Temporal Institutional Work as Temporal Conditioning: Exploring Inter-Institutional Temporary Organizations

ABSTRACT

Collaboration for innovation and change across institutional domains is increasingly facilitated by inter-institutional temporary organizations. This paper presents an in-depth and processual case study of an innovation and change project involving diverse private and public-sector organizations. The case study shows how organizing developed recursively in response to diverging of timing, pacing, ordering, frequency and duration. With respect of time and timing we introduce the idea of *temporal conditioning* as a way of understanding how organizations cope with conflicting institutional requirements by making use of three primary strategies to shape and reshape the timing, pacing, ordering, frequency and duration. The paper adds to our understanding of temporality and the dynamics of organizing in temporary and institutionally pluralistic settings – settings that put greater pressures on our ability to deal with conflicting conceptions around time and timing.

Keywords: institutions, management, project, temporal conditioning, time and time reckoning.

INTRODUCTION

Large-scale temporary organizations that are time-limited and project-focused mélanges of actors and organizations are increasingly used for developing infrastructure, achieving economic growth, targeting welfare and managing health and safety concerns (Altshuler and Luberoff, 2003; Lundin et al., 2015; Burke and Morley, 2016). For such *inter-institutional temporary organizations,* operating under conditions of institutional complexity and pluralism is a normal condition and an essential *raison d'être*. These organizations are characterized by designed temporal limitations and explicitly formulated deadlines (Lindkvist et al., 1998) that require actors to align with an overall sequence of nested and interdependent activities (Thompson, 1967). Intense collective agency is essential for realizing evermore challenging system-wide goals with regards to limited budgets, time pressure, and stakeholder benefits (Merrow, 2011).

While all projects are alike in their temporary duration each project-focused organization is unique in its tightly integrated orientation and demands for intense collaboration and synchronization among the actors involved. For successful projects spanning multiple sectors, legitimacy transcending individual member organizations needs to be constructed if specific sectoral sub-optimal goal prioritization is to be avoided (Human and Provan, 2000). The grounds for any such legitimacy will likely be embedded in different sectors and institutional fields; hence, legitimacy has to be secured without obliterating sector-specific institutional advantages and idiosyncrasies (Furnari, 2016). Given the uniqueness of their task (Scranton, 2014; Whitley, 2006), project-focused organizations have no prescribed routines to rely on but are characterized by emergent forms of organizing and governance (Beck and Plowman, 2014).

Informed by literature on temporal institutional work, we develop an analysis that portrays these project-focused organizations as "temporal zones" designed to facilitate collective action among sovereign actors and organizations (Granqvist and Gustafsson, 2016; Tukiainen and Granqvist, 2016). Because different rituals and norms shape organizational practices and structures (Jarzabkowski et al., 2009; Lindgren et al., 2014; Scott, 1994) such organizations are institutionally pluralistic (Friedland and Alford, 1991; Kraatz and Block, 2008; Lounsbury, 2007; Meyer and Rowan, 1977; Whittington, 1992). Differences can range across professional codes (Anderson-Gough, 2001), time horizons (Judge and Spitzfaden, 1995) and time orientations (Lawrence and Lorsch, 1967; Mosakowski and Earley, 2000).

In this contribution we develop a processual analysis addressing the nature and dynamics of inter-institutional temporary organizations with the aim of enhancing institutional theory, through emphasis on temporality in collaborations across institutional fields. Recently, a rebalancing of institutional theory to grasp processes occurring at the organizational level has been advocated (Greenwood et al., 2014: 1210). Scholars point out the importance of exploring how organizations respond to conflicting institutional requirements and continuously evolve in response to and as responses to institutionally conflicting requirements (Bechky, 2003; Engwall, 2003; Kristensen and Lotz, 2012). In our case study, we examine the strategies that management relied upon to deal with diverging time reckoning systems, drawing on the work of Clark (1978; 1985; 1995; Clark and Maelli 2009). This work conceptualizes a notion of plural time reckoning systems to analyze the effects that these have on *temporal conditioning*, defined as a process of responding and coping to institutionally prescribed temporal demands. Mirroring the temporal nature of the project, we attend to the unfolding of different time reckoning systems embedded in distinct institutional fields through the project. Following this, we address the entanglement of time

reckoning systems and institutional fields in the project and focus on various approaches to managing disparate temporalities.

PROJECTS IN TIME

Past research indicates the importance of "isochronism" for collaboration across organizations (Perez-Nordtvedt et al., 2008; Khavul et al., 2010; Granqvist and Gustafsson, 2016). In many industries, actors drawn from diverse organizations need to adhere to a unifying "project time" (Shih, 2004). However, despite temporal issues being implicit in much work on institutions and institutionalization they have received surprisingly little attention in the scholarly literature as has been noted by Roe et al. (2009), echoing earlier remarks on the general socio-temporal structuring of human organization (Zerubavel, 1979) as well as on the institutional requirements of time and timing (Butler, 1995).

A few studies explicitly address temporality in institutions, particularly as actors engage with changing institutions during changes in political governance (Aberbach and Christensen, 2001; Buhr, 2013; Kingdon, 2003). Other studies have explored how actors follow schedules or delay compliance in their attempts to cope with institutional complexity (Clayman, 1989; Raaijmakers et al., 2015). These studies have assumed that organizations adapt to timing norms as "shared, expected patterns of paced activity" (Ancona et al., 2001: 648). As pointed out by Granqvist and Gustafsson (2016), such research tends to overlook how actors enact and manipulate understandings about temporality in organizations. Accordingly, timing norms are thus an outcome of and a target for actors' construction (Barley, 1988) and actors engage simultaneously with different and diverging timing norms, which tend to produce contradictory temporal expectations and divergent agency (Emirbayer and Mische, 1998).

Prior research has addressed the role of institutional agency and its temporal embeddedness (Battilana and D'Aunno, 2009; Dorado, 2005), and stressed that understanding how institutions change and evolve over time requires a "fine-grained understanding of temporal dynamics" (Lawrence et al., 2001: 625). Equally, if we are to understand how institutional requirements play out at the organizational level and build an institutional theory that is more organizational (Greenwood et al., 2014), we need to investigate how various institutional logics are manifest at the organizational level and how these manifestations change and evolve over time during the life of an organization. As pointed out by Emirbayer and Mische (1998: 11), there is a lack of empirical work on how organizational members formulate new temporally constructed understandings of micro-level processes intersecting with longer-term social and political trajectories. Especially, homogenization with regards to time and the nature and effects of isochronism as opposed to isomorphism are under-researched. Those few studies that do address isochronism and institutionalization with regards to time and timing have primarily addressed homogenization processes and how actors respond to within-field requirements around timing, duration, rhythm and pace (Perez-Nordtvedt et al., 2008). Comparatively little research has investigated organizations that exist across fields in which there are different views on issues pertaining to time and timing.

The context of inter-institutional temporary organization constitutes an important setting in which to investigate not only how an organization responds to conflicting temporal requirements but also how such conflicting requirements are produced by various actors within different institutional fields. In these settings, completing organizational activities in time and in sync (Czarniawska, 2013) is central for project organizing (Lindkvist et al., 1998), the context in which we conducted our empirical research. To understand the role of temporality in institutions and how institutional requirements play out at the organizational

level, we studied how actors engage in temporal institutional work. In particular, we address how actors construct, navigate, and capitalize on timing norms in their attempts to move the organization forward.

RESEARCH CONTEXT

The case

The paper reports on an in-depth study of a unique large-scale project in Norway: the development and implementation of a new national emergency communication system across the three main emergency services (Fire, Police, Health). The plan for building a new, digital emergency network was launched in the early 1990s. A project administrative office was established in the late 1990s in the Ministry of Justice and Police as a coordinating unit to develop the initiative. The project administrative group focused mainly on identifying and communicating the needs and requirements of the three emergency services. It soon became apparent, however, that the three main stakeholders were putting pressure on the project coordinators to comply with their specific demands.

The three emergency services are embedded in quite different structures, ranging from municipalities to national government. For instance, the Police service is run by the state, the Fire services are run by the municipalities, whereas Healthcare services are organized by five regional healthcare authorities with municipalities responsible for primary healthcare service and local emergency wards. Table 1 presents an overview and some key facts of the project, in which cooperation and coordination between these public-sector organizations and private contractors was critical. Synchronized implementation across a challenging topography and regionalized delivery systems implied high order technical and organizational complexity.

The Norwegian government established the Directorate for Emergency Communication (DNK) in April 2007 that created a dedicated temporary organization to manage the project and run the system after implementation. A project manager and various support staff and technical experts were recruited to work in partnership with a number of technical consultancies. DNK assumed overall responsibility for coordinating activities across the different subprojects in the three emergency services. The project was explicitly temporary; most employees had short-term contracts and specific project roles to be dissolved upon completion of the project; some were to be transferred to DNK's maintenance organization set up in parallel to the project while most would move on to other assignments outside the DNK organization.

Research methodology

Data collection and analysis were processual, involving tracing and understanding processes in their natural setting (Pettigrew, 1992; Denis et al., 2001; Gioia and Chittipeddi, 1991). In-depth exploration of various political processes surrounding the project organization and their effects was conducted to capture the actuality, specificity and complexity of the case (Eisenhardt and Graebner, 2007; Stake, 1995). We used pattern inducing techniques to identify diverging institutional requirements among the actors involved (Reay and Jones, 2016). How the project unfolded was documented, particularly focusing on the organizational and managerial problems experienced and how these problems were addressed. Internal documents, public reports, in-depth interviews and observations were used to secure data.

Observations and interviews were preceded by a number of meetings with the project manager and other key individuals in the DNK organization. The initial focus was on the project's history, management's perceived challenges and difficulties as well as the overall organization and division of labor. In total, 40 formal interviews were conducted with the project manager, subproject managers, key stakeholders, staff members, top managers and key project members in the emergency services. These interviews, which averaged two hours, were recorded and transcribed verbatim. The first round of interviews was carried out in 2008-2010, while the second round of interviews occurred in 2010-2012.

In the first round of interviews, two of the investigators wrote detailed and separate notes, comparing them to create a list of notable observations and critical incidents. In the second round, all members of the research team continuously discussed important themes from the interviews and revised the interview guides as these were developed processually. By conducting interviews on multiple occasions over an extended period of time we gained an understanding of the organizational process and key events; had we relied only on retrospective interviews these would have been difficult to obtain (Langley, 1999). As understanding of the case study unfolded, documentary data, including public reports, internal documents and media coverage were collected, deepening understanding of the background and history of the project. We had complete access to a large amount of data, including eight detailed reports published by DNK and reports published by external research institutes and consultancies. We made use of the online news service *Retriever* to establish a detailed database of more than 200 articles about the project, sorted chronologically.

Project management meetings were observed on a regular basis from September 2010 to May 2011. Writing a field log was a vital part of the research process (Orton, 1997). The field

log covered the unfolding of events and their effects on cooperative attitudes, action strategies, and perceptions of the actors involved in the course of the project. Table 2 presents examples of excerpts from the field log. During this period, the first author spoke frequently with the project manager and several of the managers and members of staff on a more informal basis, adding richness to the case study beyond the formal interviews. During the observation period, a series of formal interviews were conducted with the project manager and other members of the management team and key actors affiliated with the project, including people working in the other public organizations and directorates collaborating in the project. In addition, three student groups conducted 10 interviews in each of the emergency services, adding breadth and nuance to the case-study material, creating multi-level dimensionality and variety supplementing the internal perspective offered by the managers and staff at DNK.

INSERT TABLE 2 ABOUT HERE

Using grounded theory enabled contextualization (Scott, 2012) and thick description of the project process (Geertz, 1973). A rich story, recapitulating the early years of the project and the major political events and decision-making processes, was developed from various data sources (Pettigrew, 1990). The organizational problems associated with time and timing, already flagged as essential during the first round of interviews, emerged as a recurrent pattern in the data. Several sub-themes associated with time emerged as interviews proceeded, including issues of sequencing, interdependence, timing, delays, duration and frequency. Simultaneous pressures from different stakeholders to speed up and slow down and to synchronize and desynchronize key activities in the project were observed. Conflicting views

on time and timing were evident, spurring our recourse to the extensive literature on time and timing in organizational processes and organizational sociology (see for instance Langley et al., 2013; Roe et al., 2009; Zerubavel, 1979).

We constructed a detailed analysis matrix identifying different temporal requirements and subsequent management responses. Subsequently, a comprehensive coding scheme of managerial responses was devised (Gioia and Chittipeddi, 1991). Critical issues for the management team and key stakeholders were identified, using a critical incident approach (Flanagan, 1954). Differences in time reckoning strategies among stakeholders and between stakeholders and project managers were apparent in each of these critical incidents. We analyzed how the project management (PM) team handled diverse time reckoning strategies, noting how they responded differently, depending on whose strategies they were and how they aligned with various structural arrangements and timing norms. In interviews and written communications informants referred to the lack of mutual understanding of temporally sector-specific requirements and demands, such as at what point certain activities should be initiated, at what speed activities should proceed, and in what order certain activities should be sequenced.

To characterize the evolving events and processes involved we decomposed chronological data into time periods and phases (Langley, 1999). The phases identified were used to organize emerging theoretical ideas about time reckoning relevancies (Clark and Maeilli, 2009; Gioia and Chittipeddi, 1991). We moved from framing detailed descriptions monthly, to identifying patterns and phases of the project, and gradually reducing these to even fewer phases (see Table 4). According to Denis et al. (2001), the decomposition of data into periods enables the explicit examination of how actions and activities in one period lead

to changes in subsequent periods. The chosen periods were defined by changes in the environment and/or management action, similar to the analysis suggested in Mintzberg and McHugh's (1985) study of strategic periods in complex organizations and Gioia and Chittipeddi's (1991) analysis of the evolution of strategic initiatives in organizations. For each of the phases, the participants' time reckoning strategies were examined to uncover their plurality, identify linkages, managerial responses, and ensuing temporal consequences, according to suggestions provided in Zerubavel (1981).

THE EMERGING EMERGENCY SYSTEM

After several months of negotiations with potential contractors, at the end of 2006 the Parliament decided that the state of Norway would sign a contract with MultiCom (code name), a leading international supplier of telecom systems. The contract stipulated turnkey delivery in which the contractor would develop, implement and deliver a system adjusted to all three emergency services. To deliver such a system, MultiCom had to bring in several subcontractors and suppliers, national as well as international, to provide technical infrastructure, radio terminals and control rooms. MultiCom would handle implementation, with the established PM team at DNK focusing on setting up the project organization and planning for the evaluation process that would occur after what was designated as Step 1. The project management office, seeking to comply with the different sectoral demands, produced a technical solution and implementation strategy to which the three emergency services agreed. In the media, this was described as a "unique agreement", even by international standards. It was decided to divide the main project into two primary steps. First, the system would be implemented in the south eastern part of Norway, referred to as Step 1, followed by a thorough evaluation of the system, its functionality and use to decide whether there would

be a complete, nationwide rollout, which was referred to as Step 2, with the whole project subject to Parliamentary approval for ultimate funding decisions.

> The two-step model was a compromise with the Ministry of Finance. That was the best we could get. We did not think it was a good solution to stop the project and evaluate (Member of PM team).

The DNK management team faced conflicting temporal requirements among the three subprojects. There was a central administration for the Police service, the National Police Directorate located in Oslo, which was capable of rapid time reckoning and decision. The Fire and Health services were much less centralized than the Police, with fire and rescue services being run by local municipalities. The national public fire protection authority, the Norwegian Directorate for Civil Protection, defined and regulated public requirements for fire prevention in the municipalities. Health had even greater complexity. The Norwegian Ministry of Health and Care Services administers four regional health authorities in Norway with many specialist agencies. Norwegian healthcare is "semi-decentralized" (Ringard et al, 2013). The responsibility for specialist care lies with the state as the owner of the regional health authorities, which in turn own the hospital trusts. Municipalities are responsible for primary care and enjoy a great deal of freedom in organizing health services.

A multitude of internal challenges became apparent within the project: the most pressing issue was coordination across the three main subprojects in Health, Fire and Police. Timing became increasingly out of joint. By the beginning of 2008 the Police subproject had begun using the system, despite technical shortcomings. By contrast, the Health and Fire subprojects were reluctant to use the system before it had full functionality and had been tested thoroughly. These contradictory demands implied a simultaneous speeding up and slowing down of the tempo of project activities. These tempo differences among the

subprojects "challenged the synchronized implementation of the system" (Member of PM team), which was an important precondition established by the politicians in charge of the entire project. The PM team's efforts to make the other public subprojects speed up and imitate what had been done in the Police subproject were largely unsuccessful, creating discontent both in the DNK organization and in the other emergency services. The temporal coherence of the project process was fragmenting. There were intimations of project problems from early on in the project, when the contractor failed to meet the initial deadlines.

> We saw that the contractor had problems, but you will always find an excuse. The contractor needs more time – and then you just let it go and go before you wake up and actually realize what is going on. (Project Manager)

> The contractor's project manager promised that they would finish the project as planned. Even the Nordic vice president at Multicom said to the Norwegian Minister of Justice and Police that Multicom would finish this project on time – and only two months later it turns out that this is totally unrealistic. The project manager at Multicom had misled the vice president. (Member of PM team)

After only six months, by the summer of 2007, the project was delayed by about eight months. Initially, the PM team assumed that more focus on technical deliveries and project tempo would get the project back on track. After intense discussions, a new project manager was hired at MultiCom to focus on tempo and progress, while other changes deemed beneficial for progress were also made.

> The project was delayed, but the contractor did not agree. So I was asked to carry out a re-planning and set up a task force. And it proved we were right, there was a delay of nearly eight months after only six months […] And there were 70-80 change requests from Health that had not been dealt with. (Project Planner)

> Their management office [contractor] was way too small. They had one guy who was doing the planning and he just didn't have enough control. So we demanded that they should bring in more planning resources – one for each directorate in our project, and a leader for the project with power and experience. It ended up with one planner and a leader for their project management office…. but they still didn't comply with our suggestions in terms of planning tools and overview. (Project Planner)

The new project manager at Multicom had many good skills. However, there were some major issues. He did not have much respect for the public processes and formalities that were required. And that only made the situation more difficult. (Member of PM team)

From the PM team's point of view, certain characteristics and norms within the public sector were at odds with a project of this size and complexity, throwing project time reckoning strategies out of kilter. Two of our interviewees explained the situation from two contrasting perspectives.

There are so many different entities and municipalities involved in the project. We do understand that they have a more complex structure, but still, it is too time-consuming, they don't understand the difficulty of running a project like this. (Member of subproject).

Problems of synchronizing activities are undoubtedly some of the most crucial issues in the project. In the Police subproject decisions are made quickly. In the other subprojects decisions are slow. There are processes internally in these sectors and organizations that create huge challenges for the entire project. (Member of PM team)

By June 2007, the project was running half a year behind schedule. The number of changes and additions caused a major delay in the subprojects; more specifically, the Health subproject required several sector-specific adjustments. It was obvious that the specification process "had not been sufficiently prepared among the organizations involved" (Member of PM team). Faced with conflicting temporalities, the PM denied the validity of the Health and Fire subprojects' requests and instead emphasized the difficulties of managing the project in line with their requirements, seen as the cause of delay because they did not match the project schedule. The PM team argued that the other subprojects should imitate the activities implemented by the Police subproject.

The police force is internally synchronized. They do not allow the districts to live their own life. They control them – they have the same rhythm. A decision is a decision and a deadline is a deadline. (Member of PM team)

By the end of 2008 the management team proved unable to resolve significant temporal misfit across the public subprojects. After several months of diverging progress in

an increasingly tense atmosphere, problems continued. The Police subproject tried hard to get the DNK team to understand that their desire for synchronized implementation, coupled with the lack of progress, was damaging relationships with the Police as a major stakeholder. The legitimacy for the entire project, especially among the internal stakeholders in the police organization, was threatened. In addition, one of the subcontractors, impatient with the lack of progress, put even more pressure on the PM team to speed up the overall project.

> The situation started in January – February when the sub-contractor gave us clear signals that they thought the situation was unbearable. They criticized the main contractor for not managing the project as they should. And, they criticized us [project management] for the way we were handling the specifications from the emergency agencies. We [project management], however, did not think the sub-contractor was completely unblamable. (Project Manager)

> The moment they (sub-contractor) terminate the contract it becomes our problem. If the project does not have a sub-contractor one might say that this is the main contractor's problem. But nevertheless, then the project will stop. The project might even stop for years since we have to start searching for a new contractor. Then one can ask how much one is willing to accept in order to avoid such a situation. (Project Manager)

The PM team's relationship with Health also became strained. From the Health subproject's point of view, the PM team was unable to understand their "internal organization" and "professional ethos" (Internal document). In a public letter, top management in the Directorate for Health blamed DNK for not addressing their complexity and special needs.

> I note that things are moving very quickly now in a process that is lacking clear lines of command, content and decision-making levels. /…./ DNK approaches our project along several parallel lines with difficult issues, and requires answers at a pace that makes it impossible for us to synchronize our activities and reconcile our feedback. This is a significant risk that could lead to incorrect decisions. I do not think we can continue along this route. (Letter from Health subproject to the PM team at DNK, October 21, 2008)

The PM team sought to impose a uniform linear rationality on diverse stakeholders with distinct institutional logics. Health, because of the complexity of both mission and organization across four regional areas and several different agencies, could not produce rapid

rational one-size-fits-all requirements: as a highly complex professionalized arena its time reckoning strategies were attuned to professional autonomy, widespread consultation and local variance rather than top-down control. One of the major delays was the development of software for the healthcare sector's communication centers consisting of emergency wards, casualty wards, emergency dispatch centers and aircraft coordination centers, each quite specific. The Directorate for Health demanded a more complete basis for evaluation to ensure the usefulness of the emergency network for society at large, stressing the specificity of their institutional requirements. In the letter, they stated that they could not advise the Parliament to decide on a nationwide rollout because the system had not been thoroughly tested. The system, they argued, needed more time before national roll out, leading to intense discussions among key actors in the project. As the media caught wind of these discussions they became a subject of comprehensive public debate. In one of Norway's leading newspapers, Health's Director General raised issues of functionality:

> We have great respect for DNK's high technical competence. But, that is not enough to begin using the system. We have to be able to use the system in the ambulances and in the primary healthcare services; and the physician at the emergency ward must know how to use the system […]. This is a complicated and extensive project, but still, that does not mean that we can lower our demands concerning safety and functionality. (*Aftenposten*, March 12, 2009)

Although the accusations from the Directorate for Health were initially considered inappropriate, in particular the way they were presented in the media, the PM team acknowledged that the healthcare services had "special needs" as a consequence of a more complex and "unique organizational structure" (Internal document). After the *Aftenposten* article the PM team tried to downplay the Police subproject and one of the subcontractors' requirements for speedy implementation. Representatives of the National Police Directorate criticized the implementation model by stating that in most other countries the system had been implemented initially just for police work and afterwards taken into more general use.

The National Police Directorate saw no reason to stop implementation while the system's use of encrypted communication, which they regarded as its greatest benefit, was being evaluated. The problems the Police encountered were significant: for instance, while one police district installed a new center in February 2008 it had to wait 21 months to be able to use it, as a result of the delay in Public Safety Radio being implemented across the three services. Faced with a crisis in relation to MultiCom and its relations with one of the subcontractors, the PM team was not able to respond to the Police subproject's dissatisfaction with slow progress. As a consequence, the Police's top management placed great pressure on the PM team.

> The police subprojects told us that they were going to put the system into operation […] Their top management approached us and said that they were going to start using the system right away, or else... They told us: it is up to you to handle the contract, but we are going to use the system anyway. Well, basically they made it very clear that they would not wait any longer. (Project Manager)

> It was better for them [Police] to leave the project. They could not accept to wait another six months to continue with their implementation […] If they had pulled out – then there would be no project. (Member of PM team)

Managers of the Police subproject suggested a new time schedule in their demands, enrolling support from Police's top management and some influential politicians with key roles in the police sector. Consequently, the actions taken by the Police subproject also opened up a new direction for the overall project. The crisis situation was used as an argument to make changes in the other subprojects. The crisis precipitated the "emergency services … not only focusing on bureaucratic structures and formalities" but also on "time and action" (Project Manager).

To support the new time schedule, structural changes were made in the project organization. Instead of having one project manager responsible for dealing with all public subprojects, one subproject manager was appointed for each of the emergency services. Coordination across the emergency services became an internal issue within the PM team at

DNK. The subproject managers were to follow and support the implementation in detail in each of the emergency services by re-establishing the dominance of their time reckoning strategies. For the PM team, these were a crucial central control device over the more decentralized and local time reckoning and specification processes of the non-Police services.

> If you turn the organization 90 degrees from being technology-oriented to becoming public services-oriented you have to make sure that you are able to deal with the technology in use. Now the public services are in focus, but you need to make sure that the technical matters are sorted out, and that Fire, Health and Police receive what is specified in the contract. So, we have to coordinate that in a different way. The internal structural changes improved project progress, but we still have to focus on how to make sure that something is not missing in the end. (Member of PM team)

Optimism returned to the PM team, which was now focusing on the new "time management and organization approach" (Project Manager). There was a major shift in the project structure and time schedules that, despite the many synchronization problems, were generally seen as successful. Additionally, the individuals representing the subprojects saw their internal organizational challenges being acknowledged and addressed by the subproject managers. In particular, the Police subproject was satisfied with the new way of managing the project as it allowed them to speed up the tempo of their project activities.

As the end of Step 1 approached, there was urgency to speed up project activities in both Health and Fire, sufficient to get Parliament approval of the nationwide rollout. Additionally, the PM team had to begin to plan for Step 2 and gradually involve the public subprojects. In doing so, they thought this would improve the transition from Step 1 to Step 2. As the PM team worked on synchronized preparation for Step 2, it became clear that both the Health and Fire subprojects were yet again lagging behind the schedule for Step 1. The Police subproject, which at this point had already completed Step 1, expressed concerns about progress, emphasizing that any potential delay would damage momentum among their internal stakeholders. Since a delay could potentially threaten Parliament's decision to

commit funds, the subproject managers at DNK were forced to give priority to fixing the slow progress of these activities instead of preparing for Step 2. According to a key healthcare services stakeholder the project manager had not addressed the "clinical picture" but focused only on treating the "symptoms of the illness".

In June 2011 the Parliament approved the nationwide rollout, although Health and Fire had still not completed Step 1. The Parliament specified that the system would be evaluated in Healthcare on a later occasion. In addition, Parliament determined that synchronized implementation across the subprojects could be abandoned subject to DNK advice. In the ensuing media debate the top manager for the healthcare sector opposed the unsynchronized implementation and again accused the PM team of not acknowledging health's internal organizational challenges. The healthcare services were still in Step 1; the implementation of Step 2, in their opinion, was dependent upon activities still in progress. They again demanded that DNK slow down the pace of the project, stressing the need for synchronized implementation across all emergency services.

ANALYSIS

As seen in our case study, time reckoning system relevancies differed significantly across the three subprojects. There was a divergence in time reckoning strategies across the three institutional spheres, in part because of different functionality requirements but also because of different decision-making and organizational structures and institutional norms. Timing norms relating to the sequence, duration, location and frequency of activities differed among the three subprojects. Different institutional requirements and ways of establishing them, led to incompatible time reckoning, making being "on time" and "in sync" highly contested (Zerubavel, 1981). Increasingly ad-hoc and situated responses to diverse requirements and

views on time and timing occurred. Table 3 compares institutional requirements across the sectors and subprojects involved in the project. The Health subproject had an open time horizon and a sequence that was oriented towards analysis, and less focused on action. The Police and Fire subprojects had more closed time horizons and a sequence that was oriented towards action and speed. The Health subproject's requirement for a slower project tempo was tied to their sequence (analysis first, action later) while the Police subproject's request for a higher tempo was tied to their sequence (action first, analysis later).

INSERT TABLE 3 ABOUT HERE

For the healthcare sector, in the first phase of implementation, communication centers needed to be located in emergency rooms, casualty wards at hospitals, the air ambulance coordination center and emergency health communication centers, in addition to ambulances, on a regional basis. The Health subproject representatives claimed that projects with complex requirements must take time to succeed – "projects like this need time to mature" and that "one cannot force such projects forward." The Police subproject argued that the opposite was true – for them, professional project management practice was essentially about making decisions swiftly and prioritizing action and speed; speed itself was considered an essential criterion for success. The Police subproject argued that the lack of speedy progress undermined the entire legitimacy of the project. Representatives from the Health subproject, including the Director General, did not share this view. They argued in public that the project focused far too much on action and too little on testing and preparation to gain approval from key stakeholders integrating the system into their everyday operations.

The conflicting requirements from the three professional groups challenged the centralized control model embedded in the PM team's understanding of project management. Many of our DNK organization informants described the project as an "ongoing conflict between slowing down and speeding up", matching timing among the subprojects and key stakeholders. Participant observations of discussions at most of the meetings also made this apparent. Nonetheless, management of the overall project continuously sought to knit together contrasting requirements to create an organization that produced timely delivery and synchronized coordination – that was capable of generating collective agency among actors located in different sectors (Koschmann et al., 2012). To do so, they sought to coordinate requirements and tasks across sector and professional boundaries. While the PM team wanted to establish the project as a temporal zone entraining the various actors involved, instituting a coordinated regime for time reckoning (Ancona et al., 2001), requiring temporal coordination across institutional spheres conflicted with building sectoral institutional legitimacy. Legitimacy was deeply embedded in the professionalized requirements produced within the different institutional sectors. For instance, entraining activities in a rhythm subordinated to the police sector meant dismissing the specific concerns of powerful medical specialists and healthcare administrators. For the Police, encryption was important because it would keep outsiders from listening in to Police radio and hindering and publicizing investigation; for those embedded in the healthcare sector the need for encryption was not as acute. The PM team's solution of mutual entraining failed to handle these legitimated differences; they were unable to impose a project-based institutional logic to synchronize institutional time and project phases. Operating as strategic timekeepers (Clark, 1975), the PM team was not able to align a linear, rational and universal repertoire for time reckoning on the different institutional spaces. Instead, time reckoning

increasingly defied project management repertoires, becoming publically tense and emotionally laden, with the PM team unable to segregate the contrasting temporalities.

Table 4 summarizes the characteristics of the main phases in the evolution of the project, most notably the nature of tasks, the focus of action, key events in each phase and the temporal demands and temporal consequences.

INSERT TABLE 4 ABOUT HERE

In Table 4 we show the three distinct time reckoning strategies on which the PM team primarily relied, overlapping in different phases, in responding to the diverging institutional requirements. The phases show how actions and activities in one time period led to temporal changes in the next, which in turn produced new temporal demands calling for project management action. The PM team, having neither legitimacy nor competency to overrule institutionally professional logics and legitimations, yet being held responsible by government, developed three time reckoning strategies. The three time reckoning strategies were those of:

(1) *Temporal avoidance:* Managers tried to avoid, eliminate or marginalize temporal institutional pluralism expressed in time reckoning systems contrary to theirs. For instance, managers denied the validity of various external claims placed upon them, attacked the legitimacy of the entities making the claims, attempted to co-opt or control these entities, or tried to escape their jurisdiction or influence.

(2) *Temporal splitting:* Managers divided or sequentially attended to different institutional requirements, championed specific institutional needs or created separate entities to demonstrate commitment to the values or beliefs of the involved project participants.

 (3) *Temporal matching*: Where management could not produce institutionally cooperative solutions that harmonized and coordinated requirements and negotiation among the parties that were acceptable by all or most of the significant actors involved, it tried to match and coordinate by playing constituencies off against each other.

As the complexity of managing the project's distinct institutional logics became apparent and the awareness of the difficulty of integrating organizational and technical factors mounted, the project came under increasing government pressure for system implementation according to time, specifications and budget. The choice of the PM team was to align with the least complex subproject, which was the Police. Consequently, temporal coordination aligned with the project's least demanding time reckoning system, increasingly growing out of kilter, with the PM team's time reckoning strategies becoming increasingly segmented.

DISCUSSION

In comparison to previous work on institutional pluralism (Greenwood et al., 2011), this paper documents the importance of diverging institutional requirements and their managerial responses with a particular focus on how actors relate to time and timing. Following Kraatz and Block (2008), we focus on the process of knitting together institutional requirements as time unfolds, emphasizing the importance of the temporal and processual aspects of institutional pluralism, demonstrating the importance of temporal institutional work (Granqvist and Gustafsson, 2016). Our findings indicate that time and timing are not embedded in objective time markers but in the actors' sense of distinct institutional settings drawn from stocks of highly professionalized knowledge (Hodgson and Cicmil, 2007), enacted in specific sensemaking of the worlds enacted. In our suggested framing, an inter-institutional temporary organization is by definition a dynamic temporal zone that constantly changes as the participants' definitions of the situation shift in regard to the scope and life cycle of the project. Given the project's sectoral specificities and the organizing processes oriented towards these, the project was constantly 'becoming' (Bjørkeng et al., 2009): it was under constant pressure to incorporate new structural arrangements that had an impact on the

diverse institutional requirements. The organization and reorganization of the project was prompted by a number of critical institutional challenges. Reciprocal and recursive interaction occurred between the activity cycles operating at the overall project level and management and decision-making occurring at the specific institutional levels (Shi and Prescott, 2012). Drawing on different professional logic, stakeholders frequently claimed certain activities were not allowed, were against the rules and regulations or were opposed to professional norms central for gaining legitimacy for the project among key local stakeholders.

When the PM team initially established the organization they defined differences across the emergency services solely in terms of technical matters and the general functionality of the communication system. Initially, the PM team tried to institute a standardized rhythm across the three emergency services, making use of a combination of temporal avoidance and temporal splitting. The combination of these strategies produced and reproduced temporal demands for polychronicity and monochronicity at the same time (Bluedorn, 2002; Hall, 1983). Accordingly, polychronicity was associated with the preference for working on tasks simultaneously, switching among them, responding to new tasks and events as they arose. Conversely, monochronicity was observed in the preference to perform tasks in a more sequential fashion – completing one task before moving on to another (Kaplan, 2009). Most notably, the Health subproject demanded monochronicity whereas the Police subproject advocated polychronicity. The temporal consequences of this institutional mismatch led to escalating temporal misalignment in the project (Pache and Santos, 2010; Shipp and Jansen, 2011). As the project elapsed the importance of the different professional logics became ever more evident. During the later phases, the PM team increasingly challenged the expression of these diverse needs for speed and timing in order to respond to the task requirements set from the project owner, the government.

The project and its transitions were driven by failure to match and coordinate requirements among and across actors. When the PM team shifted to a new, unsynchronized implementation schedule its credibility was strengthened across all three institutional domains. However, increased legitimacy worked against temporal demands for a synchronized and monochronic implementation coming from government. Thus, legitimacy increased through interpreting institutional demands as opportunities for changing temporal structure with effects on the progress of project processes (Pache and Santos, 2010). This dual process of being project-focused and driven by the desire for resolution to project problems (Lindgren and Packendorff, 2006), while dealing with institutionally specific time reckoning actions, embedded legitimacy problems for the temporary organization (Staudenmayer et al., 2002). The focus on task completion and deadline achievement, when pursued across institutionally differentially logics, ensured that task completion in the terms envisaged by the project organization meant that the project remained less than wholly legitimate in the terms of the professionalized institutional fields and key stakeholders.

Focusing on institutional pluralism in temporary organizations extends Orlikowski and Yates' (2002) ideas about how the creation and use of temporal structures give phase and speed to everyday organizational practices. In such contexts, temporal conditioning involves coming to terms with diverse time reckoning systems that challenge entrained time orientations with regard to phasing, speed and timing (Cicmil et al., 2006). Temporal demands evolved progressively (Lundin and Söderholm, 1995) and were emergent (Beck and Plowman, 2014) rather than adhering to a monochromatic rationality. Not only do internal processes emerge and change temporally but the dynamics of the institutional fields spanned and the interaction between external and internal project processes also has an impact. The "patterns in streams of action" (Mintzberg and McHugh, 1985) that the PM team

demonstrated in addressing and responding to temporal demands emerging from a situation of institutional pluralism led to their segmentation of temporal strategies, which weakened the overall temporal coherence of the project.

Prior research has observed that a sequential focus will often make switching among tasks undesirable, as doing so activates higher-level executive functions and controls (Kaplan, 2009). The Police service's centralized structure made decisions and legitimized changes in tasks and activities swiftly. The Health and Fire services were not authoritatively and centrally organized in the same way. They required many more structural adjustments and incorporation of multiple and different institutional requirements in the subprojects that made for challenging project specification changes. When specific interests in Health were threatened by the subproject, actors were extremely reluctant to comply with the suggested changes if they were seen, potentially, to effect central values such as institutionalized time orientations and professional safety standards.

The management team learnt to make use of opposing timing norms to advance the project. Under certain circumstances, where strongly held and diverse time reckoning strategies shaped the institutional fields traversed, temporal conditioning of projects seemed to facilitate institutional ambidexterity. In responding to the novel temporal demands facing the project, distinct time reckoning strategies were incorporated into the daily organization, creating a space that allowed for a dual focus on operational tasks and distinct institutional contexts (Ballard and Seidbold, 2003). The combination of temporal matching and temporal splitting strategies led to polychronic organizing (Ancona and Caldwell, 1992; Kaplan, 2009) and concomitant temporal conditioning since the PM team was able to focus on and respond

to new tasks and events arising as multiple and independent temporal demands. The coherently unfolding process that government initially expected proved impossible.

Compared to earlier studies on projects confronted with institutional pluralism, such as Orr and Scott (2008), institutional temporal divergences and opposing time reckoning strategies and the ongoing temporal institutional work occurring in organizations spanning institutional fields are central. As documented in recent empirical research, diverse institutional environments tend to produce diverging timing norms (Khavul et al., 2010, Shih, 2004). In settings of institutional pluralism (Kraatz and Block, 2008), a common, yet understudied, concern is the existence of temporal misalignment (Bluedorn, 2009; Raes et al., 2009) and collisions between isochronic outcomes (Perez-Nordtvedt et al., 2008). Indeed, as documented in our case study, in collaborations crossing institutional domains where task interdependencies are significant, temporal misalignment is particularly apparent and difficult to manage. Addressing the process dynamics operating in such organizations is not principally a matter of moving along a certain route of predefined phases (Lundin and Söderholm, 1995; Winter et al., 2006) or merely a sequence of punctuated equilibrium (Engwall and Westling, 2004; Gersick, 1988; Gersick, 1989). On the contrary, this study suggests that management can work *with* and *against* diverse temporal demands by relying on three primary strategies: temporal avoidance, temporal splitting and temporal matching. These strategies all play a critical role for the ongoing temporal conditioning of the temporary organization – to identity, activate, and respond to temporal and conflicting requirements among actors representing different institutional fields.

CONCLUSION

Our paper demonstrates institutional requirements playing out at the micro level with a particular focus on the role of time and timing. We underlined and demonstrated the potential of studying complex institutional processes of entangled institutional logics and requirements in empirical settings such as temporary project-focused organizations. Our study reveals time and timing as particularly critical to understanding how institutional logics are manifested and managed in temporary organizations. We offered an institutional analysis showing that project time and timing depend to a great extent on how legitimacy is differentially constructed as well as on institutional power relations within and between participants and their ongoing negotiation. In that respect, time reckoning strategies and their management in temporary organizations can be explained largely by the need to adjust temporal cycles when confronted by distinct institutional logics (Khavul et al., 2010; Perez-Nordtvedt et al., 2008; Scott 1994). Within these logics, professionally sectorial organizations and actors adopt similar isochronic processes that differ between sectors. In many ways, these represent idiosyncratic ways of working within a specific institutional field (Lee and Liebenau, 2002; Scott, 1994; Zerubavel, 1981). Isochronic processes are certainly important and research needs to explore in-depth how they are produced, how they are maintained, and how institutional fields might maintain several conflicting isochronic processes simultaneously. We addressed the difficulties that may come out of isochronic processes when these idiosyncratic ways of working need to be united and transcended. We believe this represents a specific case of institutional work and institutional complexity.

It is, on the one hand, the dynamics of phases and how managing relates to institutions and time reckoning strategies while, on the other hand, it is the processes producing and reproducing temporal demands that frame complex inter-institutional project organization in practice. These two dimensions, we argue, are essential for the understanding temporal

conditioning in inter-institutional temporary organizations, such as large public-private projects and other cross-sector projects and partnerships. Adopting a processual view of institutions and various actors (organizations, projects, teams, and individuals) enabled a better address of diverging institutional requirements than simply focusing on the structures of institutional logics. Our analysis centered on the evolutionary nature of temporal institutional work and the role played by three primary strategies to continuously shape the temporal conditions of the project: temporal avoidance, temporal splitting, and temporal matching. These strategies played a critical role in the ongoing temporal conditioning of the temporary organization producing and reproducing temporal and conflicting requirements among actors representing different institutional fields. For future research it is critical to analyze the dynamics of inter-institutional temporary organizations; how timing norms influence projects and their management and how management responses produce and re-produce temporal demands. The implications of different kinds of institutional requirements associated with temporal issues, most notably the sequencing of project activities, their duration, pace and timing, require central focus.

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Table 1. Key facts about the studied project

Project initiation	1998
Project approval, step 1	2006
Contract agreement	2006
Estimated time for completion	2016
First evaluation	2010/2011
Parliament approval, step 2	2011
Total estimated budget	440 million euros
Number of employees	Approx. 90
Number of people involved in subprojects	Approx. 120
Key stakeholders	Government, DNK, Health directorate, Police directorate, Fire directorate, Ministry of Justice and Police, Ministry of Health and Social Affaires
Main subprojects	Fire subproject, Health subproject, Police subproject
Technology platform	TETRA technology
Number of control rooms	115
Number of terminals	Approx. 40,000
Number of radiobase stations	2100

Table 2. Excerpts from field log

October 2009

Interview with project manager: He focused on tensions between them and the contractors and subcontractors. It seems like there are some public-private tensions in this project.

October 2009

Technology conference: The top manager of DNK introduced the whole session and he talked about the project and the progress. The majority keynote speakers talked about technical matters, and "what is new". There was not much focus on the process and how to implement these systems. Additionally, a police officer from one of the police districts in Norway presented how "well" they have done it in his district. He says that they are ready to put the system into use. Representatives from health and fire were also there, but they did not present or share their experience with the audience.

December 2009

Interview with members of the PM team: It seems like there are new problems every time that we talk. It seems like project management and public administration is incommensurable - it is not possible. There are structures and cultures that do not correspond with this way of running a project. Are structures the main problem, or is it the project? It seems like every step creates a new problem, and these external events are somehow unforeseen. Why are they so difficult to discover? Still, there is always some optimism – they believe that it will improve.

February 2010

Interview with the project manager: He is frustrated. It is difficult to communicate across horizontal and vertical governmental structures. Decision making is also difficult. These are interesting themes. Additionally, the differences across the emergency services were clearer. There are some public differences that should be

taken into account. They are all public entities, but they are more different than similar. Same regulations (to some extent), but different structures and culture.

Table 3. Comparing institutional requirements across sectors

	Health	Fire	Police	DNK Project
Dominant organization culture	Professional, research-based, documentation	Local, craft-based	Central, authority-based	Engineering, experience-based
Structural arrangement	Semi-decentralized	Centralized and decentralized	Centralized	Initially centralized, then decentralized
Project management approach	Analysis, documenting, high formalization	Analysis and Action, limited formalization	Action, structured/standardized	Action
Dominant timing norm	Sequence (analysis first, action later), Duration (long cycles)	Mixed	Sequence (action first, analysis later), Duration (short)	Duration (short, project-focused), Frequency (milestone-driven)
Time horizon	Long	Medium	Short	Short
Time orientation	Monochronicity	Mixed monochronicity at the central level, polychronicity at the local level	Polychronicity	Initially monochronicity, and then developing polychronicity over time
Rationality	Decision and process-oriented rationality	Decision and process-oriented rationality at the central level, action rationality at the local level	Action rationality	Action rationality

Table 4. Temporal demands and temporal consequences: summary of empirical observations

Phase	Characteristics	Key events	Conceptual analysis
Initiation	Awareness of the political dimension of the project emerges Project organization functions as a coordinating unit with administrative capacities	Establishing a project organization Gathering information about needs and opportunities Waiting for a political decision Coordinating and passing on the requirements of the thee emergency services	*Temporal demands:* Political system requires a two-step model and synchronized implementation. This defines the overall temporal structure of the project. *PM Strategy:* No strategy, assume action *Temporal consequences:* Temporal fit assumed.
Behind schedule	Relaxing on the turnkey contract Internal focus Project severely delayed	Contractor does not meet the first milestone and is falling behind on deliveries Actions are taken to make the contractor change their routines Health requires new sector-specific adjustments after analysing future situation and needs	*Temporal demands:* The PM team demands the contractor to focus more on tempo. *PM Strategy:* Temporal avoidance: PM team does not realize the temporal consequences of the Health subproject's requests. *Temporal consequences:* Emerging insight of temporal misfit.
Growing temporal divergence	Diverging tempo Focus is on structure and formal procedures in the health sector Focus is on internal legitimacy problems in the police organizations	Police subproject starts using the first communication centrals Health and Fire subproject refuse to start using the system due to lack of sufficient testing and functionality demands MultiCom argues that the bureaucratic processes are causing delays	*Temporal demand:* Health and Fire subprojects demand slowing down, Police subproject requests speeding up *PM strategy:* Temporal splitting *and* temporal avoidance: attending to the Police subproject's demands, ignore the Health and Fire subprojects' demands and assumes that they can imitate the Police subproject. *Temporal consequence:* Same time schedule, temporal misfit across the three subprojects.
Escalating temporal demands	Top-management involvement from health sector, focus is on safety issues	Letter from the top-management at the Directorate for Health requests for a comprehensive evaluation of the project The Police subproject claims that it wants to	*Temporal demand:* Health subproject demands slowing down and synchronized implementation, due to safety issues Police subprojects and subcontractor request speeding up project activities.

		more action oriented approach One of the subcontractor expresses dissatisfaction with the time schedule	*PM strategy:* Temporal splitting and temporal avoidance: attending to the Health subproject's demands, ignore the Police subproject and the subcontractor's requests. *Temporal consequences:* Same time schedule, temporal misfits escalate.
Implementing a new time schedule	Top-management involvement from Police subproject and subcontractor	Subcontractor threatens to terminate the contract Top management of the police sector threatens to pull out of the project if the project management approach does not change.	*Temporal demands:* Police demands new time schedule, unsynchronized and speeding up Subcontractor requests rapid speed-up or complete termination. *PM strategy:* Temporal matching *and* temporal splitting: relying on top management support to justify temporal changes and deal independently with the emergency services. *Temporal consequence:* New time schedule, unsynchronized implementation. The temporal misfit escalates, but is not considered problematic.
Unsynchronized and then synchronized again	Diverging tempos	The Parliament decides that the three subprojects can progress independently	*Temporal demands:* Temporal demands from the early phases recur. Health subproject demands slowing down and synchronization of implementation. Police subproject demands speeding up project activities. *PM strategy:* Temporal splitting. *Temporal consequences:* The temporal misfit is accentuated.