

# **MASTER**

Making the team work governing public private collaboration, a case study

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# Making the Team Work

# Governing Public Private Collaboration, a Case Study

# Master thesis

Date: 21<sup>st</sup> of February 2019

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Master track: Construction Management and Engineering

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# Summary

English summary of two pages, which is readable independent of the thesis and contains a brief overview of the objective of the graduation assignment, the methods and means used to achieve this objective, the results and conclusions set against the goals originally defined.

# Samenvatting

A Dutch summary of two pages is required for Dutch students and optional for international students

# **Abstract**

Max. 350 words. It is a microcosm of entire paper – contains key information from each section, but it is brief and contains essential information only. It covers research highlights, gives the research problem and/or main objective of the research, indicates the methodology used, presents the main findings and conclusions. The readers shouldn't have to read whole report to get essential points. The abstract is also copied into the on-line CME graduation report database provided by Of CoUrsE!

# List of abbreviations

A summary of the important definitions, notion, classifications, etc. related to the chosen problem.

Chapter 0 – List of figures and tables

List of figures and tables

#### 1. Introduction

World-wide governments are facing increasingly complex grand challenges. Maybe the most well-known and widely adopted list of challenges and associated goals is given by the United Nations' 17 Sustainable Development Goals (SDG) (George, Howard-Grenville, Joshi, & Tihanyi, 2016). These thematic social development goals, like *Affordable and clean energy* (SDG7) or *Sustainable cities and communities* (SDG11), envision a world in which all forms of life can prosper.

One way to address some of those grand challenges and to achieve the associated goals is through so-called *Smart Cities*. Smart cities aim to save energy and increase the quality of life of its citizens (Dameri, 2016; Moser, Wendel, & Carabias-hütter, 2014) in a user friendly way (Nam & Pardo, 2011), with the use of adaptable ICT services (Moser et al., 2014; Washburn & Sindhu, 2010) – IoT<sup>1</sup>.

However, the path towards addressing such social challenges is uncertain and requires efforts from both public and private organizations (Batty et al., 2012; George et al., 2016; Lam & Yang, 2017; Voegtlin, Scherer, & Hawn, 2018), but such efforts, also known as public-private partnerships (PPP) (Khanom, 2010), are however not without any challenges. Whereas social challenges exist on the interface between the public and private organizations both types of organizations differ significantly. Their complex nature stems from a natural misalignment between the actors, because individual goals, missions and values diverge – i.e. social and commercial, making them a unique type of hybrid organization (Battilana & Lee, 2014; Jay, 2013; Villani, Greco, & Phillips, 2017).

In order to tackle these social challenges, public and private partners thus have to increase their mutual cooperative capabilities (Cabral et al., 2016). Currently, however, in depth understanding of how public and private partners can achieve this, is lacking (Battilana, Besharov, & Mitzinnek, 2017; Cabral et al., 2016; George et al., 2016). More specifically, increased understanding of how public and private partners should manage their relationship, in both contractual and social terms, is called for (Cabral et al., 2016).

In order to increase insight in the challenges for relationship management, this study examines the dynamics underlying a PPP as a result of tensions stemming from their diverging characteristics. This was done by investigating the tensions arising within a public-private arrangement in its early period, before partners have found a way to mitigate them – i.e. the organization has become hybridized (Jay, 2013). Being a type of hybridization, the knowledge already generated by this research area will be used to guide this research. All this will eventually aid in answering the following research question.

How do diverging organizational characteristics shape the collaboration process within a PPP aimed at social value creation?

<sup>&</sup>lt;sup>1</sup> "An Internet of Things (IoT) ecosystem consists of web-enabled smart devices that use embedded processors, sensors and communication hardware to collect, send and act on data they acquire from their environments." (Rouse, Rosencrance, Shea, & Wigmore, 2016)

Chapter 1 – Introduction

### 2. Literature review

The fact that organizations' goals, missions and values differ stems from the different institutional logics existent in society. Institutional logics are defined as 'the socially constructed, historical patterns of material practices, assumptions, values, beliefs and rules by which individuals [and organizations (Thornton & Ocasio, 2008)] produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality' (Thornton & Ocasio, 1999, p. 804). This means that each logic provides a different source of rationality (Thornton & Ocasio, 2008), resulting in alignment challenges within PPPs (Ebrahim, Battilana, & Mair, 2014).

### 2.1 Hybrid organizations

Researchers have long denoted the existence of multiple logics within organizations (Albert & Whetten, 1985; Friedland & Alford, 1991). It has striking examples in health and education (Battilana et al., 2017) and more recently the social enterprise has gained attention. A social enterprise combines elements of non-profit organizations — i.e. civil society logic — and businesses — i.e. market logic (Battilana & Lee, 2014; Di Domenico, Haugh, & Tracey, 2010; Pache & Santos, 2013; Smith, Gonin, & Besharov, 2013), like micro-finance organizations do (Battilana & Dorado, 2010). Hybrid organizations may however similarly integrate any of the aspects of the state, market or civil society logic (Vurro, Dacin, & Perrini, 2010).

The creation of social value is the common denominator in all types of hybrid partnerships (Quélin, Kivleniece, & Lazzarini, 2017). The creation of social value is aimed at creating benefits for society or reducing societal costs beyond economic value creation (Kivleniece & Quélin, 2012; Phills, Deiglmeier, & Miller, 2008). More specifically, differences are discernable in how different types of hybrids seek to create social value. Whereas the civil society's motives are empathic, the state's foci are rules and regulations and their public accountability (Jay, 2013). When comparing PPPs and social enterprises, this difference reflects in their respective goals: social enterprises typically create social value by pursuing environmental or social goals (Di Domenico et al., 2010), while PPPs typically create social value through increased efficiency or innovative capacity (Fernandes, Costa, & Lahdenperä, 2018; Matinheikki, Aaltonen, & Walker, n.d.).

Hybrids thus by definition addresses a certain societal problem – i.e. an area where the market or state currently falls short – with the social value they create (Quélin et al., 2017). Moreover, the societal challenges have to give sufficient sense of purpose to the hybrid organization in order to confirm that the members need one another in addressing the challenge (Bryson, Crosby, & Middleton Stone, 2006), and adequately motivate them to pursue the common goal in addition to their individual one(s) (George et al., 2016; Hollensbe, Wookey, Hickey, & George, 2014; Quélin et al., 2017).

#### 2.1.1 Internal and external conflict

Within PPPs, the confrontation between two (or more) distinct logics inherently causes conflict, both internal and external (Battilana & Dorado, 2010; Zilber, 2002), because each logic prescribes a different course of action. The necessity to align – i.e. hybridize (Battilana & Lee, 2014) – the conflicting logics varies, depending on the extent to which their demands reflect in the core features of a PPP (Besharov & Smith, 2014), like its means and ends.

As a result, hybridization is a complex process (York, Hargrave, & Pacheco, 2016). Literature has indicated the existence of two different hybridization strategies. Either organizations adopt a strategy of *integration* or *differentiation*, whereby logic elements are merged into one coherent set or separated into distinct organizational parts respectively (Battilana et al., 2017). Regarding integration, one challenge lies in aligning and/or prioritizing of the diverging interests present in the hybrid

organization through appropriate governance (Ebrahim et al., 2014). Regarding differentiation, the presence of good coordination structures were found to play a role in situations of conflict, with providing a prescription for action and offer guidance (Battilana et al., 2017; Bechky, 2003; Christiansen & Lounsbury, 2013). Another strategy is to recruit new and unexperienced who can be educated to accept both logics (Battilana & Dorado, 2010).

Achieving full integration is difficult, as PPPs members often remain to have strong ties with one of the institutions that makes it up (Greenwood, Raynard, Kodeih, Micelotta, & Loonsbury, 2011), due to its temporary nature (Matinheikki et al., n.d.). This makes it difficult for them to let their previous adherence go within the hybrid organization (Battilana et al., 2017), despite a probable realization of the necessity. Indeed, PPPs have shown to be more innovative (Jay, 2013) and sustainable (Kraatz & Block, 2008; York et al., 2016).

Apart from internal conflict, hybrid organizations face external – i.e. outside the hybrid organization – legitimacy problems. Non-hybrid organizations conform to a single logic and therefore meet societal expectations (Boxenbaum & Jonsson, 2008) and fit within the existing regulatory system (Battilana & Lee, 2014; Williamson, 1999). This ensures legitimacy, whereas hybrid organizations often don't conform to either of these (Battilana & Lee, 2014). This then leads to problems when it comes to societal acceptance (Quélin et al., 2017), for which a solution lies in the hands of entrepreneurial change advocates who are able to bridge the logics involved. They have the power to create new logics by combining intact elements of the previous incompatible ones (Baum & Oliver, 1992; Pache & Santos, 2013) through so-called *boundary work* (Zietsma & Lawrence, 2010), eventually creating new sources of legitimacy (Purdy & Gray, 2009).

### 2.1.2 Governance challenges

In essence, governance is one of the ways in which logics take shape (Kraatz & Block, 2008), in the form of the system used to control and direct organizations (Tihanyi, Graffin, & George, 2014). This means that distinct logics create distinct organizational forms (Battilana & Lee, 2014) and in turn distinct governance modes. These two both have to be supported by the governance structure of a PPP (Quélin et al., 2017). Indeed, the challenge of finding the right coordination structures for PPPs have been acknowledged (Oliveira & Lumineau, 2017; Opara & Rouse, 2018). Nonetheless, for "traditional" PPPs – i.e. governed by a contract of a well delineated subject where economic and efficiency considerations predominate (de Bettignies & Ross, 2004) – a workable situation seems to have been found, as supported by the long history of the use of PPPs (Linder, 1999). However, in the case of PPPs that aim to create social value, this governance mode needs to be redefined, as it needs to support both social and economic value creation – the latter as a prerequisite for private organizations (Quélin et al., 2017).

In finding a solution for this challenge, the nature of social value creation plays an important role. Social value is typically created through innovation (George et al., 2016), for which the actual outcome is unknown up front. Also, it is often not possible to determine the amount of social value that will be created. These two things combined make social value rather challenging (i.e. impossible) to formally capture, e.g. in a contract. Knowing that European legislation requires PPPs to be based on a contract (European Parliament, 2014), the nature of social value makes that only incomplete, or outcome based, contracts can be devised for this type of PPP (Quélin et al., 2017; Sumo, van der Valk, van Weele, & Duysters, 2016; Tirole, 1999). In the past, private actors have then received financial remuneration based on the social impact they created (Aghion & Tirole, 1994; Quélin et al., 2017). The appreciation of the different notions of value however varies with each logic, making remuneration sometimes problematic (Kivleniece & Quélin, 2012).

Being incomplete, this type of contract leaves room for interpretation and creates a necessity to renegotiate during the period the contract is valid, which leaves room for the contract partners to behave opportunistically and potentially threaten value creation (Anderson & Dekker, 2005; Christensen, Nikolaev, & Wittenberg-Moerman, 2016). In this context mutual trust has shown to play an important role, as it is likely to mitigate this threat and the incomplete contract can consequently function as a "soft" coordination structure (Klein-Woolthuis, Hillebrand, & Nooteboom, 2005).

However, public actors may not show any signs of favoritism and thus are obliged to treat all equal cases equally (principle of equality) (European Court, 1993). For procurement law, this means that only very limited modification of the contract are allowed when it has been assigned, not 'alter the overall nature of the contract' at the very least (European Parliament, 2014 Art. 72). But as explained previously, , the exact outcome of social value creation is difficult to oversee, making the necessity of alterations more likely. On top of this, when a contract is actively used and maintained, it has been shown to decrease trust levels (Lyons & Mehta, 1997). These decreased trust levels can in turn inhibit defensive behavior (Zand, 1972), opportunism and even conflict (Klein-Woolthuis et al., 2005). This means that regarding PPPs, the use of incomplete contracts poses challenges.

Finally, on top of issues stemming from hybridity, a PPP is regarded a form of network that requires its own form of governance (Bryson et al., 2006; Provan & Kenis, 2008). Since the partners aim to achieve a common goal in addition to their organizational interests, a PPP is a form of network (Provan & Kenis, 2008). Within a network, sufficient levels of *relational* and *structural embeddedness* (Jones, Hesterly, & Borgatti, 1997) need to be present to make collaboration possible. Relational embeddedness reflects the partners' need to take one another's goals into account (Granovetter, 1992) and display mutual trust and openness (Driessen, Dieperink, van Laerhoven, Runhaar, & Vermeulen, 2012; Uzzi, 1997), while structural embeddedness reflects the need for coordinated social control mechanisms within a partnership (Jones et al., 1997).

# 2.2 Conclusion

A PPP is shown to be a particular type of hybrid organization. This study focusses on PPPs that are aimed at the creation of social value through the pursuit of social goals through innovation, whereas PPPs typically focus on social value creation by increasing economic efficiency. This raises major challenges. More specifically, these complex collaborations i) typically have to operate in divergent institutional patterns which affect the current structure of beliefs and norms (i.e., hybridity in logics) and ii) are comprised of entities with distinct legal boundaries and authority structures (i.e., hybridity in governance) (Quélin et al., 2017), resulting in both internal and external pressures.

Additionally, a contract, being prescribed, puts the innovation process under pressure due to the prohibition to alter it in a public context (European Parliament, 2014). On the one hand this has shown to hamper the development of trust, while trust also showed to play a role in (innovation) partnerships (Bryson et al., 2006; Klein-Woolthuis et al., 2005). On the other, it is neigh impossible to oversee the extent and nature of the actual social value creation, making the necessity of alterations more probable.

Chapter 2 – Literature review

#### 3. Method

The central purpose of this research is to determine how *diverging organizational characteristics shape* the collaboration process within a PPP aimed at social value creation. In order to be able to examine this more closely than in previous studies one needs to examine the principle "in action" (Mintzberg, 1979). Moreover, the examination of current events will minimize the effect of recall bias, as is the case in research of historical events (Raphael, 1987), which is beneficial for the accurate achievement of in-depth insights. As this research wants to examine emerging interactions within the PPP, control over events is not needed nor desired. These facts combined — a how-question that focusses on contemporary events without the need for control — make a case study the appropriate method (Yin, 2014).

Little research has provided in-depth insights in the actual collaboration process within a PPP aimed at social value creation (Battilana et al., 2017; Cabral et al., 2016; George et al., 2016). Therefore, this study aims to *explore* relevant concepts, rather than to *explain* them (Yin, 2014). The relevant literature identified in the previous section – i.e. hybrid organizing and it's underlying concepts of logics and governance – give the guidance necessary in explorative research (Yin, 2014).

Within the field of exploratory case studies, both qualitative as well as quantitative methods have been used in literature (Van Aken, Berends, & Van der Bij, 2007; Yin, 2014). A general distinction between quantitative and qualitative research is that quantitative research mainly aims to test theory, while qualitative research mainly aims to generate theory (Bryman, 2012). Since this research aims to develop new insights about a phenomenon that has not been researched in detail thus far, qualitative research methods are appropriate.

#### 3.1 Data collection

Due to the lack of knowledge in this field and the resulting open-ended nature of the research question, the research method of choice is the semi-structured interview, which will enable patterns to emerge from the data (Bryman, 2012). They will have the nature of a conversation while being based on a guideline to ensure the same topics are covered by each interview, providing the interviews, and resulting data, with some focus (Turner, 2010).

In order to determine how the collaboration within a PPP is influenced by each of the partner's, the unit of analysis is the interaction between the public- and private organizations constituting the PPP. This interaction is the topic of research for the semi-structured interviews. For the case a PPP is selected that specifically aims to create social value, found in the city of Eindhoven. Within all organizational tiers of this PPP both public and private actors are represented. Decisions are jointly made and both parties are responsible for the success of the project on both economic and social aspects.

The nature of the underlying mechanisms is researched through semi-structured interviews, held with members who actively participate in the PPP at hand. An equal distribution of respondents among the different organizations involved will make different perceptions clear and help reveal the underlying tension mechanisms. In total, 15 interviews have been performed, among 14 people. These have been recorded, with the respondent's permission, and subsequently transcribed.

The interview guideline used for this interview is based on the main research question and guided by previous literature by covering aspects related to logics and governance and how the partners experience the collaboration. Also, they were asked about which events they found influential and how they thought the project could improve. The interview guideline has been given in Appendix A.

The general nature of this guideline allowed for follow-up questions and to integrate knowledge from previous interviews.

I triangulated the interview data in order to increase the reliability of the research and to corroborate the findings. More specifically, observational data was collected during project meetings. Also, advisors to the PPP have been consulted, being valuable in their more distant reflection of events. Finally, archival data from companies and public sources related to the PPP have been collected.

# 3.2 Data analysis

The understanding of real-world dynamics can be increased through system dynamics: a method whereby these dynamics are abstracted and molded into a comprehensive process model (Sterman, 2000). Since this study aims to *explore* a dynamic within a PPP, this research is limited to the development of a causal loop diagram, rather than a fully developed system dynamics model, depicting first hypotheses about the nature of the dynamics within the PPP and the factors at play (Sterman, 2000).

In order to come to the causal loop diagram, in the first place, a narrative strategy has been used. In general, a narrative strategy is used to construct a detailed story about the studied process (Lincoln & Guba, 1985). The aim of this strategy is to provide a narrative that will invoke a feeling of recognition among its readers and thereby create external validity (Langley, 1999). Causal loop diagrams are rather similar, since its aim is to tell a story that will reveal hidden patterns (Senge, 1990; Sterman, 2000). However, it differs in the fact that it tells a story in abstract terms, rather than a full narrative.

Therefore, in addition, the strategy of grounded theory is used in order to derive these abstract concept. Grounded theory is used in qualitative research to build new theoretical structures as they emerge from the data (Langley, 1999). This is done by dividing the data into categories and aggregated dimensions, enabling coding and hence comparison of the data (Strauss & Corbin, 1990). In doing so, previous literature has been used as a theoretical lens that provided meaning and direction. In order to ensure the eventual result matched the data, the strategy of constant comparison has been used (Charmaz, 2006; Glaser & Strauss, 1967).

### 4. Empirical setting

The city of Eindhoven (the Netherlands) has grown to be a highly innovative region. More specifically, in 2013, according to Forbes (2013), Eindhoven was the most inventive city in the world with 22,6 patents per 10.000 residents. Eindhoven has a strong connection with public lighting due to the historical impact that Philips has had on the city. Already in 2006, the municipality decided that they needed a vision for public lighting in order to be able to remain front runner in this area (Brock, den Ouden, van der Klauw, Podoynitsyna, & Langerak, n.d.). After having participated in various European lighting projects and even initiating some they eventually earned the predicate 'front runner' in this field in 2013 (European Commission, 2013).

With this background in mind it is not surprising that, when Philips offered to replace 21.000 luminaires with LED lighting in 2011, an internal discussion was triggered among the deputy mayors responsible for public lighting, spatial planning and innovation. Their main concern lay in the fact that the average lifespan of LED luminaires is 25 years: a timeframe in which many technological innovations in this field would happen that Eindhoven then no longer could afford. A decision was reached to create a new vision for 2030 accompanied by a roadmap, both commissioned to TU/e LightHouse – a company that aims to bridge the gap between research and practice (Brock et al., n.d.).

For us the trigger mainly was: is this something you should want just like that? [...]

It was in our way of thinking to be critical about this subject.

- Municipality

The created vision and roadmap described a smart grid to be the necessary enabler of future continuous improvements with respect to the quality of life within the city (Den Ouden & Valkenburg, 2012) – 'smart' in this sense referring to IoT. Because the light grid is a fine-grained network, already present throughout the city, it was deemed ideal for all kinds of future smart city services. Think, for instance, of a 5G city-wide WiFi network or electric vehicle charging. This created the idea of a smart light grid that should be unrolled throughout the city, working as an enabler of future smart city services. What these services would entail is yet unimaginable – similar as to when the smartphone was first introduced – which is why the vision and roadmap aim to guide rather than prescribe action.

#### 4.1.1 JLO040 initiation phase

The roadmap was adopted as official policy document by the city council in 2012. Because it describes a process instead of an outcome, the municipality needed a new procurement strategy. Contracts were normally geared towards the execution of one single project, with a clear goal, but this contract should cover a period in time in which multiple projects should be executed with unknown outcomes. On top of this, the vision and roadmap envisioned integral solutions to societal problems. Due to the integral character of PPPs, this type of collaboration hence was the chosen type of collaboration (Den Ouden & Valkenburg, 2012).

Because this type of procurement was the first of its kind, an open market consultation procedure was organized prior to the legally obliged tender procedure. Such open consultation serves to better shape the tender towards the capabilities of the market (European Parliament, 2014). As part of the process, any interested party was welcomed to take notice and share their views and ideas. Initially the initiative saw a lot of interest, but later the sheer size and complexity of the project made that only a few large companies remained involved (Brock et al., n.d.).

During the subsequent tender phase a competitive dialogue strategy was deployed by the municipality. Competitive dialogues have been especially designed for PPPs under complex conditions (EPEC, 2010 Art. 30). It entails various dialogue rounds, held in private, between a public actor and a private actor,

which is ideal when a private actor knows *what* it would like to achieve, but not *how* to achieve it (Burnett, 2009). Three consortia eventually participated in these dialogue sessions. When the actual tender came, the consortium of Heijmans and Signify (formerly Philips Lighting) had the winning bid.

In total, the tendering process had a duration of about 2.5 years, after which the contract negotiation phase started. Because it proved difficult to capture an innovation process in contractual terms this was another time consuming process. Eventually, the contract was signed only in October 2016, after which the project started on November 1<sup>st</sup>, 2016. The timeline in Figure 4.1 summarizes the events taking place during the initiation phase.

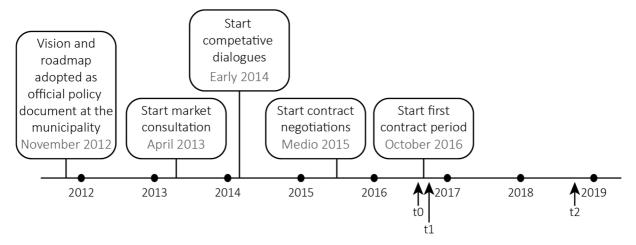


Figure 4.1 – Timeline of the project's main events during the project initiation phase.

The contract stated a project duration of 5 years with – mutual consent provided – an extension of 10 years. It, among other things, comprises of various Key Performance Indicators (KPIs) on which the consortium is evaluated, such as innovativeness and added social value. Moreover, it specifically stated that the consortium and the municipality share the responsibility for a successful project.

# 4.2 Description of the contractual partners

This section describes the different contractual partners in order to understand the ways in which the public and private logic take shape within JLO040. They are described based on the characteristics previously identified in literature. Table 4.1 summarizes the key features of both logics.

Table 4.1 – Features of public and private logics. Categories based on (Jay, 2013; Matinheikki et al., n.d.; Thornton, 2002; York et al., 2016)

	State Logic	Market Logic
Ideal type of organization	Municipality	Business firm
	(public organization)	(private organization)
Normativity	Public service	Client service
Goal	Increase quality of life	Maximize profit
Means	Tax payments	Deliver goods/services, increase efficiency, increase competitive advantage
Focus of attention	Serve civil society	Serve client and stay ahead of competition
Accountability	Publicly accountable	Accountable to shareholders

#### 4.2.1 Municipality of Eindhoven

The primary aim for the municipality of Eindhoven is to improve the quality of life the users of the city, i.e. live, work, visit. They believed that a smart light grid will improve this. On the other hand, they smart cities have the future and want to facilitate and attract this new market to stimulate the business in the region, which will eventually be beneficial for the city as well. Secondly, this vision and roadmap are of course in line with upholding their reputation of Eindhoven being 'City of Light'.

The eventual goal is to improve the quality of life, which we related to what we want for the city.

- Municipality

Their primary means are the tax payments allocated to them by the State, of which the municipality creates budgets for all their expenses. Since this is public money, they need, and want, to spend this money responsibly. Things like the 4 yearly elections and free press are examples of social control mechanisms for their public accountability.

#### 4.2.2 Signify

Signify, formerly Philips Lighting, is a product developer and manufacturer who earns money by selling armatures and lights, by and large. On top of this they engage in the 'smart'-market with network solutions for, among other things, cities.

Being a business firm, their primary aim is to perform projects that will maximize their profit in both short and long term. They do this by gearing their products towards their potential clients as well as possible. In principle they want to make a profit for every single product they sale. However, R&D investments are made whenever they expect this will increase their competitive advantage.

We prefer an even project, but [...] we are willing to invest in projects with strategic value.

- Signify

Signify is a listed company, which means that they are held accountable for their profits by their shareholders.

#### 4.2.3 Heijmans

Heijmans, although a business firm, has slightly different features then Signify, because they are a contractor instead of a manufacturer. This means their core business is a service instead of a product and they have only little experience in R&D. However, they are also a listed company aimed at increasing their profits and competitive advantage.

We are a listed company, so in the end money needs to be made.
- Heijmans

# 4.3 Relationship between the contractual partners

The parties involved in this project are no strangers to one another. On the contrary, they have a long history of collaboration within the field of civil engineering: contractors like Heijmans build roads for public bodies on a daily basis, while product developers like Signify sell their products to contractors as their core business, while being in close consultation with public bodies.

When one looks at this relationship in more abstract terms, this traditional type of collaboration can be conceptualized as shown in Figure 4.2, left side: the contractor delivers a good and gets financial compensation from the public body, while itself receiving goods from the product developer and

paying for them. Finally, the relationship between the public body and product developer is limited to consultation of the product developer. Overall, this is a relationship where the contractor is in the lead and where a minimal of alterations is made after the contract has been agreed upon.

However, a very different situation is that of the PPP, illustrated in Figure 4.2, right side. In this situation both public and private actively contribute to all phases of the project with their knowledge. Then, similar as to the traditional model, each of the two brings in their assets and retrieves the compensation they desire: the public body pays and receives the benefits of the goods and services in return, while the private actors put in their efforts in terms of goods and services, and receives financial remuneration.

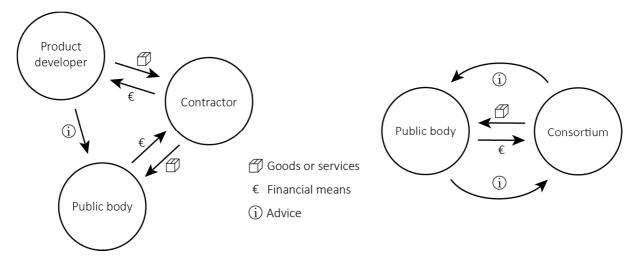


Figure 4.2 – Conceptualization of each party's relationships, traditional (left) v.s. PPP (right).

#### 4.4 Role and task substantiation over time

This altered relationship translates into different tasks and roles performed by the contract partners. Traditionally, the role of the public body is that of the client who's task is limited to contract management – i.e. checking if the contractor lives up to the contract. This relationship is characterized by inequality: the public actor orchestrates the consortium. The public actor's envisioned role, however, would be one of a partner, implying that they would contribute to the collaboration process with their knowledge, based on equality. Being traditionally involved as supplier, the product developer little to do with the actual project. This contrasts with their envisioned behavior, where they would participate in the co-creation process.

Secondly, the consortium decided to rearrange the traditional tasks among them. This meant that the product developer would be responsible for project management, traditionally the contractor's task. On the other hand, the contractor would become responsible for the management of the innovation process – i.e. flexible management of ambiguous projects. Something, between the two of them, only the product developer is familiar with.

Everyone involved has a completely different role than they are accustomed to.
-TU/e Lighthouse

The way in which all three partners filled in their role during the project phase strongly altered over time. In order to show this, an inventory is made of their role and task substantiation at three moments in time, added to the timeline in Figure 4.3. Moreover, the events described in this section are added to Figure 4.3 as well. At t1, The envisioned project behavior is still prevalent, for it is the moment where the contractual negotiations have ended but *before* the project started. Actual

behavior is then given by t1, for it depicts the time right *after* the project started. Finally, t2 is at the time of this study and gives the current situation.

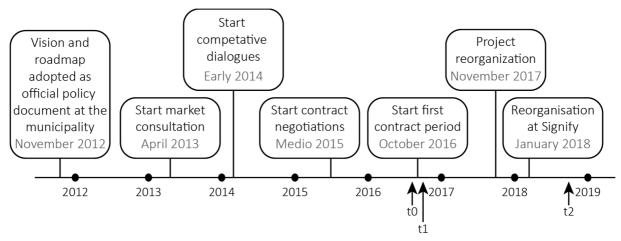


Figure 4.3 – Timeline including time indications and events described this section

An immediate relapse in traditional behavior is discernable at t1. The municipality started managing the contract while an active collaboration attitude on their part lacked. This project management in turn forced the consortium to rigidly start project managing. On the one hand, innovation management was forced to the background because of this, combined with the contractors inability to effectively defend innovation management due to their lack of experience. On the other, the product developer had the responsibility to manage the project without prior experience, thus failing to adequately perform it when the situation appeared entirely different from what they had anticipated.

Something went wrong in the beginning: we'd had dialogue sessions in which we really understood one another and we all had faith in the project. However, when the tender was awarded it seemed like everything ended all of a sudden: [...] the way in which [the municipality] manages the contract is fully traditional [...], which was a bit of a letdown.

- Signify

When I looked at the project after a year I was chocked: we'd had a tender that took two years [...] [while by then] we were only busy delivering the right processes and reports.

- Heijmans

The situation at t1 was not sustainable. After a year an evaluation session led to a change in the project structure which is still in operation to date. This change entailed an increase in capacity at the municipality's side, whereby contract management should be forced to the background. At the contractor's side, they took responsibility of the project management again while trying to integrate innovation management. This proved to be difficult, but the unpredictability of the co-creation process has gradually made them realize that more flexibility is needed when it comes to project management.

As an inconvenient coincidence, the role of the product developer was downgraded to that of supplier once more because of an internal reorganization. This affected the amount of people they made available for JLO040, meaning that they didn't contribute to the co-creation process anymore. Table 4.2 summarizes the behavior described in this section.

Table 4.2 – Shift in role and task interpretation of the project members over time, opposed to their traditional behavior

Ro	ole and task	State	Market	
			Product developer	Contractor
Role	Traditionally	Client	Supplier	Contractor
	JLO040 - t0	Partner	Partner	Partner
	JLO040 - t1	Client	Partner	Partner
	JLO040 - t2	Cooperating client	Supplier	Partner
Task	Traditionally	Contract management	Manufacture and supply armatures	Project management and realization
	JLO040 - t0	Add knowledge and participate	Project management and manufacture + supply armatures	Innovation management and realization
	JLO040 - t1	Contract management	Project management and manufacture + supply armatures	Realization
	JLO040 - t2	Contract management and participation	Manufacture and supply armatures	Project management with elements of innovation management and realization

# 4.4.1 Project organigram

The way in which the partners (used to) work together is depicted in an organigram, Figure 4.4.

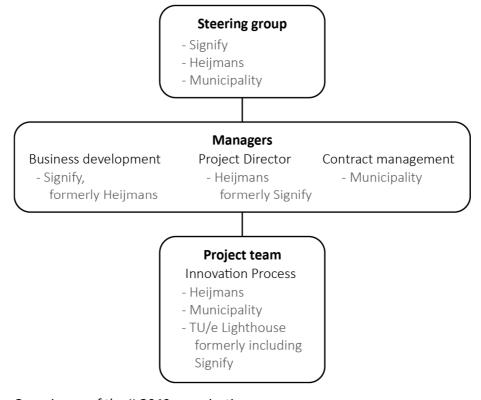


Figure 4.4 – Organigram of the JLO040 organization

The steering group consist of the senior managers of the contractual partners, which shows the commitment of the actors involved in this project. This senior level group keeps track of the project in trunk lines and has the decision-making authority whenever a subject is not covered by the contract. They have little to do with the daily operations, but are informed by the management team.

Within the management layer the different heads of the contract elements are positioned and keep track of the project on headlines. As described in the previous section, there have been two substantial changes in this layer whereby the roles of business development and project director have been swapped between the consortium members.

Finally, the project team and manages and executes the contract. At the start of the project Signify was a member of the project team, but as from their reorganisation they did not take part anymore. Moreover, the TU/e LightHouse participates in the project team, due to their experience with innovation processes and their role in the validation process of the innovations. The dynamics at the level of the project team are of main interest to this study.

Chapter 4 – Empirical setting

#### 5. Results

Following the two logics of the parties involved as described in section 4.2, the aim of this project was twofold. The state logic demanded an increase in quality of life through social value creation, while the market logic prescribed to maximize profits through economic value creation. When the project started it soon became apparent that both parties understood the results of the project differently due to their diverging logics, despite the long tender phase. The public actor's focus on economic value led to a higher expectation of financial benefits from their part than the private party anticipated, resulting in an economic value gap. Likewise, the private actor's focus on social value led to an overestimation of social value creation at their part, compared to what the private party thought they would be delivering, resulting in a social value gap.

As the outcome of the project was not specified at the outset, this indeed created room for interpretation, as supported by the following quotes.

The contract [...] leaves room for interpretation, which means that it constantly notice the expectations at both sides diverging strongly: about what the consortium will deliver [according to the municipality], or what we think we will deliver.

- Signify

[The budget] has been calculated based on the consortium's offer. I am convinced of the fact that both think it is correct at that point in time, but viewed from both worlds.

- Municipality

The substantiation of how the partners envisioned both social and economic value creation is given in Table 5.1.

Table 5.1 – Summary of diverging anticipations regarding social value and economic value creation

Anticipated	Public	Private
Social value	New-to-the-world innovations that will create an unprecedented amount of social value	Implement and further develop proven concepts of their own
Economic value	Substantial investments by private parties that will return to them on the long term	Small R&D investment is acceptable, else full remuneration from public party for the executed work

Both parties have taken action to minimize the social and economic value gaps. Following their logic, the municipality has initially acted to minimize the social value gap while the private actors have initially acted to minimize the economic value gap. Their measures induced a dynamic within the project as depicted in the causal loop diagram given in Figure 5.1, where social and economic value are depicted as SV and EV respectively. Hence, this conceptual model depicts the underlying dynamic of an innovation project where public and private bodies aim to create social value through a PPP.

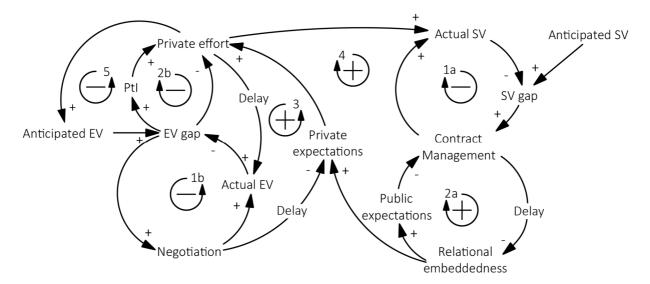


Figure 5.1 – Causal loop diagram depicting the underlying dynamics of a PPP aiming to create social value.

In the following sections the model will be explained based on the typologies, as identified by Senge (1990), present in the model. It is important to consider each of the typologies as taking their effect concurrently, creating a complex and highly interdependent system. Each of the conclusions is rooted in the interview sessions and thus supported by quotes in this text.

# 5.1 The fix that fails

The first typology discernible in the model is that of the fix that fails, explained in Figure 5.2.

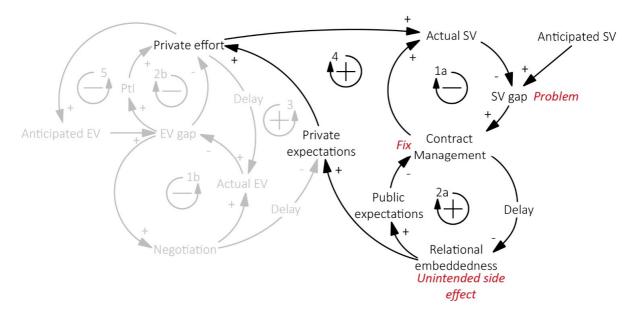


Figure 5.2 – Typology of the fix that fails in the conceptual model

Traditionally, the primary measure by which a certain result can be enforced is the contract. So, in case of a social value gap, the public party will be inclined to fall back on the contract. This is depicted in the conceptual model as loop 1a.

The municipality oftentimes refers to the contract [...]: whether we comply and whether everything is still going well.

- Heijmans

Contract management has to a certain extent kept the contract partners on track, therefore loop 1a is balancing. The contract at hand is, in contrast with traditional contracts, multi interpretable to a large extent and the partners need to deal with this ambivalence through co-operation for which a sufficient level of relational embeddedness is required, as one of the respondents clearly pointed out.

The problem is that we are all used to working according to a contract, while this contract requires to let this go and operate based on togetherness and equality.

- Heijmans

However, whenever contract management prevails, this has shown to decrease relational embeddedness, gradually making loop 4 dominant – as illustrated by the following quote.

It is sometimes confusing: are we strictly looking at the details of the contract or do we want to work together [...] based on trust. Those two are difficult to combine, but people tend to switch between them. [In the first case] you will see [the consortium] acting more defensively.

- Signify

JLO040 has shown that contract management decreased the level of relational embeddedness by decreasing levels of openness, trust and conformity between the public and private actors. This in turn resulted in decreased expectations for both the private as well as the public organizations. This implies that both organizations start to doubt whether the other can live up to their own a priori project standards. In the case of this PPP the public party started to think that the private party was not be able to deliver the desired / agreed social value, since they do not comply with the contract.

I sometimes wonder if we have the right party at the table.
- Municipality

On the other hand, the public party felt constrained to engage in the innovation process, as contracts worked counterproductive for innovation.

[The municipality] was forced to put the contract to tender, which resulted in [a contract with] frames and KPI's. This is a shame, because you don't want that for [an innovation] process.

- Heijmans

The private actors' expectations showed a direct positive relationship with their efforts. Hence, if expectations were high, the financially driven organization showed the will to invest their assets – i.e. people and financial means – because they expected the revenues of the project to be worth it. However, whenever expectations go down regarding these revenues, they will be less willing to invest because they need these revenues in order to continue their existence, as the following quotes made clear.

We are no philanthropic institution.
- Heijmans

There is an end to the amount of people we can deploy for innovation if there is no prospect of being able to roll out these [concepts] outside of Eindhoven.

- Signify

Finally, the private actor's efforts were related to the actual social value created, since more effort increases chances of success in a logical relationship.

The public actor's expectations in turn negatively influenced their inclination to manage the contract, meaning that the lower their expectations, the stronger their inclination towards contract management. This has to do with the fact that, for a public actor, contract management is the most familiar way to keep contracts on track whenever they perceive it to be amiss, as observed by one of the respondents.

If people experience difficulties they are inclined to relapse in old behavior.
- TU/e LightHouse

Since contract management directly influenced embeddedness this is a self-reinforcing effect, making the system highly unstable.

The overall effect of this *fix that fails* is as follows: a social value gap is noticed by the public actor, who reacts by increasing its contract management. This works on the short term, but whenever contract management prevails, relational embeddedness is decreased. This then decreases the private actor's expectations regarding the overall outcome of the project, decreasing their efforts and eventually decreasing the actual social value created. This then increases the gap, resulting in even more contract management, less embeddedness... and so on. All of which being amplified by the self-reinforcing effect on contract management.

# 5.2 Shifting the burden

The second typology present in this collaboration is that of *shifting the burden*, which is substantiated in Figure 5.3. It is the effect of the private actor's behavior whenever they discerned a gap in economic value.

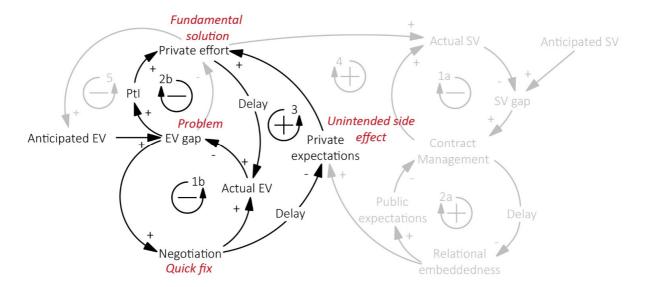


Figure 5.3 – Typology of Shifting the burden.

Economic value creation is a prerequisite for the public parties involved is the co-creation process. However, for this type of contract applies that it doesn't specify what exactly constituted this economic value creation. In case of a gap, the consortium then had two choices: either they increased their efforts in order to increase their chances of economic value creation (loop 2b) or they tried to negotiate additional remuneration from the public actor (loop 1b).

In the first case, the actual value creation would be increased because increased efforts results in higher chances of a successful project in a logical way. In the model, the pressure to intervene (PtI) depicts the private parties' perception of the necessity to increase their efforts. A higher pressure to intervene then thus results in more private effort. Because they had to deal with an innovation process, the results of increased efforts would only become noticeable in the more distant future. When combining the latter with a high uncertainty regarding the outcome of the innovation process, the private actors have shown not to be keen on increasing their efforts – as illustrated by the following quotes.

Within the municipality they think that [the consortium] can make up a business model through new business development and innovation, which will generate future financial revenues. This is however way too uncertain.

- Signify

[They] are still searching for the right revenue models.
- TU/e Lighthouse

They have therefore initially been inclined to negotiate additional remuneration from the public actor. These negotiations have in this case been open and honest – preventing a negative influence on the partner's alignment – but the problem proved difficult to solve. Hence, the economic value was not easily increased and negotiations continued to be needed.

Many things have not been detailed in the contract, [...] so then you need to sit down again which is sometimes time-consuming.

- Municipality

We have our relationship [with the municipality] in order, but that doesn't solve the problem.

- Heijmans

The problem's continued existence has shown to over time reduce the private actor's expectations, creating a dominance for loop 3 plus a reinforcement of loop 4.

Similar as to relational embeddedness, negotiations have shown to bring the private actor's efforts down when not successful. Viewed from the private actor's perspective, this in turn even further decreases the actual economic value created, increasing their problem.

Concluding, the consortium could choose two possible solutions when it comes to solving the problem of an economic value gap. The obvious and short term solution is to negotiate extra remuneration from the public body. Whenever this doesn't succeed it will in the long term however undermine the fundamental solution – that of the private party increasing their efforts – and even worsen the problem.

# 5.3 Eroding goals

The final typology discernible in this project is that of *eroding goals*. How this is incorporated in the model is shown in Figure 5.4.

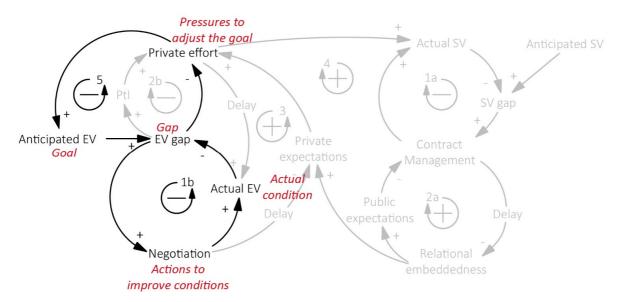


Figure 5.4 - Typology of Eroding goals

This typology too starts with loop 1b, whereby the private actor attempted to reduce their economic value gap by negotiating more financial remuneration. On the other hand, however, a pressure to adjust the goal, and thereby diminishing the gap, is present in the system through loop 5. The previous section described a positive relationship between the economic value gap and private effort. Even so, a negative relationship between the two existed as well.

Whenever the economic value gap is small, the private actor would have had the financial means to increase their efforts and vice versa. Private effort in turn positively influenced the amount of financial means needed for the project – i.e. anticipated economic value – since more effort is more costly. Whenever an economic value gap is present, this means that the private actor had the means to directly diminish this gap through loop 5. Indeed, they have felt the necessity to do so under top management's pressure to have a financially equal project as these two respondents pointed out.

[Because of] the financial situation the available manpower is insufficient for the project to succeed.

- Municipality

I think that the capacity for the project team cannot increase [...], which has to do with the expected revenues and [...] the costs of the project organization.

- Heijmans

#### 5.4 Overall dynamic

The private parties needed to put in effort in order to make the project successful on both the social and economic aspect. However, pressure was put in this effort from three sides:

- 1. Contract management decreases alignment, which in turn decreases the private parties' expectations, finally resulting in less private effort;
- 2. Financial negotiations likewise bring down the private parties' expectations, reducing the private effort;

3. The economic value gap negatively influences private effort, meaning that a lack of financial means reduces the effort dedicated to the project

This means that whenever loops 1a and 1b did not have their envisioned effect, private effort was going down. The end state of the system was then one where the private party caries out the contract with minimal effort, while the public party is stuck with a large social value gap. As long as the members of the PPP have not found a way out of this dynamic, this has shown to result in decreased management support, endangering the future of the project — as illustrated by the following two respondents.

[Within the board] enthusiasm and curiosity prevailed at the beginning [...], right now I think [the board of] Heijmans keep a watchful eye on our success.

- Heijmans

Internally, this project is a top priority [...], but if we don't receive any orders... I cannot tell the board I sold 10 armatures [not literally] in the city of Eindhoven. Compared to Jakarta, Buenos Aires and New York I would be in 575<sup>th</sup> place [as a matter of speaking].

- Signify

#### 6. Discussion

Recent research on hybrid organizations has shown that PPPs aimed at social value creation have to deal with both a hybridity in logics as well as a hybridity in governance (Quélin, Kivleniece, & Lazzarini, 2017). However, this setting creates challenges both internal and external to the PPP. Externally, PPPs often struggle with finding the right legitimacy structure, because they diverge from the logics that are present at the societal level (Battilana & Lee, 2014). Internally, the diverging nature of the characteristics resulting from both logics often leads to conflict (Battilana & Dorado, 2010). On top of this, whether a PPP can successfully create social value depends on the extant degree of mutual trust between the partners (Uzzi, 1997). Social value cannot be captured in contractual agreements, but has shown to be adversely affected by strict adherence to contractual agreements (Lyons & Mehta, 1997).

Although the necessity of hybrid arrangements has been recognized, research in this has currently largely refrained from examining the exact nature of dynamics within hybrid arrangements, while deeper understanding is called for (Battilana, Besharov, & Mitzinnek, 2017; Cabral et al., 2016; George, Howard-Grenville, Joshi, & Tihanyi, 2016). This study contributes to research on hybrid arrangements, and PPPs in particular, by showing how these diverging characteristics manifest themselves in practice and how the partners react on the tensions resulting from them. Specifically, the results describe the initial reaction of contract partners prior to hybridization, confirming the need for hybridization.

This study has explored the dynamics within a PPP aimed at social value creation, during the phase where hybridization pressures are at their peak (Jay, 2013). The results are structured using a causal loop diagram depicting the mechanism underlying the collaboration. The causal loop diagram shows and explains a variety of mechanisms underlying the collaboration process within a PPP directed at social value creation. The results show three important concurrent archetypal dynamics that seemed to have a major effect on the PPP.

- The fix that fails: The public actor tries to enhance social performance by strictly managing the contract. Since this eventually reduces the private actor's efforts, this results in the opposite effect.
- Shifting the burden: The private actor tries to enlarge their economic benefits by negotiating for a higher remuneration from the public actor. The long term solution however lies in putting more effort in, which the act of negotiating has shown to pressurize.
- *Eroding goals:* A lack of economic value creation will make the private party inclined to reduce efforts in order to keep costs down and require less economic value creation.

Jay (2013) states that juxtaposition of different organizations will eventually lead to change. On the other hand, York et al. (2016) have identified this to be a complex process. Adding to these insights, this study shows the nature of the pressures present in a PPP that aims to create social value, revealing a source of complexity. The case shows how three different and separate dynamics operate simultaneously, while all three have the same eventual effect. The interrelationships of these dynamics make it rather difficult for the partners to disentangle the nature of their struggles and find appropriate measures (Sterman, 2000).

Recent research has indicated the importance of a business model to keep the partners together in a PPP (Villani, Greco, & Phillips, 2017). In this case however, the business model appeared could not be adequately devised, as no specific project outcome was defined at the outset. This indeed created ambivalence about financial remuneration and hence triggered the private actor to renegotiate financial remuneration from the public actor.

On top of this, previous research has indicated how a PPP should be guided by a well-articulated societal problem in order to give the partnership sufficient purpose (George et al., 2016). Indeed, the absence of a pre-defined goal in this case seems to have induced the current dynamic, because it left room for interpretation and did not provide sufficient motivation to keep up the private actor's efforts.

Externally, Battilana and Lee (2014) showed how hybrid organizations struggle to find the right legitimacy structures, but have not described the nature of these tensions and their effect on the hybrid organization. This study however has shown, in the case of a PPP that aims to create social value, *which* external tensions arise. The study indicates external tensions on two dimensions.

Firstly, as Jones et al. (1997) indicated, relational embeddedness is crucial to the success of all sorts of collaborations. For PPPs that aim to create social value this has reflected in the pivotal role of relational embeddedness on the PPP's outcome by influencing the private actor's efforts. In turn, relational embeddedness is brought down by rigidly upholding a contract that at some point is likely to deviate from the project's actual need, given its innovative character (Di Domenico, Haugh, & Tracey, 2010; Tirole, 1999). Social value creation thus seems to be hampered by the external obligation for PPPs to base the collaboration on a contract, that cannot be altered significantly (European Parliament, 2014).

Secondly, the PPP's members have shown to remain to have strong ties with their "home" organizations due to its temporary nature (Matinheikki, Aaltonen, & Walker, n.d.). This study indicates that, as a result, institutional logics create a situation in which the private actor is inclined to act on economic incentives and under-appreciate social benefits and vice versa. Despite the fact that was already known to hamper hybridization (Battilana et al., 2017), this study adds by showing in what way this problem is kept alive. Namely, both public and private are heavily involved, over all organizational tiers. Top-management is more a part of their business then they are of the hybrid organization , making that strongly adhere market and state logics respectively and keeping these incentives alive within the PPP. Indeed the data has shown a decrease in management enthusiasm and an increase in skepticism over time, as their respective gaps do not cease to exist. The complexity of the issues is underlined by the fact that both parties realize what is going on, but are nevertheless unable to solve the problem.

This study therefore also underlines the necessity of hybridization processes to keep all partners on board by showing how a non-hybridized situation leads to a decreased engagement of the private actor through a decrease of their effort and an increase in top-management's skepticism. This is especially important, since the private actor's effort is crucial in the success of the project on both the social and economic aspect. What this study then describes how pressures lead to a situation of conflict: the private actor puts in less effort then the public actor desires and they themselves anticipated.

# 6.1 Limitations and avenues for future research

This study has been performed using a single case, which indicates that one needs to be careful with generalizing the findings. However, the type of PPP in combination with the representative actor characteristics of the case at hand indicate that this behavior could generally apply. Also, the dynamics appeared to be largely stemming from diverging logics. As logics are regarded to be present at the societal level (Thornton & Ocasio, 2008), this indicates that a similar dynamic could appear in PPPs within societies similar to the Netherlands. Future research is however necessary to verify my findings.

On top of this, the case took place in a social environment where living standards are already quite high. For the case, this meant that no particular societal problem was addressed, while prior research indicates how a societal problem is needed to give the PPP purpose and thus keep the partnership together (George et al., 2016). If PPPs that aim to tackle a specific societal face the same challenges therefore remains to be found out.

Another threat to case studies, as well as system dynamics, is the possible existence of factors that have not been taken into account in this study, while they do play an important role (Sterman, 2000; Yin, 2014). I have tried to minimize this effect by repeatedly consulting experts. However, the influence of the particular choice of literature probably had an influence. For example, research on value creation or business model development could deliver valuable insights for PPPs of this category.

A subject that has not been mentioned in this study so far is that of open innovation and the important role of innovation intermediaries (Chesbrough, 2006). The case did displayed a desire among the actors for open innovation and even the involvement of an innovation intermediary: TU/e LightHouse. However, the intermediary in this case did not seem able to bring the partners closer to one another, which might also have to do with a lack of purpose to the collaboration. This raises the question in which circumstances, or under which preconditions, intermediaries could be helping PPPs to innovate, which future research could elaborate on.

This PPP chose a form in which the public actor actively participates in the social value creation process. This in contrast with their usual role, where they have a rather normative role: judging solutions and keep the contract on track. This is directly connected to their logic, and related societal role. Striking is the fact that indeed the municipality took on this normative role again right at the project start. One could argue that the municipality, as a result of the normative role related to their logic, is not the right type of partner when it comes to creating the innovative solutions needed for social value creation (George et al., 2016). It could be interesting to research different forms of collaboration in the public-private context and their effect on the outcome of the project.

On top of this, my research focused on the tensions that resulted from the organizations' diverging characteristics. Future research could continue the storyline by examining how exactly the hybridization process takes place. For example, this study shows how tensions rise over time, while private involvement decreases inversely proportional. Future research could show at what point these tensions start leading to change in the project organization.

Moreover, this study treated every member of an organization to have the same source of rationality. However, reality indicates a much more complex interaction that is also strongly dependent on the characteristics of the individual. Future research could focus on the role of the individual in the overall prosperity of the project.

Also, this study only researched the underlying managerial tensions present in the project. However, the data shows diverging evaluation criteria, depending on the logic one adheres. On top of this, the power of decision is distributed differently within the underlying organizations due to their differences in governance. Combined, these factors constitute an interesting avenue for future research, by focusing on the decision-making process within the project team itself when it comes to choosing the project outcome or courses of action.

Finally, the relationship between the hybridization process within the PPP and the prerequisite facilitating processes within the underlying organizations would be an interesting area of future research. After all, the members of the PPP remain to have strong ties with their 'home' organizations, indicating that something should be changed there too. Indeed, respondents have pointed out the existence of "two timelines": one within the PPP and one within their original organizations, which proved difficult to match.

# 6.2 Practical implications

PPPs that aim to create social value can learn lessons from the dynamics coming forth in this study. First and foremost, members of these types of PPPs need to realize that hybridization doesn't happen on its own accord. Management will actively need to try to unite the demands of social and economic value creation and come up with new governance structures. Also, hybridization as shown to be a time-consuming process – many studies on this topic cover a period of about 20 years – which indicates that the members of a PPP should not despair whenever this problem continues to exist.

As long as the partners have not fully understood one another logics, gaps in both economic and social value creation appear to be inevitable. Both contract management and negotiation work to decrease these gaps, but the model shows this should be done with caution. Most importantly, the members of the PPP should try to uphold relational embeddedness to mitigate the negative effects of both mechanisms. This is done by displaying trust, openness (Uzzi, 1997) on primary and secondary aims and maybe also patience regarding the other actor's ignorance. This will then enable the partners to fully understand each other's goals and create the opportunity to take them into account (Granovetter, 1992). Also, it might be important to invest in a good informal relationship to inhibit trust and openness. This then doesn't trigger hybridization by itself, but at least creates the right boundary conditions.

Previous work in social value creation has emphasized the importance of a common goal that gives sufficient purpose to the collaboration in order to motivate the partners to deploy their means and pursue the common goal in addition to their individual ones (George et al., 2016). The partners therefore need to keep in mind or formulate the exact problem they want to solve in order to motivate them and also confirm they need one another (Bryson, Crosby, & Middleton Stone, 2006). During this process, the interests of both actors should be taken into account in order to motivate the private actor to put in effort, possibly without direct financial remuneration.

#### 7. Conclusion

This research set out to generate more in-depth insights in how the diverging characteristics of public and private actors, as a result of their diverging logics, influenced the dynamics within a PPP that aims to create social value. The research question was addressed by first exploring the literature on hybrid organization, which was deemed relevant as a social PPP is a form of hybrid organization. Then, a case was selected in order to research the exact dynamics through an in-depth case study.

In total, 15 interviews have been performed, equally distributed over the PPP's members that were most actively involved. Different methods were used to extract information from the data, of which grounded theory formed the main contribution. Together with the advice from experts, who have been consulted repeatedly, this resulted in a causal loop diagram. This diagram depicted first hypotheses regarding the nature of influences on the PPP during the phase in which hybridization has not taken place. As a result, tensions stemming from the diverging characteristics can take full effect.

The research objective was to find out how the diverging actor characteristics influence the dynamics within a PPP that aims to create social value. This study shows how the diverging actor characteristics mainly manifest themselves through the public actor's focus on social value and the private actor's focus on economic value, while under-appreciating economic and social value respectively. This induces a dynamic that will motivate the private partner to bring their efforts down, despite the fact that these efforts are vital for the project's success.

Linking these findings to previous literature, the absence of both a pre-defined business model related to the actual outcome and a well-articulated societal problem indeed seem likely to help maintain the problem. On top of this, the individuals that constitute the PPP not easily let go of their logic, as they remain involved in their "home" organizations. This hampers evolution of the partnership in terms of hybridization, while hybridizations seems to play an important role in continuing management's support for the PPP.

Finally, some advice to this type of PPPs was provided. In this, mainly the vital role of relational embeddedness was emphasized, as it played a crucial role in dynamics that resulted from this study. Relational embeddedness could then provide the right conditions for hybridization processes to take place.

#### References

- Aghion, P., & Tirole, J. (1994). The Management of Innovation. *The Quarterly Journal of Economics*, 109(4), 1185–1209.
- Albert, S., & Whetten, D. (1985). Organizational identity. *Research on Organizational Behavoir*, 7, 263–295.
- Anderson, S. W., & Dekker, H. C. (2005). Management Control for Market Transactions: The Relation Between Transaction Characteristics, Incomplete Contract Design, and Subsequent Performance. *Management Science*, *51*(12), 1734–1752. https://doi.org/10.1287/mnsc.1050.0456
- Battilana, J., Besharov, M., & Mitzinnek, B. (2017). On Hybrids and Hybrid Organizing: A Review and Roadmap for Future Research. In R. Greenwood, C. Oliver, T. B. Lawrence, & R. Meyer (Eds.), *The SAGE handbook of organizational institutionalism* (pp. 128–162). Thousand Oaks, California: SAGE Publications, Inc.
- Battilana, J., & Dorado, S. (2010). Building sustainable hybrid organizations: The case of commercial micro-finance organizations. *Academy of Management Journal*, *53*(6), 1419–1440.
- Battilana, J., & Lee, M. (2014). Advancing Research on Hybrid Organizing. *The Academy of Management Annals*, 8(1), 397–41.
- Batty, M., Axhausen, K. W., Giannotti, F., Pozdnoukhov, A., Bazzani, A., Wachowicz, M., ... Portugali, Y. (2012). Smart cities of the future. *European Physical Journal: Special Topics*, 214(1), 481–518. https://doi.org/10.1140/epjst/e2012-01703-3
- Baum, J. A. C., & Oliver, C. (1992). Institutional Embeddedness and the Dynamics of Organizational Populations. *American Sociological Review*, *57*(4), 540–559.
- Bechky, B. (2003). Sharing Meaning Across Occupational Communities: The Transformation of Understanding on a Production Floor. *Organization Science*, *14*(3), 227–351. https://doi.org/10.1287/orsc.14.3.312.15162
- Besharov, M., & Smith, W. (2014). Multiple institutional logics in organizations: Explaining their varied nature and implications. *Academy of Management Review*, *39*(3), 364–381.
- Boxenbaum, E., & Jonsson, S. (2008). Isomorphism, Diffusion and Decoupling. In R. Greenwood, C. Oliver, T. B. Lawrence, & R. Meyer (Eds.), *The SAGE Handbook of Organizational Institutionalism* (pp. 78–98). Thousand Oaks, California: SAGE Publications, Inc. https://doi.org/10.4135/9781849200387.n3
- Brock, K., den Ouden, E., van der Klauw, K., Podoynitsyna, K., & Langerak, F. (n.d.). Light the way for smart cities: Lessons from Philips Lighting. *Technological Forecasting and Social Change, XX*(XX), XX–XX. https://doi.org/10.1016/j.techfore.2018.07.021
- Bryman, A. (2012). Social research methods. New York: Oxford University Press Inc.
- Bryson, J. M., Crosby, B. C., & Middleton Stone, M. (2006). The Design and Implementation of Cross-Sector Collaborations: Propositions from the Literature. *Public Administration Review*, *66*(1), 44–55. https://doi.org/10.1111/j.1540-6210.2006.00665.x
- Burnett, M. (2009). Using Competitive Dialogue in EU Public Procurement Early Trends and Future Developments. *EIPAScope*, *2*, 17–22.
- Cabral, S., Mahoney, J., McGahan, A., Potoski, M., Gambardella, A., & Mitchell, W. (2016). Call for Papers for a Special Issue Value Creation and Value Appropriation in the context of Public and Non-Profit Organizations. *Strategic Management Journal*, 1–4.

- Charmaz, K. (2006). *Contructing Grounded Theory: A Practival Guide through Qualitative Analysis*. Thousand Oaks, California: SAGE Publications, Inc.
- Chesbrough, H. (2006). *Open Innovation: the New Imperative for Creating and Profiting from Technology*. Boston, MA: Harvard Business School Press.
- Christensen, H. B., Nikolaev, V. V, & Wittenberg-Moerman, R. (2016). Accounting Information in Financial Contracting: An Incomplete Contract Theory Perspective. *Journal of Accounting Research*, *54*(2), 397–435. https://doi.org/10.1111/1475-679X.12108.This
- Christiansen, L. H., & Lounsbury, M. (2013). Strange Brew: bridging Logics via Institutional Bricolage and the Reconstitution of Organizational Identity. In M. Lounsbury & E. Boxenbaum (Eds.), *Institutional Logics in Action, Part B (Research in the Sociology of Organizations, Volume 39 Part B)* (pp. 199–232). Emerald Group Publishing Limited.
- Dameri, R. P. (2016). Smart City and ICT. Shaping Urban Space for a Better Quality of Life. In F. Ricciardi & A. Harfouche (Eds.), *Information and Communication Technologies in Organizations and Society: Past, Present and Future Issues* (pp. 85–98).
- de Bettignies, J. E., & Ross, T. W. (2004). The economics of public-private partnerships. *Canadian Public Policy*, *30*(2), 135–154. https://doi.org/10.2307/3552389
- Den Ouden, E., & Valkenburg, R. (2012). *Vision and roadmap urban lighting Eindhoven 2030*. Eindhoven.
- Di Domenico, M. L., Haugh, H., & Tracey, P. (2010). Social bricolage: Theorizing social value creation in social enterprises. *Entrepreneurship: Theory and Practice*, *34*(4), 681–703. https://doi.org/10.1111/j.1540-6520.2010.00370.x
- Driessen, P. P. J., Dieperink, C., van Laerhoven, F., Runhaar, H. A. C., & Vermeulen, W. J. V. (2012). Towards a Conceptual Framework for The Study of Shifts in Modes of Environmental Governance Experiences From The Netherlands. *Environmental Policy and Governance*, 22(3), 143–160. https://doi.org/10.1002/eet.1580
- Ebrahim, A., Battilana, J., & Mair, J. (2014). The governance of social enterprises: Mission drift and accountability challenges in hybrid organizations. *Research in Organizational Behavior*, 34, 81–100. https://doi.org/10.1016/j.riob.2014.09.001
- EPEC. (2010). Procurement of PPP and the use of Competitive Dialogue in Europe.
- European Commission. (2013). Lighting the Cities, Accelerating the Deployment of Innovative Lighting in European Cities. Brussels.
- European Court. Case C-243/89 (1993).
- European Parliament. (2014). Directive 2014/24/EU of the European Parliament and of the Council.
- Fernandes, D. A., Costa, A. A., & Lahdenperä, P. (2018). Key features of a project alliance and their impact on the success of an apartment renovation: a case study. *International Journal of Construction Management*, *18*(6), 482–496. https://doi.org/10.1080/15623599.2017.1344913
- Forbes. (2013). World's 15 Most Inventive Cities. Retrieved from https://www.forbes.com/sites/williampentland/2013/07/09/worlds-15-most-inventive-cities/
- Friedland, R., & Alford, R. R. (1991). Bringing Society Back In: Symbols, Practices and Institutional Contradictions. In W. W. Powell & P. J. DiMaggio (Eds.), *The New Institutionalism in Organizational Analysis* (pp. 232–263).
- George, G., Howard-Grenville, J., Joshi, A., & Tihanyi, L. (2016). Understanding and Tackling Societal

- Grand Challenges Through Management Research. *Academy of Management Journal*, *59*(6), 1880–1895. https://doi.org/10.5465/amj.2016.4007
- Glaser, B. G., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago, IL: Aldine.
- Granovetter, M. (1992). Economic Institutions as Social Constructions : A Framework for Analysis. *Acta Sociologica*, 35(1), 3–11.
- Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E. R., & Loonsbury, M. (2011). Institutional Complexity and Organizational Responses. *Academy of Management Annals*, *5*(1), 317–371. https://doi.org/10.5465/19416520.2011.590299
- Hollensbe, E., Wookey, C., Hickey, L., & George, G. (2014). Organizations with purpose. *Academy of Management Journal*, *57*(5), 1227–1234. https://doi.org/10.5465/amj.2014.4005
- Jay, J. (2013). Navigating paradox as a mechanism of change and innovation in hybrid organizations. *Academy of Management Journal*, *56*(1), 137–159.
- Jones, C., Hesterly, W. S., & Borgatti, S. P. (1997). A General Theory of Network Governance: Exchange Conditions and Social Mechanisms. *The Academy of Management Review*, 22(4), 911–945. https://doi.org/10.2307/259249
- Khanom, N. A. (2010). Conceptual Issues in Defining Public Private Partnerships (PPPs). *International Review of Business Research Papers*, *6*(2), 150–163.
- Kivleniece, I., & Quélin, B. V. (2012). Creatin and Capturing Value in Public-Private Ties: A Private Actor's Perspective. *Acad*, *37*(2), 272–299.
- Klein-Woolthuis, R., Hillebrand, B., & Nooteboom, B. (2005). Trust, contract and relationship development. *Organization Studies*, 26(6), 813–840. https://doi.org/10.1177/0170840605054594
- Kraatz, M. S., & Block, E. S. (2008). Organizational implications of institutional pluralism. In R. Greenwood, C. Oliver, K. Sahlin-andersson, & R. Suddaby (Eds.), *The SAGE Handbook of Organizational Institutionalism* (pp. 243–275). Thousand Oaks, California: SAGE Publications, Inc.
- Lam, P. T. I., & Yang, W. (2017). A Study of the Costs and Benefits of Smart City Projects Including the Scenario of Public-Private Partnerships. *International Journal of Urban and Civil Engineering*, 11(5), 600–605.
- Langley, A. N. N. (1999). Strategies for Theorizing from Process Data. *The Academy of Management Review*, 24(4), 691–710. https://doi.org/10.2307/259349
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Thousand Oaks, California: SAGE Publications, Inc.
- Linder, S. H. (1999). Coming to Terms With the Public-Private Partnership: A Grammar of Multiple Meanings. *American Behavioral Scientist*, 43(1), 35–51. https://doi.org/10.1177/00027649921955146
- Lyons, B., & Mehta, J. (1997). Contracts, Opportunism and Trust: Self-interest and Social Orientation. *Cambridge Journal of Economics*, 21(2), 239–257. https://doi.org/10.1093/oxfordjournals.cje.a013668
- Matinheikki, J., Aaltonen, K., & Walker, D. (n.d.). Politics, public servants, and profits: Institutional complexity and temporary hybridization in a public infrastructure alliance project. *International Journal of Project Management, In Press.* https://doi.org/10.1016/j.ijproman.2018.07.004

- Mintzberg, H. (1979). An Emerging Strategy of "Direct "Research. *Administrative Science Quarterly*, 24(4), 582–589.
- Moser, C., Wendel, T., & Carabias-hütter, V. (2014). reviewed paper Scientific and Practical Understandings of Smart Cities Corinne Moser, Thomas Wendel, Vicente Carabias-Hütter. In *Plan it Smart! Clever Solutions for Smart Cities. Proceedings of REAL CORP 2014, 19th International Conference on Urban Development, Regional Planning and Information Society.* (pp. 507–514).
- Nam, T., & Pardo, T. A. (2011). Conceptualizing Smart City with Dimensions of Technology, People, and Institutions. In *Proceedings of the 12th Annual International Digital Government Research Conference on Digital Government Innovation in Challenging Times dg.o '11* (pp. 282–291). https://doi.org/10.1145/2037556.2037602
- Oliveira, N., & Lumineau, F. (2017). How Coordination Trajectories Influence the Performance of Interorganizational Project Networks. *Organization Science*, 28(6), 1029–1060. https://doi.org/10.1287/orsc.2017.1151
- Opara, M., & Rouse, P. (2018). The perceived efficacy of public-private partnerships: A study from Canada. *Critical Perspectives on Accounting, In press.* https://doi.org/10.1016/j.cpa.2018.04.004
- Pache, A.-C., & Santos, F. (2013). Inside the Hybrid Organization: Selective Coupling as a Response to Competing Intstitutional Logics. *Academy of Management Journal*, *56*(4), 972–1001.
- Phills, J. A., Deiglmeier, K., & Miller, D. T. (2008). Rediscovering Social Innovation. *Stanford Social Innovation Review*, *6*, 34–43.
- Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory*, 18(2), 229–252. https://doi.org/10.1093/jopart/mum015
- Purdy, J. M., & Gray, B. (2009). Conflicting Logics, Mechanisms of Diffusion, and Multilevel Dynamics in Emerging Institutional Fields. *Academy of Management Journal*, *52*(2), 355–380.
- Quélin, B. V., Kivleniece, I., & Lazzarini, S. (2017). Public-Private Collaboration, Hybridity and Social Value: Towards New Theoretical Perspectives. *Journal of Management Studies*, *54*(6), 763–792. https://doi.org/10.1111/joms.12274
- Raphael, K. (1987). Recall Bias: A Proposal for Assessment and Control. *International Journal of Epidemiology*, 16(2), 167–170. https://doi.org/10.1093/ije/16.2.167
- Rouse, M., Rosencrance, L., Shea, S., & Wigmore, I. (2016). Internet of thing (IoT). Retrieved December 7, 2018, from https://internetofthingsagenda.techtarget.com/definition/Internet-of-Things-IoT
- Senge, P. M. (1990). *The Fifth Discipline The Art and Practice of the Learning Organization.* New York: Doubleday.
- Smith, W. K., Gonin, M., & Besharov, M. L. (2013). Managing Social-Business Tensions: A Review and Research Agenda for Social Enterprise. *Business Ethics Quarterly*, 23(3), 407–442. https://doi.org/10.5840/beq201323327
- Sterman, J. D. (2000). *Business Dynamics: Systems Thinking and Modeling for a Complex World*. New York, NY: The McGraw-Hill Companies Inc.
- Strauss, A., & Corbin, J. M. (1990). *Basics of Qualitative Resarch: Grounded Theory Procedures and Techniques*. Thousand Oaks, California: SAGE Publications, Inc.
- Sumo, R., van der Valk, W., van Weele, A., & Duysters, G. (2016). How Incomplete Contracts Foster Innovation in Inter-Organizational Relationships. *European Management Review*, 13(3), 179–192.

- https://doi.org/10.1111/emre.12075
- Thornton, P. H. (2002). The Rise of the Corporation in a Craft Industry: Conflict and Conformity in Institutional Logics. *Academy of Management Journal*, 45(1), 81–101.
- Thornton, P. H., & Ocasio, W. (1999). Institutional logics and the historical contingency of power in organizations: Executive succession in the higher education publishing industry, 1958-1990. *The American Journal of Sociology*, 105(3), 801–843.
- Thornton, P. H., & Ocasio, W. (2008). Institutional Logics. In R. Greenwood, C. Oliver, T. B. Lawrence, & R. Meyer (Eds.), *The SAGE handbook of organizational institutionalism* (Vol. 1, pp. 99–129). Thousand Oaks, California: SAGE Publications, Inc.
- Tihanyi, L., Graffin, S., & George, G. (2014). Rethinking governance in management research. *Academy of Management Journal*, *57*(6), 1535–1543. https://doi.org/10.5465/amj.2014.4006
- Tirole, J. (1999). Incomplete Contracts: Where Do We Stand? *Econometrica*, 67(4), 741–781.
- Turner, D. W. (2010). Qualitative Interview Design : A Practical Guide for Novice Investigators. *The Qualitative Report*, *15*(3), 754–760.
- Uzzi, B. (1997). Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness. *Administrative Science Quarterly*, *42*(1), 35–67. https://doi.org/10.3102/00346543067001043
- Van Aken, J., Berends, H., & Van der Bij, H. (2007). *Problem-solving in organizations: a methodological handbook for business students*. Cambridge: Cambridge University Press.
- Villani, E., Greco, L., & Phillips, N. (2017). Understanding Value Creation in Public-Private Partnerships: A Comparative Case Study. *Journal of Management Studies*, 54(6), 876–905. https://doi.org/10.1111/joms.12270
- Voegtlin, C., Scherer, A. G., & Hawn, O. (2018). Sepcial issue call for papers Grand societal challenges and responsible innovation. *Journal of Management Studies*. Retrieved from http://www.socadms.org.uk/wp-content/uploads/Grand-Societal-Challenges-and-Responsible-Innovation.pdf
- Vurro, C., Dacin, M. T., & Perrini, F. (2010). Institutional Antecedents of Partnering for Social Change: How Institutional Logics Shape Cross-Sector Social Partnerships. *Journal of Business Ethics*, 94(SUPPL. 1), 39–53. https://doi.org/10.1007/s10551-011-0778-0
- Washburn, D., & Sindhu, U. (2010). *Helping ClOs Understand "Smart City" Initiatives: Defom. Forrester Research, inc.* Cambridge, MA. https://doi.org/10.1029/2004RS003041
- Williamson, O. E. (1999). Strategy Research: Governance and Competence Perspectives. *Strategic Management Journal*, *20*(12), 1087–1108.
- Yin, R. (2014). Case Study Research (5th ed.). Thousand Oaks, California: SAGE Publications, Inc.
- York, J. G., Hargrave, T. J., & Pacheco, D. F. (2016). Converging winds: Logic hybridization in the Colorado wind energy field. *Academy of Management Journal*, *59*(2), 579–610. https://doi.org/10.5465/amj.2013.0657
- Zand, D. E. (1972). Trust and Managerial Problem Solving. *Administrative Science Quarterly*, *17*(2), 229–239. https://doi.org/10.2307/2393957
- Zietsma, C., & Lawrence, T. B. (2010). Institutional Work in the Transformation of an Organizational Field: The Interplay of Boundary Work and Practice Work. *Administrative Science Quarterly*, 55(2), 189–221. https://doi.org/10.2189/asqu.2010.55.2.189

Zilber, T. B. (2002). Institutionalization as an Interplay between Actions , Meanings , and Actors : The Case of a Rape Crisis Center in Israel. *Academy of Management Journal*, *45*(1), 234–254. https://doi.org/10.2307/3069294

### **Appendices**

# Appendix A – Interview guideline

The guideline as given below is given in the form of concrete questions. However, these questions cover topics that were mentioned during the interviews and have not been used in precisely this way. The introduction is used to warm up the interviewee and get to know more about someone's background and potential logics at play. Also, the timeframe in which someone has been involved might influence their perception of the project.

Secondly, more detail about the important stakes of the underlying organizations are asked. Why does an organization contribute and has this reason stayed the same over time? This will help understand their motives and the dynamics resulting from them. Thirdly, internal influences on the collaboration are investigated. Finally, the personal experience and opinion about the project are inquired. Also, respondents have likely identified strengths and weaknesses of the project and their causes and possible solutions.

#### Introduction

- Could you shortly introduce yourself?
  - o Extent of experience within the built environment
- What is your role in the project?
- How long have you been involved?

#### **Organization (external influences)**

- Why does your organization contribute in this project; with are their stakes? (secondary aim)
- How does your organization('s management) regard this project?
  - o Changes over time?

#### **Collaboration (internal influences)**

- To what extent does tender legislation influence the process?
- What is the difference between this and other collaborations?
- To what extent do you experience trust and openness and how?

#### **Project**

- What do you think about it?
  - o How did that chance over time
- What have been important events and why?
- What do you think of your own contribution?
- What do you think of other people's contribution?
- SWOT and why?
  - o Do you see potential avenues for improvement?