the study object was a strategic project done in response to a political directive to significantly cut the energy use in hospital buildings, of which several were built during the 1950-1975, managed and operated by a public construction client organization (Medhouse).

In the AHome case, the PhD monograph thesis 'Omställning-Tillväxt-Effektivisering' ('Transition-Growth-Efficiency', Thoresson, 2015) was chosen as the empirical basis for analysis. The thesis is a monograph in Swedish and provides rich details of the case of AHome and how their work with energy-efficiency issues was handled in practice. The theoretical foundation for the thesis is Actor Network Theory (Latour, 1990, 2005), which entails that both humans and non-humans (objects) are seen as active participants in the processes studied and that energy-efficiency targets were translated into practice. The empirical data in the thesis consist mainly of observations and interviews.

I also interviewed the thesis writer. This interview lasted for about 90 minutes and was divided into two main parts. The first part was inductive with open-ended questions mainly about the case organization, the research process and the

today's energy demands and other sustainable objectives.

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³ In Sweden, many public buildings were built during the so called "million program", which was the result of the Swedish parliament's decision that a million new homes should be built in the period 1965 to 1974, a mission that was achieved (Hall and Vidén, 2005). During this time period, also the public sector was expanding, for example a large reform regarding day-care for children was introduced, resulting in the construction of a vast number of public buildings. These buildings, including both public housing and public premises are now in need of more or less acute measures as they face several problems including meeting

theoretical foundations for the research. The second part of the interview was theoretically informed by the frameworks of institutional work and sociomateriality. Both parts had a semi-structured layout, allowing the interviewee to reason and speak about whatever came to her mind in relation to the questions (Bryman & Bell, 2015).

In the case of MedHouse, I analyzed data that had previously been collected by members of my research group. This data comprised observations from meetings and presentations that were recorded and transcribed verbatim.

4.4 Data collection

The understanding of the change process that PFMOs are undergoing was achieved using several data collection methods, many of which were inspired by ethnographic studies such as interviews, document studies, participant observations and shadowing (Flick, 2014). In addition, a small survey was conducted in PublicPrem to collect the facilities managers' views on strategic facilities management (as implemented in PublicPrem).

The combination of observations and interviews was particularly useful when studying the work practices in PFMOs because they exist both in practitioners' beliefs and actions (Schatzki, 1996). Some even go so far as stating 'Studying practices through surveys or interviews alone is unacceptable' (Nicolini, 2013, p. 217). This is because studying practices means studying activities within their context. For an overview of the different data collection methods, see Table 4, 5, 6.

Table 4 – Overview of interviews in the different studies

	Interviews	
Study la+b	15 interviews in PublicPrem, open-ended interviews, audio recorded, transcribed in verbatim, 1h / interview.	
	Interviewees: Development leader (sustainability), Project leader pilot project/Facilities manager, Head of Premises Management Office, Development leader (facilities), Planning-manager (premises), 2 Facilities managers, 3 Project managers, Head of finance department, Improvement manager.	
	7 interviews in PublicPrem, open-ended interviews, audio recorded, transcribed in verbatim 1h / interview	
	7 conversations with project manager via e-mail, phone and face-to-face.	
Study II	1 interview with writer of the monograph thesis that was the base for the AHome case.	

Study Illa+b	Interviews as preparation for workshop, audio recorded, transcribed in verbatim, 1h / interview	
	3 representatives from private FM organization specialized in renovation of 'millionprogram' housing, one facility manager from a PFMO, Head of facilityunit at a PFMO.	
	12 open-ended interviews, with representatives from 8 different PFMOs, audio recorded, transcribed in verbatim, 1h / interview.	
	Interviewees: Line manager (head of facilities managers), Head of facilities (Head of unit), Improvement manager, Head of PFMO, Line manager (head of technical administration unit), Head of PFMO, Line manager (head of facilities managers), Improvement manager, Line manager (head of facilities managers), Line Manager (head of facilities managers for pre-schools and schools), Head of facilities at a PFMO, Facilities Strategist	
Study IV	Interviews with representatives from FacilityUnit Interviewees: Line manager, Head of FacilityUnit, 2 facilities managers, Strategist.	
	7 Interviews with the shadowed strategist	
	6 interviews representatives from FacilityDep	
	Interviewees: Head of Facility Dep (4 occasions), Project manager energy and ventilation, Project Manager maintenance.	
	6 interviews with shadowed strategist (+ short check-ups via e-mail)	

Table 5 – Overview of observations and shadowing in the different studies

	Observations	Shadowing
Study la+b	7 observations of meetings and presentations	
Study Illa+b	Observations during workshop	
	Conference for practitioners in 2016 and 2020	
Study IV	Facility Unit 4 internal meetings 4 meetings with external	FacilityUnit (50h) and FacilityDep (150 h)
	stakeholders	Following a strategist in each organization
	Informal observations approx. 150 hours	
	FacilityDep 17 internal meetings 2 meetings with external stakeholders Informal observations approx. 50 hours	

Table 6 – Overview of written documentation and miscellaneous in the different studies

	Written documentation	Miscallaneous
Study I a+b	The project directive, power point slides etc.	Informal conversations during coffee-breaks at presentations and at the national conference.
	Unpublished case report of	
	PublicPrem (Ludvig, 2010).	Four questions via e-mail e-mailed to all 13 facilities managers employed at PublicPrem in September 2017
Study II	Verbatim transcripts of meetings and presentations from MedHouse.	
	Monography thesis (results based on interviews, observations and organizational documents in AHome).	
	Notes from observations in PublicPrem.	
Study Illa+b		Notes from workshop
Study IV		Informal conversations during lunchbreaks, car-rides, coffee breaks etc.

4.4.1 Interviews in PublicPrem, FacilityUnit and FacilityDep

According to Van de Ven (2016), to frame the focus, level and scope, phenomenon-driven research, i.e. research in which empirical rather than theoretical problem(s) guide the research, it is important to know whose perspective is being addressed and to engage them in describing the phenomenon. To achieve this in this thesis, individuals from several different PFMOs and holding different positions, as well as their collaborators, were interviewed. All interviews were semi-structured to some extent, allowing the interviewees to reason and speak about whatever came to their minds in relation to the questions (Bryman & Bell, 2015). Semi-structured interviews also allowed for variations and follow-up questions when appropriate (Kvale, 2007).

The interview data in Study Ia was collected through 15 interviews with 12 persons in PublicPrem and stakeholders involved in the pilot project/strategy project. Following this initial interview round, follow-up interviews were conducted (Study Ib). For round two, I targeted all those from the first round; however, not all were

available to participate in the second round for reasons such as sick leave, workplace changes and so on.

The interview guide for the first round consisted of three main themes with questions corresponding to how new management practices emerged and the involvement of various actors in processes of change. These themes were: 1) the strategy project's and the included pilot project's development, implementation, goals and interrelations; 2) the timing and enabling of the new way of working; and 3) the actors involved and their roles. In addition, each interview included questions that arose from the situation and were tailored to specific roles (within both the project and the organization). As such, these questions varied depending on the interviewee.

For the second round of interviews, the guide consisted of questions regarding the current status of the project, such as: How has it gone? Is it where you thought it would be? Why or why not? Can you describe current changes in practices related to the project? The questions were modified and adapted to each interviewee. For this round, a less exploratory approach was adopted than in the former round, and the questions were based on the information regarding the strategy project as collected in the first round.

During my studies at FacilityUnit and FacilityDep, I conducted interviews with people with whom the shadowed person (two strategists in each core organization) collaborated in order to gain insights into their work in relation to other people's work, as well as for a greater understanding of the overall work within the organizations. The questions varied depending on the respondent but were all geared towards experiences of SPFM, current challenges for PFMOs and PFM and perceptions of the strategist role.

With the strategist at FacilityUnit, I had weekly follow-up calls during the time I spent with the organization (10 weeks). Here, I would ask the strategist what she had been doing during the week and her perception of her role in relation to the work tasks. Likewise, I had check-ins with the strategist at FacilityDep, albeit not as often. This was because I met her more regularly at the office than the strategist at FacilityUnit who was working more from home.

4.4.2 Interview study with 12 representatives from eight PFMOs

The purpose of the interview study included in Study III was to gain a broad picture of current challenges for PFMOs in Sweden. The contacts were generated from a workshop and from the previous study of PublicPrem together with the method of

snowballing. Also, I contacted municipalities spread out in Sweden to get a broad representation of them. An e-mail was sent to the PFMOs where I had not talked to an identified interviewee previously to inquire about speaking to someone in the organization who had an overview of current challenges for PFMOs and internal and external changes in relationships as consequences of these challenges.

A total of 12 interviews were conducted in eight different PFMOs where the sample represented a wide range of PFMOs in Sweden from smaller to larger municipalities (ranging from 40 000–560 000 inhabitants). These interviews varied in duration from 30 to 60 minutes and were conducted either face-to-face or via Skype/Zoom. They were semi-structured (Flick, 2014) so that the interviewees could talk openly about whatever came to their minds related to the questions. The focus was on the current situation for PFMOs and the change process these organizations experienced. Examples of questions include: What challenges are PFMOs experiencing? How does this affect your collaboration with stakeholders? Are there any new work roles?

4.4.3 *Shadowing in FacilityUnit and FacilityDep*

'Shadowing is a form of observation that enables an understanding of the daily work and practices of others (cf. Czarniawska, 2014) and was in line with my research interest. It enabled a close examination of the activities conducted by the shadowed persons. In Study III, I decided to shadow two persons belonging to different PFMOs. I sought people who were working 'strategically'. In FacilityDep, I shadowed a strategist (with the specific role of planning manager) between May and October 2020. This person was hired specifically to manage the work of inventorying the building stock. For a period of 10 weeks between the end of March and beginning of June 2020, I shadowed a strategist at FacilityUnit. This person had previously worked as an occupational therapist and, thereafter, a facilities coordinator. She had recently been appointed to strategist (with the specific title strategist coordinator), which meant being responsible for future and planned (care) facilities. This position was also newly created.

In both FacilityDep and FacilityUnit, I wanted to get a sense of what it was like to work as a strategist. I was interested in what a day would look like, who the strategists collaborate with and why, which roles they have in different meetings, and what they felt about their roles. I would reflect (with them as well as on my own) on what is difficult and why, and what is easy and why?

In FacilityDep, I began by following the planning manager wherever she went for the first month, and later I observed all meetings regarding the project she was managing, which was related to the inventorying of the public building stock. At FacilityUnit, I followed the strategist to all meetings she attended where she was able to bring an external participant. In both FacilityDep and FacilityUnit, some meetings were online due to the pandemic. For observations of meetings in FacilityUnit and FacilityDep, see chapter 4.4.4.

4.4.4 Observations in PublicPrem, FacilityDep and FacilityUnit

To capture the process through which SPFM developed in practice for PFMOs, non-participant observations were conducted in PublicPrem, FacilityUnit and FacilityDep. In PublicPrem, I participated in all meetings concerning the strategy project. I asked the project manager for the strategy project to invite me to all meetings that he deemed suitable, both external and internal.

During both online and in-person meetings, I was introduced as 'a researcher that is following the work with facilities management' and played a silent role. In the beginning of meetings that I observed for the first time with people I had not met before, I gave a short introduction about myself and my research project. At presentations, the presenter usually gave a short introduction about me and my reasons for being present. During meeting observations, I sat by the table like everyone else, taking notes at my computer or by hand. I did not take part in discussions. Some meetings were audio-recorded, but for most of the meetings I took extensive field notes. At presentations, I did not ask questions or participate in discussions, and at online meetings, I was on mute and took notes on the computer. I was attempting to capture everything going on, as if I had been filming the meeting. That included not only writing what was said but also who said it, where people sat in relation to each other and their non-verbal expressions.

According to Czarniawska (2007), there is not yet a clear definition of 'participant' or 'non-participant' observations. All direct observations can be said to be participatory in some sense; where does one draw the line if asked to bring coffee for a participant at a meeting? Nevertheless, Czarniawska (2007) stated that a participant observation includes that 'you do the same thing as the people you are observing', which I did not. Further, non-participant observations can be divided into indirect and direct observations and the latter into shadowing and stationary observations. During Study I in particular, I tried to be a 'camera lens' (stationary observations) during observations and capture everything going on during meetings, but at the same time I am human, expressing emotions, interacting with others and

continually interpreting and analyzing. In Study III, I was more interactive during some of the meetings observed, for example, asking questions to clarify concepts and relationships with stakeholders. These were typically smaller meetings with people I had met before and not 'formal' presentations. Here I asked questions for clarifications regarding, for example, organizational routines and stakeholders' involvement.

In all three PFMOs where I collected data, I was part of the informal discussions at coffee breaks and car rides. Here, I took no notes but listened to the general discussions about the workplace.

I did not have a formal observation sheet when I conducted my observations. My aim was to capture everything going on, i.e. all conversations, the positions of those in the room, their non-verbal expressions and the tone in their voices. After meetings, I usually asked for clarification if something was unclear. Sometimes the way that an interviewee had experienced the meeting was not at all how I had experienced it; thus, it was important to ask these follow-up questions to increase my understanding.

4.4.5 Observation of national conference on strategic planning for premises As part of data collection for the case study of PublicPrem, I attended a national conference on strategic facilities planning for public premises that took place in Stockholm in 2016. In 2020, I participated at the same conference, this time on my own to see how/if the questions and issues were the same or had changed, and if so, in what direction. Participating in these conferences gave me insights into the shared and common matters that the practitioners on a national level were discussing with

At the 2016 conference, organizational challenges related to the current and future public building stock in Sweden were portrayed as needing urgent attention. The existing public building stock in need of repair was described as 'a ticking bomb', and the conference participants emphasized the magnitude of the problem by referring to the number of buildings in need of attention as 'a mountain of buildings'.

regard to public facilities management.

In 2020, the current situation for Swedish municipalities was described in less alarming terms, and hope permeated the conference. These participants were delighted to announce that, in recent years, local politicians have started to realize the extensive amount of savings that can be gained if attention is paid to proper and strategic management of the current building stock. Thus, facilities management has

moved higher up on the agenda in several municipalities, according to participants at the conference.

4.4.6 Document studies in FacilityDep, FacilityUnit and PublicPrem

Using written sources such as organizational documents, articles from Swedish newspapers, and national and regional policy documents was seen as complementary to other data collection methods in the study of PublicPrem, FacilityUnit and FacilityDep. In my view, organizational documents cannot be considered neutral but must be viewed within their context (Flick, 2014), and relying only on organizational documents will capture mostly organizational level action rather than the micro processes of meaning; hence, this data collection method supplemented the interviews and observations (Zilber, 2013). PowerPoint slides and documents containing numbers and figures were included in the analysis. These slides and documents were analyzed not only in terms of their content but also in regard to how the content was used by individuals. For example, in PublicPrem, it was noted that PowerPoint slides containing complicated figures and numbers could be used as a way to legitimize new practices by showing that they were based on hard facts.

4.4.7 Workshop

With the findings from Studies I and II as a foundation, a workshop was held as part of Study III. Its aim was to get a broad view of PFM in Sweden and the work conducted in PFMOs to implement new practices and to validate early results from the PublicPrem case. The participants (two representatives from project management companies, one private consultant, four representatives from PFMOs, a researcher in FM and two representatives of a public housing company) were chosen because they had knowledge of facilities management in municipalities as they were either working in PFMOs or in organizations that were closely collaborating with these organizations.

Prior to the workshop, I conducted interviews with the participants as well as four additional individuals from a construction company with a focus on renovation projects to benefit from their backgrounds and their insights into matters of organizational changes related to the management of the public building stock.

The workshop was organized and executed by the author of this thesis, together with three colleagues and co-authors. To start the sampling process, I contacted the CMB (Centre for Management in the Built Environment) and asked for names of appropriate persons who might be interested in a workshop on PFM and

organizational issues When I contacted those whose names I had been given, I asked them for names of additional individuals they knew who might also be interested in the workshop. CMB is a forum in Sweden for management issues relating to the built environment. It comprises four Chalmers departments and about 40 of the market's key players in the private, public and corporate sectors. CMB's objective is to promote a modern approach to management and contribute to a sustainable built environment.

During the workshop, participants were to discuss issues related to the findings in Papers I, II and III, that is: What are the conditions for the current transition for PFMOs? Which actors are involved in the transition, what do they do and how is their work changing (both humans and objects)? How are your present work practices affected by the current situations for PFMOs? The outline for the interview guide in study III b was developed based on the discussions and outcomes of the workshop

4.4.8 Reflections on the impact from COVID-19 on the data collection

Just as I was about to start Study III b and Study IV, Just as I was about to start Study IIIb and Study IV, the World Health Organization formally declared the spread of the coronavirus a pandemic in in March 2020, affecting my data collection in several ways. First, the plan was to visit three PFMOs, FacilityUnit (which was also visited) and two other PFMOs, localized in southern and western Sweden. It was not possible to visit these two additional PFMOs, due to travel restrictions as well as their inability to focus on a researcher while adapting to the new situation following the spread of the coronavirus. Fortunately, I was able to replace these two PFMOs with one other organization located closer to my home (FacilityDep). Second, even though I was able to visit both FacilityDep and FacilityUnit, in FacilityDep especially, I was not able to do shadowing as extensively as planned since the person I was to shadow was working from home to a large extent.

At both FacilityUnit and FacilityDep, I conducted many hours of observations through my computer, following meetings in Teams. This resulted in both advantages and disadvantages. Being one of many people following the meeting online, I really became a 'neutral' observer who did not affect the meeting, which can be seen as an advantage. However, I did notice that it was more difficult for me to study nuances during the meetings, and I missed opportunities for discussions at for example coffee breaks. And other informal get togethers. Sometimes I had an additional meeting afterwards to discuss the meeting with the person who had invited me. However, although being informal conversations, they became more like

interviews, and I still missed out on the spontaneous discussions and reflections between participants (and myself) after the meetings.

Although the facilities strategist in FacilityDep said her work was affected by COVID-19 as she could no longer overhear conversations by the coffee machine, which used to be a way for her to find new work tasks, I cannot say I noticed that the overall work with PFM was affected, except that the officials had to work from home to a larger extent. Here I think they faced the same problems common to other working roles with fewer spontaneous discussions and a more challenging physical (and psychological) work environment. It is my impression that the day-to-day work with PFM continued generally unaffected by the restrictions in place due to COVID-19, during my fieldwork. In Sweden, during the period of my data collection, most public spaces were open, and in terms of schools, only upper-secondary schools went to online teaching. Thus, the buildings were continuously used and needed to be managed.

4.5 Data analysis

The process of data collection and analysis was iterative, meaning that data collection and analysis ran simultaneously. In some cases, the data analysis started before all interviews and observations were completed for a particular study. In all my studies, I have used thematic analysis of the material when writing for publication in the different papers. The themes for the papers varied somewhat but revolved around the following: a) the context of PFMOs, such as levels, logics and the emotions produced by the context; b) the role and agency of objects; and c) the work conducted (by humans and objects).

A theme, according to Braun and Clarke (2006), 'captures something important about the data in relation to the research question(s) and represents some level of patterned response or meaning within the dataset' (p. 82). Data analysis has not been a linear process or a mechanical categorization or coding but has required me to interpret the data. The process can, nevertheless, be described as comprising a number of elements (Braun & Clarke, 2006), which I describe below and relate to my own work: (a) familiarization with data: In Study I, I transcribed all material verbatim; for the material in Studies III and IV, I had a professional transcriber do this. In both cases, I reread the transcription of the verbal (interview) and observational material several times, the first time without any intention to sort the material; instead, I simply made notes about responses and comments I found interesting and/or surprising. After that, (b) I turned to the initial coding where I was identifying and organizing features of the data that appeared interesting. Thereafter,

(c) I was sorting the different codes into potential themes. In the next steps (d), I went through the codes again, reviewing themes for internal homogeneity and external heterogeneity. Then, it was time to (e) interpret and conceptualize the themes in relation to the data, and here I went back to the literature and started to elaborate on my theoretical framework to be able to finally (f) provide an interesting narrative account of the story that the data tell.

In the final step of writing the different analyses, the themes were re-embedded into an analytical narrative illustrating the different themes and issues identified for the purpose of providing a rich description and illustration of the themes to enable contextual understanding. This is in line with the aim of social science in general and practice-based studies in particular, which is to provide a richer and morenuanced understanding of the world rather than simple answers to complex issues and questions (Nicolini, 2013). Thus, the data analysis process for this thesis included the identification of recurring patterns in the data, categorized into themes and then analyzed across municipalities, departments, organizational levels and different type of actors in order to explore the dimensions of the identified themes, focussing on recurring patterns in the interactions between humans and objects in relation to SPFM.

Throughout the research, I have revisited the same dataset more than once, using different theoretical and conceptual lenses and placing different aspects of the dataset in the forefront. In this thesis, theory is used to help explain actions and practices and to suggest new connections and relationships that have previously not been articulated. Thus, theorizing is a way to help me think about the relationships between the elements in the world that occupy my research attention (van Maanen et al., 2007).

When analyzing the data, both explicit and implicit levels were included, as is common for qualitative data analysis (Flick, 2014). As an example, this meant that both what was said and not said during an interview, written or not written in an organizational document, as well as what was said or not said during observations was of interest, as well as information regarding how the participants felt during a meeting. I also noted was what said by one person but then disputed by another during another meeting, in the same meeting or in different interviews. For a more detailed account of the data analysis, please see the included papers.

4.6 Quality of the research

My overall aim has been, first, to provide 'successful' case studies/descriptions that enable the portrayal of general phenomena so well that others have little difficulty seeing the same phenomena in their own settings (Dyer & Wilkins, 1991). According to Flyvbjerg (2006), the generalizability of results from case studies depends on the selection of an 'appropriate case', for example, one that has 'strategic importance in relation to the general problem' (p. 229). As mentioned, the sampling of the case organizations was purposive, and thus the cases have been selected to fit the research problem area and objectives of the study. The aim has also been to produce knowledge that can be relevant for practice (Nicolai & Seidl, 2010), in my case PFM. Practical strengths of my methods include the ability to have an ongoing discussion with my informants. Throughout my studies, I have elaborated on the results with practitioners. Specifically, I have been in contact with the project manager from PublicPrem since 2016 (until 2021). Moreover, the conceptual model developed in Paper I was used as a basis for the discussion at the workshop in 2019 and, to further enhance validity, two of the workshop participants were interviewed in 2020 to elaborate on the results presented and discussed at the workshop. Table 5 describes how issues of quality were addressed in my research.

Table 7 - Means to ensure reliability and validity

Concept(s)	Measures taken in this thesis
Reliability in qualitative research (Flick 2014)	Thorough documentation of research process and data analysis was conducted. Cross-checking the data between authors and with respondents was
	done.
	Participants were free to recount their experiences at their own pace, and if participants were asked to elaborate on a specific statement or issue, requests were framed in their own words.
Validity in qualitative research (Flick 2014)	Data triangulation was obtained by: 1) integrating data across different sources (interviews, observations, e-mail questionnaire, shadowing, organizational documents, workshop); 2) including people from different parts of the organizations studied; and 3) using five case organizations to illustrate a phenomenon.
	The use of semi-structured interviews included room for flexibility, and interviewees were asked to give feedback and reflect upon the interviewer's assumptions. Likewise, after the meetings/presentations, the participants were asked questions for clarification if necessary.

	During observations of formal meetings and presentations, I mostly played a 'silent' role, not actively interrupting the processes by speaking and/or asking questions.
	At informal gatherings and smaller meetings, I was interacting with my respondents and asking question to ensure I had understood the discussions.
	Writing with researchers/co-authors from different fields enabled different perspectives.
Transferability (Halldorsson	Use of theoretical frameworks as guidelines for data analysis
and Aastrup, 2003)	Clear and rich descriptions of empirical contexts
Credibility	Data collection of an actual and ongoing project (PublicPrem) to
(Halldorsson and Aastrup, 2003; Nicolini,	reduce recall bias and enhance accuracy of the data
2013)	Shadowing ongoing activities in FacilityUnit and FacilityDep
	Shadowing and interviewing both novices and established officials in the field of PFM
Relevance (Nicolai and Seidl, 2015)	Conducting phenomenon-driven research and steering the research towards issues deemed relevant by the actors involved
	Taking an approach that enabled engagement in conversations,
	interactions with actors involved, and reflections on the topic together with practitioners
	Visiting conferences aimed for practitioners to capture real-world problems

4.7 Reflection on ontology and epistemology underlying the research The theoretical frame of reference and the theoretical lenses used for this research come with assumptions regarding the nature of the world and of science and research. They include assumptions that have implications for data analysis and for the results presented, as well as the formulation of the aim and research questions. Adhering to the practice-oriented stream of institutional studies (institutional work and institutional logics), together with the acknowledgement of objects as actively involved in institutional work, my research can be said to belong to two major current streams in the philosophy of science; first, a form of realism in which the duality between structure (in this thesis, institution/context) and agents/agency is acknowledged. The second is a view that the reality we live in is shaped by practices; in this latter reality, both objects and humans have agency (post-humanism) (Mol, 1999). The ontologies underlying the two theoretical lenses presented in this thesis

(practice-based institutionalism and sociomateriality) are compatible but depart from slightly different premises.

Practice-based institutionalism adheres to the notions of critical realism (Delbridge & Edwards, 2013). According to a critical realist standpoint, reality exists independent of the conscious mind (Bhaskar, 2008). Humans interpret this reality, and via certain methods, we as researchers can, in turn, interpret this interpretation. There are different valid perspectives of reality; this is not the same as saying there are multiple realities. Thus, critical realism turns the interest to research ontology, and the methods and research epistemology adopted in this thesis align with the ontological assumptions of critical realism. Ontologically speaking, critical realism espouses that social phenomena such as institutional logics exist irrespective of having been explicitly identified and/or acted upon (Fleetwood, 2005; Sayer, 2000, referred to by Hemme et al., 2020).

Sociomateriality, as a research stream and umbrella term, is harder to categorize according to ontology than practice-based institutionalism. According to Jones (2014), '...none of the notions (strong or weak) of sociomateriality are wholly consistent with critical realism' (p. 920). Rather, sociomateriality adheres to a research stream in organizational studies that takes less interest in the dualism debate (structure/agency) and is more interested in the understanding of how 'the social' is formed in specific contextual situations (agential realism), as put forward by, for example, Barad (2003).

Nevertheless, taking the weak sociomateriality perspective presented previously in this thesis enables an investigation of the objects within their institutionalized environments. Thus the weak perspective is proposed to be closer to a critical realist standpoint than the strong one (Jones, 2014). Additionally, Leonardi (2013) proposed that sociomateriality research can be built on either agential realism or critical realism. Both approaches have advantages and disadvantages. For example, scholars who treat objects and humans as distinct (weak sociomateriality) tend to privilege one over the other (Putnam, 2015). Using what Jones (2014) called a strong process perspective and Putnam (2015) referred to as performativity would avoid this tendency⁴. By contrast, Leonardi (2013) pointed to the benefit for practice of

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⁴ Both Jones (2014) and Putnam (2015) refer to Orlikowski and Scott (2001; 2011; 2015) when contrasting different forms of materiality studies, and both agree that Orlikowski and Scott's perspective is ontologically different from that of other scholars. Putnam, for example, highlights five different ways in which discourse and materiality are elaborated on in materiality studies, of which four have an ontological grounding other than Orlikowski and Scott (2015). These four resemble the weak perspective as presented by Jones (2014).

using critical realism as a basis for sociomateriality studies rather than agential realism. According to him, since actors in the real world do not act as if agential realism is 'true', this philosophical stance presents empirical problems.

With an interest in how other-than-humans are materialized, I would argue that Cooren's research (2020) belongs to the weak sociomateriality stream, even though he has a focus on processes. This is because of the focus on what becomes of a certain entanglement rather than the entanglement itself. This is also the focus for this thesis as institutional work and sociomateriality are combined.

According to Leonardi (2013), in sociomateriality based on a critical realist standpoint, the researcher acknowledges that the material and the social are external relations, just as in institutional work researchers acknowledge that institutions are coming from the 'outside'. As an example, for a sociomateriality scholar with a critical realist base, when users are introduced to a technology, its features have already been preconfigured for them. 'Although they may be able to change its materiality, even their perceptions of what changes could be made are constricted, to a large degree, by the initial materiality that they encounter when first using the technology' (Leonardi, 2013, p. 69). This, I would say, would be the same for institutional workers within their institutions. The institutions have already shaped (oriented) the behaviours of their inhabitants as to what is possible for them to do (Cardinale, 2018). Moreover, by using an institutional work lens together with the theoretical notion of sociomateriality, the focus is not only on 'obvious' objects but also on ordinary objects both tangible and intangible that may be working, so to say, 'in the background'. This is an advantage of combining the two perspectives.

Thus, in this thesis, it is acknowledged that there is a reality that can be investigated through theories. It is further acknowledged that the people within an organization view this organization in a certain way and, based on these perceptions, a conceptual model of this organization can be developed influenced both by individuals' perceptions and by theoretical lenses. However, this is not to say that the organization is this way; it could be viewed differently with other theoretical lenses. Likewise, institutions exist because many people view things in a similar way; however if this view changes, so do the institutions. The research does not take an interest in finding out exactly what the reality is but rather how it is understood by the individuals who populate it. If this reality is understood differently by different people or at different points in time, that is what becomes interesting. The nature of knowledge that is put forward in my research is, thus, that two factors are available,

the reality and the interpretation of the reality, and the latter is emphasized in this thesis.

4.8 Reflection on my research process

In 2016, when I began my first data collection in PublicPrem, the initial focus for the work with the public building stock was the management of 'energy-efficient' renovation, and the strategy project I followed was initially (officially) framed as an energy-efficiency project. At the time, energy efficiency had been in focus for PFMOs for some years. This was, in part, because the public sector is expected to lead by example and accomplish sustainable objectives set by the government. One central method of accomplishing these goals is to create more energy-efficient buildings. However, the project manager (affected by a general discourse within PFM) reframed the project to instead be a 'strategic' or strategy project. I began to focus on what the actors were doing and saying in PFMOs, which was developing something they called 'strategic (public) facilities management'. By participating in the national conference mentioned earlier and reading newspapers, I began to understand that this trend towards what in PublicPrem was referred to as 'strategic public facilities management' was happening not only in PublicPrem but also in many municipalities in Sweden as well as in other countries. Thus, throughout my studies I have remained close to the empirical evidence and adopted an emergent research approach (van Maanen, 2007).

Adopting an emergent research approach and continuously being cautious in regard to the empirical evidence (van Maanen, 2007) has not been without hesitancy; such an exploratory method meant I did not know what I would find or where I would end up. However, it enabled me to explore new theories and questions. Moreover, I believe it gave me a deeper and richer understanding of the empirical phenomenon than if I had used a problem-driven research approach (Wiedner & Ansasi, 2017) or searched (only) for gaps in the literature (Alvesson & Sandberg, 2011). However, the research process was not solely inductive; it can also be said to be abductive, given the theoretical underpinnings of my research and the back-and-forth-character in which the empirical and the theoretical have been in interplay (van Maanen et al., 2007) during the data analysis and the design of Study III (a, b).

As the foundation for all data analysis, the reasoning began with unmet expectations and surprises from the empirics, such as the role of the pavilions (and other objects) found in Study I, as well as the finding that PFMOs are aiming for and working towards a new role in their organizational and institutional fields (Paper IV). Then, I worked 'backwards' to extend existing theory that could make the surprises

meaningful. Thus, although the research has been primarily empirically (and inductively) driven, the empirics were analyzed using a particular theoretical framework (different for each paper) and are used in 'the service of theorizing' (van Maanen et al., 2007, p. 1149). Hence, data analysis has been a recursive process involving a constant moving back and forth between the entire dataset, coded extracts of data, and the emerging analysis of the data to generate and describe (theoretical and empirical) themes in the material (cf. van Maanen et al., 2007), which in some cases led to the formation of conceptual models.

That institutions exist was taken for granted from the outset. When conducting the interviews and participating in the meetings, I already had an assumption that the practices I was studying were placed in a specific context or a certain institutional setting and that these practices that I witnessed were affected by both the past, present and future (Battilana & D'Aunno, 2009). I wanted to study practices and individuals and their actions within this institutional setting. Likewise, the readings of the texts from Medhouse and AHome together with the interview of Thoresson was coloured by theoretical understandings. It is reasonable to assume that the worldview I had already adhered to in Studies I and II also coloured what I asked for and later found during Study III. This suggests that, if I had used other theoretical lenses, other findings might have surfaced during the different steps of the research.

5 Summary of papers

In this chapter, I provide a summary of the papers focussing on the aim, main findings and key implications for theory and practice. For further reading, see the included papers.

5.1 Paper I: On the nexus of changing PFM practices: Purposive and cocreative actions across multiple levels

Purpose: This paper uses a practice-oriented approach together with the theoretical construct of *institutional work* to conceptualize the organizational nexus of changing practices for SPFM.

Research design: Changing management practices are illustrated with the help of real-world experiences that were captured through interviews and field observations in a case study of a strategy project at a Swedish PFMO.

Findings: In order to implement new practices associated with SPFM, a pilot project team was developed in PublicPrem, with representatives from different organizations who needed to collaborate in practice for change to happen. This pilot project team setup is described as a 'proto-institution' as it can be seen as a prototype for how the larger institution would work when fully developed.

The findings show that several human actors within the PFMO studied exhibited a great deal of agency while working with the strategy project. In the process of promoting their ideas, the members of the project team took on different (complementary) roles. This further emphasizes how the actors worked together to promote their ideas. Their needs for support from all levels of the organizational nexus (ranging from national, managerial, and organizational to project level) demonstrate what was needed to bring about change. For example, one member of the project team took on the role of 'expert', displaying and explaining his ideas using complex PowerPoint presentations filled with numbers and figures. Moreover, the project leader could be described as a bridge from top management, i.e. the managerial level of the organization, to the operational level. Alongside the human actors within these proto-institutions were the objects actively taking part in the process of developing new practices; these were labelled institutional implements.

The paper details a framework and conceptual model that takes into consideration various levels of the organizational nexus of changing practices for sustainable public management, ranging from macro (national) to micro (project level and individual level), and how these relate to each other. The conceptual model was

developed through a process in which the researchers sought to understand changing practices for SPFM theoretically and conceptually by identifying patterns, connections and underlying properties. The developed conceptual model helps to visualize the complex web of interaction that characterizes public organizations in general. It is shown that there are different enabling conditions for change in PFMOs that are located at different (and distinct) levels within the organizational nexus. It is theorized that, together, these enabling conditions create space for institutional work. For change to happen, different type of actors (humans and institutional implements) 'travel' within this space. Thus, the actions of the actors are viewed as intertwined, so instead of talking about specific barriers, the importance of knowledge about the processes within the organizational nexus of changing practices for sustainable public facilities management is emphasized.

Contributions: With an increased knowledge of the organizational nexus of changing practices for sustainable public facilities management change, including how national and local practices and directives are interacting and who is involved in this process, it is argued that practitioners can make better-informed decisions about sustainable measures focussing not only on hard issues but also on softer ones such as a knowledge of how, by whom, where and which practices are created, used, developed, and implemented.

The paper also adds to research on institutional work by highlighting the multitude of actors involved in the work, including both humans and objects as institutional works and institutional implements.

Relation to the other papers: The findings of Paper I were further developed and investigated in all other papers. Paper II develops and discusses the finding that shifting institutional logics might take place as a result of the change and that objects as 'institutional implements' play an active role in the change process studied, which is then further developed in Paper III and Paper V. In Paper IV, how PFMOs take on a new position in their institutional and organizational field is discussed.

5.2 Paper II: Navigating the logics of changing public facilities management **Purpose:** The paper uses a practice-oriented approach together with the theoretical construct of *institutional work* and *institutional logics* to describe how the complex institutional landscape faced by officials in PFMOs forces the individuals responsible for implementing and developing new practices in PFMOs to become so-called navigators. The aim is to explore how a multitude of demands and challenges faced by PFMOS, particularly in relation to a large building stock in need of attention, are acted upon and negotiated in practice. Specifically, the following

questions are asked: What are the institutional logics within the organizational context of PFMOs? How does an institutional worker navigate PFMOs in order to create change?

Research design: Data were collected through a case study of a public facilities management organization, PublicPrem, and include interviews, observations and readings of organizational documents. The first step in the data analysis sought to identify the most salient institutional logics that mediated practice in PublicPrem. Secondly, data analysis was aimed at exploring the perspective of one institutional worker as he strived to work his way through these multiple institutional logics to drive change in PublicPrem. This role is labelled 'navigator'.

Findings: In the paper, six intertwined logics that constitute PFM are identified: a short-term, project—practice perspective; 'patch and mend' logic; professional logic; strategic, long-term logic; financial logic; public administration logic; energy efficiency and sustainability logic.

How the navigator works through these while implementing new practices is shown. He uses two overall strategies, *zooming in* and *zooming out*, and two approaches for each strategy, keeping calm and carrying on and individuating (zooming in), followed by adapting to the various parts of the organization and its surroundings and emphasizing collective efforts (zooming out). These strategies and their associated approaches were further connected to the following types of institutional work:

- *Disrupt* Ignoring established practices and, thereby, being able to continue to create (and implement) new practices.
- *Create* Choosing which people to work with early in the project and, thereby, enabling new ways to collaborate across organizational borders.
- *Create* Making the aim of the project open for interpretation and, thereby, enabling a diffusion of practices by making it everyone's concern.
- *Maintain* By 'ignoring' or downplaying some aspects of the project that the navigator thought were not important for influential stakeholders, he could, instead, focus on what he deemed important for these stakeholders. In this case, it was to focus on financial means, which had been a strategy prior to this project.
- *Disrupt* Selecting and promoting practices other than those that were prevalent before, i.e. developing long-term instead of short-term practices.
- *Create* Presenting a project group that was working with developing the new strategy as a unified entity and, thereby, legitimizing new practices.

The findings show how the situated nature of institutional work in PFMOs is best described as a series of purposive yet ad hoc responses often geared to suit the immediate ends of the institutional worker rather than any normative bird's-eye view of institutional change or neatly ordered framework to rely on.

Contributions: With increased knowledge about the challenges for PFMO officials and how to navigate their organizational nexus, this enables a better understanding of their everyday work and the resources they need to conduct their work. A key theoretical and practical implication is that it is not the logics presence per se that determines the outcome of new practice implementation but rather how these logics are acted upon in practice.

Relation to the other papers: While this paper focussed foremost on a single individual with a social position that enabled him to pursue agency, Paper IV focussed on the institutional work conducted by both managers and non-managers. The findings in the paper set the scene for Paper IV.

5.3 Paper III: Materiality in action: The role of objects in change processes in public built environment organizations

Purpose: This paper is informed by *institutional work* and elaborates on the role of objects for institutional work in change processes in public built environment organizations. The aim is to advance the understanding of the role of objects in strategic change processes through which public built environment organizations develop practices to manage new demands that are raised.

Design: The paper builds on empirical studies in three Swedish public-built environment organizations. All three organizations were chosen based on the criteria that they were developing long-term and strategic ways of working in relation to management of the public building stock and confronted with new demands from politicians regarding, for example, ecological and financial sustainability. The data analysis was informed by the theoretical construct of institutional work with a focus on the entanglement between *materiality* and *human actions*, including the dimensions of *distributed agency*, *temporality* and *emotions*, together with the framework on *materiality*.

Findings: Four narratives were created illustrating the role of objects in change processes in public built environment organizations. The four objects were: temporary modular buildings (pavilions); an IT-based calculation model for

planning and forecasting (the simulation tool); an image of a surface on a graph (the blue ball); and an energy system (the district heating system).

The empirical examples show how objects were part of processes in which actors purposefully used objects to *attack* established institutions to pave the way for their actions. For example, by labelling an object as something to avoid, a shared interface towards external stakeholders to promote new management practices on a broader ground was created.

Through acts of *justification*, the objects also played an important role in institutional work to promote a preferred route forward. Here, objects with high explanatory power served as rhetorical instruments to translate abstract and complex realities to something more easily approached, such as the simulation tool and the blue ball.

In acts of *safeguarding* to maintain institutions, objects also played a role in actions of black-boxing messy information to make it unapproachable for outsiders. Here, a present object was part of maintaining practices by acts of safeguarding them.

Contribution: Increased knowledge of the nature of objects' participation in institutional work and a better understanding of how objects (can) influence human action and the messy realities of change processes helps actors involved in change processes in PFMOs to make better-informed decisions. With an increased understanding of how objects can take on different roles during a change process, this is argued to add to the knowledge about institutional work by showing the active role of objects in change processes. Through an intermediating role, objects have relational agency that unites actors and ascribes meaning and significance to proposed actions. Also highlighted is that objects cannot be seen as objective; rather, their subjective features can be interpreted and used differently between different actors. Therefore, depending on the actor, the same object could have a role in both disrupting old practices and creating new ones as well as agency to maintain current practices.

Relation to the other papers: Paper III develops the findings in Paper I regarding the role of institutional implements for change in PFMOs and PFM. In this paper, we see a multitude of roles for different objects and their engagement in different forms and types of institutional work. In Paper V, specifically, the maintenance of practices is highlighted as well as the function of objects to reduce anxiety and uncertainty in different ways.

5.4 Paper IV: Institutional work in public facilities management organizations: organizational repositioning during institutional change **Purpose:** To increase the understanding of the external and internal institutional work in complex public settings, this paper investigates *the experiences and practices of public employees during institutional change*.

Research design: Data was collected through shadowing in two PFMOs and through an interview study with 12 interviewees in eight PFMOs. The theoretical frame used for data analysis is based on previous research on institutional work during periods of institutional change. Institutional work is divided into two overarching categories: *external* and *internal* institutional work, followed by classification according to four different types of institutional work: *structural*, *operational*, *conceptual*, and *relational*.

Findings: In PFMOs, as an example of a type of public organizations, influenced by NPM, employees are experiencing institutional change. The findings show discrepancies between external and internal work in terms of relational, conceptual, structural, and operational endeavors. These discrepancies can be derived from different type of work categories, typically managers and those who are not managers. Ideas communicated outwards by managers were not always manifested inwards in the organization, for example, principles regarding building status.

The findings indicate that to realize new strategic PFM practices, more is required than PFMOs acting differently; user organizations and other external stakeholders also need to act differently. Externally, PFMO employees (both managers and non-managers) worked closely with user organizations, in meetings and discussions. However, findings show that this work, in relation to SPFM, was mostly conceptual, missing important elements of necessary relational work and lacking mutual understanding and trust-building around new ways of working.

PFMO managers worked actively to position PFMOs differently within their institutional field. This involved sending employees to other types of meetings than before, where employees interacted with representatives on organizational levels they did not have prior access to. By that, they challenged structural arrangements in the municipality. This type of work resembles but cannot fully be captured within legitimacy work, since it not only involves influencing, but also physically occupying space in ongoing collaborations with external stakeholders. Neither it can be fully captured in structural work and defined as work that establishes formalized

roles since roles were not only established but also placed into a different organizational place than before. It also cannot be captured as relational work since it involves more dimensions than relationship-building. It is labelled *positioning work*, and conveys a specific type of institutional work conducted in public organizations that are challenging both previous positions and organizational identity during institutional change. Managers engage in this by challenging prior arrangements in relation to who takes part and where. Employees, in turn, when occupying these new spaces and places, must adjust not only their behaviour but also their attitudes, including emotional expressions.

In terms of developing a new organizational identity, the findings again indicate a discrepancy between external and internal work. When managers addressed questions concerning roles and identities, they were referring to the PFMO at large, i.e. the collective organizational identity, whereas the non-managerial professionals addressed their individual experiences. This shows tensions in the work, where managers focus on collective identity-building, and non-managers struggle to realize those ideas in practice.

Contributions: The paper enhances the knowledge of every-day practices and work activities that are carried out in public organizations pursuing a new role in their institutional field, and how these relate to the experiences of public employees. The paper discusses and highlights a specific type of work that is not fully captured within the framework upon which the papers analysis is built: *Positioning work*. It also highlights the importance of identity work in public organizations in relation to structural, relational, operational, and conceptual work.

Relation to the other papers: Paper IV can be seen as a development of both paper I and paper II in that it further discusses the work conducted, during changes in PFMOs and PFM when introducing SPFM. In Paper I and II, focuses was foremost on one organization and/or one actor. In paper IV, both managers and other employees are in focus as well as their relationships.

5.5 Paper V: Exploring the connection between emotions, artifacts, and institutional work: The case of institutional change for public facilities management

Purpose: The aim is to increase the understanding of the connection between emotions, artifacts and humans. The paper examines how and why actors, from an emotional perspective, employ artifacts in their institutional work, and the unintended consequences of this usage, during institutional change.

Design: Data were collected through case studies in two PFMOs, twelve interviews in eight PFMOS and interviews with representatives from public housing companies (PHCs) and a workshop with representatives from the institutional field of PFM.

To theorize and analyze connection between emotions, artifacts, and humans during institutional change, concepts from practice-based literature were applied.

The paper builds on the main foundation that practices take place in an *equipped* context, that can carry affect and thereby produce emotional experiences. That is., the context is not only 'equipped' in the sense of functionality—allowing people to do the work at hand—but also equipped in the sense that it can carry affect and produce emotional experiences. When investigating changing practices and institutional work, this assumption implies a need to take into account the organizational context in which people operate, the affect this context carries and the emotional experiences this context produces. Furthermore, it places focus on what people are doing when they experience certain emotions.

Findings: The organizational setting for the public organizations studied is complex, uncertain and composed of three main organizational challenges which together make the context *carry affect* and *produce negative emotions*. These organizations were found to have:

- Problems with connecting the different parts of the organization creating silos
- Problems with collaborating with external stakeholders
- Trouble with delivering the right and/or relevant information within the organization especially in relation to new roles and functions

To manage the emotions produced by the organizational context, actors engage in different type of actions, where they employ artifacts as means to drive change. The actions observed were: developing concepts and sayings, creating new work roles and functions, creating processes (process-charts, guidelines and procedures) and investigations, and crafting and implementing new IT-systems and programs, which all aimed to create new practices and to change the institution of PFM. However, in this paper it is shown how instead, through the usage of artifacts, these actions have un-intended consequences in that they maintain or change very little of current practices.

The artefacts functioned in various ways to reduce negative feelings by inducing a sense of safety (as soft blankets), by enabling the avoidance of dealing with 'the

truth' (as shields) and by offering hope and, thereby, taking away negative feelings (as a vision of a perfect).

Current challenges for the PFMOs created a need for professionals to develop new practices and routines in several different areas in relation to new work roles. However, due to lack of time and resources it was hard to develop sufficient practices for all different areas needed. Instead, reports and investigations concerning a specific issue, suitable for one specific area, for example ventilation, were used in several different areas, making the investigations that were described in the reports function as 'soft blankets' that could uphold current ways of working, rather than creating new ones.

Contribution: With concepts borrowed from the emotional turn in practice-based studies it has been possible to further increase the understanding the institutional change for PFM. The research presented in this paper can help to discover and pay attention to the type of actions humans undertake when they employ different artifacts at times when the organizational context carries affect that produce negative emotions. These actions that can be interpreted by humans themselves (and others) as aimed at creating change, may instead maintain institutionalized practices, or at least not change them nearly as much as intended. It is further shown that humans can – not purposively – may engage in activities that maintain institutions when their psychological wellbeing is threatened. As such, the findings complement previous research that has shown how humans engage in *creating new* or *disrupting old institutions* if the current situational order threatens their psychological wellbeing.

Emphasizing the role of artifacts as presented in this paper, opens up for a focus on the organizational structure, rather than on, (or in addition to), individual measures when humans experience negative emotions.

Relation to the other papers: Paper V deepens the understanding of the role of objects, in change processes, previously discussed in Paper III and thereby increases the understanding of the institutional change in PFMOs and PFM.

6 Discussion

This chapter synthesizes the findings from the included papers and discusses them in relation to the thesis's overarching research questions. Previous research on PFM together with the theoretical framework, based on institutional logics and institutional work as well as sociomateriality, are applied in the discussion.

SPFM is not a set reform that is delivered from above. Rather, different directives from above, together with frustrations and ideas stemming from the bottom up and with directives regarding, for example, energy efficiency and sustainability, have combined to shape and continue to shape SPFM. Although politicians have urged an increased focus on facilities management that should be cost effective together with, for example, directives regarding energy efficiency, they have not decided how this should be done in practice or how PFMOs should be organized.

In this thesis, I have called the new type of PFM that is emerging SPFM. SPFM is an 'institution in the making'. It is in part a reality, a vision, a direction and a utopian ideal. At the beginning of my data collection, for example, when I was collecting data in PublicPrem and ideas associated with SPFM were presented there, some would claim that 'this is nothing new' or 'we have tried this before'. Others would describe it as completely different from how things had been done before. 'It' would then refer to a utopian future when everything would be different or, in contrast, to rather minor adjustments.

To achieve SPFM, it has previously been proposed that PFMOs need to be organized differently (Junghans, 2013; Olsson et al., 2015; Ramskov-Galamba & Nielsen, 2016; Jensen et al., 2018; Pardalis et al., 2019; Hopland and Kvamsdal, 2019). I will discuss SPFM in the making and the work conducted in practice and, thereby, argue the benefits of the practice-based institutionalism perspective to increase the understanding of the development and implementation of SPFM.

6.1 (RQ1) How can the organizational nexus of PFMOs be conceptualized and understood?

When analyzing how actors work with SPFM, it is important to understand the setting in which this work takes place (cf. Palm & Reindl, 2016, 2017; Campbell, 2017). In this chapter, the organizational nexus of changing practices for SPFM is detailed, focussing on the enabling conditions at different levels, how spaces and places are created and altered and on the different logics prevalent within the nexus and their implications for practice.

6.1.1 Enabling conditions on different levels

Paper I presents multiple enabling conditions on different levels of the organizational nexus of changing practices for SPFM regarding why the change work in PFMOs was begun. The explanations encompass all levels of the organizational nexus of changing practices for SPFM and show how operational as well as organizational and organizational-field levels are present during the work to change PFM into SPFM. The illustration of enabling conditions at varying levels of the organizational nexus of changing practices for SPFM (see Paper I) answers the call for research that takes a multi-level lens when investigating enabling conditions for agency (Lawrence et al., 2010; Smets et al., 2012).

Paper I portrays the development of SPFM within its context and shows how national and local sustainability and energy goals and directives played important roles to get the change work started in PublicPrem, as did a general discourse and discussion on the organizational field level regarding challenges related to the 1960– 1970-era buildings and their extensive renovation needs. However, the new ideas did not arise (only) because new logics and perspectives entered from 'above', as often suggested in previous studies on institutional change. Rather, frustration on the operational level and organizational conditions that enabled development work, together with new directives from government and local politicians, led to the change work (cf. Smets et al., 2012). Within the studied organization portrayed in Paper I (PublicPrem) and driven by previous relationships, organizational readiness and timing, as well as frustration regarding current strategic planning and renovation practices, triggered various purposive actions. By translating and modifying politicians' directives, together with ideas from the project level and from those working 'on the ground', the institutional work (Lawrence & Suddaby, 2006) of creating new practices to develop SPFM was conducted by several individuals at different organizational levels.

The developed conceptual model presented in Paper I helps to visualize the complex web of interaction and logics that characterize public organizations in general (Christensen et al., 2007; Hartmann et al. 2008; Christensen & Lægreid, 2011) and specifically PFM (Vermiglio, 2011; Galamba & Nielsen, 2016; Uotila, 2019). It is developed based on the descriptions of those who work at PublicPrem and is a compilation of the respondents' views of their changing reality. The swirls, in the conceptual model in paper I, symbolize what some of the actors *wish* their reality looked like in order for them to implement SPFM, i.e. they want to be able to move within the space created for institutional work, and the actual possibilities for some actors (such as the navigator).

As seen in Paper IV, while some individuals seem to be able to actively move between different organizational levels, others still describe the *need* to be able to move between different organizational levels to pursue SPFM.

6.1.2 New space and place in the organizational nexus

Papers I, II and IV discuss how space and place are created to give direction for and legitimize routes taken by the actors involved who were trying to introduce SPFM in PFMOs and in the institution of PFM and how new spaces and places were incorporated in PFMO officials' daily work. When developing and implementing SPFM, officials are situated at new and additional places compared to before. Several of the appended papers show how actors have created new 'spaces' for their actions such as different projects.

Theoretically, what could be seen in Paper I was that the actors developed so-called proto institutions (Zietsma & McKnight, 2009), i.e. smaller versions of institutions in the making, for example, through the pilot project in which the idea was to test a new way of working. The pilot project setup was such that the organizational nexus of changing practices to SPFM was present on a small scale. This project consisted of elements such as IT systems and meeting routines that were used to 'pave the way' and show early results. The ideas were that this project and the practices within it could be transferred to other areas; the facility managers' ways of working according to the new ideas within the pilot project were to be transferred later to the whole organization.

What could be seen in this proto-institution was that, for SPFM to be implemented in practice, there was a need for new types of collaboration between organizational units, new types of IT systems in place to support the inventorying of the public building stock, people with resources to be able to lead the change work and work across organizational levels and units, and permission from the politicians.

When SPFM is implemented, this will also require PFMO officials to conduct work within new spaces and at new places. For example, the facility manager's role is believed to change from working 'here and now' to planning for the future. To assess, plan and decide when a building must be renovated (or replaced), the practitioners involved must change from today's urgency-triggered ad hoc fixers to strategic thinkers with an ability to grasp long-term strategic plans (Goulden & Spence, 2015; Curtis et al., 2017). This requires access to other types of information than previously available and to collaboration with other types of work roles. These

roles are often located higher up in the organizational nexus. To be able to conduct the strategic work, PFMO officials need the ability to move within the space created for institutional work, as shown in Paper I, and to occupy new places (Paper IV). The facility managers will also have to compete for space and place with the newly installed strategist role (Papers IV and V). The strategists are, in many cases, new to their roles, with responsibilities to plan for future facilities, work strategically and have a mindset of focussing on the entirety. However, these responsibilities also belong to the facility managers, which creates grey areas where the responsibilities of the facility managers and the strategists overlap.

Notably, as shown in Paper IV (and II), there are tensions in practice, and not everyone within the organizational nexus of changing practices for SPFM agrees that PFMO officials should occupy the (new) places and spaces that PFMO officials are creating, such as participating in meetings with people who were previously higher up in the organization.

6.1.3 Different institutional logics within the organizational nexus managed in practice

As elaborated on in Paper I and further developed in Paper II, SPFM is constituted by several different perspectives that need to be negotiated in practice. In this thesis, these perspectives are theoretically conceptualized as different institutional logics that need to be managed in practice (Hemme et al., 2020; Lindberg et al., 2014). By exploring institutional work as it unfolds on the micro-levels (Smets et al., 2017) in PFMOs, rather than studying it from 'a far distance' (Zilber, 2013), it has been possible to increase the understanding of how the challenge for PFMOs is about how to manage different logics that need to co-exist in practice (Zilber, 2013; Lindberg; 2014; Venkataraman et al., 2016). These institutional logics are prevalent at different parts of the organizational nexus of changing practices for SPFM as illustrated in Paper I and need to be navigated when implementing practices associated with SPFM, as illustrated in paper II. Paper II shows how actors need to adjust their behaviours according to where they are, for example, how they need to downplay certain logics at times and enhance others at other times.

Revisiting Figure 1 and elaborating on how the different logics of SPFM are associated with the old versus the new practice of PFM, I next discuss what consequences this has for practice (see Figure 3 for details).



Figure 3. Practices and logics of SPFM

Following the notion that it is not the presence of logics per se that determines the outcome of a new practice implementation but rather how these logics are acted upon in practice (Hemme et al., 2020; Lindberg et al., 2014), it becomes possible to discuss how the old and new practices of PFM and their different associated logics coexist in PFMOs. My studies have shown how the old practice of PFM is strongly connected to the 'patch and mend' logic—one that is no longer wanted, especially by managers and those occupying places higher up in the organizational nexus of changing practices for SPFM. In Paper IV, how practices associated with a private logic were favoured and contrasted to the 'patch and mend' logic as well as public administration logic is shown, suggesting that the logics of SPFM are competing rather than facilitating each other (cf. Goodrick & Reay, 2011).

Previous research has also identified how the complexity stemming from multiple logics can be particularly challenging in sectors where individuals in professions informed by different institutional logics need to collaborate and coordinate (Jarzabkowski et al., 2009). In the case of PFMOs, not only did different officials have different backgrounds carrying different institutional logics; they were also relating to the new and old practices of PFM in different ways. The new practice of 'planning for the future' was especially emphasized by PFMO officials who were new to their positions and those who came from the private sector (Paper IV). For them, what is defined by others as SPFM was the only PFM of which they were

aware. Yet, at the same time, practices in relation to the old practice of PFM are of course present, and needed, within their organizations.

In Figures 1 and 3, the dashed line symbolizes the new practice. To be able to successfully implement or integrate this practice with the former, awareness of the previous practice is needed. Ad hoc measures regarding the buildings will likely be impossible to completely prevent. Thus, it remains important to remember the old practice in order to respond to buildings' needs even when the way that has been done is no longer desired. Planning for the future has been associated with a financial (private) logic that is favoured. However, this work still needs to be done within the public context, and the public administration logic cannot be forgotten or ignored. Hence, it is important to analytically separate the logics from the practices to better understand how they play out in practice (cf. Hemme et al., 2020; Lindberg, 2014).

6.2 (RQ 2) What work is conducted in PFMOs during the development and implementation of SPFM?

While the role of the facility manager has been noted as vital in previous research (Curtis et al., 2017), the research presented in this thesis has pointed to the number of people involved in institutional work towards a shift from PFM to SPFM. This includes not only facilities managers but also other categories such as politicians and managers. Here, the concept of distributed agency (Lawrence et al., 2011) has helped to shed light on the number and different types of actors involved in changing practices for SPFM.

6.2.1 Different types of institutional work

Within the PFMOs studied, different types and forms of work have been conducted in different directions. Similar to how Dahlman and Grosvold (2017) found that actors were conducting different forms of institutional work when implementing long-term practices in private organizations, PFMO officials have been shown in this thesis to create, maintain, and disrupt institutionalized practices in their endeavours to change PFM and PFMOs (Papers I–V).

The concept of distributed agency (Lawrence et al., 2011) together with the three forms of agency as presented by Battilana and D'Aunno (2010) has helped to increase the understanding of the contribution of different types of actors and actions in the analysis. Some actors, depending on their positions within their organizations, have engaged primarily in 'iterative' agency, i.e. small-scale decisions that can reinforce institutions or move them in a new direction, such as choosing one institutionalized practice over another. Examples include the facility managers and

pilot project members in Paper I who followed along with the project manager's ideas. The findings of this thesis indicate that this type of institutional work has usually been directed internally (Gawer & Phillips, 2013) towards the organization and conducted by officials who were not managers. This work can be said to be directed mainly towards changing PFMOs and not the institution of PFM.

Others, usually managers, have been able to engage in 'practical-evaluative' and 'projective' agency (Battilana & D'Aunno, 2010) to a larger extent, and on a deeper level, they have challenged the taken-for-granted institutional logics of the institution of PFM. Examples include 'the navigator' in Paper II and managers in Paper IV who actively strived to give PFMOs a new position within their municipalities and introduce new concepts, practices and ideas in the institutional field. These actions can be said to be directed at changing the institution of PFM, where changes with regard to single PFMOs represent one aspect of this change. Actions changing PFM have typically been directed externally (Gawer & Phillips, 2013), whereas other types have been directed internally and these types of work (internal and external) are important and need to be aligned to develop a new notion of what is regarded as PFM (Gond et al., 2017).

By applying the frameworks of Gawer and Phillips (2013) and Cloutier et al. (2016), it was possible to relate different forms of institutional work to external and internal dimensions. Also discovered was a need to add to the four types of institutional work presented by Cloutier et al. (2016) as present in public organizations during institutional change (Paper IV). Externally, it was found that managers in PFMOs spend a large amount of time establishing themselves and their employees in new places and spaces compared to before (i.e. work conducted to create a new organizational identity and a new position) (Paper I and Paper IV).

Thus, PFMO managers have been working to position PFMOs differently compared to before, and here they have, for example, sent their employees to other kinds of meetings than previously where employees are now expected to interact with representatives occupying organizational levels that they did not have prior access to. This cannot be fully captured within legitimacy work, as put forward by Gawer and Phillips (2013), since it involves not only influencing but also physically taking part in new spaces. Nor can it be captured in relational, operational, structural and/or conceptual work. These endeavours are called positioning work.

According to Gawer and Phillips (2013), for change to happen, the internal and external institutional work needs to be aligned and coordinated. However, there have

been tensions between the externally oriented and internally oriented work in the organizations studied in this thesis. In Paper IV, a discrepancy is shown between the external and internal work, where managers tend to focus on the external at the expense of reconnecting with their employees, especially in terms of allowing employees to adjust to new circumstances. For example, when managers have addressed questions concerning roles and identities, they have been referring to the PFMOs at large, i.e. the collective organizational identity, whereas the non-managerial officials have addressed their individual experiences (Paper IV). This indicates that there is a discrepancy between the external and internal work conducted in that managers are focussed on collective identity building, whereas non-managers struggle to realize those ideas, often without (sufficient) support.

Many of the officials in the PFMOs studied describe being in a state of limbo since their roles and responsibilities have not been defined. Paper V shows that actions taken to create practices are common; however, less focus is placed on disrupting previous practices, which is necessary for change to happen. For example, new work roles and responsibilities have been introduced, but organizational structures to enable work related to the roles is lacking. As shown in Papers IV and V, managers have found it difficult to realize that fully introducing SPFM requires fundamental, structural changes within PFMOs and also within the user organizations. Given that changing PFM to SPFM involves several substantial changes in the ways PFMOs are organized, this requires work that is directed at both operational practices and conceptual and structural practices (Valen & Olsson, 2012). Here, sufficient structural work has not been conducted (Cloutier et al., 2016), i.e. managerial efforts to establish formalized roles, rule systems, organizing principles and resource allocation models that support the new organizational principles (Cloutier et al., 2016).

The managers and, subsequently, the other PFMO officials studied have, to a large extent, been involved instead in conceptual work. In terms of conceptual work, what can be seen from my research is that, for example, in PublicPrem, a great deal of time was spent on this type of work, which led to new concepts, words and phrases that emerged from the idea of SPFM and became adopted within the organizational nexus among managers and politicians and at the operational level. What can be seen is that these concepts were locally anchored and constantly repeated and led to several changes at the operational level. For example, using existing buildings for relocating students during renovations became apparent in the minds of the facility managers, making them consider this an option that had not previously been used (see Paper II for more details). However, much of the conceptual work conducted

in PFMOs has been detached from the daily operations, as is common for this type of work (Cloutier et al., 2016), and not linked to structural work.

Previous research has shown that if the institutional environment is highly institutionalized with strong, binding institutional logics making path dependency strong, proto-institutions may have less of a chance of becoming fully established institutions in their own right (Modell et al., 2007; Gómez & Atun, 2013). In the case of PublicPrem, it could be reasonable to believe that prior logics and practices prevented the proto-institutions from becoming fully accepted. It could also be that the work conducted in the pilot project group was, to a large extent, conceptual rather than structural. Structural work, being a disruptive form of institutional work, was executed only within the pilot project group but fell through when new practices should have been transferred to the larger organization. Adding to this, those who were selected for inclusion in the pilot project group were considered a little better than the rest. This resulted in the group being detached from the daily operations of the other officials since their expertise differed from that of the operational employees. This dynamic is common in conceptual work where those engaged in such work are typically experts (Cloutier et al., 2016).

Conceptual work needs to involve individuals and groups at all levels of the organization to propagate a shared vision and to engage officials and external partners in its appropriation (Cloutier et al., 2016). What can be seen in PublicPrem with the pilot project as a proto-institution was that, at least in the beginning, the conceptual work involved individuals and groups from different levels of the organization as well as external partners. However, once the pilot project group was dissolved, this engagement with different stakeholders diminished; this was also seen in the other PFMOs studied.

A finding from my research is that, given the difficulty of capturing SPFM (in the making), whether it is a vision or has already been implemented, it became difficult to relate the concept to something concrete since SPFM is such a vague concept that should capture everything at once, as shown in Paper II. SPFM is associated with ambitious and creative visions, but it is difficult to connect to day-to-day practice(s). Ambiguity and vagueness in the SPFM concept enabled its implementation to some extent (Paper II); however, when contradictions embedded within vague concepts eventually become manifest, this triggered a need for further clarification of meanings (Cloutier et al., 2016) that, in turn, could lead to additional conceptual work in repetitive cycles rather than focussing on the other types of work needed. New phrases and concepts such as SPFM and the phrase 'we are solving the puzzle'

have been introduced to legitimize PFMOs in their endeavours. However, for operational-level actors, it has not always been easy to understand what this puzzle is and how it should be solved.

Moreover, what can be seen in the three case study organizations I closely followed (PublicPrem, FacilityUnit and FacilityDep) was that a way to 'use' a new logic to one's advantage (Venkataraman et al., 2016) could be to contrast the new way of working with how it was before and, with that, 'make' the past worse than it was. Many times, SPFM has been contrasted with how things were 'before,' and this 'before' has been painted in very dark colours. Then, there was 'no planning at all'. This could be a way to work conceptually (Cloutier et al., 2016) and to gain the approval of the management and politicians. However, the operational staff did not share the managers' descriptions; they thought that things had not been as bad as portrayed. The risk of portraying them as entirely negative before can make the conceptual work feel detached and disconnected to the officials conducting work on the operational level (Cloutier et al., 2016).

Throughout my studies, it has become evident that for SPFM to be realized requires not only PFMOs to act differently but also for their user organizations as well as politicians to act differently. According to Cloutier et al. (2016), relational work facilitates all other types of work and is crucial when implementing new ways of working and organizing. Whereas Cloutier et al. (2016) focussed on relational work inside the organization that implements a new reform, I would like to highlight the relational work needed both inside and outside PFMOs. Although new structures, concepts and operational projects could be developed on paper, defined in offices and presented in PowerPoint presentations, without relational work, they were unlikely to penetrate very far. Implementing a new structure in PFMOs requires individuals occupying new roles to interpret them, grow into them, establish mutually satisfactory boundaries and build trust—a collective relational task. The lack of relational work between a PFMO and its user organizations could be explained by the public aspects of PFM, for example, a tendency to rely on the NPM view and, thereby, focus on intra-rather than inter organization (Radnor et al., 2014). Working in 'silos' has become institutionalized and, for example, a lack of proper IT solutions to share information between administrative silos that was deemed necessary to work strategically was missing. With regard to relational work, the findings from Paper IV concerning external and internal institutional work become especially interesting since relational work needs to be performed both outside in and inside out for SPFM to be realized. Indeed, managers from PFMOs have been working with their user organizations and have had numerous

interactions, meetings and discussions. However, this work has been mostly conceptual rather than relational in the sense that mutual understanding and trust-building have been lacking.

6.2.2 *Pre-reflexive agency*

Similar to Hemme et al.'s (2020) results, only the more reflective PFMO officials' behaviours led to the actual instantiation of shifts in logics and practices, as with the project manager/navigator in Paper II. However, even though the navigator was knowledgeable about the field and his own organization, he did not manage to change as much as he wanted to. Thus, it does not seem to be enough for actors to be aware of their institutional surroundings and reflect on their institutional embeddedness (Battilana 2006; Hemme et al., 2020; Ludvig et al., 2013); Dalman & Grosvold 2016) to implement new ways of working. It is not only an actor's reflexivity that constrains or enables his or her actions (Cardinale, 2018); it is also important to take the contextual orientation into consideration, i.e. how structure makes a given actor more likely to settle on some possibilities out of those it enables.

Cardinale (2018) distinguished between reflective and pre-reflective agency. In most institutional research, the reflective agency has been theorized. This type of agency is defined as the possibility to actively engage with and be aware of the context, structure and institutional surroundings and evaluate different possibilities in much the same way as agency was theorized in Paper II (and Paper I). However, in many situations, actors neither consciously choose a course of action among alternatives nor are they drawn towards some course of action. This, according to Cardinale (2018), is because some courses of action appear self-evident due to an actor's pre-reflexivity, which in turn is based on her or his prior experiences and positions. Actors have a way of being and acting that is relatively enduring, imprinted in the cognitive and bodily setup. Therefore, when actors are placed in new situations, they have a propensity to transpose their previous schemes and ways to these new situations. As such, managers from the private sector will see things in a certain way (see examples in Paper IV) and act accordingly, and the same goes for other professionals trained in other disciplines and practices, and within other organizational and institutional settings. The process of becoming familiar with the environment is gradual, and it is not possible, according to Cardinale (2018), to choose a different approach. Nor does a new position induce an immediate response; rather, it triggers a gradual process of new socialization. Thus, to bring about change, it is not enough to be knowledgeable of the context and the logics available (as argued in Paper II); being aware of the pre-reflective aspects of one's agency is also important as well as an awareness that certain actors look for problems and solutions

(and other-than-humans) depending on their backgrounds. What I emphasize here is that the context is not orienting all actors in the same way (Hemme, et al., 2020; Cardinale, 2018). Using managers in PFMOs as an example, it becomes important to understand the socialization process needed if they want previous operative personnel to 'become' strategic (Paper IV) and allow them to engage in figuring out their new work roles. Nevertheless, while previous research has highlighted that the built environment needs 'hybrid' individuals (Löwstedt, 2015), it is also important to highlight that not everyone can become the type of hybrid that PFMOs seem to wish for, given their professional background and the fact that no one can know everything (Paper IV). Rather than merging the practices, the aim is to enable their co-existence and perhaps guide people toward different ways of doing things.

6.3 (RQ 3): How do human actors and objects within the organizational nexus of changing practices for SPFM pursue agency to change PFM? While the concept of distributed agency (Lawrence et al., 2011) has helped to shed light on the number of actors that have to be involved for SPFM to be realized, it has also helped to place a focus on the objects. In this chapter, objects' roles for the change process towards SPFM are discussed. In the same vein as Leonardi (2013), Monteiro and Nicolini (2015), and Raviola and Norbäck (2013), I argue that institutional work is shared between human and material entities and that objects can be seen as complex assemblages of humans and material elements that perform institutional work when certain alignments are in place.

6.3.1 Objects and institutional work in PFMOs

Objects in this thesis were found to attack, justify and safeguard intuitions and institutional practices and, by doing so, disrupt, maintain and create practices. Objects were also associated with different emotions and temporal positions. They were found to take on multiple roles and be involved in different actions that vary over time. Different characteristics make them suitable for different purposes, such as taking control of complex issues; objects both united and divided human actors as well as evoking emotions that guided actions. Most objects portrayed in detail in this thesis have been involved in actions aimed at changing PFM to SPFM, for example, the pavilions and the blue ball.

When researching the built environment, it is almost impossible to avoid relating to physical objects. As in the case of current challenges for PFMOs, the buildings in need of measures are the core element that the organizations must relate to, and the logics and practices surrounding these buildings are also changing. However, it is not just the buildings that influence PFM, and 'the material' is not to be understood

as just tangible things (Cooren, 2020). Just as places' material as well as non-material features have been shown to influence institutional work previously (Lawrence & Dover, 2015), material and non-material features of, for example, conferences, pavilions, a district heating system, a simulation tool, and a graph on a PowerPoint slide can be seen to influence Institutional work in this thesis. In line with Cooren (2020) and in advancing the discussion on objects' roles for change processes research, I propose that future studies use the term 'other-than-humans' as the collective term for objects that are not human to signal their diverseness. Using the concept other-than-humans opens the possibilities to include a broader range of entities that take part in change processes. I think this is especially important for research pertaining to the built environment that has previously had a main focus on tangible objects and, for example, the role of building materials for change processes and the role of the building it self (together with IT devices) (Buser & Carlsson, 2017; Hadry & Thomas, 2015).

6.3.2 Institutional and emotional implements

Summarizing the findings from Paperd I, III and V, two main types of objects have been prevalent in my research and influenced change processes. To highlight their participation in the implementation process of new practices for SPFM, they are referred to as institutional as well as emotional implements.

Similar to Raviola and Norbäck's (2013) study where an old object (newspaper) was functioning as a blueprint that guided future practices into different directions, the objects presented in this study were part of processes in which humans purposefully tried to steer strategic change processes into a preferred direction. In this thesis, how objects function as helping to implement preferable practices by attacking, justifying and/or safeguarding institutions (Paper II) has been demonstrated. These actions were shown to be affected by the temporal positioning of the objects and the emotions associated with them. Also shown was how the objects took on different roles within these processes, for example, as something to gather around and share a common idea that these objects were to be avoided (pavilions) for a desired route to be taken. Other examples are PowerPoint slides that induced a sense of factualness, participation in a national conference that legitimized new practice implementation (Paper I), a heating system regarded as a safe choice (Paper III) and a graph on a PowerPoint slide that simplified a messy reality (the blue ball, Paper III).

According to de Vaujany et al. (2019), recent research on institutional work suggests that, with the integration of the material dimension, social reality is revealed as far

less compliant than previously assumed. As seen in Paper V, objects can also prevent preferable routes and ideas from becoming reality and cannot always be controlled. Findings in this thesis have shown how the will to change PFMOs and introduce new organizational practices (creating institutions) that will solve (organizational) problems in relation to the problems of deteriorating building stock can lead to the opposite, i.e. maintaining or making very few changes to existing practices, due to the function of certain objects. Using the theoretical framework for data analysis proposed in Paper V enabled an increased understanding of the role of the context and the objects for institutional work in PFMOs. In the paper, how the context itself with its many perspectives (and the change that is ongoing) induces feelings of stress and anxiety is discussed. As a counter-action to this, the main function of objects becomes to reduce these negative feelings and induce a sense of safety (functioning as soft blankets), a reduction of negative feelings by avoiding dealing with 'the truth' (shields) and offering hope in place of negative feelings (vision of perfect future).

In Paper IV, the idea that not all actors are able to pursue agency in the same way as the navigator in Paper II is detailed. Moreover, in Paper V, how this complex context can carry affect and produce emotions and what those emotions, in turn, can lead to is detailed. This relates to the discussion on purposive actions. Institutional work involves the 'purposive actions' to create, maintain and disrupt institutions (Lawrence & Suddaby, 2006). However, despite good intentions, attempts to change institutional practices do not always produce the intended results. This could be because the institutions orient actors in a certain way (Cardinale, 2018) or because other actors are involved, such as other-than-humans or a combination of both where the structure orients humans to use objects in ways that lead to unintended consequences. In Paper V, how human actors tried to implement new practices (creating institutions) but were falling short was shown. The objects that were used with the purpose of creating change actually prevented it. Here, the purposive actions to create change ended up maintaining or changing very little about the current institutions. However, it is still interesting to study these actions as purposive actions, given that, from the outset, they were driven by a desire to change practices. This expands the view on institutional maintenance work.

The greatest difference between the two types of objects (institutional and emotional implements) is that the institutional implements are associated with purposive actions, i.e. how institutional work is defined (Lawrence & Suddaby, 2006). The emotional implements are associated with unintended consequences of the institutional work. Their main function in practice is as implements for emotional regulation; this relates also to the discussion on institutional work that led to the

maintaining of institutions. The focus for institutional work has been primarily on actions to create and disrupt institutions. However, there is an increasing need to learn more about maintaining institutions (Lawrence, Suddaby, & Leca, 2009). Even though emotions have been shown to be a powerful device for and in institutional processes and for affecting human actions and interactions with artefacts (Friedland, 2018), research directed toward the work of maintaining institutions has had a 'rational' focus (Townley, 2002). It has emphasized the cognitive features of this phenomenon rather than the emotional; institutional maintenance has been studied as routine work leading to the reproduction of a world view (Zilber, 2002, 2009). A finer-grained picture would be gained through the exploration of failed or unintended consequences (Lawrence, Suddaby, & Leca, 2009; Lawrence et al., 2013), as revealed in this thesis.

7 Conclusions

This chapter provides a summary of the main findings and points for discussion. This is followed by an outline of the contributions. The chapter ends with suggestions for future research.

7.1 Answering the research questions

This thesis has highlighted the work that has been conducted in relation to SPFM and has focused on *SPFM in the making*. An increased focus from politicians on facilities, possibly as a result of the institutional work conducted by several actors in PFMOs, has led to an increased awareness of the importance of a proper management of the public building stock in Sweden. In 2020, at the national conference, the task at hand did not seem as impossible as back in 2016. However, the conference attendees themselves did not seem to understand what they had done to accomplish this; the reasons for the outcome were usually not considered as being related to their own accomplishments. A circumstance often referred to was that of politicians having mysteriously 'woken up'. Another example is that officials who have moved from one organization to another perceive the new organization as better prepared to take on the strategic work. While this can, of course, be true, the findings in this thesis also point to institutional work in different PFMOs having enabled the beginning of a change of the institution of PFM, i.e. not just single organizations.

The research presented in this thesis has sought to increase the understanding of how the work with SPFM emerges, the context within which it takes place and the type of agency present, as well as acknowledging both the material and human dimensions of this work.

The work to transform PFM to meet current challenges involves several human actors who perform different types of institutional work that need to be aligned. (All) these humans are not perhaps 'obvious' change agents; rather, they occupy and move between different organizational levels. The first research question asked: How can the organizational nexus of changing practices for strategic public facilities management be described and conceptualized? Conceptualizing the organizational nexus of changing practice for SPFM shows how the work with SPFM is conducted at several levels, from national to municipal, organizational, project and finally operational and individual levels, and these levels are constantly connected and need to be sufficiently navigated for change to happen. It is also possible to increase understanding of how new space and place for SPFM is created for change to happen. The model developed and presented in Paper 1 enables an

understanding and visualization of how there need to be enabling conditions in place at different organizational and institutional levels for change work to be possible.

In addition, within the organizational nexus of changing practices for SPFM, there are multiple logics prevalent. By exploring institutional work as it unfolds on the micro-levels in PFMOs, it has been possible to increase the understanding of how the actual challenge for PFMOs is less about weighing and managing various dichotomies (such as long versus short term) and more about how to navigate a multitude of different logics in practice. Significantly, some of these are associated with the 'old' practice of PFM and others with the 'new' practice of PFM, in addition to being prevalent at different organizational and institutional levels.

The findings show that, in the eyes of PFMO officials, the organizational nexus of changing practices for SPFM is different from that of how PFM in many cases is organized in practice. Conceptualizing the organizational nexus from PFMO officials' descriptions, we see a need for officials to be able to seamlessly move between different organizational levels and units. To do so, actors need to conduct different types of work and be aware of the context but must also be aware of one's background (pre-reflexive agency) and to importance of identifying the different types of institutional work conducted and how they can be aligned.

The thesis also highlights the institutional logics in relation to the old practice of PFM with the new practice of SPFM and the importance of analytically separating logics from practices. The old practice is associated with negative connotations such as 'lack of planning' that makes it unwanted. However, for SPFM to be realized, these two practices need to be able to co-exist in practice, not competing but facilitating each other.

The second research question involved the *work conducted in relation to SPFM*. The concept of *distributed agency* has helped to shed light on the number of actors that had to be involved for change to take place in PFMOs and, in the future, to change PFM. These actors were located at different organizational levels and pursued different types of agency. Their actions varied from small-scale adjustments of institutionalized practices aimed at affecting the immediate surroundings, i.e. one's own organization, to being part of changing PFMOs, and some were more directly involved in part of changing the 'taken-for-granted' notion of what PFM is. The actions also varied in terms of being directed externally or internally. The work is discussed as relational, disruptive, conceptual, operational and positioning work.

In addition, how structural, conceptual, operational and relational work interact in the case of SPFM is discussed. This theoretical perspective helps to summarize the work presented in the different papers. What can be seen is that there is a tendency to get stuck in the conceptual work. SPFM is a vague concept that can cover a very large number of ideas, actions, concepts and objects; this can be a good aspect if one wants to get many actors on board. However, the vagueness of the concept can lead to a loop of continuous conceptual work that does not link to the operational work. Moreover, findings show how the structural work is superficial, with limited amount organizational support, for example, to enable those in new work roles to pursue their responsibilities. In addition, there seems to be a lack of relational work that concerns the user organizations. Findings also add to previous research by introducing another type of institutional work, positioning work.

The notion of *pre-reflexive agency* was discussed. In most institutional research, the reflective agency has been theorized. This type of agency is defined as the possibility to actively engage with and be aware of the context and institutional surrounding and evaluate different possibilities. However, in many situations, actors neither consciously choose a course of action among alternatives nor are they drawn toward some course of action. This is because some courses of action appear self-evident due to the actor's pre-reflexivity, which in turn is based on her or his prior experiences and positions. Thus, to make change happen, it is not enough to be knowledgeable of the context and the logics available (as argued in Paper II); it is also important to be aware of the pre-reflective aspects of one's agency. In a context such as PFMOs where different professionals reside and enter with varying backgrounds, it becomes especially important to know not only the new surroundings but also one's past. When new work roles are developed, it also becomes important to let PFMO officials take their time and help them figure out their new roles and identities in relation to past, present, and future endeavours.

Summarizing the work conducted with changing PFM into SPFM, it can be said that this work is about changing the boundaries for PFM, turning to a new notion that is not regarded previously as PFM into PFM. Work is performed to create, maintain and disrupt institutionalized practices while moving forward with change.

The third research question revolved around *human and non-human agency*. In addition to human actors, several objects (such as computer systems, PowerPoint presentations and certain types of buildings) are part of the organizational nexus as well as being institutional implements and emotional implements and, as such, actively involved in the change process and in institutional work. Practical

implications of this notion include the awareness of how humans and objects interact, and that objects are not just passive things; rather, they take active roles and shape organizational processes. These objects were tangible (such as pavilions), non-tangible (such as an IT system and/), and a mixture of the two such as a graph on a PowerPoint slide, a conference, and phrases such as 'we are working with this issue'. With help from Cooren's (2020) theorizing, it became possible to view these 'things' as objects.

7.2 Contributions

The focus of this thesis has been to conceptualize current challenges for public facilities management as a multi-logic challenge, that is, the challenge to integrate different perspectives in practice. Moreover, taking a practice perspective, the research has focussed on how SPFM unfolds and develops in practice and not on a desired end but rather on how actors work with SPFM in practice. SPFM has been defined with the help of the people working with the concept, i.e. there has been no predefined meaning of the concept; instead, what SPFM means varies among different actors, although it has several characteristic features including a focus on strategic measures and long-term planning.

The research in this thesis add to previous studies that have emphasized the usefulness of understanding organizational practices as greatly influenced by the institutional logics available and accessible for actors to elaborate (cf. Friedland & Alford, 1991) and perform into being (cf. Lindberg, 2014) as well as the usefulness of understanding of how multiple logics are acted upon in practice (Lindberg et al., 2014: Hemme et al; 2020; Zilber, 2013). The findings show how it is not the logics presence per se that is of importance for practice and actors, but how these logics are understood and acted upon.

According to Smets et al. (2012), institutional change can, and does, emerge from everyday practices. In their seminal study, the actors did not intend to change the institution; rather, it was shown how mundane day-to-day practices in real-world situations contributed to shifts in logics on the field level. In this thesis, the analysis of the empirical material has provided insights into how a combination of actions aimed at changing the field and changing day-to-day practices plays out in PFM practice. Here, managers do engage in both internal and external work but sometimes end up in a 'Catch-22' as they are establishing their new roles and positions at the same time they are modifying practices internally. Sometimes, they do this based on fantasies about how things were before and develop a narrative of a very bad past. This highlights the necessity of acknowledging the past and basing

future practices on the actual past, not on fantasies or generalizations about it; this links back to the discussion on superficial structural work and the tendency to paint the past in darker colours. Interestingly, the managers, who were the most engaged in institutional work aimed at creating and disrupting institutional practices, were those who seemed less aware and attentive to their institutional context (Paper IV). They were engaged in conceptual work to 'pull to the new' (Cloutier et al., 2016); however, they did not seem to be fully aware that the operational work carried out in practice by non-managers was a simultaneous 'pull to the old'.

The thesis has acknowledged the importance of recognizing the aspects of prereflexive agency for successful change work in an institutional setting constituted by several different logics and PFMOs-officials. It has also shown how actors' level of agency is not constant, but dependent on their social position, their pre-reflexive agency and their ability to identify and combine different forms of institutional work.

The thesis has also raised the importance of focussing on the organizational nexus of changing practices for SPFM, i.e. focussing not only on PFMOs but also on their organizational and institutional contexts. The thesis offers insights into how the institutional environment of PFMOs condition how the work with SPFM unfolds in practice. Focussing on the work conducted, it shows how relational work is lacking, and that SPFM is dependent on how PFMOs interact with their user organizations and with politicians. Previous research on PFMOs has underscored the specific communication and organizational skills needed for PFMO-officials in relation to the user organizations, where focus needs to be on inter- rather than intraorganizational issues to a limited extent (one exception is Ludvig et al., 2013).

While the conceptual model in paper I presents multiple enabling conditions for institutional work to start working with implementing practices associated with SPFM, it is also important to point out that there needs to continuously be enabling conditions to implement practices supporting SPFM. SPFM requires fundamental organizational changes within the organizational nexus of PFM. The implementation and development of SPFM is presented as a process of continuously and recursively conducting structural, operational, conceptual, relational work and positioning work.

A specific type of institutional work prevalent in PFMOs has been highlighted: positioning work. This is work that is aimed at providing public organizations with a new position within their institutional field. The work includes to take on new

space and place and by that influence stakeholders outside of the own organization. It is work that is challenging both previous positions and organizational identity during institutional change. By that, previous structural arrangements in the municipalities are challenged. This type of work resembles but cannot fully be captured within legitimacy work, as suggested by Gawer and Phillips (2013), since it not only involves influencing, but also physically occupying space in ongoing collaborations with external stakeholders. Neither can it be fully captured in structural work, as put forward by Cloutier et al. (2016), since roles are not only established but also placed into a different organizational place than before, both inside and outside the own organizations. Managers engage in positioning work by challenging prior arrangements in relation to who takes part and where things happen. Employees, in turn, engage by when occupying these new spaces and places.

The research presented in this thesis extends the view on institutional work by highlighting the role of objects. Theoretically and conceptually, the thesis introduces two types: institutional and emotional implements. To be aware of the difference between institutional implements and emotional implements are important as the latter has been shown to take part in institutional work that can lead to un-intended consequences whereas the former contribute to the implementation of new practices.

More, whereas previous research on PFM has lifted the role of the facility manager as important for realizing sustainable and long-term focused PFM, the findings in this thesis has shown how new roles are developed, such as the strategists, and how these roles relate to the facility managers in practice. For example, issues of power and status became evident as PFMO-officials were challenging previous arrangements that were taken for granted (Paper IV) (cf. Hughes & Hughes, 2013). Thus, the findings in this thesis complement previous research that has stated that the facility managers need to be included in strategic decision-making (Curtis et al., 2017; Elmualim, 2010) regarding facilities to a larger extent than before. By showing *how* previous practices and arrangements together with issues of power and status pose tensions in practice, the research presented herein shows *why* including the facility manager in different decision-making processes is difficult and challenging in practice. It is further concluded that collaboration between different work roles and functions is key to achieve SPFM, and that time is needed to figure out new responsibilities and boundaries.

7.3 Suggestions for future research

For future research it would be interesting to further study positioning work, how it unfolds in different types of organizations and the relation between this type of institutional work and other types of institutional work. For example, in an institutional setting where some actors and organizations are engaged in positioning work, what type of work is conducted as a response to this work?

In addition, to what has been presented in this thesis, and in relation to the questions posted above, future research could be based in the change that PFMOs and PFM are going through and also include PFMOs collaborators. Gaining a deeper understanding of PFMOs, I have seen how these organizations are changing the way they interact with their user organizations, such as representatives from schools and nursing homes. However, I have not specifically studied the other organizations and stakeholders within the organizational nexus of changing practices for SPFM. Although members of other organizations have been present during meetings and for example within the pilot-project group I have not specifically reached out to them in other cases than in PublicPrem. I have neither interviewed politicians. This could be a subject for future studies.

Regarding PFMOs, the tensions between being strategic and operative (as explained in the PFMOs officials own words) would be interesting to dig deeper into. The will to become strategic seems in practice to be equal to first coding every single detail of the public building stock during the inventorying process. Thereafter, the strategic work can begin. It would be interesting to explore this assumption and its underlying tensions, and the practices (and logics) associated with it when studying strategy implementation and work. One suggestion is to use the strategy-as-practice perspective Jarzabkowski (2004) and conceptualizing the work conducted as strategy work. In line with this, exploring the tensions between the role of the facilities manager and the strategist, as representants for the two diverse yet aligned practices of PFM, needs further attention. How does this type of work relate to positioning work?

In this thesis, two types of objects have been highlighted: emotional and institutional implements. The relationship between these needs further attention. In addition, as portrayed in my thesis based on the studies in PFMOs, the emotional implements are, foremost, associated with negative emotions. For future research, it is important to investigate emotional implements and other types of emotions than negative ones. Research on the material dimensions of institutional work is only in the beginning. In addition, materiality studies have usually adopted a weak perspective, meaning

that humans and objects have been seen as distinct yet affecting each other. A possible route forward based on my studies is to dig deeper into the issue of agency and to adopt a strong materiality ontology. As facilities management is increasingly about conducting calculations and estimations at a desk by computer, what happens with human agency? Findings indicate that facility managers are members of a profession that wants to feel autonomous, and they want to make their own decisions instead of being guided by a computer. I believe PFM is a suitable context for studying tensions between human and material agency together with issues of digitization.

8 A final reflection: Connecting back to where we started This thesis started with the following quote:

Working with strategic public facilities management is considered the most important change for our organization. Everyone, from top to bottom agrees on this and likes the idea. Yet, to be able to implement new work practices has been really hard. Not much is happening in practice...

- Project manager in a public facilities management organization (2016)

Several respondents articulated that the context for PFM is complicated and inert. It was labelled the 'Titanic' and the 'amoeba' and conceptualized as 'very difficult to change'. However, with lots of enthusiasm they still tried! In writing these final words of the thesis and concluding my work, I think it is fair to say that things are happening in practice in Swedish PFMOs.

I asked the project manager again in 2021 about his perception of SPFM and its implementation. His answer witnesses the complexity inherent in implementing SPFM and the interplay between the context, the politics and the practice:

As of now I work in a smaller municipality, where it has been easier to implement practices connected to SPFM, since internally we own the issue by ourselves. However, externally there are still obstacles when we are to collaborate outside of our own department. Then, our goals can collide with other political goals and prioritizations. Nevertheless, I am proud to say that practices connected to SPFM are implemented and work in practice at my current PFMO.

This thesis has provided a deeper understanding of why the perception among practitioners may be that not much is happening despite their efforts. It has highlighted the messy day-to-day practices and experiences of change in a complex context. The findings presented point to the large amount of work conducted and the difficulties for PFMO officials in navigating the complex context in which PFMOs are situated. It highlights the challenges and struggles facing PFMO officials. This helps to explain why, despite 'everyone liking the idea of SPFM' it may seem that '... not much is happening in practice....'

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