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The title page of the paper

Politics, public servants, and profits: Institutional complexity and temporary hybridization in a public infrastructure alliance project

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Politics, public servants, and profits: Institutional complexity and temporary hybridization in a public infrastructure alliance project

ABSTRACT

Public infrastructure projects must comply with the divergent and even conflicting demands of multiple institutional logics causing institutional complexity. Despite the increasing interest in different forms of complexities in projects, we lack empirical illustrations and rigorous theorizing of mechanisms for responding to institutional complexity. This paper demonstrates how public buyers of a tunnel construction project formed a hybrid organization of a multi-party project alliance to respond to institutional complexity. We delineate a process of temporary hybridization through which the competing logics of a bureaucratic state, corporate market, and multiple professions were combined within the temporary project alliance organization. Such temporary hybridization not only focused on selective coupling with external demands but also mitigated internal tensions. Our findings emphasize a blended organizational structure, jointly formed governance and incentive systems, and the facilitation of social interaction to build a temporary yet sustainable hybrid organization capable of combining conflicting institutional logics.

Keywords: Institutional logics; institutional complexity; hybrid organizing; public infrastructure projects; temporary hybridization; project alliance

1 INTRODUCTION

Public infrastructure projects—such as the development of transportation, energy, telecommunication, and water supply systems—account for the increasing intensity of global economic activity (Söderlund et al., 2017). The Global Infrastructure Hub (2017) has forecasted that such undertakings will require investments of over 90 trillion USD (or 3.55% of global GDP) in the next two decades. The key managerial issue in such public inter-organizational projects is combining the efforts of multiple, and often divergent, organizations (Jones & Lichtenstein, 2008; Oliveira & Lumineau, 2017). Previous studies suggest that managerial challenges stem from the structural and dynamic complexities of such projects or from the great number of constantly changing technical components and organizational actors (Brady & Davies, 2014; Ramasesh & Browning, 2014). There is a plethora of approaches for overcoming such complexities, such as employing systems integration through innovative contracts (Davies et al., 2009; Gil, 2009), adopting more collective decision-making processes (Gil et al., 2012; Gil & Pinto, 2018), decomposing the project into manageable entities (Davies & Mackenzie, 2014), and improving communication across project organizations (Roehrich & Lewis, 2014). Thus, previous project management research has predominantly focused on formal coordination and governance mechanisms internal to a project—such as contracts, monetary incentives, communication routines, and decision-making heuristics—through which diverse actors can establish a common ground for working with each other (Oliveira & Lumineau, 2017).

Project management researchers have also been increasingly emphasizing the importance of social structures and have revealed how institutions (i.e., norms, beliefs, conventions, values, and taken-for-granted practices) in a particular social context not only constrain but enable action in project-based organizing (Aaltonen & Turkulainen, 2018; Engwall, 2003; Grabher, 2002; Jones & Lichtenstein, 2008; Morris & Geraldi, 2011; Sydow et al., 2004), how such actions may come to reshape the old social structures (Tukiainen & Granqvist, 2016) and create new

ones (Söderlund et al., 2017; van Marrewijk, 2017). Recently, calls have been made to critically account for the impact of the surrounding society on project organizing (and *vice versa*) to further enrich so-called project studies (Geraldi & Söderlund, 2018) and allow a more dynamic perspective on inter-organizational projects to emerge (Sydow & Braun, 2018). Consequently, the difficulties of undertaking coordination and collaboration in public infrastructure projects may not purely stem from their complex inter-organizational nature, such as the mere number of different organizational entities (i.e., structural complexity), but from institutional differences, such as the divergent perceptions regarding the legitimate means and ends of a project (Dille & Söderlund, 2011, 2013; Geraldi et al., 2011; Orr & Scot, 2008). This requires complementing formal contractual governance mechanisms with more relational and social mechanisms, which could mitigate institutional tensions (Benítez-Ávila et al., 2018). Such conflicting institutional demands are particularly strong in public infrastructure projects, which must comply with the operating logics of government bureaucracies and business firms (Jay, 2013; Jooste & Scott, 2012) and achieve legitimacy in the eyes of diverse stakeholders, such as the local community (Di Maddaloni & Davis, 2018). Thus, in addition to different internal complexities, the managers of public projects must respond to the institutional complexity that arises externally from the surrounding social context (Biesenthal et al., 2018).

Institutional complexity entails a contradictory situation where an organization's actions are hindered when it faces multiple conflicting, or at least divergent, institutional demands due to the presence of multiple institutional logics (Greenwood et al., 2011; Kraatz & Block, 2008; Raynard 2016; Vermeulen et al., 2016). Institutional logics are widely available and shared prescriptions on the legitimate actions and so-called meta-theoretical frameworks of institutions that guide the behavior of organizations (Friedland & Alford, 1991; Ocasio et al., 2017; Thornton et al., 2012). Thus, organizations that must appear legitimate by adopting multiple logics must seek a way to

satisfy divergent, and occasionally, conflicting institutional demands (Boxenbaum & Jonsson, 2008).

Organizations can adopt different strategies to respond to institutional complexity (Oliver, 1991). The simplest are avoidance or deliberate defiance of competing logics (Mair et al., 2015). However, failure to comply with multiple logics may pose a risk to the organization's survival (Pache & Santos, 2013a); therefore, combining multiple logics through the adoption of organizational hybridization—a deliberate change process for settling conflicting demands (Schildt & Perkmann, 2017)—is suggested as a more effective approach (Battilana & Lee, 2014; Battilana et al., 2017). However, organizational hybridization is a time-consuming process that entails internal change in an organization (Battilana & Dorado, 2010; Evers, 2005; Mair et al., 2015; Pache & Santos, 2013a) and involves a potential re-positioning of the organization within the field (Kraatz & Block, 2008; Raynard, 2016). Thus, previous research on hybridization has essentially assumed that an organization possesses a sufficient level of autonomy and power over its activities to actually implement such a change (Battilana et al., 2017).

Past research has shown that public projects are implemented in multiple organizational forms, such as public–private partnerships (PPPs) (Bishop & Waring, 2016; Jooste & Scott, 2012), and integrated project deliveries (Fischer et al., 2017), like project alliances (Chen et al., 2012; Hietajärvi & Aaltonen, 2018; Laan et al., 2011; Walker & Lloyd-Walker, 2015). As these forms aim to unite the efforts of multiple organizations and comply with divergent institutional demands, such as those of multiple stakeholders, they represent hybrid forms of organizing. PPPs have proven to be innovative hybrid organizing forms (Jay, 2013), but due to their more long-standing existence (Osei-Kyei & Chan, 2015), they can adopt a hybrid form through long-term organizational change (Bishop & Waring, 2016) and learning (Hartmann et al., 2014). However, a project alliance, as a unique multi-party contractual arrangement involving the creation of a temporary alliance organization that shares the risks and rewards of a project (Walker & Lloyd-

Walker, 2015), arguably must rely on varied yet unknown mechanisms in order to attain a hybrid form and meet the demands of multiple yet conflicting institutional logics.

Understanding the potential of project alliances for resolving institutional conflicts would help to further explain recent empirical evidence that project alliances have been, on many occasions, the most efficient and effective way to deliver large and complex projects in the public infrastructure sector (Suprpto et al., 2016; Walker et al., 2015). Despite the proposed usefulness of the institutional theory lens for managing public infrastructure projects (Biesenthal et al. 2018), past empirical research has only examined institutional complexity in such projects to a limited extent (for notable exceptions in the context of global projects, see Javernick-Will & Scott, 2011; Orr & Scott, 2008; Scott, 2012 and regarding inter-disciplinary projects, see Dille et al., 2018). This may have amplified the assumption that problems in public infrastructure projects arise primarily from poor coordination and integration of actors; in fact, they may also result from poorly managed institutional tensions (Dille & Söderlund, 2011, 2013) and failure to build, paradoxically, a temporary but sustainable hybrid organization (Battilana & Dorado, 2010).

The purpose of this paper is to examine how does organizational hybridization occur in a public infrastructure alliance project. In particular, by empirically investigating the Lakeside Tunnel Project implemented in a Northern-European country, we develop a conceptual process model explaining the phenomenon of temporary hybridization, through which the created temporary multi-party alliance organization was able to respond to various external demands of bureaucratic state logic and corporate market logic, as well as to mitigate internal tensions caused by divergent professional logics. In addition, we discuss the model in light of previous literature to delineate our contributions and open avenues for further research.

2 THEORETICAL BACKGROUND

2.1 Multiple institutional logics and institutional complexity

Early neo-institutional theory shows that seeking legitimacy in the organizational field (e.g., in a specific industry) may define an organization's success and consequently its behavior (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). More recent views further posit that organizational fields involve multiple prescriptions of legitimate action, i.e. institutional logics, a phenomenon that is defined as institutional pluralism or multiplicity (Friedland & Alford, 1991; Kraatz & Block, 2008; Thornton et al., 2012). All organizing therefore occurs in institutionally pluralistic setting (Greenwood et al., 2011; Schildt & Perkmann, 2017), but when demands of multiple logics are highly divergent or even conflicting and become to simultaneously define the means and/or ends of organizing, an organization faces institutional complexity, with which it must cope to avoid organizational paralysis (Pache & Santos, 2013a).

Institutional complexity can be divided into three analytical dimensions: level of incompatibility between the competing logics, unsettled prioritization between the logics, and jurisdictional overlap or the extent to which the demands of logics target the same jurisdictional spaces—that is, organizations (Raynard, 2016). In turn, this creates different types of complexities, such as volatile (Raynard, 2016) or contested (Besharov & Smith, 2014) complexity when logics are incompatible, lack prioritization, and affect multiple actors in the field. For example, public infrastructure projects face such a contested and volatile situation when they need to balance between contradicting logics of government bureaucracies and private enterprises (Jay, 2013; Jooste & Scott, 2012).

Organizational responses to institutional complexity range from pure avoidance and defiance (Oliver, 1991; Pache & Santos, 2010) to decoupling the symbolic representation from the actual operational structures (Boxenbaum & Jonsson, 2008; Meyer & Rowan, 1977) or seeking a

manipulated compromise between logics (Kraatz & Block, 2008). Such defensive strategies appear efficient when organizations can safeguard themselves from external pressures and when demands target organizational means rather than goals (Pache & Santos, 2010). However, they appear problematic in the volatile inter-organizational setting where a single organization does not possess sole authority or possibility for isolation (Dille et al., 2018). Therefore, more recent research (Battilana et al., 2017; Pache & Santos, 2013a; Smets et al., 2015) has proposed logic combination through hybrid organizing as a more effective means to respond to volatile institutional complexity.

2.2 Hybrid organizing as a response to institutional complexity

There exists a wealth of literature discussing hybrid organizations purely from the perspective of an organizational structure, such as describing networked forms of organizations as hybrids (see, e.g., Powell, 1990). We deviate from this line of study and explicitly focus on the stream describing a hybrid organization as a specific organizing form to combine multiple institutional logics (Battilana & Lee, 2014). More specifically, we define organizational hybridization as a change process through which organizations aim to transfer from one organizational settlement (i.e., configuration of structural and cognitive elements of organizing) into a new one by instantiating multiple societal rationales, such as institutional logics, in their values, structures, goals, and practices (Battilana et al., 2017; Schildt & Perkmann, 2017).

A hybrid form of organizing is especially necessary for organizations that (1) involve a wide variety of stakeholders, (2) pursue multiple and often conflicting goals, and (3) engage in divergent or inconsistent activities (Besharov & Smith, 2014; Mair et al., 2015). Building a hybrid organization requires forming a new organizational settlement through re-configuring and integrating different structures, practices, and cognitive elements, such as schemas from different logics, to meet external demands (Battilana et al., 2017; Schildt & Perkmann, 2017). This may occur through selective coupling, which implies the adoption of a creative mixture of

selected practices to comply with the demands of divergent logics (Pache & Santos, 2013a). The use of such practices can then be governed by creating governance mechanisms that ensure the appraisal of distinctive logics (Mair et al., 2015). Furthermore, human resource management practices and active socialization and sensegiving regarding the organization's hybridized goals and practices are reported to be essential for integrating organizational members and for constructing new cognitive schemas or ways of thinking and acting (Battilana & Dorado, 2010; Schildt & Perkmann, 2017). These efforts can be combined with congruent incentive systems for rewarding actors for attaining hybridized goals (Wittmer, 1991).

Hybridization is not a linear process and will most likely raise opposition and create uncertainty and ambiguity (Evers, 2005; Jay, 2013), as would any radical organizational change process (Greenwood & Hinings, 1996). This is particularly true when the hybrid form lacks external support (Battilana & Lee; 2014; Raynard, 2016) as well as due to internal conflicts caused by clashes of employees' existing perceptions and schemas regarding legitimate practices and goals (Bishop & Waring, 2016). While the selective coupling of external demands might prove successful for gaining external legitimacy, mitigating internal tensions typically entails employees' long-term socialization processes (Battilana & Dorado, 2010). Hence, negotiations and joint sensemaking within a hybrid organization as well as with external parties are seen as means to mitigate conflicts caused by multiple logics (Bishop & Waring, 2016; Jay, 2013).

A common feature of the reported approaches to building hybrid organizations is that they require a tremendous amount of time and effort. This casts doubt on the suitability of hybridization as a response mechanism to institutional complexity in public infrastructure projects, which are more or less inter-organizational and temporary undertakings.

2.3 A project alliance as a hybrid organizational form for public infrastructure projects

Public infrastructure projects face conflicting institutional demands when they must bring together multiple, diverse organizational actors with varying goals (Clegg et al., 2002; Jones & Lichtenstein, 2008). Unfortunately, existing public infrastructure sector procurement systems underlining traditional lump-sum contracts have been claimed to facilitate price competition instead of long-term orientation, trust building, and mitigation of (institutional) conflicts (Bygballe & Ingemansson, 2014; Dubois & Gadde, 2000). Furthermore, the structural properties of the infrastructure sector have been traditionally characterized by separated responsibilities and a low level of integration among the various actors, which create rather poor premises for a balanced combination of divergent institutional logics (Winch, 1998).

However, recent evidence indicates a shift toward more collaboration-oriented and integrated project delivery forms, such as project alliancing (Lahdenperä, 2017). From a contractual perspective, a project alliance differs from a traditional lump-sum delivery (e.g., design and construct) because it aims to accommodate the different logics of participating clients, designers, and contractors through a multi-party joint contract and commercial model. This facilitates the creation of a temporary joint alliance organization, the sharing of risk and rewards, and unanimous decision-making (Walker & Lloyd-Walker, 2015).

Therefore, a project alliance represents a temporary hybrid organization seeking to combine multiple institutional logics. The project alliancing practices, such as a joint value-for-money thought process and setting up shared key results areas (KRAs) (Walker & Lloyd-Walker, 2014) and alliance identity (Hietajärvi & Aaltonen, 2018), can be seen as attempts to find a settlement of cognitive elements or different schemas and mindsets enacted by project participants (Schildt & Perkmann, 2017). Furthermore, the early integration and co-location of designers and contractors (Kokkonen & Vaagaasar, 2017) and facilitation of interaction and socialization (Aaltonen & Turkulainen, 2018) are hallmarks of structural configurations combining the logics of

multiple professions. Thus, we define a project alliance as an integrated project organization consisting of representatives of multiple independent organizations uniting their efforts for what is often termed *best-for-project*. Hence, a project alliance is an instantiation of a hybrid organization in the specific context of project-based organizing.

We argue that setting up a project alliance requires undergoing a process of hybridization in which multiple, conflicting logics are combined and implanted into the structures and practices of a jointly formed alliance organization. As argued earlier, the inter-organizational, task-specific, and temporary nature of public projects (Burke & Morley, 2016) may significantly affect the patterns of hybridization. To investigate and clarify these potential discrepancies of organizational hybridization in temporary multi-actor projects, we next report on empirical research on the Lakeside Tunnel Alliance to address how organizational hybridization occurs in a public infrastructure alliance project.

3 RESEARCH DESIGN AND METHODS

Our in-depth, single case study on the Lakeside Tunnel Project is based on abductive reasoning (Ketokivi & Choi, 2014) through which we aimed to elaborate existing theories on the management of public infrastructure projects, institutional complexity, and hybrid organizing. We reconciled general theoretical claims with our particular findings to identify potential contextual idiosyncrasies that would provide avenues for theoretical contributions, such as explaining the process of hybridization in a temporary project context.

3.1 Case background

Our unit of analysis was the Lakeside Tunnel Project, which aimed at building a 2.3-km tunnel under the city center located in Northern Europe. An initial alliance agreement of the Lake Side Tunnel, worth 180 million Euros, was signed in July 2012 and the tunnel was completed in November 2016. Political debates, initial scoping studies, acceptance, and tendering processes

date back as far as 2008. The tunnel became a hot political theme for municipal elections in 2012. The newly elected city council finally approved the funding in September 2013 after the development phase of the project.

Furthermore, while being one of the first major alliance projects in the Northern European country of implementation (referred now on as the case country), the project was strongly linked to preceding events and actions taken by one of project's two public purchasing organizations, the National Transport Agency (NTA), and other major organizations in the infrastructure sector when they developed an project alliance model that would meet the requirements of the European Union (EU) procurement legislation. Therefore, our analysis spanned the events preceding and appearing outside of the Lakeside Tunnel Project, and we particularly focused on the front end of the project—the initial project stage before the actual funding decision, during which the legitimacy of the project is typically built between multiple parties (see, e.g., Matinheikki et al., 2016). Figure 1 presents a summary of the most prominent events during this long period of time; we have separated the events that occurred within and outside the project alliance organization.

Insert Figure 1 about here

The Lakeside Tunnel Alliance consisted of representatives of five organizations. There were two public buyers—the NTA and the City—and three private service providers—the main contractor, Infra Contractor Inc. (pseudonym), an engineering company called Rock Engineering Inc. (pseudonym) responsible for underground design, and an engineering and architecture company called General Engineering and Architecture Inc. (pseudonym) responsible for tunnel and roadway designs. The public buyers selected the private partners for the alliance through a rigorous selection process that took place in spring 2012. The selection was based on a monetary component—the service providers' requested service fee—and qualitative criteria,

such as the organizations' prior experience and capability for collaboration, which were tested in multi-day workshops. The five organizations established a multi-party alliance agreement and formed a joint alliance organization, diluting the boundaries of the participating organizations, to work together on a best-for-project basis. The alliance then developed a technical solution—a target-outturn-cost (TOC) (to be approved by the city council)—as well as a commercial model including key result areas defining the service providers' bonuses and possible sanctions and eventually implemented the project. Figure 2 illustrates the structure of the project alliance organization and shows how representatives of the different organizations were positioned.

Insert Figure 2 about here

3.2 Data collection

We collected the empirical material by interviewing representatives of the five organizations. Furthermore, we interviewed individuals from the NTA who had participated in the earlier pilot alliance project as well as prominent experts who had been influential in developing the alliance model in the case country. In total, we conducted 19 interviews. We conducted three interviews concerning the pilot project and introduction of the alliance model during November and December 2014, and 12 interviews regarding the Lakeside Tunnel Project in February and March 2015. Furthermore, in 2016, we interviewed two local alliance consultants, in 2017, one senior researcher, and in 2018, an Australian alliance consultant, who all had played pivotal roles in setting up and developing the project alliance model in the case country. Interviews lasted between 86 and 120 minutes and all were recorded and transcribed verbatim. The interviews were semi-structured and focused on the interviewees' backgrounds in the construction industry, their descriptions of project-related, as well as preceding, events, the project's management, and the roles of different organizations and individuals. Table 1 presents the interviewees' roles, professional backgrounds, and organizations, along with the duration

and place of the interviews. The interviews were conducted in the local language and the quotations used in the paper were translated into English by the authors (except the Australian consultant, whom we interviewed in English).

To triangulate our primary data sources, we collected extensive secondary data by following the intensive media discussion on the Lakeside Tunnel Project and the introduction of the alliance model in the case context (a database of 123 case-specific news articles retrieved from one local and one national newspaper by using the search keyword “project alliance”), as well as receiving rich project documentation, such as official project plans, innovation reports, a value-for-money report, and press releases. Furthermore, we retrieved publicly available minutes of city council meetings that dealt with the funding decisions of the Lakeside Tunnel Project, which helped with triangulation and the general laws and regulations governing the construction of public infrastructure.

Insert Table 1 about here

3.3 Data analysis

3.3.1 Identification of institutional logics, their varied demands, and the conflicts they cause

The first stage of our analysis was aimed at understanding which institutional logics were at play in the context of the Lakeside Tunnel Project. To this end, we applied an abductive “pattern matching approach” (Reay & Jones, 2016). As our analytical framework, we used the seven ideal types of institutional logics (family, religion, state, market, profession, corporation, and community) given by Friedland and Alford (1991) and Thornton et al. (2012). At this stage, we analyzed our interviewees’ descriptions of varying demands placed on public infrastructure projects in general and on the Lakeside Tunnel Project in particular, as well as a wide variety of secondary material describing conventional contracting practices and legal requirements (industry reports, public procurement law, industry regulations, and media sources). Thereafter,

we linked these demands with the ideal types of institutional logics. Through this abductive analysis process (comparing empirical findings with existing literature), we identified the three prevalent logics of the bureaucratic state, corporate market, and professions. We perceived the corporate market logic as a combination of two ideal types (corporate and market) rather than two separate logics, as was done by Jay (2013). This is because we identified closely intertwined threads of these logics, such as the emergence of hierarchical corporate structures in public projects to improve efficiency and allow private companies to accumulate greater profits. We illustrate the results of this analysis in sub-section 4.1 and summarize the results in Table 2.

Identifying the different institutional demands, gave us a clear indication that public infrastructure projects in our case context are subject to demands of multiple institutional logics (i.e. institutional pluralism/multiplicity). Furthermore, when we analyzed our informants' explanations about the perceived key problems in the field and their experiences in past infrastructure projects, we became more convinced that these plural demands had created conflicts, such as a constant juxtaposition of public and private organizations and a lack of collaboration between different professions. Therefore, we concluded that multiple logics were aggregated into institutional complexity in public infrastructure projects, which the NTA wanted to solve by adopting project alliancing. We explain some of the conflicts in depth at the end of sub-section 4.1.

3.3.2 Identification of mechanisms of hybridization

At the second stage of our analysis, we wanted to understand how the NTA and other organizations responded to institutional complexity; therefore, we applied a more inductive analysis approach (Gioia et al., 2013). We initiated this stage by creating a chronological storyline of events that took place between 2008 and 2015. To cope with retrospective and

positive biases, we utilized multiple interviewees' descriptions as well as the described archival data.

To understand how the adoption of alliancing happened, we first aimed to identify initial concepts related to different mechanisms through which conflicting demands were responded to when initiating and implementing the Lakeside Tunnel Project and then group these mechanisms into categories. Through the first-order coding of important events and actions, we initially found a pattern of the importance of the NTA's pre-project actions to ensure the legitimacy of the alliance model as well as to convince project stakeholders of the model's suitability for the Lakeside Tunnel Project. Furthermore, we identified multiple mechanisms of how the formed alliance organization attempted to cope with different institutional demands.

We then endeavored to put these first-order descriptions into more meaningful and theory-related categories (second-order themes) and employ axial coding to identify potential relationships between the themes (Gioia et al., 2013) and aggregate these relationships into two different hybridization mechanisms—*responses to external demands* and *mitigation of internal tension*—creating a clear data structure, which is illustrated in Figure 3 involving also the identified demands of multiple institutional logics. Finally, by accounting for temporal relationships between the second-order themes, we utilized the data structure to formulate a conceptual process model (Langley, 1999) of temporary hybridization, shown in Figure 4. To increase the trustworthiness of our data and the transparency of our analysis, we have provided representative quotations related to each second-order theme in Appendix A1.

Insert Figure 3 about here

4 TEMPORARY HYBRIDIZATION IN THE LAKESIDE TUNNEL PROJECT

We begin this section by showing how different institutional logics instantiated themselves and created institutional complexity. Then we explain how the conflicting demands of multiple logics

were responded to through project alliancing. Based on our inductive analysis, we delineated the conceptual process model of temporary hybridization in Figure 4.

Insert Figure 4 about here

4.1 Conflicting demands of multiple institutional logics causing institutional complexity

We identified that the Lakeside Tunnel Project faced strong pressures from the three distinct logics of the corporate market, bureaucratic state, and professions. We summarize the results of pattern-matching efforts in Table 2, which describes the basic variable attributes of each logic (the Y-axis; adopted from Thornton et al., 2012) and provides our interpretations of the empirical instantiation of these attributes (the X-axis).

Insert Table 2 about here

4.1.1 Corporate market logic

In the public infrastructure sector, the corporate market logic emphasizes that markets are the most efficient means of acquiring public goods and services, and that private corporations should offer their services to public organizations (via markets) to generate profits and increase their market share to create value for shareholders. Our interviewees labeled contractors in particular as being focused on profit-making and self-interested gains, as well as on the narrow temporal dimension (quarterly cycles) in their cognitive processes. One informant working on the contractor side describes such behavior as follows:

“It feels like learned behaviour, but contractors tend to be really calculative, disclose information and tell about problems only when they really have to.”

In addition to private companies, public agencies, such as the NTA, were forced to utilize market mechanisms to appear legitimate and comply with the public procurement legislation. This is explicitly highlighted in the procurement law (2 §), which states that “the purpose of the law is to improve the efficient use of public funds, advance the implementation of high quality, innovative

and sustainable procurements and secure the equal opportunities of private companies and other collectives to offer goods, services and construction projects in the bidding contests of public procurements.” Thus, the law emphasizes the importance of competitive bidding and market transactions as plausible means of achieving high quality, innovativeness, and sustainability. Unfortunately, our interviewees reported that the law had led to situations where private companies attempted to minimize the project’s scope in their bids to win the deal and then reap profits by extending the scope and billing for extra work, which is clearly in conflict with the quality and cost-efficiency requirements of the public sector.

4.1.2 Bureaucratic state logic

The bureaucratic state logic underlines the importance of transparent and democratic decision-making, a strong welfare state, and public ownership of infrastructure assets. The NTA is a state bureau responsible for the country’s roads, railways, and waterways, and it operates directly under the Ministry of Transport and Communications. This implies that the annual budget for infrastructure development is prepared by the NTA together with the Ministry, and final acceptance is undertaken by the national parliament. The Lakeside Tunnel Project, like any major public infrastructure project, needed to undergo a long political process to receive acceptance by both the national parliament and local city council, which both allocated the funding (30% by the state, 70% by the city). The national parliament accepted its funding proportion in 2012, but the city’s funding proportion initiated a political battle that prolonged the final decision of the city council to September 2013. Such long civic decision-making process can also leave the project budget open for politicizing such as deliberate cost cutting by politicians trying to save their political careers (see e.g. Flyvbjerg, 2014). One informant describes the potential for po as follows:

“Sometimes, these projects feel like a great pyramid scheme meaning that some politician has decided the upper cost limit and then we [contractors] need just implement it with that, no questions asked.”

Furthermore, as a state bureau, the NTA’s goal was not to make a profit out of its assets; instead, its projects were always aimed at producing a publicly available good, since there existed strong national opposition to the privatization of infrastructure assets. The NTA managers had perceived it to be difficult to combine a goal that had a longer time horizon with private companies’ shorter-term profit-making goals. Interestingly, the public procurement law was considered to amplify institutional tensions because the requirement of competitive bidding had made the formation of longer-term partnerships nearly impossible. In addition, major projects were at risk of becoming divided into too many poorly integrated individual pieces.

4.1.3 Professional logics

In addition to the logics of the corporate market and bureaucratic state, the logics of individual professional groups were identifiable in the case context. The public infrastructure sector is a relatively mature field comprising rather segregated professions, such as architects, designers (e.g., structural engineers), contractors (e.g., construction managers), and public servants. Each of these groups of professions appeared to have its own professional associations that created a strong sense of identity in each group. For example, the National Association of Civil Engineers did not allow anyone without a master’s degree in civil engineering to become a member. Furthermore, national construction regulations, which were developed as an extension of, and in congruence with, national construction law, determined the specific qualification requirements (e.g., minimum years of experience, professional certificates) for different roles (e.g., designers, construction managers, architects). The regulations also strongly determined acceptable design principles as well as construction and management practices. Our interviewees reported that such specialization in professional groups had led to a low level of collaboration and suspicious

attitudes toward other groups. Such segregation appeared to surface during higher education, when different professions were considered as separate disciplines with their own education programs.

4.1.4 Conflicting demands causing institutional complexity

Our empirical analysis showed how the three logics of the corporate market, bureaucratic state, and professions created divergent and even conflicting demands in the context of public projects, such as the Lakeside Tunnel. We argue that these demands then came to perplex the organization of public infrastructure projects and create institutional complexity. The complexity seems to have appeared especially as conflicts between the corporate market and bureaucratic state logics, but also within the logics of professions due to the actors' different professional backgrounds.

The fundamental discrepancy between the goals of the bureaucratic state and corporate market logics (i.e., public good vs. private profits) reportedly reinforced a constant juxtaposition of the public buyer and private service providers. The former typically accused the latter of delivering poor quality and reaping profits through billing for extra work, while the latter blamed the former for slow and bureaucratic decision-making and micro-managing. As we explain in the following sub-sections, our informants saw project alliancing as a potential way to mitigate this juxtaposition, as one of the interviewees from the private sector explained:

“The big thing here is that these kinds of constant disputes with the buyer, which consume a lot of energy, are non-existent [in a project alliance]. The focus is on actions, not in any kind of gimmickry of billing or wondering about extra work, which happens in usual projects.”

In addition, in many ways, it was unclear for the actors which logic must have been followed for public projects to appear legitimate, since there seemed not to exist any field-level prioritization

of logics; rather, the strongest party seemed to dictate the rules of the project, which created a situation of volatile complexity (Raynard, 2016).

Furthermore, the diverging norms, practices, and codes of conduct of different professions or professional logics appeared to create friction in conventional projects, but also during the initial stages of the Lakeside Tunnel Project. One informant described the drastic differences in the mind-sets of contractors and designers, which caused problems in project organizing (e.g., scheduling), amplified by institutional support (i.e., institutionalized conventional contract forms and incentive models):

“In general, the contractor has a great interest to just get the project implemented efficiently and quickly. That also forms the incentives for the contractor while the designer’s reward is based on the quality of the design (not on efficiency). They have this kind of differing perspective... This forms some sorts of contradictions when a contractor wants that things proceed quickly and the designer has different role-related goals.”

In the following sub-sections, we explain how the NTA and other Lakeside Tunnel Project participants adopted project alliancing principles to construct a hybrid organization combining the rationales of different logics into their modus operandi, which helped in responding to external demands and mitigating internal tensions.

4.2 Responding to external demands

4.2.1 Publicizing a new hybrid form of organizing

In 2009, a group of NTA managers heard an Australian consultant’s conference presentation explaining the benefits of project alliancing in undertaking complex infrastructure projects. The managers marked this as the starting point for them to seek alternative ways of procuring infrastructure assets. However, they soon learned that researchers of the National Research

Centre (NRC) had already undertaken research on new types of procurement models, which led the NTA and the NRC to undertake a joint research project exploring the suitability of the alliance model in the case context. At this point, the Australian alliance model's compliance with European procurement legislation was unclear. The legislation dictated that the selection of suppliers should be at least partially based on clear monetary component (i.e. project price). The basic principle of project alliancing is that the project budget or target outturn cost be jointly developed with a buyer and alliance members, thereby complicating bidding based on the total price of the project. In the research project, legal specialists and numerous major private and public organizations were consulted to resolve the clash with the procurement law. As an outcome, the NRC published a report delineating a "competitive single target cost approach to project alliancing," which met the demands of the European procurement law by basing the competitive bidding on private providers' profit margin or service fee rather than on the total price of the project (for a better description of the approach, see Lahdenperä, 2010). The NTA's director described the importance of solving the legal issue:

"We [the NTA] had the courage and capability to interpret the public procurement legislation in a clever way. Everybody out there in other countries said that this was against the EU directives. But we have used our internal as well as external lawyers and they have said that there is no conflict. We just need to add a certain monetary component as one bidding criterion. Apparently, elsewhere, there has not been the courage or will to do this."

The report ensured compliance with legislative institutional pressures on the public buyers and legitimized the use of the project alliance model in the case country; it also gave the NTA managers an opportunity to adopt the model for the first time in a rail refurbishment project in 2011. The pilot project proved to be successful and important for developing the NTA's internal routines for selecting members of the alliance organizations and undertaking work in a highly

collaborative environment. However, the project was technically and organizationally rather simple and without much of a political dimension, since the NTA, as the sole public buyer, did not need to convince other parties of the benefits of the model. Therefore, it was not until the Lakeside Tunnel Project that the capability of project alliancing to solve an even greater number of institutional demands was put to an acid test.

4.2.2 Receiving social acceptance from project stakeholders

The NTA's decision to implement the Lakeside Tunnel Project through an alliance model required acceptance from the city council. The NTA managers had already had a promising discussion with the representatives of the City Planning Department, whose managers also saw great potential in alliancing. Thus, the NTA managers and a local alliance consultant organized a seminar for the city council and invited an Australian consultant to explain the fundamentals of project alliancing. Then the NTA managers, with the support of the City Planning Department, emphasized the cost-saving opportunities that alliancing could offer when the project plan and TOC were estimated jointly with designers and contractors and referring to successful Australian cases. The Australian consultant recalls the seminar as follows:

“Mr A (a manager of the NTA) and Mr B (project alliancing consultant) invited me to Finland to co-organize a seminar for the tunnel project stakeholders such as city council members. The seminar was predominantly given by me and these guys were co-facilitators, we had professional translators and all. I think that some people in the audience were really against the project but I got an impression that they got the idea of alliancing.”

The economic rationale and potential savings in project budget helped convince the city council, which decided in January 2012 that a project alliance between the City Planning Department and the NTA should be formed. They were given permission to open a public bidding process to

select private service providers. However, at this point, it was not yet guaranteed that the project would actually be implemented, because the final funding decision had yet to be reached.

4.2.3 Selective coupling of external demands

In summer 2012, after a rigorous selection process, the multi-party alliance organization was formed among the five organizations, which then set to establish the project concept, TOC, as well as a governance structure defining the project goals and incentive system. After receiving a detailed project plan and budget, the newly elected city council finally showed the green light and accepted the funding scheme in September 2013. Some of the informants as well as media outlets described this as somewhat surprising, since the project had received negative publicity before the municipal elections and had been criticized for being far too expensive. The positive decision required four local politicians to vote against their party's election promise to halt the project. These individuals justified their radical decision by stating that the technical solution developed by the alliance was the most feasible one and that the tunnel would improve the economic climate of the city.

After the positive decision and when the project implementation proceeded, the tunnel project actually began to receive much more positive attention in the media and eventually received the annual prize of the National Association of Civil Engineers in 2016 and the project of the year award from the National Project Management Association in 2017. Hence, our interviewees, local and national media, and the overall construction industry perceived the Lakeside Tunnel Project as successful (in terms of budget, schedule, usability of the tunnel, and management of public relations).

We argue that this was at least partially because the key organizations, the NTA and the City Planning Department, were able to selectively couple with external demands to gain legitimacy from various sources. Despite the delay in the political decision-making process, it was considered to be a necessary approach for project approval in order to appear legitimate in the

eyes of the citizens by giving them a possibility to at least indirectly participate in the decision-making through the elections. This implied that the city council's final decision was considered democratically sound and unquestionable. A representative of the City Planning Department described the importance of the final positive decision as follows:

“The city council’s positive funding decision required a really heavy decision-making process. The discussion circled, of course, around project costs, but a clear question mark was about whether this [alliance] model can really work and ensure the benefits it promises. The applicability of the alliance model was constantly pointed out by the political opposition. We just needed to provide different clarifications, reports, and references time after time before they finally were assured that it could work.”

In a similar vein, the selection of alliance partners was organized through competitive bidding, which ensured compliance with the procurement law. Using bidders' service fees (resembling suppliers' profits) as a selection criterion complied with the corporate market logic, when open but reasonable profit generation was allowed for private companies. Most importantly, the negotiation-based process enabled the selection of private service providers with the best capabilities and experience, further legitimizing the project. Finally, the joint alliance organization resembled a typical corporate hierarchical structure, satisfying the demands of the corporate market logic by providing efficiency in internal communications and an improved platform for innovation.

4.3 Mitigating internal tensions

4.3.1 Jointly forming structures to align goals and unify actions

The essence of project alliancing is to form a contract and a commercial model that allows all organizations to benefit from the project. This implies that the Lakeside Tunnel Project aimed to

provide a public good in the most cost-efficient manner in accordance with the bureaucratic state logic, but also allowed reasonable profits for private service providers, thereby complying with the corporate market logic. The alliance members crafted the alliance contract and the commercial model that defined the incentive structure explicitly to reflect this ideal; this implied that all service providers would receive higher bonuses if they would bear the TOC. For example, the contractor and designers would gain monetary bonuses if the target cost went under 5%. A manager of a private contractor described the clarity and importance of the contract as a behavior-guiding artifact as follows:

“Well, if I exaggerate a bit, when one just once skims through the alliance contract, one does not need to take another look, because it defines pretty well what we need to do. However, it does not involve any complex clauses about fines or anything because there is no need for such things, since we are in this together. The contract is really clear, which is a good thing, since in conventional cases, one needs to interpret the contract with a magnifying glass.”

To ensure that the project worked toward a shared interest, the alliance adopted a corporate-like governance structure, such as a separate alliance leadership team (resembling the board of directors of a private company) and alliance management team (resembling the top management team of a private company), both having representatives of all the alliance members. Hence, such a governance structure would allow for integrating different organizations, but also enhance efficiency in the decision-making. Furthermore, since such a hierarchical decision-making structure complied with the typical structure of business corporations as well as state bureaucracies, it helped the project participants to better understand their role and the line of command within the temporary alliance organization. Moreover, they did not need to request acceptance from their home organizations.

Finally, potential conflicts among diverse organizations were mitigated by symbolically emphasizing that all organizations were in the same boat and working toward achieving the best for the project. Such rhetoric was clearly visible in the project contract and project documents as well as in the everyday language used by our interviewees.

4.3.2 Ensuring adaptive capacity

The NTA managers were aware that because project alliancing was a new delivery model in the case study country, it would be basically unknown to everyone except for a few NTA employees who had participated in the pilot project. To overcome potential organizational inertia and mitigate the risk of resistance, rigorous psychological testing of all key persons within the alliance organization was undertaken to ensure that they were sufficiently adaptive to comply with divergent demands. Furthermore, the last round of the selection process for private service providers involved a series of workshops that modeled the routine tasks performed in an alliance organization, while third-party organizational psychologists analyzed the performance of two remaining consortiums. In addition, the consortiums needed to provide comprehensive clarification regarding their experience and capabilities from technically similar projects. By adopting these extreme means in selecting the organizations and individual employees, the NTA managers wanted to verify both the technical capacity of service providers and the adaptive capacity of individual employees and ensure that they would be capable of working within the highly pluralistic context of the Lakeside Tunnel Project.

4.3.3 Period of ambiguity

Despite the handpicking of individuals and the creation of supporting structures and mechanisms, strong ambiguity existed at the beginning of the project, when employees were not familiar with what was legitimate in the alliance organization or whose goals to pursue. Questions such as what to do first and who was in charge kept arising. The parallel existence of multiple professional norms partially persisted in day-to-day interactions and practices, such as

in project meetings where different organizations framed their own problems as the most important ones. However, as the project proceeded and participants learned from their experiences, they shifted their emphasis from thinking about “their” problems to “the project’s” problems.

4.3.4 Blending diverse professional groups

The major problems from which the ambiguity seemed to arise were the internal roles of the project employees and potential conflict among the professional logics of different groups. Therefore, to combine the different professional logics, a series of amendments to the organizational structure and daily routines, sensegiving efforts, and training were required to eventually beat the period of ambiguity when different professional groups began to interact and work with the actual tasks of designing the tunnel. In addition, the interviewees emphasized the importance of alliance training as a clear attempt to explain what was expected from them. The public relations (PR) manager described this as follows:

“Orientation is one thing in which we introduce the fundamental principles of the alliance model. Then, we have these development days every now and then; for example, the next one is tomorrow. We organize these scheduling workshops in which we carefully analyze all the tasks to be undertaken during the next six months. There we have all the disciplines present—designers, contractors, and so on. And at the very beginning, we had this alliance training or coaching where we had an external consultant, Mr. N.N. He also facilitates these scheduling days as well as some other workshops and joins the development days.”

The basic rationale given in the training was that the point of the alliance was not to change anything too dramatically; the professionals were given the opportunity to focus completely on their specific duties in constructing the tunnel without any additional burden from their home organizations. Furthermore, co-locating all the alliance’s employees to a shared co-locational

space, or “Big Room,” next to the project site helped blend employees with different professional backgrounds and increase informal interaction across professions. For example, the close proximity of the project site allowed designers to quickly visit the site and give advice to contractors regarding the actual implementation of their design; thus, this helped to increase collaboration among the diverse professional groups and mitigate any negative stereotypical beliefs about each profession. Continuous training and shared workshops increased social interaction and trust, which were further facilitated through the common rhetoric of labeling everyone as being in the same boat and working toward achieving the best for the project.

4.4 Temporary combination of multiple logics

We argue that the series of events and actions described above led to the temporary combination of multiple institutional logics within the formed alliance organization. This means that the Lakeside Tunnel Alliance, as a hybrid organization, did not overrule or favor any of the institutional sources of legitimacy but adopted specific structures, practices, and cognitive elements to harmonize the discrepancies among the logics by deliberately seeking compliance with the diverging demands. For example, the public buyers—the NTA and the City Planning Department—did not deny the effectiveness of market mechanisms and profit-making of the private companies, which the corporate market logic demands. On the contrary, they aimed to utilize these mechanisms by openly asking private companies to bid for the project and offering them a fair share of the profit if the project succeeded. In a similar vein, an institutional refinement of the Australian-based alliance contract model was required to meet the EU procurement laws and regulations and ensure consistency with the bureaucratic state logic. Furthermore, the underlying strategy of the bureaucratic state logic, to produce a public good, was enforced by assuring that the needs of the community were met—such as safety, the usability of the tunnel, and media image—by jointly developing incentive mechanisms that would reward alliance participants for accounting for the communal aspect of the project.

To cope with the short period of ambiguity and internal tensions within the formed hybrid organization, a careful selection of employees was required to ensure that they would be adaptive to a logic-combining context. In addition, training, planned isolation, and blending of multiple professional groups enabled employees with different organizational backgrounds to find a common tone and comply with the demands of different professional logics through increased collaboration. Table 3 summarizes the identified mechanisms of temporary hybridization through which the Lakeside Tunnel Alliance complied with the conflicting demands of multiple institutional logics.

Insert Table 3 about here

5 CONCLUDING DISCUSSION

The research on institutional complexity describes hybrid organizations as an effective means to respond to the conflicting demands of multiple institutional logics (Battilana & Lee, 2014; Battilana et al., 2017; Mair et al., 2015; Pache & Santos, 2013a). Previous theorizations and empirical examples of hybrid organizations predominantly assume that the process of hybridization occurs in a more or less permanent organization and possesses sufficient power and capability to alter its structures and practices (Schildt & Perkmann, 2017). However, this is rarely the case in the domain of public infrastructure projects, which are inter-organizational and temporary by their nature. Our study examined how organizational hybridization occurred in a public infrastructure alliance project. As an outcome of our empirical analysis of the Lakeside Tunnel Project, we presented a conceptual process model of temporary hybridization in Figure 4.

The first stage of the model, publicizing a new hybrid form of organizing, emphasizes the importance of more permanent field-level structures (Clegg et al., 2002; Grabher, 2003; Sydow & Staber, 2002; Sydow et al., 2004) as determinants of organizing in projects. Project alliancing, as a new form of organizing in the case context, probably was not introduced and developed

within the project because the project stakeholders would not have considered it legitimate to use a major and politically sensitive infrastructure project as a testing ground. Instead, multiple years of developmental work through research projects, motivated by positive results from Australia, as well as the testing of the alliance form of organizing on a smaller scale—the “vanguard project” (Brady & Davies, 2004)—were mandatory for establishing legitimacy internally and externally. Such preliminary stage in hybridization complements the existing view that hybrid forms of organizing, like any new organizational form, do not necessarily develop in a vacuum but may be adopted from other institutional fields (see, e.g., Zietsma & Lawrence, 2010).

The second stage of the model shows that since the NTA did not have the authority to dictate rules, receiving social acceptance from other project stakeholders was necessary for the adoption of the hybrid form. The demand for acceptance stems from the basic nature of public projects as having complex social and organizational settings in which even a powerful actor cannot command by fiat (Matinheikki et al., 2016). We complement the work of Bishop and Waring (2016), who describe the process of hybridization as one that occurs through micro-level negotiations among different parties. Our findings imply that the negotiations were not only aimed at mitigating potential tensions in the process of organizing but also at ensuring the external legitimacy of the hybrid form itself and thus complement the existing view of organizational fields as enabling but dynamic structures for new public procurement models (Jooste & Scott, 2012).

The third stage of the model regarding selective coupling with external demands complements the existing view of selective coupling as “the purposeful enactment of selected practices among a pool of competing alternatives” (Pache & Santos, 2013a: 994) by showing that selective coupling is not merely an enactment of existing practices but also involves devising new practices (e.g., competitive bidding based on a service fee) as well as developing overall

structures (incentive structure based on key result areas), which selectively meet the demands of multiple logics. Thus, we conclude that in the context of public infrastructure projects, which must comply with the demands of multiple logics, projects should adopt a form of a dissenting hybrid (Mair et al., 2015).

With regard to internal tensions that arose mostly from divergent professional logics during the fourth stage of the model, we found that jointly crafted mechanisms, such as the governance and incentive system, partially helped mitigate internal conflicts when the diverse goals of public and private actors were harmonized. This joint effort enabled different organizations to build consensus and overcome their categorical demands (e.g., profit-making) and form new situated norms to guide the organizing. The development of such jointly agreed and situated goals, behavioral norms and institutions reportedly spur collective action (Matinheikki et al., 2017a; Ostrom, 1990). Our findings complement the recent views underlining the importance of formally and informally governed collective action for successfully undertaking public infrastructure projects (Gil & Pinto, 2018) by emphasizing their capability to mitigate institutional conflicts.

Despite the jointly crafted governance structure, a period of ambiguity arose during the fifth stage of our model. It seems evident that such a period and even strong opposition would emerge in radical organizational change, such as hybridization, which is aimed at revising cognitive schemes or complete mindsets of individuals (Greenwood & Hinings, 1997; Schildt & Perkmann, 2017). Our model indicates the pivotal role of well-established structures, official training programs, and hand-picking individuals on the basis of their adaptive capacity (the sixth stage in the model), which enabled the employees to overcome the period of ambiguity (as reported also by Battilana & Dorado, 2010; Besharov & Smith, 2014). In addition, routine interaction played an even more important role as a mediator between formal governance mechanisms and solving institutional tensions (for similar findings in the PPP context see Benítez-Ávila et al., 2018), enabling representatives of different professions to overcome

persistent beliefs and focus on a common goal—constructing the tunnel in the best manner possible. In our case, this dialogue and interaction were achieved through a blended organizational structure, as indicated during the seventh stage of the model.

Therefore, we argue that the process of temporary hybridization may eventually lead to a balanced combination of multiple logics and that such a process is fundamentally rooted in interaction and negotiations (Bishop & Waring, 2016; Jay, 2013) between actors, who are forced to combine different logics in their actions. This outcome of logic combination was illustrated in the eighth stage of the model.

Finally, we reflect upon the temporariness of the logic combination outcome and the indicated termination point of the temporary organization in the model. Although our results reveal that the template of a hybrid form had become partially available in the field, complying the previous views on the embeddedness of projects in surrounding knowledge and other social structures (Jones & Lichtenstein, 2008; Sydow et al., 2004), our empirical findings indicate that the logic combination was not a permanent end-state of the project. Instead, our interviewees were reasonably confident that their organization will continue to mainly undertake conventional projects, despite the experienced benefits of alliancing. They considered project alliancing to be suitable for extremely risky projects. Therefore, our model possesses a linkage leading back to the field-level institutional complexity after the termination of the temporary hybrid organization. This leads to an interesting yet under-researched question regarding the role of social structures—such as organizing templates, experience sharing, and the evolution of industry standards and norms—in disseminating organizational response mechanisms to institutional complexities within the organizational field (see, e.g., Micelotta et al., 2017). Our empirical analysis revealed only weak threads of knowledge dissemination through lessons learned among other field actors. In addition, it would be highly unlikely that the organizations that participated in the Lakeside Tunnel Alliance will ever form another identical hybrid organization.

Hence, a question remains: In what kind of structure will the knowledge of the process of temporary hybridization remain, if at all? We would suggest examining not just industry standards and an organization's internal knowledge repositories but also professionals and their practices, through which projects are undertaken (Grabher & Thiel, 2015; Javernick-Will & Scott, 2011).

5.1 Implications for theory

Our study makes an important contribution to the scholarly knowledge of hybrid organizations and management of public infrastructure projects. We have developed a conceptual process model showing that institutional complexity can be responded to by adopting a hybrid form of organizing in a temporary organization.

Our study also contributes to the trend in institutional theory of hybrid organizing of responding to institutional complexity (Battilana & Dorado, 2010; Jay, 2013; Mair et al., 2015; Pache & Santos, 2013a) by adopting an inter-organizational and temporary-project perspective. In general, our findings empirically validate the existing theoretical argument that project-based and task-oriented arrangements are effective means of responding to volatile institutional complexity (Raynard, 2016) and facilitating institutional change (Matinheikki et al., 2017b; Tukiainen & Granqvist, 2016). In addition, we provide nascent theorizing on how the temporary nature of projects affects organizational hybridization. To that end, we define temporary hybridization as a process aimed at combining the multiple institutional logics into the goals, structures, and practices of a temporary organization set to achieve a given task in a limited period of time.

For project management scholars, we want to emphasize that in addition to various types of complexities (Geraldi et al., 2011), public infrastructure projects face and should respond to institutional complexity. Thus, we complement the nascent stream of theory arguing that the

challenges of project organizing may arise from the project's institutional setting (Biesenthal et al., 2018; Dille et al., 2018; Javernick-Will & Scott, 2011; Morris & Geraldi, 2011). More specifically, we add the process of temporary hybridization to involve the development of a set of different mechanisms through which conflicting institutional demands and internal tensions can be handled within inter-organizational projects. Further, we show that such responses cannot be taken only in the domain of temporary organizing; certain preceding actions are also required by more permanent organizations and field-level actors to make hybrid organizing templates available and accepted in the field (Jooste & Scott, 2012). This finding complements existing views regarding the embeddedness of projects and the role of field-level knowledge structures (Grabher & Thiel, 2015; Sydow et al., 2004), thereby blurring the line between temporary and permanent organizing by showing them as two closely interlinked domains (Stjerne & Svejenova, 2016; Winch, 2014).

In addition, our study contributes to the specific arena of project alliancing and management of public infrastructure projects by showing that the reported success of alliance contracts (Suprpto et al., 2016; Walker et al., 2015) not only results from increased collaboration and better integration and coordination but also from the capability of alliances, as hybrid organizations, to overcome institutional tensions. We consider this relevant because it can enable project managers and researchers alike to target their efforts beyond the micro-managing of tasks. This study illustrates how to ensure the creation of social structures and working environments (Walker & Lloyd-Walker, 2014), and the adoption of practices that facilitate meeting external demands and mitigating internal tensions caused by multiple institutional logics.

5.2 Implications for practice

Despite the theoretical focus of this paper, we want to underline that understanding the social aspects of project organizing is an essential requirement of modern project management

practice. Therefore, it is crucial for managers to understand that major infrastructure projects need to identify and satisfy the demands of multiple institutional logics. We have delineated project alliancing as one potential organizational response to the institutional complexity caused by the presence of multiple logics. The essence of alliancing is not just mindlessly applying it to one's project but carefully considering how the jointly developed incentives and governance structures may mitigate both external demands and internal tensions. Table 3 could especially provide managers potential ideas on how the project alliancing principles may be used to resolve institutional conflicts.

5.3 Limitations and avenues for future research

We acknowledge that our single case study on the Lakeside Tunnel Project was purely based on interviews with a group of key individuals and a vast number of documents, thus permitting only an analytical generalization of the findings (i.e., the conceptual model). We encourage other researchers examining projects in different institutional settings to continue providing rich empirical examples of how the institutional context not just defines but potentially complicates project-based organizing and how temporary hybridization may mitigate tensions. In addition, more micro-level descriptions through participant observations would further enhance the understanding of the routine interactions in which institutional logics are reproduced and how potential conflicts are faced and mitigated. Such an approach might further explain how the temporary project setting actually hinders or facilitates combining logics at the individual level and make an important contribution to the growing body of knowledge of individual responses to institutional complexity (see, e.g., Pache & Santos, 2013b; Smets et al., 2015).

Finally, what our current observations do not tell us is how the story of project alliancing in the case country continues and how the project events could feed field-level structures. So far, we have settled for indicating that institutional complexity persists after the dissolution of the temporary organization. However, an interesting question remains: Could the new hybrid form of

delivering projects become institutionalized and start functioning as a new hybrid logic in its own right? Addressing such questions might provide a fruitful contribution to the nascent stream of institutional theory that aims to explain which organizational responses to institutional complexity trickle back down to the field and which are more likely to remain local (Micelotta et al., 2017; York et al., 2016).

The theorization of projects, organizations and institutions appears to be maturing, and we hope that our linkage of these literature streams with that of hybrid organizations will enable a more fine-grained understanding of the roles and dynamics of institutions governing and being shaped by project-based organizing.

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Figure captions

Figure 1. Timeline showing the most prominent case events

Figure 2. Simplified organizational structure of the Lakeside Tunnel Alliance

Figure 3. Data structure

Figure 4. Conceptual process model of temporary hybridization

Events occurring outside the project organization

NTA's managers' participate in a conference in Germany and got convinced about project alliancing

City council's accepts NTA's suggestion to implement the Lakeside Tunnel Project as an alliance

Explicit event

(Project) phase

Research report showing that alliancing complies with EU-legislation

NTA's decision to begin using project alliancing

City council's final positive funding decision

Implementation of a smaller scale rail refurbishment project as a pilot alliance project by NTA (2012-2015)

2009

12/2010

12/2011

5/2012

7/2012

9/2013

10/2013

11/2016

Events occurring within the project organization

Request for proposals. Five consortiums. Rigor selection process.

Formation of the alliance organization, alliance training and project development

Project execution

Signing of the alliance agreement with the selected consortium.

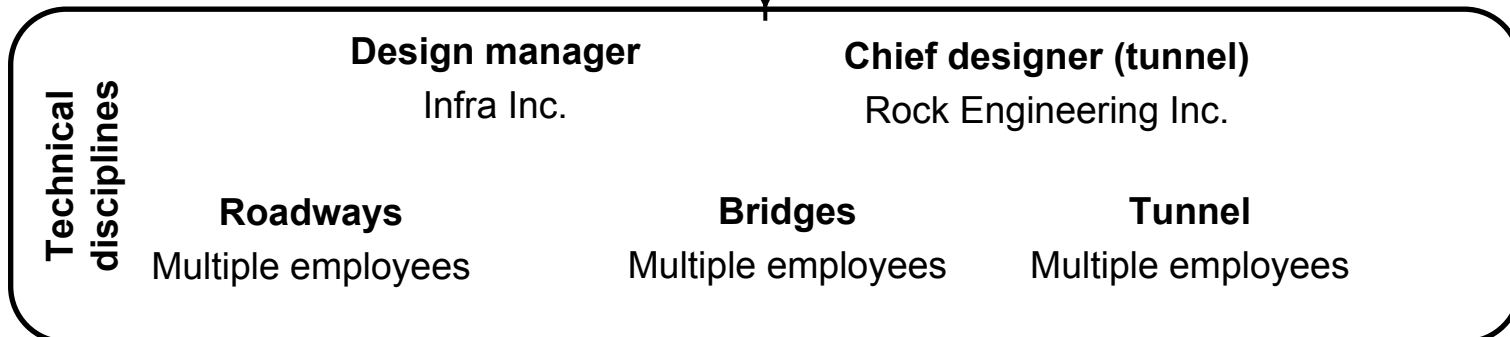
Project execution agreement signed. Project execution begins.

Project finished half a year early. Five-year guarantee period starts.

Alliance leadership team (ALT)

Representatives of each of the five alliance participants and a permit issuing authority

Alliance consultant
Consulting Inc.



First Order Concepts

Second Order Themes

Aggregate Dimensions

- Call for transparency in decision-making and safeguarding tax-payers money
- Public procurement law restraining choice of suppliers and requiring a bureaucratic selection process

Demands of bureaucratic state logic

- Private companies have pressures to make profit from projects
- Public buyer has legal pressure to select suppliers through competitive bidding from market
- Hierarchical project organizations

Demands of corporate market logic

- Professional standards defining the used practices and qualifications of the project employees
- Pre-defined professional roles
- Distinct higher education programs for each profession

Demands of professional logics

- NTA's managers gained knowledge about project alliancing in an international conference
- Organizing a joint research project with NRC
- Research project and consultation of legal specialists show that alliance model can be used without violating the procurement law
- NTA top management decision to initiate a pilot project and consequently to use alliancing in the Lakeside Tunnel Project

Publicizing a new hybrid form of organizing projects

- Negotiations with the representatives of the City about alliance model
- Lobbying the model to the city council
- Emphasizing possibilities for cost reductions through alliancing
- City council accepts the use of alliance model

Receiving social acceptance from project stakeholders

- Publicly open political project acceptance process
- Open competitive bidding based on qualitative criteria and profit margin
- An alliance contract meeting the standard legal requirements
- Inclusion of a representative of issuing authority in the alliance board
- Joint alliance organization diluting organizational boundaries
- Organizing community hearings and putting extra emphasis on public relations management by measuring the tone of project media coverage

Selective coupling of external demands

- Alliance agreement encouraging collaboration and preventing conflict solution through court
- Jointly set Key Result Areas defining service providers profits
- Representation of alliance organizations as one community working for the best of the project in official documents and mundane rhetoric

Jointly forming structures to align goals and unify actions

- Tight criteria while selecting alliance partners
- Psychological testing of collaborative capabilities of project employees

Ensuring adaptive capacity

- Project employees were unknown from where to start after formation of alliance organization
- Low level of information sharing and collaboration in the beginning
- No prior knowledge what is allowed in alliance

Period of ambiguity

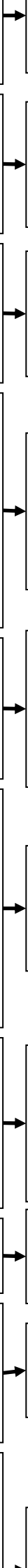
- Assigning all of employees to work full-time for the project
- Formal alliance training of all employees in the beginning and regular developmental workshops
- Co-locating all of the employees to a shared office close to the project site to ensure fast information sharing
- Daily meetings and ad-hoc workshops to facilitate interaction and problem solving

Blending diverse professional groups

Conflicting demands of multiple logics

Responding to external demands

Mitigating internal tensions

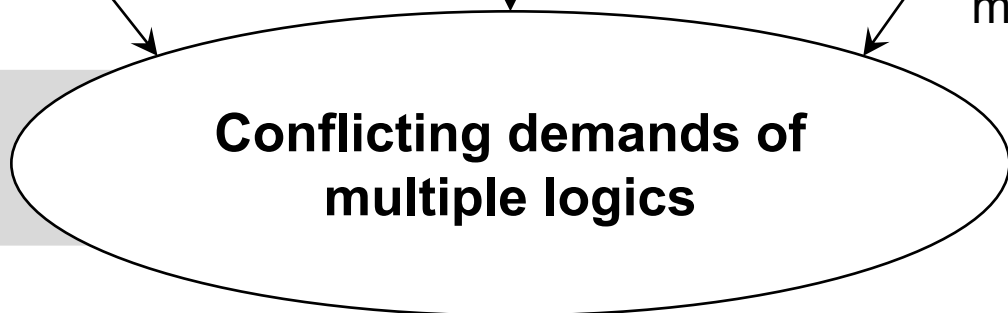


Organizational field

Bureaucratic state

Professions

Corporate market



Conflicting demands of multiple logics

Termination of the temporary organization

Temporary inter-organizational project

RESPONDING TO EXTERNAL DEMANDS

MITIGATING INTERNAL TENSIONS

1. Publicizing a new hybrid form of organizing projects

2. Receiving social acceptance from project stakeholders

3. Selective coupling of external demands

4. Jointly forming structures to align goals and unify actions

5. Period of ambiguity

7. Blending diverse professional groups

8. Temporary combination of multiple logics

6. Ensuring adaptive capacity

Permanent organization

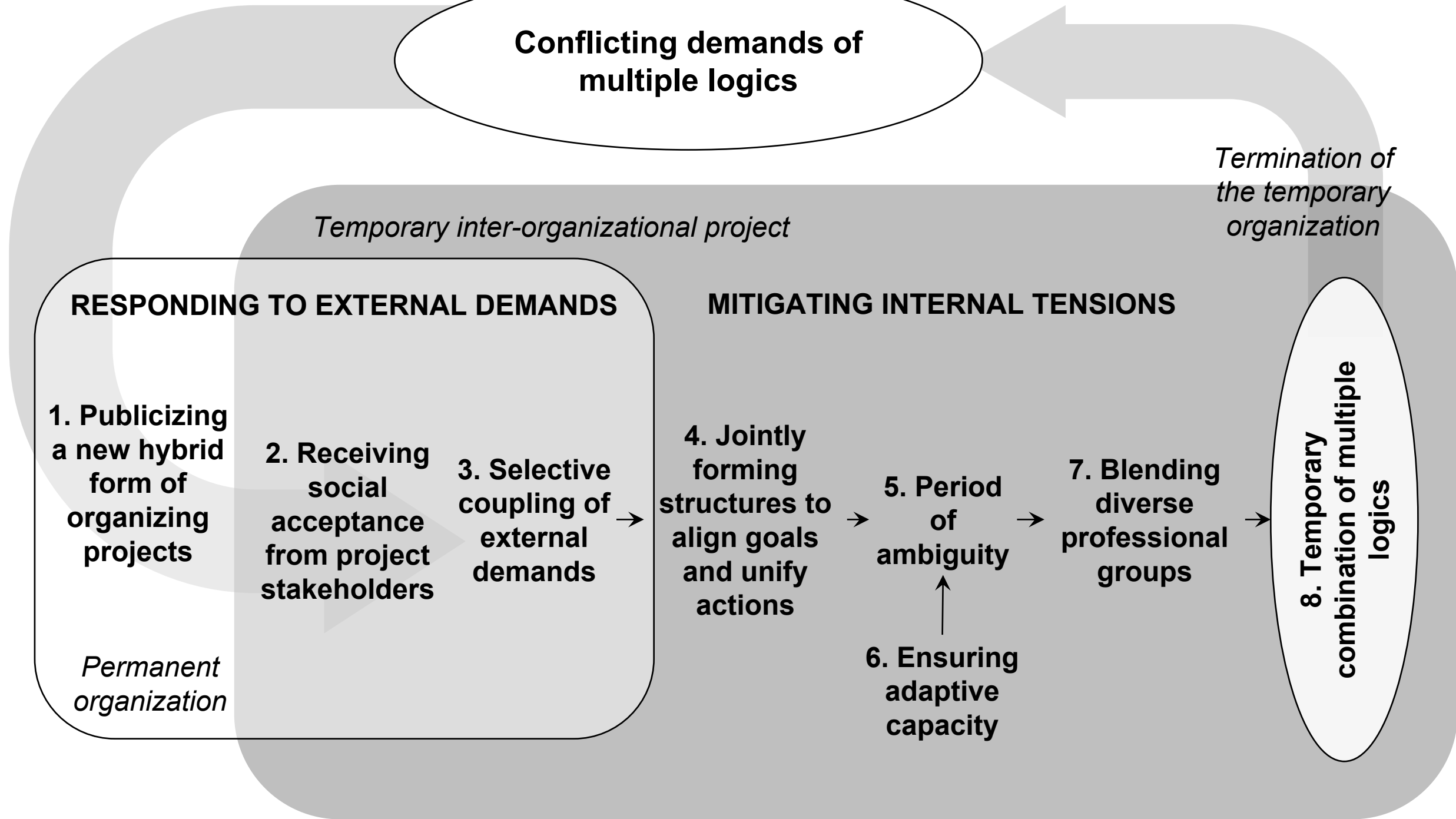


Table 1. The numbered list of interviews, with interviewees' roles and backgrounds, organization as well as date, duration, and place of the interview

No	Interviewee's role and professional background	Description of the organization	Date and duration	Place
1	Assistant project manager of the pilot project • A public servant	The National Transport Agency (NTA) • A state authority responsible for constructing and maintaining national roads, railways, and watercourses • Under direct supervision and funding of Ministry of Transport and Communication • Bureaucratic organization (employees are public servants) • The implementer of the first national infrastructure alliance project (a smaller scale pilot before the Lakeside Tunnel) • One of the two public buyers and member of the alliance • Responsible for the maintenance of the forthcoming tunnel	27.11.2014 • 1:51:28	Co-locational space of the pilot project
2	Chairman of the alliance leadership team (both the pilot and the Lakeside Tunnel projects) • A public servant with decades of experience in public organizations	The NTA • See the description above	27.11.2014 • 1:32:09	Co-locational space of the pilot project
3	Alliance project manager of the pilot project • A civil engineer (M.Sc.) with extensive working experience	Constructor Inc. (pseudonym) • Main contractor responsible for the overall design and construction of the first alliance pilot project	5.12.2014 1:49:31	Co-locational space of the pilot project
4	Design director of the pilot project • A design engineer (Master of Science, M.Sc.) with extensive design working experience	Constructor Inc. (pseudonym) • See the description above	10.12.2014 • 1:31:00	Co-locational space of the pilot project

5	<p>Project manager</p> <ul style="list-style-type: none"> • An engineer with project management experience in Infra Contractor Inc. 	<p>Infra contractor Inc.</p> <ul style="list-style-type: none"> • Main contractor responsible for the excavation and construction of the tunnel and supporting infrastructure • A major player in the national infrastructure field • A member of the project alliance • Hired several subcontractors for the site work, who were not under alliance contract 	<p>16.2.2015 1:13:50</p>	<p>Co-locational space of the Lakeside Tunnel Project</p>
6	<p>Health, safety, and environment (HSE) coordinator</p> <ul style="list-style-type: none"> • A civil engineer with working experience from public and private organizations in the infrastructure industry 	<p>Infra contractor Inc. (pseudonym)</p> <ul style="list-style-type: none"> • See the description above 	<p>16.2.2015 1:02:43</p>	<p>Co-locational space of the Lakeside Tunnel Project</p>
7	<p>Deputy project manager</p> <ul style="list-style-type: none"> • A public servant with decades of experience in public sector projects 	<p>The NTA</p> <ul style="list-style-type: none"> • See the description above 	<p>9.3.2015 1:57:48</p>	<p>Co-locational space of the Lakeside Tunnel Project</p>
8	<p>Procurement manager</p> <ul style="list-style-type: none"> • A public servant 	<p>City Planning Department</p> <ul style="list-style-type: none"> • Responsible for city development • Bureaucratic organization (employees are “city officials/public servants”) <p>One of the two public buyers and a member of the alliance</p>	<p>9.3.2015 1:29:36</p>	<p>Office premises of the City Planning Department</p>
9	<p>Chairman of the alliance leadership team (2nd interview)</p> <ul style="list-style-type: none"> • A public servant with decades of experience in public organizations 	<p>The NTA</p> <ul style="list-style-type: none"> • See the description above 	<p>17.3.2015 0:56:12</p>	<p>Co-locational space of the Lakeside Tunnel Project</p>
10	<p>Planning manager</p> <ul style="list-style-type: none"> • A civil engineer with a private sector background 	<p>Infra contractor Inc.</p> <ul style="list-style-type: none"> • See the description above 	<p>17.3.2015 2:00:59</p>	<p>Co-locational space of the Lakeside Tunnel Project</p>

11	Public relations (PR) manager • An environmental consultant	General Engineering and Architecture Inc. (pseudonym) • A major domestic engineering office responsible for overall project planning, infrastructure designing, and project communications A member of the project alliance	17.3.2015 1:31:10	Co-locational space of the Lakeside Tunnel Project
12	Technical project director • A geotechnical engineer (M.Sc.) with decades of private sector experience	Rock Engineering Inc. (pseudonym) • A private engineering office specialized in excavation and rock engineering • A member of the project alliance • Responsible of geological and excavation designing and rock engineering	23.3.2015 • 1:26:27	Office premises of Rock Engineering Inc.
13	Chief structural designer • A geotechnical engineer with a background in the private sector	Rock Engineering Inc. • See the description above	23.3.2015 • 1:26:27	Office premises of Rock Engineering Inc.
14	Project cost engineer • A civil engineer working with a background in the private sector	Infra contractor Inc. (pseudonym) • See the description above	24.3.2015 • 1:39:13	Co-locational space of the Lakeside Tunnel Project
15	Procurement manager • A civil engineer with decades of experience in public organizations, but recently shifted to the private sector	Infra contractor Inc. • See the description above	24.3.2015 • 1:11:33	Co-locational space of the Lakeside Tunnel Project
16	Project alliancing consultant • Master of Science in construction management with extensive experience in integrated project deliveries	Consulting Corp. (a pseudonym) • A construction company offering also alliance consulting services in the case country	23.3.2016 1:27:00 •	Office premises of the consultancy
17	Project alliancing consultant • Founding partner of Consulting Inc.	Consulting Inc. (pseudonym) • First consulting company focusing on project alliance consulting in the case country • Not a member of the alliance, but provided alliance training and facilitated workshops	29.3.2016 • 1:53:00	Office premises of the consultancy

18	Senior researcher • Doctor of construction management, with a research background	The National Research Centre (NRC) • A national research institute that had participated in the past research projects investigating collaborative project models • The senior researcher had participated in advising the NTA managers and helped in the development of a commercial model of the project	11.5.2017 • 1:33:00	Office premises of the researcher
19	Project alliancing consultant • B.Sc. in civil engineering • Decades long experience from global construction industry and project alliancing	Foreign Consulting Corp. (a pseudonym) • A consulting company specializing in project alliance consulting in Australia	10.5.2018 • 1:43:00	Via telecom.

Table 2. Institutional logics and their instantiation in the context of the Lakeside Tunnel Project.

Institutional logics	Corporate market	Bureaucratic state	Professions
Ideal type of organization	Business enterprise	Government bureau	Professional group
Sources of legitimacy	Share price <i>Private service providers aim at economic success and profit-making in public projects and are willing to use any means necessary to win the bid over public projects to increase their market share, leading to opaque project scoping & pricing and reaping profits by billing extra work.</i>	Democratic participation <i>Approval of the Lakeside Tunnel Project required a decision from both the national parliament (covering the NTA's share or 30% of total costs) and the local city council department.</i>	Personal expertise <i>Key personnel such as construction managers and chief designers of construction projects required sufficient education and expertise in order to participate in public projects.</i>
Sources of authority	Shareholder activism/top management <i>A major portion of the infrastructure construction market is dominated by a handful of publicly listed companies that are predominantly aiming to increase shareholder value.</i> <i>Public projects had adopted hierarchical governance structures with separate project-steering groups and management teams to allow better corporate control over them.</i>	Bureaucratic decision-making <i>Public funding of infrastructure projects mandates tight procurement processes that obey procurement law, as well as cost control and transparent reporting to safeguard tax payers' money.</i>	Obedience of professional guidelines set by professional associations and national regulations <i>Diverging higher education programs to educate different professional groups, complemented by professional education and certificates.</i> <i>Tight national legislation and industry guidelines defining the qualifications of professionals as well as applicable design and construction practices.</i>
Basis of strategy	Increase efficiency, profit and market share <i>Profit maximization by private service providers on the public buyers' expense.</i> <i>Private contractor's motivation to bid for unprofitable projects just</i>	Increase community good <i>Public projects were ultimately undertaken to improve the services of the local communities.</i>	Increase personal reputation <i>Professional groups, such as The National Association of Civil Engineers, had strong will to improve the expertise of their members and the visibility and</i>

*to keep control over the
market.*

*appreciation of the
entire profession.*

Table 3. Mechanisms of meeting demands of multiple institutional logics in temporary hybridization

Institutional logics	Institutional demands	Mechanisms to selectively couple with external demands	Mechanisms to mitigate internal tensions
Corporate market logic	Competitive bidding from market	Competitive bidding was based on qualitative criteria and profit margin.	N/A
	Profit-making	Profit margin as one selection criterion allowing reasonable profits for private suppliers.	Jointly designed incentive and governance structure.
	Hierarchical business organization	One joint organization, which represented a hierarchical structure with a separate alliance management and leadership teams.	All the alliance members had a representative in the alliance management and leadership teams.
Bureaucratic state logic	Compliance with laws	The Australian model was adjusted to meet local laws by using profit margin as a bidding criterion.	Crafting the project alliance agreement to define legitimate behavior.
	Transparent and political decision-making	The elected city council was responsible for the final acceptance of the project funding. The publicly open budget, extensions had to be accepted by the city council.	Equal inclusion of alliance members into the decision-making bodies.
	Aim to create public good	Community-based KRAs (e.g. usability of the tunnel, media image of the project). Openly communicating the goals to the wider public.	Alliance training in which the KRAs were explained to all project participants.
	Professional norms and code of conduct	Tight selection criteria for alliance member organizations and project employees based on experience and formal qualifications.	Alliance training. Regular developmental workshops. Structural blending and co-location. Emphasizing trust and the best-for-the project thinking.

Table A1. Illustrative data supporting interpretation

Identified theme	Representative Quotes
<p>Conflicting demands of multiple institutional logics</p>	
<p>Demands of bureaucratic state logic</p>	<p>“Public procurement law and regulations set challenges. We have to comply with these laws and regulations and fulfill the prerequisite of sustainable public procurement models” ~ A manager 1, the NTA</p> <p>“A bureaucrat manages projects or one’s duties in a certain manner. One task first and then the next-in-line and so forth. An entity is chopped into small manageable pieces and nobody is taking care of the big picture or is really committed. That just needs to be changed from the public buyer’s side.” ~ A manager 2, the NTA</p> <p>“The current council rushes tunnel money to its year 2011 extra budget. – From the City Planning Department’s point of view, we assume that what has been agreed [concerning the budget] will hold. But it is political realism that the new city council might have some new agendas. Says City Planning Department’s procurement manager.” ~ Local newspaper 25.1.2011</p>
<p>Demands of corporate market logic</p>	<p>“We are used to proceed through markets, which are based on the juxtaposition [between the buyer and the supplier]. There exist multiple tiers [in project organization], on which everyone optimizes their own benefits. In addition, different risks occur and the buyer has adapted to push the risks to the supplier. The dissolution of this juxtaposition was also among the greatest challenges.” ~ A manager, the NTA</p> <p>“When the competitive bidding is organized in a conventional manner (the lowest bidder wins), pricing of the uncertainty may become expensive to the buyer and it does not encourage the most optimal implementation from the buyer’s perspective. Deviations during the construction phase tend to increase the juxtaposition [between the buyer and the supplier(s)]. However, procurement models in which the buyer carries the risk does not encourage private suppliers to the best performance.” ~ A research report</p> <p>“In conventional procurement models (e.g. design and construct), specifying and responding to customer’s needs is secondary, since for project actors (typically, contractor and designers) it might be economically feasible to do and not to do certain things, which may weaken the outcome of the project as a whole. ~ An industry report</p>
<p>Demands of professional logics</p>	<p>“It is very typical for designers that they wait as long as possible in order to get all the starting values right. They are not proactively asking what the dimensions should be here. They just sit and wait until you give those values to them. It is not their fault if you think about this through the norms of traditional contracting. It is completely legitimate; they have made an agreement that they will be given the starting values and if they are not, nothing will proceed.</p> <p>Same applies to the contractors. They will make a contract defining that one will get twenty thousand [euros] if one installs a wall. They are not then interested what happens elsewhere, they just want to build that wall as quickly as possible.” ~ A manager, a private service provider 1</p> <p>“Everybody knows that not a single party (in the field of infrastructure construction) was satisfied with the ways in which public buyers and service providers collaborated [in the past projects]. There was a lot of room for</p>

improvement. Even public buyers wanted different ways of working, which would encourage innovation. But everybody (in previous projects) were just interested in their own share and their own tasks.” ~ A manager, the NTA

Responding to external demands

Publicizing a new hybrid form of organizing projects

“This Australian consultant did some benchmarking for us and visited Finland and we had discussions. He educated us and we then asked Mr. N.N. from the City Planning Department to join. Then we spent this one afternoon all together and the most important content and perspectives to project alliancing were clarified.” ~ A manager 1, the NTA

“There were some differences in public procurement laws between EU and Australia. Thus, we needed to harmonize the model and consult lawyers. Finally, there was no problems or conflicts with the law.” ~ A manager 2, the NTA

Receiving social acceptance from project stakeholders

“The NTA suggested that the Lakeside Tunnel should be undertaken as an alliance project and introduced it to the City Planning Department. Based on this, discussions and reports and information about previous cases in Australia, our department got into this.” ~ A manager, the City Planning Department

“If I recall correctly, it was around midsummer in 2011 when we organised a seminar for the city council, in which we explained the potential benefits of the alliance model. The NTA’s stand was pretty clear from the very beginning. We had a project that involved so many risks. Hence, using alliancing was justified. We already had strong support from the City Planning Department and we did not hear objections from the city council toward the alliance model. Well, later on some council members objected to the whole project, but they were positive or neutral towards the model itself and saw that it was worth of using.” ~ A manager, the NTA

“The Lakeside Tunnel was a politically disputed project. Thus, I believe that by bringing this new way of doing things (the alliance model) into the picture helped to create legitimacy for the entire project. There were lot of discussions about the absolute maximum cost of the project and council members then perhaps saw that this model could really help incentivizing contractors to obey such a cost limit.” ~ A manager, the City Planning Department

Selective coupling of external demands

“We have this alliance leadership team, in which we have representatives from all of the organizations as well as a director from Centre of Transportation and Environment. The board brings up things actively and we have good collaboration.” ~ A manager, the NTA

“We settle for reasonable margin. One needs to also consider that the risks are so large. These are the reasons why we joined. Meaning that it is important that we can share the risks and ensure fair profitability.” ~ A manager, a private service provider

“We knew that the project is challenging and complex, while it is here in the middle of the city and we have so many demands. We have tens of thousands of inhabitants living next to the site, creating challenging environmental demands. There are various municipal engineering challenges. The tunnel should be connected to the national transportation network creating different technical demands. We have city planning requirements and regulations. We have two public buyers, the state [through the NTA] and the city. Both parties had certain preconditions and tight budget expectations. However, the alliance

model as an open and joint problem-solving platform helped us to discuss and find solutions to meet with these demands.” ~ A manager, the NTA

“The construction plans and guidelines have been collected and saved into the project bank. Construction plan also accounts for the laws, regulations, and norms guiding designing.” ~ A project plan

Mitigating internal tensions

Jointly forming structures to align goals and unify actions

“Key Responsibility Areas (KRAs) have been set for schedule, safety, usability, and public image of the project. These targets have been set so that the minimum requirement is to meet the performance of typical major infrastructure projects. Bonus will be paid if these minimum requirements are exceeded and sanctions are enforced if they are not met.” ~ A project plan

“First of all, we check a possible issue through the alliance leadership team and then in the alliance management team, which is pretty large and also involves the site supervisors. I would be then amazed that if they do not communicate these key results areas, meaning for example that ‘hey let’s keep the accident levels at zero so that we as a company can then enjoy the potential bonuses’. I have a strong belief that these KRAs really govern the actions towards the best of everyone in the project.” ~ A manager, the NTA

“All of the media hits in newspapers or other domestic media concerning the project will be stored and then we analyze how many of them are negative, neutral, or positive in their tone. It correlates pretty well how they act at the site and that is the point to govern those actions. For example, if we cause unbearable disturbance to the environment and the locals, there will be letters to the editors. The minimum requirement is that at least 85 % needs to be neutral or positive.” ~ A manager, a private service provider

“Those who have participated in the bidding and selecting of the alliance consortium are well adapted to alliancing and know what it is. Meaning that everybody is in the same boat and one cannot anymore just think that I do just my own job and if you screw up it is your own problem.” ~ A manager, a private service provider

Ensuring adaptive capacity

“We have used these kind of team or organizational psychologists, who have evaluated the new staff and also observed how our staff behaves in workshops, which are used as a basis for selecting our staff as well as service providing organizations.” ~ A manager, the NTA

“Preparing our staff for the principles of alliancing was challenging and it is still sort of ongoing. I mean that as a private supplier, organizing for the alliance model, it is not easy at all. But we trained ourselves. We organized countless number of workshops and meetings. We were prepared.” ~ A manager, a private service provider

Period of ambiguity

“The majority of the new employees coming in during the development phase do not know that much [about project alliancing]. The problem is how to communicate the true nature of the alliance contract to them. Perhaps, the new *modus operandi* is just a new thing to learn since these people have worked for many years with the conventional procurement models. It does not change all of the sudden just like that, but requires some time... Changing the ‘mind-set’ is not easy and this can easily become just as any conventional project especially if one is working with multiple projects at the same time.” ~ A manager, a private service provider 1

“One of the greatest risks in alliancing is when you bring in new employees who did not participate in the joint development phase. If we do not take care that the similar [alliance] mind-set and values are not transferred to the new members, there is a great risk that we slip into the conventional model.” ~ A manager, a private service provider 2

Blending diverse professional groups

“This is a rather exceptional project when both the project site and our office are in the middle of city. This allows designers to visit the project site often and really see what is ongoing and how their designs have been implemented.” ~ A manager, a private service provider 2

“All of the central actors are here in the Big room. Here are the designers and the technical managers who then supervise the project site. Project management is here. And all of these stakeholders, meaning officials and permitting authorities whose input is needed during the project, they will come here because here is all the knowledge. That helps solving potential issues. It is not just that we have a joint integrated organization in which we have contact details of each other, it is important that we work together and interact with each other on a daily basis, then we do not need to send e-mails or make phone calls, but we can just go and ask have a discussion or organize an ad hoc workshop.” ~ A manager, the NTA

“It is important that we do things together. Being it communication, risk management, brainstorming. There should be the spirit that we make decisions together. So that everyone knows that if someone suggests something we need to find consensus and everyone needs to accept it. It is this collaboration which drives the project forward. This means that we then have always the best knowledge of every discipline at our hands, when we need to decide. Of course this requires some adaptation. Typically, we used to just look at our own paper and keep it hidden from the others. This collaborative culture requires learning and practices such as these workshops. These joint schedule workshops have been particularly effective, and it really makes people share their ideas but also to commit themselves for the common good.” ~ A manager, a private service provider 3
