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Balancing Efficiency and Co-Creation in Networks: A Case Study of Ruter

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EXECUTIVE SUMMARY

This thesis aims to explore how efficient coordination and co-creation for innovation can be combined in a business network. To study this, we build on literature about networks and knowledge sharing, to provide insight on the mechanisms that can affect efficiency and the collaborative environment in the network.

We study this in the context of Ruter and its network of operators and partners. The network provides public transport services in Oslo and Akershus, and consist of 11 member organisations that operate a variety of services, coordinated by the administrative company, Ruter. A case study research design has been applied to examine the phenomenon and gain insights on how the network has evolved over time. We conducted 27 interviews with key individuals from all 11 member organisations and accessed archival data on the network. With this solid basis of data, we were able to gain an in-depth understanding of the network's development over time and the characteristics that affect learning and co-creation in the network.

In our study we find that the network has gone from a turbulent start, to become an efficient service provider with well-functioning collaboration at an operational level. By joining efforts to work on achieving a common goal, the network managed to become highly efficient and created a solid basis for a good collaborative environment. Until recently, the main focus of the network has been on exploiting knowledge and resources to improve their services and to meet the passenger growth. Today's complex and changing environment requires the network to collectively shift the focus towards exploration and co-creation, in order to continue to deliver high-quality services that satisfy the continuously changing demand from customers and stakeholders. However, we argue that exploration should not come at the expense of the overall efficiency of the network, but rather be balanced in order to secure progress in both dimensions.

Balancing efficient coordination and co-creation can be difficult because these two dimensions have attributes that are fundamentally different. We find some attributes of efficiency, such as strong contractual focus, low levels of involvement and rigidity, to have an inhibiting effect on exploration and co-creation in the network.

However, we also find some of these attributes to be crucial for the network's further development. This thesis contributes to the literature on network development, by discussing how the network, despite these attributes, can facilitate co-creation, without significantly compromising efficient coordination.

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1.0 INTRODUCTION

Over the last decades, there has been an emergence of new innovative organisational designs where collaborative behaviour has been a central idea. Researchers have given much attention to interfirm collaboration and how these new organisational forms can contribute to value creation (Lee, Olson & Trimi, 2012a; Bititci, Martinez, Albores & Parung, 2004), knowledge creation (Lee & Cole, 2003) and product development (Snow, Fjeldstad, Lettl & Miles, 2011), to mention some areas. These new designs have their basis in the network form of organisation and have evolved as a response to the complex and changing competitive conditions (Miles & Snow, 1986).

Scholars argue that the network form of organisation is especially beneficial when the business environment is dynamic and there is a demand for speed, as networks yield flexibility, responsiveness to changes, and fast access to resources and information (Powell, 1990; Brass, Galaskiewicz, Greve & Tsai, 2004). As the environment is changing, multi-party collaboration becomes increasingly important when considering the firm's ability to respond to and cope with complex problems, as well as adapt to the dynamic changes (Fjeldstad, Snow, Miles & Lettl, 2012).

Although there seem to be multiple benefits of this form of organisation, not all networks are able to effectively achieve positive network outcomes. While dealing with the complexity of sharing knowledge across firm boundaries, networks are also concerned with mitigating the risk of opportunistic behaviour. This creates a paradox where high levels of control and coordination can be important in securing network efficiency, but can also have an inhibiting effect on collaboration and knowledge sharing. How a network is structured and governed can affect the network's development and outcome (Provan, Fish & Sydow, 2007). In this thesis, we aim to explore how a network can evolve in the direction towards co-creation, without compromising efficiency. This leads us to the research question:

How can efficient coordination and co-creation be combined in a heterogeneous business network to collectively adapt to rapid industry changes?

We are studying this in the context of the public transport network of Ruter and its operators and partners, which is the largest of its kind in Norway. The public transport services in Oslo and Akershus is operated by the network, with Ruter as the administrative entity. Ruter was established by political mandate in 2008, with the aim to plan, coordinate, market and develop the public transport services in the region. At the outset, the collaboration was characterised by low levels of trust and the operators and partners questioned Ruter's relevance and mandate. There was a resistance towards unifying the public transport services under one administrative company, particularly from one of the actors in the network that previously held parts of the administrative responsibility. Measures were taken to improve the interfirm relations and create stability in the network, and one of the most important initiatives was the development of a common network goal and a code of conduct for collaboration. From a turbulent start, the network has during its lifespan developed to deliver efficient and high-quality services and has become the public transport service provider with the highest customer satisfaction in the Nordics (Ruter, 2017). Simultaneously, the network has seen a strong passenger growth of 63% since 2007, equivalent to a CAGR of 4.3% (Ruter, 2018).

Until recently, the main focus of the network has been to meet increased passenger growth, by delivering efficient and affordable solutions. However, the network appears to be in a transition where increased efficiency is no longer sufficient for facing the external demand and cope with increased competition. The public transport industry is facing uncertainty due to rapid technological changes, such as green technology and self-driving technology, which create new mobility trends and change customer demand. Thus, the actors' survival is to a larger extent than before dependent on exploration and co-creation. However, it is important not to disregard the aspect of efficiency, and obtain a balance between efficient coordination and co-creation that maximises the efforts of both dimensions.

After having reviewed literature on networks and how it can facilitate interorganisational learning and innovation, we acknowledge that extensive research has been conducted on this topic. Networks can be studied at different levels, and in this case, we apply a network level approach, as Kilduff and Tsai (2003) refer to as the "whole network". Provan et al. (2007) argue that focusing on the network as a whole is important in order to understand how the network evolves

and how collective outcomes are generated. They further argue that this topic is frequently discussed but rarely empirically studied (p. 480). Our study adds to the existing literature on networks as a whole by empirically examining the network's development. We also illustrate how the network joins efforts to deliver efficient services and discuss how the network can achieve an appropriate balance between efficient coordination and co-creation.

The thesis is organised as follows. First, we introduce foundational literature on networks, how they are structured and which mechanisms that affect the network development. We also review literature on knowledge creation and organisational learning. Second, we present the methodology that is applied in the study, followed by a presentation of our findings. Lastly, we discuss the findings in light of relevant theories, before providing a conclusion of the thesis.

2.0 THEORETICAL FOUNDATIONS

In this chapter, we will outline relevant literature to motivate our research question and to provide the reader with a foundational background. We start by reviewing literature about networks, how they are structured, governed, and how these characteristics affect the dynamics on a network level. Going from a general perspective on networks, we further present insights on how to evaluate the performance of a network. As our research question aims to explore efficient coordination in networks, we address how this can be achieved and what implications efficiency can have on other measures of performance.

Networks as a form of organisation facilitate interorganisational learning and impacts how companies innovate (Dhanaraj & Parkhe, 2006). However, innovative processes are not conducted without obstacles, even in a network setting. With this in mind, we aim to explore how co-creation is carried out in networks, by focusing on how knowledge is generated and managed. This is important for how a network collectively can learn, which is essential for exploration and joint development (Holmqvist, 2004). The ability to explore is of special importance for firms in increasingly dynamic environments, as there is a need for companies to innovate (Eisenhardt, Furr & Bingham, 2010). In such dynamic environments, an organisation's capabilities alone is not sufficient to develop sustainable competitive

advantage (Lee, Olson & Trimi, 2012b). Accordingly, interorganisational collaboration is crucial, and we will further explain how collaboration can facilitate knowledge creation and learning, and discuss potential barriers that can inhibit these processes.

Lastly, we introduce the concept of trust, as it has been argued to have a significant impact on collaboration (Dodgson, 1993; Scott, 2000). Low levels of trust are found to affect the partners' perceived risk and thus have an inhibiting effect on the collaborative environment (Das & Teng, 2004). Accordingly, trust is an important element in interorganisational relations, as it lays the foundations for a well-functioning collaboration between organisations.

2.1 Networks

A network perspective concerns how actors are embedded within networks of interconnected relationships. We can define a network as “a set of nodes and a set of ties representing some relationship, or no relationship between the nodes” (Brass et al., 2004, p. 795), where the nodes are representing the actors, individuals, units and organisations. Although there exist various definitions of the term interorganisational network, most of them refer to some common elements, such as social interaction, relationship, collaboration, collective action and trust (Provan et al., 2007). Prior research on interorganisational relationships has listed several motives for why firms engage in interfirm network arrangements. Networks can “provide a firm with access to information, resources, markets, and technologies; with advantages from learning, scale, and scope economies; and allow firms to achieve strategic objectives, such as sharing risks and outsourcing value-chain stages and organizational functions” (Gulati, Nohria, & Zaheer, 2000, p. 203).

With extensive research on networks, progress has been made in understanding how networks are, how they are structured and how they evolve. However, most research is focused towards the individual member's organisation and its egocentric dyadic relationships, thus insights regarding the network as a whole are limited (Provan et al., 2007). In most networks, organisations work together to achieve not only their own goals, but also a collective goal, and the research on organisational level tends to underemphasize the importance of collective behaviour. Especially for-profit organisations are assumed to not have an interest in the development of the whole

network, and are only focusing on achieving their own goals. However, Provan et al. (2007) argue that studying the network as a whole can be important for the individual network members, as the structure and development of the whole network can have implications for the individual members' possibilities to accomplish their own goals.

2.1.1 Network dynamics

Networks can be structured in a variety of ways, in terms of density, centralisation and existence of cliques within the network, and this may greatly influence the creation of positive outcome. Power in the network can be distributed more or less symmetrical, with collective decision making, or it can be more directed towards a "lead organisation". In this last scenario, most activities are coordinated through the lead organisation, mobilising the network to efficient deployment of its resources in order to achieve network goals (Provan & Kenis, 2008). Key actors in the network often play an important role in carrying out norms and practices and can be significant drivers of development within the network (Provan et al., 2007).

Networks may be formed on initiative from members themselves or can be formed by mandate or contract, which is typical to public sector networks (Provan & Kenis, 2008). In addressing network change processes, Kilduff and Tsai (2003) distinguish between two network trajectories; goal-directedness and serendipity. They argue that these two processes impose fundamentally different network dynamics. Serendipity-driven change is developed primarily from the interactions of individuals through a predictable process of clustering and bridging. On the other hand, goal-directed network trajectories are driven by the pursuit of specific goals that members of the network share (Kilduff & Tsai, 2003), and this type of network is especially relevant in the case of Ruter and their network of operators and partners. Goal-directed networks have become important in addressing complex issues that require collective action and coordination, which is often the case in the public sector (Provan & Kenis, 2008). Such networks are often characterised by a centralised structure with one leader and are therefore likely to grow from the centre outwards, adding more members at the periphery. Another feature is that such networks establish a clear boundary between members and non-members, where membership benefits and obligations are often well defined (Kilduff & Tsai, 2003).

As networks vary in terms of number of participants, network-goal consensus and need for network-level competencies, there are various modes of governing a network to achieve effectiveness. There is a common understanding that reciprocity and trust are important in a network form of organisation (Gulati & Nickerson, 2008; Powell, 1990). In the next section, we will take a closer look at the network as a form of governance, and the control mechanism in interorganisational networks.

2.1.2 Network governance and control mechanisms

Network can be seen as a mode of governance, as opposed to the traditional market versus hierarchy from transaction-cost economics (e.g. Williamson, 1985). Market mode copes with exchange problems by rigid contracts, and on the other end of the continuum, we find hierarchy performing economic activities in-house (Williamson, 1991). A network form of governance overcomes these problems by using social mechanisms, such as restricted access, macroculture with shared assumptions and values, collective sanctions and reputation (Jones, Hesterly, & Borgatti, 1997).

Bradach & Eccles (1989) argue that the assumption that the two governance forms – market and hierarchy – are mutually exclusive, can be misleading. They propose the control mechanisms, price, authority and trust, which map roughly on to market, hierarchy and relational contracting (Bradach & Eccles, 1989, p. 101). They argue that these mechanisms are independent, and can be combined within the complex social structures. They also emphasise trust as a more general mechanism that often does not work alone, but intertwines with price and authority. Ties between organisations tend to be embedded in the personal relationships between the managers and owners of the organisations involved (Ring & Van De Ven, 1992). Macro-level processes of tie formation between organisations reflect the micro-level processes of interpersonal trust formation between individuals (Kilduff & Tsai, 2003).

The two perspectives on alliance governance – structural and relational – have been applied by researchers to propose different governing mechanisms for alliances. The structural perspective has evolved from transaction-cost theory and relies on the general assumption that partners tend to act opportunistically (Oxley, 1997;

Williamson, 1991). The risk of such behaviour increases along with the level of certain transaction attributes, such as asset specificity and uncertainty (Faems, Janssens, Madhok, & Van Looy, 2008). The structural perspective presents complex contracts as means for mitigating the risk of opportunistic behaviour (Deeds & Hill, 1999). On the contrary, the relational view rather focuses on interfirm relationships as they evolve over time and over transactions, and rely on trust as a safeguarding mechanism. The prevailing view is that with a history of successful collaboration, there is a tendency of trustworthy behaviour (Faems et al., 2008). When entering an exchange relationship, less formal governance is likely when there is trust between the organisations (Gulati & Nickerson, 2008). In addition to this substitution effect, Gulati and Nickerson (2008) argue trust can have a complementary effect on any mode of governance and thus enhance exchange performance.

Provan and Kenis (2008) argue that network governance is critical for effectiveness because addressing complex issues through a common goal often requires collective action and coordination of activities. They categorise governance forms along two different dimensions. With shared governance, the network is governed by the organisations themselves, yielding density and decentralisation. On the other hand, networks can be governed by a single organisation acting as a highly centralised entity. The latter one can occur through a “lead organisation”, which is often the case in buyer-supplier relationships with asymmetrical power (Provan & Kenis, 2008; Uzzi, 1999). Large and complex networks require increased coordination, and a lead-organisation governance in such cases may be more efficient (Faerman, McCaffrey, & Slyke, 2001).

2.2 Assessing network performance

Efficiency and effectiveness are central terms applied in the literature when evaluating and measuring performance (Mouzas, 2006, p. 1124). Efficiency is a measure of outputs over inputs (Provan & Kenis, 2008) and is described as a necessary condition as it reflects the company’s operating margins (Mouzas, 2006). Effectiveness, on the other hand, is defined as “the attainment of positive network-level outcomes that could not normally be achieved by individual organisational

participants acting independently” (Provan & Kenis, 2008, p. 230). In the following section, we will discuss these terms and their implications.

2.2.1 Efficiency trade-offs

Efficient coordination can be an indicator of network effectiveness, but can also compromise other measures of effectiveness. Provan and Kenis (2008) argue that the main tension between efficiency and broader indicators of effectiveness is most prevalent in the carry out of long-term decisions that can be inefficient in the short run. Furthermore, they argue that there is a trade-off between efficient decision making and member involvement. Collaboration is important in networks and involvement is shown to foster trust (Edelenbos & Klijn, 2007), however, the more participants involved in the process, the more time consuming and resource intensive such processes tend to be. A lead-organisation governance tends to be more efficient, although it can compromise the commitment of the members and focus on the needs of the lead organisation (Provan & Kenis, 2008).

Another trade-off that has been widely discussed in the literature, is the trade-off between efficiency and flexibility (Adler, Goldoftas & Levine, 1999; Eisenhardt et al., 2010). A firm’s ability to exploit its existing capabilities is important for securing efficiency. However, operating in dynamic environments requires some flexibility, because innovation and exploration of new opportunities can be achieved if the organisation allows the employees to deviate from their routines (Jørgensen & Messner, 2009). Although efficiency and flexibility are not mutually exclusive they impose a tension. The bureaucratic features of efficiency, such as standardisation, formalisation and hierarchy can inhibit the networks ability to make adjustments required for flexibility (Adler et al., 1999).

One example of a case where the trade-off between efficiency and flexibility was successfully balanced, is the Toyota Production System (NUMMI). NUMMI managed to simultaneously improve procedures in both dimensions (Adler et al., 1999). This was possible due to the presence of four mechanisms; establishment of *metaroutines* to increase the efficiency of non-routine tasks, *partitioning* into subunits that worked in parallel on routine and non-routine tasks, *switching* between production tasks and improvement tasks, and an *ambidextrous* focus, encouraging both workers and suppliers to look for improvement opportunities. High levels of

trust were found to be the critical factor for successful deployment of these mechanisms (Adler et al., 1999).

2.2.2 Evaluating network effectiveness

Evaluating network effectiveness can be a complex task, particularly in public sector networks, where the stakeholders and their interests can be diverse (Provan & Milward, 2001; Dawes, Cresswel, & Pardo, 2009). Provan and Milward (2001) built a framework for evaluating network effectiveness in public sector networks and argued that it can be assessed at the community level, the network level and the organisational level, with distinct effectiveness criteria. They define community as “the local area that is being served by the network”, and key stakeholders at this level are customer interest groups, politicians, funders and the general public. The stakeholders have both direct and indirect interest in seeing that the overall client needs are served, thus aggregate client well-being can indicate effectiveness. Other criteria that indicate effectiveness can be a public perception that the problem is being solved and that it is done in a way that lowers costs for the community. Networks that are effective at a community level are likely to have considerable legitimacy and external support, however, for a network to survive it must also secure internal support and involvement from the members.

At a network level, the key stakeholders are the funders, regulators, the lead organisation and the member organisations. The effectiveness criteria at this level are network membership growth and maintenance, member commitment to network goals, and integration and coordination of services. It is also important to consider the needs of the individual organisation’s staff and managers, as they are also concerned with the interests of their own organisation.

At an organisational level, effectiveness can be evaluated based on how the network involvement benefits the individual organisation, such as improved client outcomes, enhanced legitimacy, and increased access to resources. Provan & Milward (2001, p. 421) further argue that network effectiveness is likely based on interactions of all three levels of analysis, and highlights that the needs and expectations of the various stakeholders can be conflicting, which creates a tension in the network. Moreover, the lead organisation and the members can make decisions to enhance services on an aggregate level, which can negatively affect the

individual organisation. However, Provan and Milward (2001) emphasise that the lead organisation's focus should be on ensuring positive community-level outcomes, rather than securing the well-being of individual network members. The rationale for public-sector networks is most apparent at the community level, and such networks are most effective when they manage to serve the customers while satisfying the needs of the people who work for and support the network (Provan and Milward, 2001).

We have reviewed foundational literature on networks and how to evaluate network performance, in order to address how efficient coordination can be carried out in a network. We are informed on how different network characteristics can affect the network dynamics, and how this changes over time. Moreover, we have gained insights on the network form of governance, and how trust and contracts can serve as control mechanisms.

2.3 Co-creation in networks

Organisations strive to develop unique competencies to gain competitive advantage. However, an organisation's capabilities alone is not sufficient to develop sustainable competitive advantage, due to the tremendous changes in the market and the unpredictable external forces (Lee et al., 2012b). Lee et al. (2012b) propose interorganisational co-innovation as a solution to the problem discussed above, where the value is created through convergence, collaboration and co-creation (p. 829).

Prior research in the field of organisational learning argues that the most effective learning takes place in organisations with well-established routines on processes of developing, storing and applying new knowledge (i.e. Cohen & Levinthal, 1990; Nelson & Winter, 1982). The concept of knowledge is greatly discussed in the literature, and the knowledge-based theory of the firm has its basis in the resource-based view. With this origin, the theory describes knowledge as the key resource for firms to achieve competitive advantage (Kogut & Zander, 1992; Grant, 1996; Argote & Ingram, 2000).

In the following paragraphs, we will discuss the process of knowledge creation and organisational learning specifically in the context of interorganisational network collaboration.

2.3.1 Exploration and exploitation in networks

Two concepts of knowledge management are described in the literature; the process of increasing the knowledge base and the process of utilising and improve the existing knowledge. March (1991) refer to these processes as *exploration* and *exploitation*. In broader terms, exploration concerns every process that deals with experimentation and discovery of new possibilities, such as variation, discovery and innovation. Exploitation, on the other hand, concerns all processes where the focus is on refinement and increased efficiency of already existing resources and procedures (March, 1991).

The activities related to exploration are more experimental and unfamiliar to the organisation than the activities related to exploitation, and the organisation is facing a higher risk when performing these activities. The returns from exploitation are more certain and less remote in time than returns from exploration. However, a firm's survival is dependent on a balance of both of these activities (Levinthal & March, 1993). Although the results of exploration often come out negatively in a short-term perspective, the effects are more prominent in the long term. Exploration has been claimed to be "the only way to finish first" (Levinthal & March, 1993, p.107), which illustrates the importance of a firm's ability to increase their knowledge base in order to gain competitive advantage.

Even though exploratory activities are important for gaining a superior position, the organisation needs to balance the exploration and exploitation activities in order to utilise new knowledge. As the firm becomes more familiar with the knowledge discovered through an explorative process, the exploration evolves into exploitation (Lavie, Stettner & Tushman, 2010). Levinthal and March (1993, p.105) describe the importance of this balance:

"An organization that engages exclusively in exploration will ordinarily suffer from the fact that it never gains the returns of its knowledge. An organization that engages exclusively in exploitation will ordinarily suffer from obsolescence."

Several researchers have argued that being organised in a network structure can improve a firm's innovative performance (i.e. Nootboom, 1992; Powell et al., 1996; Ahuja, 2000), and consequently facilitate the exploration activities. As a network connects firms that differ in skills and experience, it is a good platform for generating new knowledge (Gilsing, Nootboom, Vanhaverbeke, Duysters & van den Oord, 2008). However, being involved in a network does not necessarily accelerate these advantages. The characteristics of the network and the firm's role are proved to have an impact on the outcome of the collaborative exploration and exploitation activities. One of the key characteristics researched in network theory is the centrality in the network (Ibarra, 1993; Lin, Yang & Demirkan, 2007). This characteristic is of great importance when discussing a firm's learning outcome from network commitment. A firm with a central position has more ties and relations than the firms that are less central. Lin et al. (2007) argue that the higher a firm's centrality in the network, the greater access to resources, which again generates advantages for exploration and exploitation. The view that centrality has an impact on the firm's learning outcome is also examined and corroborated by Gilsing et al. (2008). Similarly to Lin et al. (2007), they found that the effects of explorative activities decline when the centrality decreases.

In addition to centrality, Gilsing et al. (2008) studied another network characteristics; the technological distance between the actors. Considering this characteristic, they propose that the effects of explorative activities decline when the technological distance increase. Their argument is that the greater the distance, the harder it is to understand and absorb the novel knowledge of the partnering firms. Research indicates that increased network density can help to reduce potential technological distance, as both direct and indirect ties facilitate learning (Gilsing et al., 2008).

Another rationale for engaging in interorganisational relationships is for financial reasons. March (1991) highlighted a trade-off between exploration activities and exploitation activities and argued that this trade-off is affected by costs and benefit valuation. The costs of early-stage experimentations are usually greater than the beneficial returns from it, and thus firms might suffer economically. In the context of networks, firms often recognise the benefit of sharing the cost associated with

exploration and exploitation activities and thus engage in interorganisational relationships (Barringer & Harrison, 2000).

2.3.2 Collaboration as a source to knowledge creation and learning

Collaboration can facilitate organisational learning (Dodgson, 1993). When discussing organisational learning, researchers have brought attention to the importance of knowledge transfer and knowledge sharing and found that one main objective for engaging in collaboration and interorganisational relationships is to acquire new knowledge (Dyer & Nobeoka, 2000; Kale, Singh & Perlmutter, 2000; Grant & Baden-Fuller, 2004).

Grant and Baden-Fuller (1995) illustrate several reasons for why interfirm collaboration is a beneficial strategic option to acquire knowledge. They propose that interorganisational relationships are an efficient method to transfer and integrate explicit knowledge. Furthermore, building on the discussion of Hurry (1993), they argue that interorganisational relationships are of special importance in changing technological environments because firms can rapidly gain access to resources and knowledge that is difficult to obtain on their own. As the knowledge acquiring and integration processes are time-consuming, the return from the firm's knowledge investments is uncertain. In such environments characterised by uncertainty, a firm can invest in collaborative arrangements to limit its investments and thus reduce the risk related to acquiring new knowledge (Grant & Baden-Fuller, 1995).

Not only does collaboration facilitate the transfer of knowledge between organisations, but it can also generate new knowledge (Lee & Cole, 2003). Powell, Koput and Smith-Doerr (1996, p. 121) states that "Knowledge creation occurs in the context of a community, one that is fluid and evolving rather than tightly bound or static". This view considers knowledge as a property of collaborative networks, rather than a resource one can generate individually (Hardy et al., 2003). Accordingly, engaging in interorganisational relationships are important to gain new knowledge.

There are various reasons why network as a form of governance has been argued to boost knowledge creation. Powell et al. (1996) state that the creation of new

knowledge is more likely to be generated when the network consists of organisations with distinct sources of knowledge. Hardy et al. (2003), on the other hand, propose that the creation of knowledge is related to the networks' involvement and embeddedness. While involvement facilitates the interorganisational learning that is necessary to create new knowledge, the embeddedness facilitates the knowledge transfer beyond the network to ensure a deeper learning in the community (Hardy et al., 2003, p. 340). Hence, the higher level of involvement and embeddedness, the greater potential for successful knowledge creation and organisational learning.

Although the above presented arguments for why network engagement can facilitate knowledge creation and organisational learning seem appealing, there is also a potential dark side of networks that we find important to address. Gulati et al. (2000) highlight a constraining network effect that might lock organisations into relationships characterised by unproductiveness. This lock-in effect is also argued to inhibit the organisations to engage in partnerships with other reasonable organisations. From a learning perspective, the lock-in effect can inhibit the process of knowledge creation and exploration, as it limits the organisation's possibility to search outside of the network.

Other factors can also inhibit the outcome of knowledge creation and learning. How the knowledge is managed can have a significant impact on the interorganisational learning, and this will be further addressed in the next section.

2.3.3 Barriers to interorganisational learning

Although collaboration can be an efficient way for firms to acquire new knowledge beyond their boundaries, not all networks manage to efficiently obtain positive network outcomes (Provan & Kenis, 2008).

Interfirm networks consist of firms with different knowledge bases, which creates an opportunity of trading knowledge (Grant, 1996). Even though a common objective for collaborating is to acquire new knowledge, the knowledge transfer process can be challenging and not easily accomplished (Szulanski, 2000; Carlile, 2004). Knowledge is a complex resource, and thus the issue of transferability is important. It is common to classify the concept into two categories; tacit and explicit

knowledge (Nonaka, 1994; Zander & Kogut, 1995; Grant, 1996). While explicit knowledge is codified and can be easily communicated, the tacit knowledge is characterised by a personal quality and rooted in personal experience, and thus more difficult to communicate (Nonaka, 1994). In his framework for managing knowledge across boundaries, Carlile (2004) points on the necessity of a common lexicon in order for knowledge to be transferred from one actor to another. Furthermore, he emphasises the importance of being able to manage the knowledge transferred, by translating it and transforming it in order to utilise the new information achieved.

The process of transferring knowledge can be affected by various factors. Szulanski (1996) claims that both characteristics of the knowledge, as well as characteristics of the recipient and the context, is determining the success of the knowledge transfer. These findings are supported by Simonin's (1999) study, where he found that the knowledge transfer process is affected by both knowledge-specific variables, as well as partner-specific variables. Individuals interpret information differently which might result in distant understanding. This causal ambiguity is especially prevalent when knowledge is tacit and difficult to communicate (Simonin, 1999).

The recipient's absorptive capacity plays a critical role in determining a successful outcome of the knowledge transfer. Absorptive capacity is defined as "the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends" (Cohen & Levinthal, 1990, p.128). A firm's absorptive capacity is affected by its previous experiences, and the more in-house expertise of a firm, the better the absorptive capacity (Mowery, Oxley & Silverman 1996). The firm's learning outcome from a network collaboration is largely dependent on the various firms' knowledge bases and how similar these are (Gilsing et al., 2008). Moreover, the arduous relationship between the source and the recipient, characterised by for example cultural and organisational distance, are determining the outcome of the knowledge transfer process (Szulanski, 1996; Simonin, 1999).

Another aspect that affects the knowledge transfer success is trust. According to researchers in the field of interorganisational relationships, trust is an important element in which the collaborative learning is dependent on (Dodgson, 1993; Scott,

2000). Lane, Salk and Lyles (2001) argue that trust influences both the extent and the efficiency of the knowledge exchange in interorganisational relationships. Similarly, Powell et al. (1996) argue that lack of trust inhibit effective collaboration. Consequently, the knowledge sharing process is likely to be unproductive when the level of trust among the different partners is low.

2.4 The importance of trust in interorganisational networks

Trust has been widely discussed by scholars within the fields of sociology, strategic management and contracting literature among others, and although there exist various definitions, it seems as positive expectations and willingness to be vulnerable are important elements in most definitions (Mayer, Davis & Schoorman, 1995; Rousseau, Sitkin, Burt, & Camerer). Lewicki, McAllister & Bies (1998, p. 439) defines trust in terms of “confident positive expectations regarding another’s conduct”. Trust exists at individual, organisational and interorganisational level, but in this paper, we focus on trust on an interorganisational level, as an element in cooperative relationships.

Lack of trust can inhibit collaboration in a network, as it can affect the partners’ perceived risk (Das & Teng, 2004). In interfirm relationships the actors may be exposed to relational risk; “the probability that the partners may not be fully committed to the relationship” (Das & Teng, 2004, p. 102). There may also exist doubts about the other actor’s necessary skills and qualifications to perform certain actions and obtain desired results, referred to as performance risk (Kee & Knox, 1970). Das & Teng (2004) argues that trust can be understood as the mirror image of risk, implying that in situations with high levels of trust there is low perceived risk.

Trust is viewed differently across disciplines and researchers has modelled it as a cause, an effect or a moderating condition in causal relationships (Rousseau et al., 1998). Especially in transaction-cost economics, it is argued that trust is a cause of reduced transaction costs, because it can reduce opportunism and lower the governance costs (Gulati & Nickerson, 2008; Rousseau et al., 1998; Williamson, 1975). Gulati (1995) also argues that prior ties with a partner affect the firm’s contractual choices and that repeated ties between firms breed trust, which can

sometimes substitute contractual safeguards in repeated alliances. Das and Teng (1998) claim that although trust and control are two different mechanisms, they are not mutually exclusive. Furthermore, they argue that trust level plays a moderating role between control mechanisms and the level of control, implying that with high levels of trust, control mechanisms are likely to be more effective in creating an appropriate level of control. Several scholars apply a process-oriented view of trust dynamics, arguing that reliance on trust in interorganisational relationships can change over time (Faem et al., 2008; Ring & Van de Ven, 1992).

How trust is distributed and reciprocated among the network members is important for understanding interactions on a network level. Trust may be widely distributed among members, or it can occur differently within individual dyadic relationships. Provan and Kenis (2008) argue that trust across the network may be lower when governed by a lead organisation. This is because such governance is primarily built around various dyadic relations.

We have now examined how networks as a form of organisation facilitate interorganisational learning, and how co-creation is carried out in networks. Exploration is argued to be important for firms in order to gain a superior position, however, engaging in explorational activities can be resource demanding and returns are uncertain. We have learned that collectively engaging in explorational activities can be beneficial because it reduces the individual organisation's risk and learning outcomes may be greater when knowledge is shared across organisations. However, there are several barriers that can impede the process of knowledge transfer across organisations, and trust plays an important role in overcoming these barriers.

3.0 METHODOLOGY & EMPIRICAL CONTEXT

In the following chapter, the empirical context and the research methodology of the study are presented. The chapter begins with a description of the studied case to provide the reader with an overview of the situation, both in the focal network and in the industry which it operates in. Secondly, it presents the research design and the approach used to gather data on the case, followed up by a description of how the data has been processed and analysed. Finally, the chapter gives an assessment of the quality of the study and the ethical considerations taken throughout the research process.

3.1 Empirical Context

Ruter is an administrative company responsible for the public transport in Oslo and Akershus. The company was established in 2008 with the aim to plan, coordinate, manage, order, market and develop the public transport network in the region. Prior to the establishment of Ruter, these tasks were managed by two different actors who operated in two bordering regions, Stor-Oslo Lokaltrafikk (SL) in Akershus and Oslo Sporveier (today Sporveien) in Oslo. However, there was a need for an administrative entity coordinating the ordering and the contracting of public transport between the regions. Consequently, the two actors merged as a result of political mandate and thus Ruter was established.

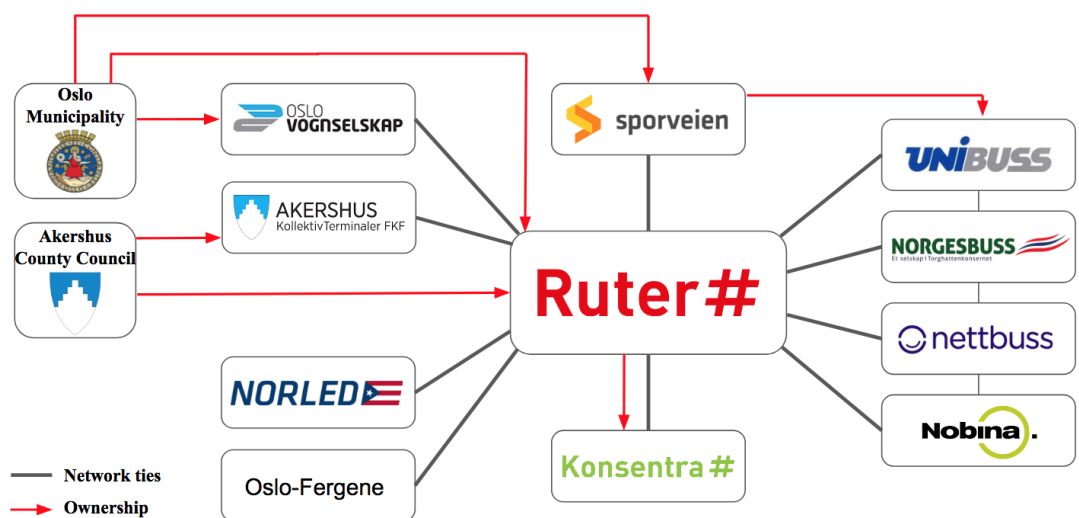
The establishment of Ruter led to a restructuring of the public transport sector in the region. As a consequence, the actors needed to form new relationships and adopt different roles. Especially one actor that previously had broad responsibilities and was perceived as a prestigious institution, was deprived of its responsibilities, causing disagreement about Ruter's mandate. This is by some people referred to as "the ugly divorce", and has been inhibiting the cooperative environment between Ruter and this actor from an early stage. For the bus companies, the establishment of Ruter did not impose any drastic changes in their businesses, and they continued to operate as usual.

Ruter's marketing strategy was to unify the public transport into one brand and to take full responsibility for customer communication. For customers, this led to a more seamless experience, but for the operators this caused tension. Operators experienced that Ruter, the administrative entity on the top level, took the honour

for the successful development of the public transport, and disregarded the efforts of the actors on the operational level. This tension peaked when Ruter launched the vision “I prefer to travel with Ruter”, an excluding vision that was perceived as disrespectful to the actors that were actually operating the public transport services. This dissatisfaction inspired to initiating a joint process towards a new vision where the operators in the network were included. The new vision “Together we’ll make public transport a natural first choice” was jointly developed and embraced the collaborative nature of the network.

The network of actors operating the public transport services in Oslo and Akershus has evolved from having early establishment difficulties to being a stable and well-functioning service provider. Over the past decade there has been a strong focus on reaching highly efficient services with high customer satisfaction, and today the network is characterised by formalisation, professionalisation and efficiency. As a result, the commercial operators have been concerned with the operative level and has gradually reduced their strategic and marketing functions. Today, the public transport industry is facing major technological changes, which creates a need for the actors to work closely together on industry-specific challenges and opportunities, such as the shift towards green services and disruptive self-driving technology. Therefore, the network is now entering a phase where there is a greater focus on innovation and future-oriented collaboration.

Figure 1: Structure of Ruter’s network of operators and partners



The network consists of 11 different actors which combined make up the core of the public transport services in Oslo and Akershus. As shown in the figure above, the network is highly centralised where Ruter, as the hub-organisation, is considerably more centrally connected than the other actors. Furthermore, it is characterised by heterogeneity, where the members differ in ownership, size, core business, interests and ambitions (see table 1). The network of suppliers is coordinated through several types of contracts, where we find large variation in duration of operations. In the bus segment, the majority of the operating companies are privately owned and are enrolled in contracts of 2-10 years. There are currently four bus companies enrolled in contracts – Nettbuss, Norgesbuss, Unibuss and Nobina. These companies are direct competitors and this segment is characterised by a low profitability and high competition on price (Spekter, 2014). In addition to regular bus companies, Konsentra, a subsidiary of Ruter, is delivering personal transportation services for the public sector, and in this way differentiate from the other bus companies. Norled and Oslo-Fergene operate the ferries, with a contract duration of around 10 years. Sporveien, the operator of trams and metros, and the associated infrastructure, is enrolled in a long-term contract and is not exposed to competition at the moment. The actors Oslo Vognselskap (OVS) and Akershus Kollektivterminaler (AKT) have a slightly different interest of collaborating with Ruter. They are both publicly owned and have the network as a whole in their interest. OVS purchases and maintains the carriages and material for trams and metros, and AKT is involved in the infrastructure, such as bus stops, terminals and driver facilities, and they are both defined as partners.

Table 1: Overview of the actors in the network

Actor	Type	Core business	Ownership	Revenue in m. NOK (2016)	Number of employees
AKT	Partner	Operates bus terminals in Akershus	Publicly owned (Akershus County Council)	74	56
Konsentra	Operator	Special passenger transportation services	Publicly owned (subsidiary of Ruter)	36	28
Nettbuss	Operator	Bus operations	Publicly owned (subsidiary of NSB)	3 682	4779
Nobina	Operator	Bus operations	Privately owned (Nobina AB)	910	1339
Norgesbuss	Operator	Bus operations	Privately owned (Torghatten ASA)	858	1405
Norled	Operator	Ferry operations	Privately owned (Norled Holding AS)	2 072	1331
Oslo-Fergene	Operator	Ferry operations	Privately owned (Eli-Katrine Bøe AS)	44	45
Oslo Vognselskap	Partner	Owner of metros and trams	Publicly owned (Oslo municipality)	605	12
Ruter	Lead organisation	Plan, coordinate, manage, order, market and develop the public transport in Oslo/Akershus	Publicly owned (Oslo municipality (60%) and Akershus County Council (40%))	7 514	267
Sporveien	Operator	Operates the trams and metros, and its infrastructure	Publicly owned (Oslo municipality)	1 326	901
Unibuss	Operator	Bus operations	Publicly owned (subsidiary of Sporveien)	1 526	2044

Financial data retrieved from proff.no

The collaboration is carried out through several arenas of contact. The most important meeting point is the monthly bilateral meeting that Ruter has with each actor. In these meetings, Ruter can consider the interests of each actor and make arrangements accordingly. However, aligning the interest of the various actors that differ in terms of size, scope and interest, can be challenging. To smoothen this process “*Operator and Partner Forum*” was established, and is today the only forum in which all the existing operators and partners meet. It is hosted by Ruter four times a year, and the participants are top managers of each operating or partnering firm. In this forum future outlooks and new trends in the public transport industry are addressed.

3.1.1 Public Transport in Oslo and Akershus

There has been a significant increase in the use of public transport services in the region. In 2017, 371 million public transport journeys were made in Oslo and Akershus, which is an increase of 5.9% from 2016 (Ruter, 2018). This trend has been present ever since the establishment of Ruter, and there has been a total passenger growth of 63% since 2007. This is equivalent to a compound annual growth rate of 4.3% (Ruter, 2018), and future outlooks give no indication for this trend to decline. The population in Norway is growing, and we see a higher population density in large cities. Oslo has for the past couple of years been one of the cities in Europe with the fastest growing population, and the growth in the city’s population by 2040 is estimated to be 28% (Oslo Kommune, 2017). Moreover, the increased environmental awareness has accelerated the use of public transport, and a greater focus on global warming and sustainability calls for stricter demands on the public transportation services and the standards delivered. Regulations that disfavour the use of private vehicles, such as road tolls and increased parking fees, has also contributed to this development. In addition, new technologies and the digitalisation of processes associated with public transport are contributing to a more attractive transportation service. By making use of new technology to retrieve data and communicate with the customers, the solutions delivered can be considered as seamless, convenient and more cost-efficient than travelling in a private manner. This makes public transport a clear first choice for a significant part of Oslo and Akershus’ inhabitants. However, new technology and new actors are also challenging the traditional forms of public transport, and convenient mobility

trends, such as car sharing (i.e. Nabobil and Hyre), bicycle sharing (i.e. Oslo Bysykkel) and car-pooling (i.e. GoMore), is receiving increased attention.

In conclusion, the public transport industry is facing major changes driven by new customer needs, technology and governmental regulations. New positions and players are threatening the classic forms of public transportation services. The accelerating pace and combinatory effect of new mobility trends creates a need for Ruter and the operators to both sense and react rapidly in order to maintain their position in the industry.

3.2 Design and Method

The research design can be viewed as a framework for how the data collection and analysis are conducted (Bryman & Bell, 2015). In the following paragraphs, we will discuss the research methodology and design used in the thesis and justify the choices we have made regarding the research approach.

3.2.1 Qualitative Research Method

In our thesis, we are following a qualitative research method, which is commonly used to generate a theory (Graebner, Martin & Roundy, 2012). However, we have chosen to use a qualitative method to build on, improve and deepen the understanding of the already existing theory on the development of business networks towards co-creation and joint development. The unit of analysis is the complex network and the collaboration among the actors. The network is attractive to study because it consists of various actors that differ in size, scope and interest, where some members are direct competitors and others are delivering complementary solutions. However, they have a clear common vision and are all aware of the technological changes in the industry that can disrupt the whole network and the actors' business model. By using a qualitative approach, we have gained an understanding of the social interactions and potential tension among the members, as qualitative research allows the participants to describe experiences and interpretations in their own words (Graebner et al., 2012).

3.2.2 Case Study

The design we have chosen for our thesis is a single case study. As described by Eisenhardt (1989, p. 534) “the case study is a research strategy which focuses on understanding the dynamics present within single settings”. According to Yin (2013), a case study is preferred when the research question is a “how”-question, hence a suitable design for our study. The case design is chosen because it allows us to explore complex issues and investigate thoroughly the phenomenon in focus (Zainal, 2007). Furthermore, it allows us to draw data from a variety of sources that can help us understand how the network and the collaboration have evolved over time. We also see the benefits of being “close” to the case as this can generate a more novel and empirically valid theory (Eisenhardt, 1989).

3.3 Data Collection

We conducted field observations from the forum and interviews with informants from all 11 member firms of the network. The essential data for this study was collected in the period from September 2017 to February 2018. In addition to interviews and observations, we have employed several sources of data such as network-specific, company-specific and industry-specific archival data. The next paragraphs will explain the data collection in greater detail.

3.3.1 Interviews

Interviews with chief executive officers and middle managers in the network have been the main source of data for this thesis. The interviews were conducted in two phases, where the first phase consisted of eight interviews with managers from Ruter. As Ruter is the lead organisation and initiator of this network, we interviewed several informants from Ruter. The first interviews were held to test the interview guide and gain a deeper understanding of the company, the network and the industry.

The following 19 interviews were conducted with informants from the partners and operators. These firms were encouraged by Ruter to participate in the study, which made the process of contacting the firms uncomplicated. Our ambition was initially to conduct two or more interviews with informants from each firm in the network. However, this was proved to be difficult as some firms are small and key individuals

have limited time capacity. All firms showed interest in the study and participated with at least one informant. The informants were top and middle managers in their respective organisation and possessed expertise and familiarity with the network. We chose to interview key individuals on a high level because they are the ones making the strategic decisions, and have the overall responsibility for their respective companies. Based on the interviews with Ruter we developed a separate interview guide aimed for the interviews with the partners and the operators. Although the two interview guides were similar, we drew on some of the findings from the interviews with Ruter to compare different perceptions, and gain a deeper understanding of the interpersonal dynamics as well as to understand the different roles.

As the objective of the interviews was to encourage the participants to speak freely, yet stick to the research topic, we found semi-structured interviews to be appropriate. Semi-structured interview is a term used to describe interviews where the interviewer follows a general interview guide and can ask follow up questions if something of particular interest is being addressed by the interviewee (Bryman & Bell, 2015). During the interviews, the interviewer encouraged the interviewee to give examples of the issues they addressed to improve our comprehension of a certain situation. We believe that this is an adequate approach for our study. By letting the participants speak freely, we can more efficiently capture the individuals' experiences and reflections about the network (Grabener et al., 2012).

In every interview, there have been two interviewers present. As argued by Bechhofer, Elliott and McCrone (1984) it is an advantage of being more than one interviewer, as one can take the active role and one can take a more passive role. During the interviews, one has been in charge of the conversation, and the other has taken notes and observed the interview. We have experienced the advantage of interviewing in pairs, where the observing interviewer can make sure that all important topics are covered.

Furthermore, all interviews have been recorded and transcribed. After transcription, we quality checked each other's transcripts to ensure that no important messages were left behind or misinterpreted. This was done by listening to the recorded interview and reading the belonging transcript simultaneously. Recording and

transcribing the interviews allow for a more thorough examination of the data and provides a more reliable material for the analysis (Bryman & Bell, 2015).

In total, we have conducted 27 interviews with an average time of 47 minutes. A more detailed overview of the interviews is shown in *table 2*.

Table 2. Overview of interviews

Actors	Number of interviews	Average time per interview/Total time	Average number of transcribed pages/Total pages	Interview with CEO
AKT	2	32 min/64 min	8/16	✓
Konsentra	2	44 min/88 min	13/26	✓
Nettbuss	2	54 min/108 min	17/34	✓
Nobina	2	30 min/60 min	9/18	✓
Norgesbuss	2	50 min/100 min	13/26	✓
Norled	1	37 min/37 min	9/9	-
Oslo-Fergene	1	38 min/38 min	13/13	✓
Oslo Vognselskap	2	45 min/90 min	10/20	✓
Ruter	8	51 min/408 min	15/120	✓
Sporveien	4	50 min/200 min	11/44	✓
Unibuss	1	62 min	14	✓
	<i>Total number of interviews</i>	<i>Total time</i>	<i>Total pages transcribed</i>	<i>Total CEOs interviewed</i>
<i>Total</i>	27	20 hrs and 54 min	340	10

3.3.2 Observation

During the projects time horizon (September 2017 - June 2018), we have been present at four “*Operator and Partner Forums*”. Being present in these meetings has enabled us to gain a better insight into the network, and observe how these meetings are structured and facilitated. Field notes were taken during the observations, and narratives were written immediately after the forums.

3.3.3 Archival data

In addition to collecting primary data by observing and interviewing, we have also accessed archival secondary data such as reports from previous network meetings, attendance protocols, data from surveys about the network collaboration, and material from the work on creating a common vision. We were given access to 1180 documents, and we identified 58 of these documents as relevant for a more thorough review. Archival data has been applied to obtain information about previous work processes and the topics covered in the forum. This historical data gives us insight

into the development of the network and how the collaborative environment has evolved over time. Moreover, we have taken advantage of news reports, industry analysis, academic articles and websites which we regarded as relevant.

3.4 Data analysis

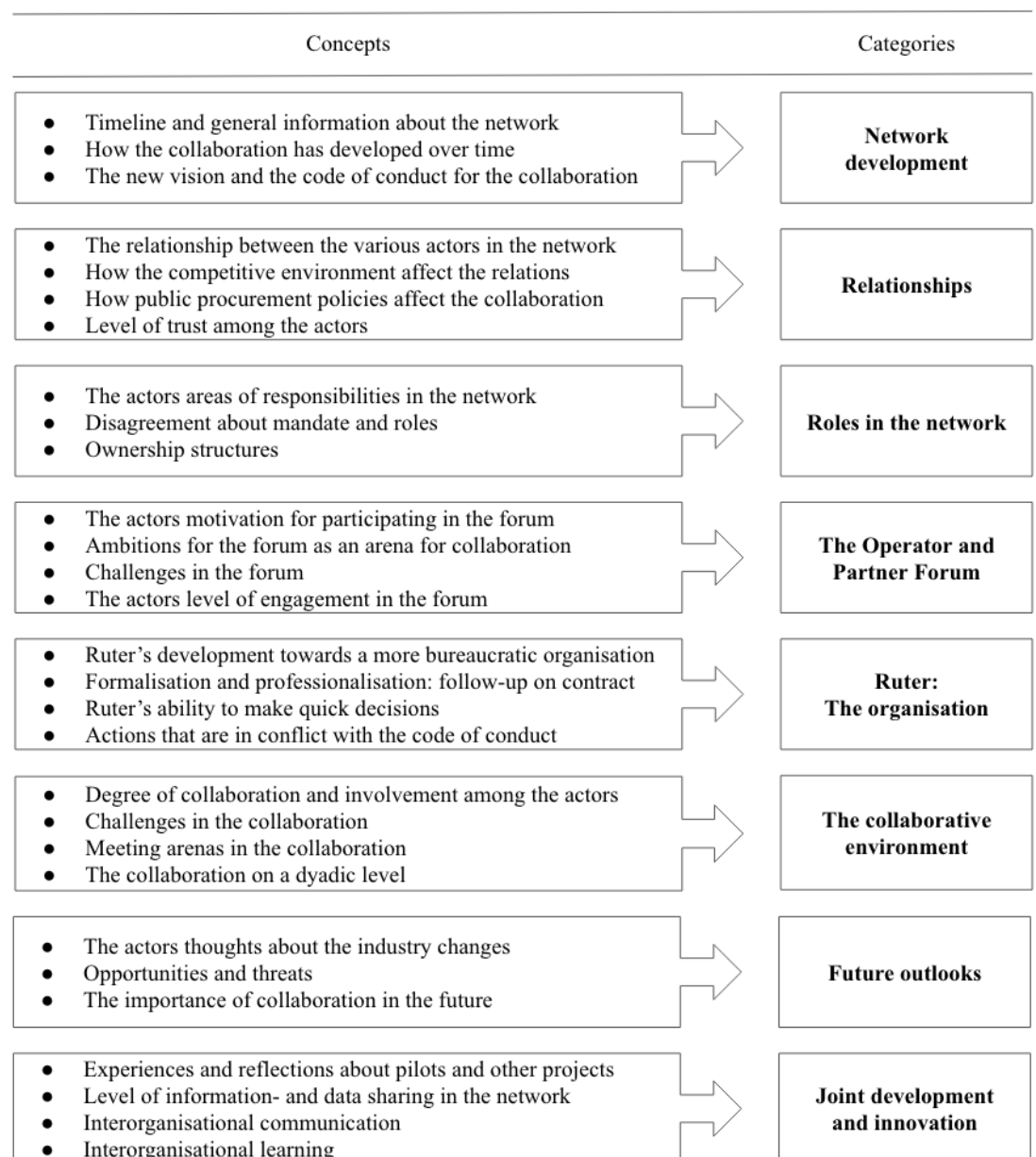
A qualitative method is characterised by a rich and holistic database, which makes the method attractive (Miles, 1979). These characteristics are however creating difficulties when it comes to managing the data (Bryman & Bell, 2015). When coding the collected data, we were inspired by grounded theory framework, which is the most utilised framework in the coding of qualitative data. What characterises this strategy is that the data is structured and organised soon after it is collected, and the coding is a continuous process emerging along with the data collection (Bryman & Bell, 2015).

The interview guide for the informants from Ruter was primarily constructed based on the research question and relevant literature. Additionally, we used network related documents (i.e. answers from the survey on collaboration) to incorporate previous findings in the data collection. After conducting the interviews from one organisation, narratives were written, summarising the thoughts about the interviews and the respective organisations perspective on the network. As the informants represent different companies, our data material has generated multiple perspectives of the studied phenomenon, and these perspectives have been somewhat conflicting. Holley and Colyar (2012, p.114) point out the importance of structuring complex data as they argue that “representing the variety of voices and stories requires careful and reflective decision making”. They further argue that by using narrative components, researchers can increase the understanding of the variations in the data material, and thus manage to present the findings in a complete way and to tell an appropriate story. The narratives were also used to make minor adjustments to the interview guide for further revision of certain topics.

We started the coding process along with the collection of data, and writing the narratives was important for developing the initial structure of our coding system. The first three interviews were coded manually using Microsoft Excel, as a pilot to the data coding. Thereafter, the analysis software program Nvivo was applied to

code all interviews. Additionally, we used the software to systemise the interviews, field notes and other case documents and run queries on specific words. In the process of coding the data we specifically looked for factors that enabled and inhibited collaboration in the network. Existing literature on network, trust and knowledge was revisited to inspire the final structure of our coding system. We coded the answers into 29 concepts. The concepts we found as most useful were those that informants mentioned frequently and thoroughly. Subsequently, the concepts were grouped into eight broader categories (see figure 2).

Figure 2: An overview of the data structure



To illustrate how we coded the data, we will give a few examples. If an informant expressed openness or transparency between the organisations, we coded it as “level of trust among the actors”. Several parts of the data were coded under two or more different concepts, as it could highlight different aspects. For example, if an informant explained how sharing data and experiences are regulated in the contracts of the new pilot project on electric buses, we coded it under the concepts “interorganisational learning” and “level of information and data sharing in the network”.

3.5 Quality of the research

The value of the research depends on the researcher's ability to prove that their findings are credible (LeCompte & Goetz, 1982). There are several measures for quality of research, and one approach is to examine the reliability and validity (Bryman & Bell, 2015). As described by LeCompte and Goetz (1982, p. 35) “reliability refers to the extent to which studies can be replicated”. They argue that the criteria of external reliability are difficult to meet when conducting qualitative research. This might be due to the unique setting, which is affected by the irreplaceable context of the situation. In our thesis, we have described the methodology and design in great detail, to provide the reader with an understanding of how the study is conducted, and can in this way critically revise the findings.

Validity, on the other hand, concern “whether you are observing, identifying or “measuring” what you say you are” (Mason, 1996, referred to in Bryman & Bell, 2015, p. 400). As we have conducted a case study, the validity is high because of our familiarity with the case (Eisenhardt, 1989). Another element that increases the quality of the study is that we experienced a high response rate, where informants from all firms in the network participated. Additionally, the informants expressed a strong willingness to participate and to share their honest thoughts. At the end of every interview, we asked the informants for feedback on the questions, in order to secure that we covered the topics that were of importance to the informants.

3.5.1 Ethical Considerations

Ethical considerations have been taken throughout the whole research process, both in the planning of the research, during interviews, when we structured and organised

the data, and when storing the data. In our research we followed the ethical principles in business research described by Diener and Chandall (1978): whether there is harm to participants, whether there is lack of informed consent, whether there is an invasion of privacy and whether deception is involved (referred to in Bryman & Bell, 2015, p. 134). The participants were informed about the research on several occasions, both in the forum, on e-mail and at the beginning of the interview. Whether to participate or not has been completely voluntary, and after having signed up for interviews one was allowed to withdraw. Furthermore, the recordings, transcripts and other data material were made anonymous and stored in a password-protected folder. Prior to the data collection, we also reported our study to the Data Protection Official (NSD) which approved the plan and allowed us to conduct the research.

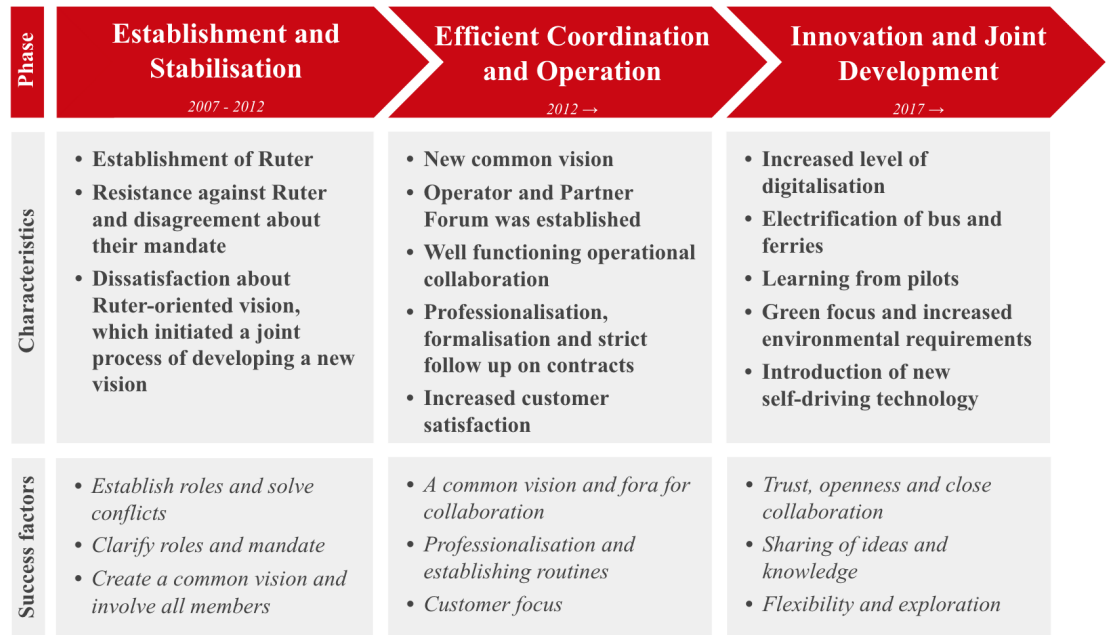
4.0 FINDINGS

This chapter presents the results from the case study. First, it illustrates how the network has evolved over time and present three stages of the network development, before describing the current situation. Furthermore, the chapter addresses current challenges and opportunities that are of importance for further development of the network.

4.1 Network development

As mentioned earlier, the network has evolved from struggling with early establishment difficulties to become a stable and well-functioning service provider. It is characterised by professionalisation and efficiency and has aimed to reach high levels of customer satisfaction. Since the establishment of Ruter, the public transport in Oslo and Akershus has experienced a passenger growth of 63% (NRK, 2018) and an increased customer satisfaction. Internally the network has gone from a turbulent start, where Ruter met resistance from the members, to a more collaborative and friendly environment. We have identified three phases of the network, and will in the next section give an explanation of their features and success factors.

Figure 3: Characteristics and success factors of the three phases



4.1.1 Phase 1: Establishment and Stabilisation

Ruter was established by political mandate, and for one actor, in particular, this was experienced as a hostile takeover. The administrative role that Ruter was now in possession of, was previously handled by two separate actors, where one of them, Oslo Sporveier, also delivered public transport services in Oslo. Suddenly, Oslo Sporveier unwillingly had to spin out and transfer the administrative position and the power that followed with this role. This was not done with an ease, and the process has by several informants been referred to as the “ugly divorce”:

“I believe that this cooperation has been a little, it was a very demanding, not thoroughly planned, an unwanted divorce when these companies were separated in 2006/2007. The relationship between the companies is characterised by this.”

To begin with, the network was also characterised by a resistance towards Ruter and its mandate, where several operators were not willing to acknowledge Ruter’s role and responsibilities. As described by one of our informants: “From the establishment, there was a lot of resistance against Ruter. Whether it was from Sporveien or from the other operators, we generally had little dialogue”. In this phase, surveys and interviews were conducted by an external actor, to assess the

collaborative environment. The results from these surveys showed a high level of distrust and the collaboration had several areas of improvement. Ruter fronted a vision that was far from inclusive and very Ruter oriented. This vision led to discouragement among the operators and partners, and it was in general perceived as an insult towards the operators who were actually delivering the public transport services. One informant describes the situation:

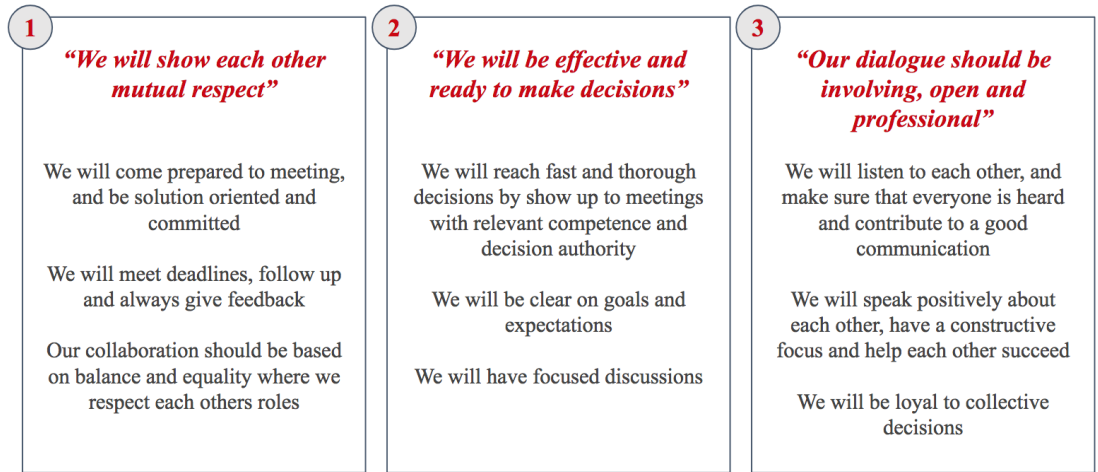
“From the beginning, the operators experience that Ruter chose a very obstinate profile, I remember their vision was *”I’d rather travel with Ruter”*, and with this, it was difficult to create motivation in the other companies.”

As a result, adjustments were needed to improve the relationships, establish trust and create a basis for good collaboration within the network. In 2010, the process of creating a new vision was initiated. Leaders from all companies participated in a workshop where they agreed upon new building blocks for the collaboration, and a cross-organisational task force was appointed in order to work in dept on formulating and implementing a new vision. Seminars were organised with the participation of 5-6 representatives from each company and together they produced several propositions for a common vision. Based on these propositions, the task force formulated five main suggestions for a new vision, which were presented and evaluated in a second seminar. These seminars enabled the task force to understand the views of the actors on different levels in the network and incorporate the views into the proposal of a new strategy. The new common vision for the network was presented and agreed upon in the *“Operator and Partner Forum”* in January 2011.

Integrating the new vision across all actors in the network was important, and the task force played a central role in carrying this out. This was done by holding workshops and running campaigns, both internally and externally. In addition to the new vision, the network needed collaborative guidelines to align expectations and secure a good network environment. A workshop with executives from all companies was conducted where a code of conduct for collaboration was developed (see figure 4). The code of conduct for collaboration was put up in the offices of all member organisations, to strengthen the feeling of being a part of a community. The collaborative guidelines encouraged the members to show mutual respect, be

efficient and ready to make decisions, and communicate in an involving, open and professional way.

Figure 4: The code of conduct for collaboration



Together we’ll make public transport a natural first choice

This process was important for building a collaborative environment, where the actors agree upon common objectives and the areas of responsibilities are clearly defined. The development of the network in the early stages is described by one of the informants:

“It started with the vision *“I’d rather travel with Ruter”*, and at this point, they were very introvert and believed they could solve everything by themselves. The current vision *“Together we’ll make public transport a natural first choice”*, starts with “together”, and this is a good illustration of the development. Ruter has seen the importance and the benefits of collaboration.”

To summarise, this phase was at an early stage characterised by significant hostility, distrust and resistance towards collaboration. Efforts were made to resolve the conflicts and to guide the network towards a satisfactory level of collaboration. This was important for the network to survive, and laid the foundations for efficient operations. Additionally, this process formed a basis for a good collaborative

environment, which is important for innovation and co-creation. In the next section, we will explain the further development of the network.

4.1.2 Phase 2: Efficient Coordination and Operations

A new and inclusive vision together with a code of conduct for collaboration created the foundations for efficient collaboration from an operational perspective. Internal campaigns were carried out to promote the vision and to create a culture where these norms were embedded. The code of conduct for collaboration created trust and predictability among the actors, as they emphasised the importance of openness and respect and encouraged efficient decision making. Followingly, the relationships became increasingly professionalised with a stronger focus on formality. Ruter started to rely more heavily on contracts with the operators and devoted a lot of resources to follow up the contracts. The professionalisation and formalisation led to increased predictability and together the actors in the network managed to provide quality services for the customers. A shared vision made it easier for the members to work together on reaching the common objectives, and there was now a willingness and eagerness to contribute to the common vision. Together, actions were taken to tackle challenges that concerned all actors, such as joint efforts to prevent free riders from using the services. In this phase, the common objectives of regularity, customer satisfaction and profitability were all reached.

Today, Ruter has monthly meetings with each operator to report on and evaluate operations, as well as discuss contractual issues. On an even more operational level, the route planners from each operator are collaborating closely with the route planners from Ruter, and have an ongoing dialogue. The cooperation is experienced as very successful on this level:

“I believe that the collaboration that concerns operative planning, our planners and Ruter’s planners, they have a successful collaboration. And are relatively solution-oriented.”

Ruter wanted to pursue a similar cooperation on a strategic level, and the “*Operator and Partner Forum*” was established for this matter. This is a forum where the top managers from all the operator and partner companies meet four times a year. As

of today, the forum plays a well-functioning role as an information sharing platform, where Ruter gives lectures about future outlooks, governmental regulations, expectations and new trends in the public transport industry. After interviews and observations, we have found the forum to be an arena for information rather than strategic discussions, and the motivation for participating in this forum is gaining insights to what Ruter is expecting from the internal and external environment. One of the informants describes it this way:

“It contributes primarily to providing information and give insights about outlooks. Both specific plans that Ruter already has, and also Ruter’s thoughts about the future.”

As the forum mainly is used to share information, it does not benefit from having the top management of the public transport industry present to discuss strategic issues and jointly develop the industry. Accordingly, there is a reason to believe that the forum has unleashed potential, as very few decisions are made during the meetings. One manager said: “Yes, it doesn’t seem like any conclusions or agreements are made”, another informant follows this by saying “I don’t see it as a forum for making decisions”. However, the forum has a great potential for being a platform where decisions can be made to develop the public transportation services in the region. One of the members describes this potential:

“I believe it is a great opportunity, with this group on this level. I mean, all have decision authority, and when decision makers are present it automatically adds a great value to the group. Because they don’t need to say “I have to discuss this with my boss, and I will get back to you”, so you can make decisions right away.”

In this phase, the collaborative environment has improved and the members of the network have established norms and routines that contribute to an efficient way of operating the public transport industry in the region. As the collaboration has become more professional, the level of trust towards Ruter has also increased. Ruter as a company has grown and has since 2012 doubled their number of employees. An increased number of employees in administrative positions has led to a formalisation and increased follow up on contracts. This has resulted in a very

professional way of working, but it also comes at the expense of the flexibility of the network.

4.1.3 Phase 3: Innovation and Joint Development

We have identified a transition to a new phase, where external factors are the main drivers for this transition. The technological development and increased digitalisation that is disrupting other industries are also making its way into the public transport industry. Autonomous technology can potentially disrupt the business model of the industry and it requires Ruter and the network to be prepared to meet such potential changes. The prevailing view is that increased collaboration and transparency is key to prepare for such changes. As one informant states:

“So there must be cooperation about the future, how to meet the future. Because the technology changes all the time, and we are not able to adapt if we keep our cards close our chest.”

Along with a technological shift in the industry, Ruter is also facing stricter environmental requirements from its owners. With a stronger focus on environmental issues and increased consumer awareness, Ruter aims at being leading in providing sustainable green solutions. Together with the operators, they have been working towards a transformation of the bus fleet to run exclusively on renewable energy by 2020, and in addition, they have ambitions about reaching a level of zero emission by 2028. One of the challenges of being so future-oriented is that they often are ahead of the market, and it can sometimes be difficult to obtain products that are within desirable standards. One of the informants describes the situation accordingly:

“We are experiencing a pressure from our stakeholders. About us being in front with testing autonomous vehicles and implementing zero-emission solutions in our contracts. And we are ahead of the market. So it’s not like you can just go and buy a zero-emission bus. You have to develop it first. And you have to work with a new market of suppliers, and we want help from the operators in doing so. But the operators are more concerned with who’s paying for it, that is their focus.”

4.1.4 Current situation

The network has for a while been situated in phase 2, where there has been a strong focus on efficient coordination and professionalisation. They manage to deliver high-quality services to increasingly demanding customers, and the network is regarded as successful. However, there are reasons to believe that increased efficiency alone is not sufficient in order to meet the future changes. Today we find that the network is transitioning from phase 2 to phase 3, where technological changes require flexibility and co-creation to a larger extent than before. In this transition it is important to leverage on the success factors from previous phases, however, there is a need for developing new strengths in the collaboration in order to successfully transition. In the next section, we will outline the factors that are important in the shift towards a more innovative and explorative phase.

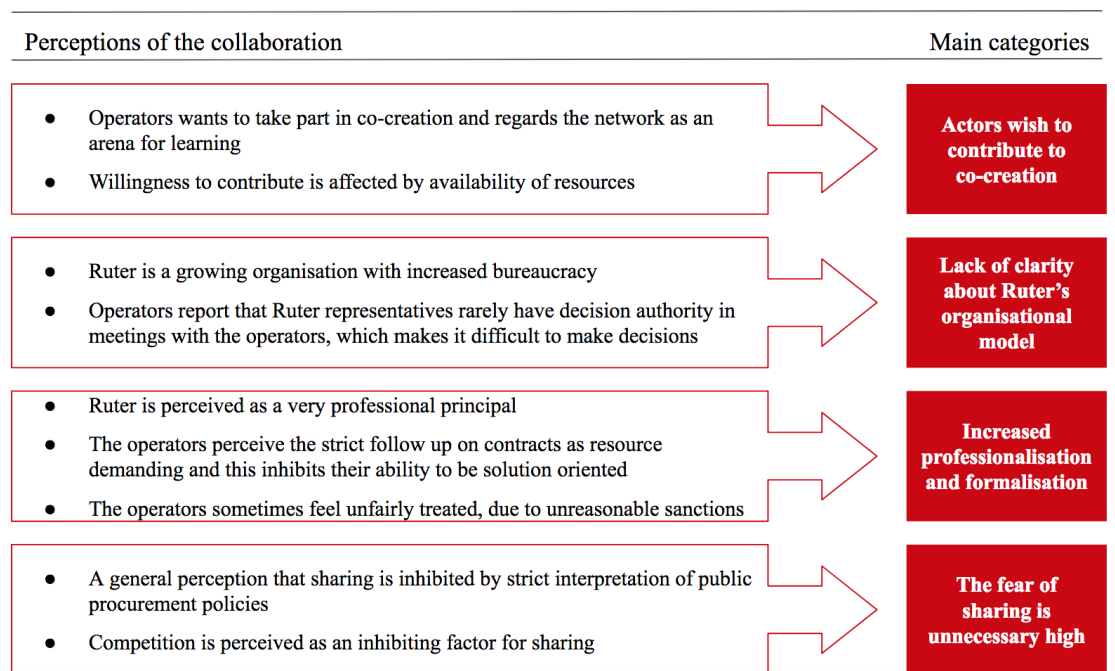
4.2 How the collaboration is experienced among the members

The network is characterised by heterogeneity, and consist of 11 actors that differ in size, scope, ownership, revenue and core business. Each operator and partner has individual goals and strategies that drive their motivation and contribution to the network. One respondent from Ruter addressed these differences:

“We are on a fairly high-level, strategic, long-term, guideline-oriented focus. The operators are more about the operation, contract, survival from year to year, margins. They have that type of focus.”

Because the various actors are so different, there exist various perceptions of how the network functions and its importance in the future. Through the interviews, we have gained an understanding of how the different members perceive the collaboration in the network, and what they regard as the challenges and opportunities for the future. Certain factors can be addressed in order to increase collaboration and prepare for a changing environment as discussed above. We have identified how operators and partners perceive the collaboration and have categorised these perceptions into four main categories as shown in figure 5. In this section, we will present these perceptions thoroughly.

Figure 5: Operators and partners perceptions of the network collaboration



4.2.1 Actors wish to contribute to co-creation

Most actors are aware of the benefits of being a part of the network, and there is, in general, a very positive attitude among the operators and partners to cooperate with Ruter. The actors are willing to take part in co-creation and join efforts to develop the public transport services.

Operators regard the network as an arena for learning

The operators and partners emphasise the learning outcome as a great motivation to collaborate with Ruter and contribute to co-creation. It is of common understanding that Ruter is a future-oriented organisation that explores new innovative solutions. The operators wish to acquire new knowledge and learn from Ruter and the network in order to transfer the knowledge to other parts of their business or other regions where they operate.

”Ruter is very future-oriented, as a contractor in the Nordics. You get the feeling that they want to be in front to drive new solutions, and that means to challenge us, which is extremely good.”

The operators and partners want to take part in co-creation to innovate and be prepared for future changes. All actors in the network acknowledge that they are facing an uncertain future, where new untraditional actors will challenge their business model. In accordance with this, one informant emphasises:

”In the future, things can change quite drastically in a way that we may not be a bus company anymore, but a technology company. We are starting to get competitors that are technology firms and not traditional bus companies.”

Another informant argues that the changes in the industry happen rapidly and that it is impossible to predict what will happen in the future:

“We have been operating the same line in 9 years, and standing there 10 years ago we would never guess what would happen during these 9 years. So much have happened, which you never could imagine. And that will happen in the years to come as well. [...] We will experience a new technological shift over the next 10 years, the question is not when, but where and to which extent, and at what pace.”

Several operators mention that they would like to be included in plans and decisions at an earlier stage, where they actually have the possibility to impact. At the moment they sometimes feel that they are informed rather than involved. An informant explains it this way:

“We want to speak to the ones who make decisions, but we prefer to be involved before they have set ideas about what to do. That would allow us to contribute with concrete feedback.”

Another one points out that occasionally it seems like Ruter explicitly avoids involving the other actors in the network: “Sometimes one can wonder if they forgot to involve others or if it is intentional.”

Willingness to contribute is affected by the availability of resources

Even though there is a positive attitude towards Ruter's future-oriented focus, the actors' willingness to contribute to, and participate in projects are affected by the availability of resources. Especially the commercial operators are constrained by profitability. One informant explains this issue:

“There is barely any profit in this industry, and that constrain our innovative capability. We are already struggling to break even, and clearly, it is unreasonable for us to have 10 people working in the innovation department.”

Supporting this discussion, when asked if the operators initiate explorative activities, one informant puts it like this:

”Well, that is initiated by Ruter. Simply because we don't have money, our income is what we are paid from Ruter. So if we are to contribute to something, we must get paid, more or less.”

4.2.2 Lack of clarity about Ruter's organisational model

Operators described Ruter's organisational model as unclear and expressed lack of clarity regarding areas of responsibilities. It is a large organisation, with many employees working in administrative positions. Most of the operators have an operational focus, with very few people working in administrative positions. In comparison, Ruter is perceived as very bureaucratic:

”The other problem is that they have become such a large organisation. Ruter is enormous. With 260-270 employees, where one does not know what the other one is doing, and you could say that the contract department follows the contracts, while the marketing department follows the market. And they don't communicate with each other.”

Ruter is a growing organisation with increased bureaucracy

A fair number of the key individuals of the operators and partners have been involved in the public transportation industry for a long time, and claim that it was

easier before. Ruter has since 2012 doubled the number of employees, and such a rapid growth has been confusing for the operators, especially for the bus and ferry operators where reductions in administrative positions have been necessary to avoid a deficit. Consequently, the operators capacity to focus on leadership and development has been reduced, while these functions are increasingly present in Ruter. The administrative capacity in the network has shifted and is possibly imbalanced.

With a growing number of employees in administrative positions and an organisation that to a larger extent is relying on lawyers and the legal department, there has been a shift towards a more bureaucratic focus. Operators claim that they have to report to up to 18 different contact persons in Ruter and that these persons rarely have the decision authority to make operational decisions right away. One of the respondents explained it this way:

”Back in the days, we would call a contact person on an operational level in the system. This person was at the same level as our department managers, and they would take care of things [...] Now we are not able to fix anything because there is no one who can make decisions. Problems are just floating around in the system. We don’t know whom to contact, everything is just pulverised.”

It is difficult to make decisions

We found that generally, the operators were discouraged by Ruter’s inability to make decisions. Being able to make quick decisions is listed as one of the key points of the code of conduct for collaboration, and when this is unfulfilled operators perceive Ruter’s communication as ambiguous: “We agreed to show up for meetings ready to make decisions, but apparently that is not how it works.”

This ambiguous communication leads to dissatisfaction among the operators, and this is an ongoing subject of discussion in most of the interviews. One informant describes it this way:

“There are way too many people who are not willing to take responsibility. Just like a bar of soap they just slip the problem away”.

Another informant explains: “The code of conduct for collaboration was about mutual respect, being prepared for meetings and show up with decision makers. And this is the problem”. The same person further emphasises “And regarding the ability to make decisions, we never make it there. It is always postponed and postponed and postponed. And there is always something pending.”

In addition, informants report about a delay in solving day-to-day issues, and that it usually takes a long time to agree upon and execute plans and initiatives. As stated by one of the informants:

“To try to solve anything regarding day-to-day operations, or with a shorter time horizon, is a bad fit for Ruter.”

4.2.3 Increased professionalisation and formalisation

Ruter is generally perceived as very professional and organised, especially compared to public transport contractors elsewhere in Norway. As exemplified by one of the informants:

“They’ve always been a first mover, and several other county councils have followed in Ruter’s footsteps. From my perception, they are very professional, and have carried out satisfactory tender processes, worked well with the contracts, worked and had a good dialogue, so in that matter, I have a good impression of Ruter as a principal and as a driving force.”

Although the professionalism is regarded as positive, a prevailing view among the operators is that the formalisation and monitoring that follows with this is exaggerated:

”What we experience is shifting nowadays, is that Ruter to a greater extent is relying heavily on the contract and follows up every detail.”

The ability to be solution oriented has decreased

The exaggerated follow-up on contracts comes at the expense of being solution oriented. The bureaucrats from Ruter do not always see the operational aspect of a situation and this can be discouraging for the operators. Another issue is that performing controls and writing penalties has been outsourced to a third party, that possess little understanding of the operations. This is explained by one of the informants:

“They have started to hire companies that perform controls and do not see the logic. They are only doing their job. They have been told to write penalties, and we have to spend a considerable amount of time to follow up all these fees.”

Such a strict focus on monitoring contractual issues is experienced as extremely resource demanding and at times unreasonable. Additionally, this inhibits the operators to be solution oriented when unforeseen events occur, as illustrated by an informant:

”You can say if a bus collides tonight, there is no available bus tomorrow because it has collided. It doesn’t even have to be our fault. Can we replace it with another bus? Because you have low-entry buses, normal buses, you can not even replace it if you have a bus that looks exactly the same. If we replace it, we will get fined. And then we can just as well cancel.”

The operators sometimes feel unfairly treated

The operators experience a very rigid surveillance, where they are controlled for regularity, customer satisfaction and standard of vehicles. This strict controlling regime is perceived as an unnecessary allocation of resources by several informants:

”They spend millions checking that we do our job. We think that this is insane, to spend so much money to check that we are on a 99,9% regularity, and that is crazy. They should use the money on something else.”

Ruter is known for being extremely customer-oriented, and as responsible for the market communication, they handle all the customer complaints. The operators are

also interested in reaching high levels of customer satisfaction, and customer complaints are something that they take seriously. However, there are issues related to how customer complaints are handled internally, and the operators want Ruter to understand that there are two sides to the story and that the customer is not always right.

”Regarding customer complaints, you have to filter more. Customers today are very open, and they use tablets and phones and are sitting in the bus, complaining about everything [...] we have to tolerate that people have opinions and are critical, but it does not necessarily mean that we do a poor job.”

We found several relevant examples from the interviews which illustrate how the operators are experiencing this:

“We have one customer who is responsible for $\frac{1}{3}$ of the complaints in one department. I think she has passed almost 100 complaints only this year. She complains about everything. In this case, Ruter should realise that some people are just not completely reliable. And now we have reached a point where the drivers need continuous follow-up, we have to talk to them, give warnings, and so on. In the end, the drivers get so fed up with this, so we are struggling to allocate drivers to the routes that she normally travels.”

Another example illustrates how the strict control regime can act against its purpose, and how the operators sometimes find themselves in a hopeless situation:

“One of our drivers were operating a commuting line with around 50 passengers on their way to work when a person in a wheelchair entered the bus. I have nothing against it, they should absolutely be able to use our services, but it takes almost half an hour. At least 20 minutes to get on the bus and secure the wheelchair. No one makes it to work, no one makes their transit and everything goes wrong. The driver does not make the returning journey, and we are fined. It is just a hassle. And then we have to disprove the fine we get. And this is a nightmare, especially for the driver, because

he is yelled at by the passengers for being late. But he can't just drive past the wheelchair user.”

In addition to the strict regime, there is also a lack of transparency about how the controls and evaluations are conducted. The operators work very hard to improve their services, and to reach a certain score from the marked assessment (MIS). The scores from this assessment are determining the operators' bonus or malus and are therefore important for their financial situation. Recently, Ruter changed the supplier of this assessment, and simultaneously all operators experienced a drop in scores. The operators claim that Ruter has been reluctant to discuss this with honesty and openness, and this is problematic for the operators who are financially dependent on the results from this assessment.

“We are using enormous resources on cleaning the vehicles, and training our staff. So in order to justify these investments, we need the bonus. If the bonus decreases, we must figure out why they are decreasing. We are not doing a poor job just because a new company is conducting the interviews. They are asking questions differently, and we are dropping. But Ruter is not doing anything about it. It has now been more than 6 months, and we have not yet come to a solution.”

4.2.4 The fear of sharing is unnecessary high

The final discovery we found to affect the efficiency in the network and the collaborative environment, is the actors' fear of sharing information. This concerns both Ruter and the operators. Today, information is shared to a low extent, and the sharing is mainly within the dyadic bonds. A more open access to industry-specific data, such as number of passengers, delays on routes, and other real-time data, has been pointed out as a wish among several actors in the network.

Sharing is inhibited by public procurement policies

Ruter follows the law to every little detail, and will not say more than what they are allowed to. We found the prevailing view to be that Ruter interprets the procurement policies very strict and that there might be room for more flexibility. One informant explains:

”This is where lawyers and the public procurement policies enter, and one must stick to the laws and regulations. And that is, at least how it is interpreted by Ruter, fairly stricter than what other Nordic countries that are part of the EU and have to follow the same regulations.”

Ruter is perceived as exceptionally concerned about equal treatment both internally and externally. As described by an informant, they are careful about giving equal information so that no parties are given a competitive advantage:

”There are too many lawyers and too few with knowledge about the market in this system. One gets too caught up with equal treatment and to not make mistakes.”

Sharing is inhibited by competition

The operators’ willingness to share is fairly low, and the informants claim that this is mainly due to competition. Especially the bus companies are reluctant to share information that can possibly reveal their competitive advantage. This inhibits sharing of information about future-oriented ideas, which is important for co-creation. This is emphasised by one of the informants: ”No no, we cannot collaborate, we are bitter competitors in the tender process. We can only work with the industry-specific issues.”

The competitive aspect also constrains the discussion in the “*Operator and Partner Forum*”. Discussions about specific plans are often kept at a general level, and the commercial actors rarely initiate such discussions. This tension is described by one of the informants:

“And when all competitors are present in the same room, and one has a good idea, then this is probably not the place to bring it up. If there are discussions that are of mutual interest for all the operators, then it is safe to discuss. But everything that is starting to approach information that is sensitive to business, one would not bring it up in such a forum.”

Although information generally is shared to a low extent, this has a larger focus in some of the recent projects or initiatives. An example of this is the pilot project where different electric buses are tested by three bus operators, and where the results and experiences from the pilot are open to all the actors in the network. This openness is regulated by the contract, and the purpose is to produce a valuable learning outcome that benefits the network as a whole. Several of the informants are very positive to this way of working, and call for more projects like this:

“For example, the electric vehicle tests, they are a good example of Ruter collecting data and information in order to investigate new technologies, and that is super relevant to share with others. [...] So to share more data from pilot projects, and invite to an open and honest dialogue, conducting relevant pilots is not just a symbol, but it actually means something.”

To summarise, we have in this chapter illustrated how Ruter and the network of operators and partners have developed over time. From having early establishment difficulties, where the interorganisational relations were characterised by hostility and distrust, the network has become an efficient and well-functioning service provider, with a common objective and increased levels of trust among the actors. Although the network efficiently delivers high-quality services, new technology can potentially change the industry and the customer demand and can threaten the current business model and the actors' survival. Thus, a successful transition towards the third phase, characterised by increased levels of collaboration, knowledge sharing, and exploration is crucial both for the individual actors and for the network as a whole. In this chapter, we have grouped the operators' and partners' perceptions about the collaboration into four categories and presented how these can either facilitate co-creation or constrain the collaboration in the future. In the next chapter, we will take a deeper look at how our findings relate to existing research on networks and co-creation.

5.0 DISCUSSION

We have found that the network has experienced a transition, evolving in a positive direction. There are several features that have been important for this positive development, such as building trustful relationships, creating predictability, aligning expectations and establishing a common goal. The network is currently facing a transition towards a third phase, where an appropriate balance between efficient coordination and co-creation is necessary for succeeding. Based on the actors' perceptions about the collaboration, we have found some factors that the network can leverage on when transitioning, such as motivation to participate, professionalism and predictability. However, we also found some factors that can inhibit collaboration and co-creation, such as availability of resources, difficulty of reaching decisions and fear of sharing.

In this chapter, we will discuss the findings in light of existing theory. First, we discuss how the network dynamics has developed over time and how this has affected the network performance. Furthermore, we discuss how the development has laid the foundations for a solid collaborative environment. Second, we discuss the factors that affect how interorganisational learning and exploration takes place in the network. Moreover, we stress the importance of an appropriate balance between efficient coordination and co-creation and discuss how this can be achieved in the network.

5.1 Network development

Over the past decade, the network has developed from having early establishment difficulties to become efficient in delivering public transport services. The transition from phase 1 to phase 2 was crucial for the network to develop in a positive direction, and has been important in laying the foundations for both efficient coordination and a good collaborative environment. With a solid foundation, the network has the necessary conditions to enter the third phase. We argue that they can leverage on some of the success factors from the previous transition, in order to develop capabilities that are necessary for collaboration and co-creation. In the following, we will discuss how the success factors have affected the network's development over time, and how they can contribute to achieve the network objectives.

5.1.1 Establishment of a shared vision

In the first phase, the network survival was threatened due to conflicting views about the network goal. Goal-directed network dynamics are sensitive to the formulation and the support of the network-level goal (Kilduff & Tsai, 2003). In the transition from phase 1 to phase 2, the network went through a change process where a new goal and actor mandates were established. We argue that this is a key success factor to prolonging the lifespan of the network, because of consensus on a common goal and vision. During this process, interorganisational relations were improved, trust was established, and roles and responsibilities were communicated clearly.

Sharing and communicating a common goal is important to create coherence and encourage participation, and in the public transport network, this is carried out through the common vision and the associated code of conduct for collaboration. These norms have been important in the transition from phase 1 to phase 2, and we argue that they still are of great importance in the transition towards the third phase. By aligning expectations and creating predictability these norms build a solid foundation for interfirm collaboration, which is crucial in phase 3. Provan et al. (2007) argue that key actors in the network often play an important role in carrying out norms and practices, and thus can be significant drivers of change. Building on this, we argue that Ruter has a considerable responsibility for encouraging the actors to follow these norms, as they hold the central position as the lead organisation. Setting a good example is a part of this responsibility, however, our findings suggest that this is not always the case. Operators experience that Ruter occasionally deviates from the code of conduct, particularly the point regarding showing up to meetings prepared to make decisions. This can reflect the operators' view of Ruter as a growing organisation with increased bureaucracy.

5.1.2 Professionalisation and reliance on contracts

The network has developed in what we regard as a positive direction. There has been a significant development in the interfirm relationships, going from distrust to satisfying levels of interfirm trust. Ruter has started to rely more heavily on contracts, which has created a safe, stable and predictable business environment.

Arguing from a structural perspective, Ruter uses contracts to mitigate the risk of opportunistic behaviour from the operators. In addition, contracts are useful tools to align expectations and create consistency of services across operators and partners. However, our findings indicate that the strong contractual focus that has been applied has been demotivating for the operators when the monitoring of contracts is experienced as unreasonable or unfair. The operators claim that the strong reliance on contracts, under certain conditions, takes the focus away from reaching the common goal, and it is perceived as a sign of distrust from Ruter towards them. When moving towards the third phase, we argue that applying a more relational focus can improve the interfirm relations, as this perspective relies on trust rather than contracts, as a safeguarding mechanism. Although trust is important, this should not replace the contracts with the operators, as contracts are useful tools in complex networks. We argue that contracts as a control mechanism do not necessarily compromise the level of interfirm trust, supported by Bradach and Eccles (1989), but the way that the contracts are followed up and monitored is what can create a perception of distrust. We suggest more openness and transparency in how the contracts are followed up, and that monitoring procedures should be designed collectively. Building strong interfirm relations with high levels of trust can rather have a complementary effect, as it can enhance exchange performance (Gulati & Nickerson, 2008).

5.1.3 Focusing on internal and external support

The network has to a large extent focused on reaching high levels of customer satisfaction. During its lifespan, the network has experienced a strong growth in the number of passengers and increased customer satisfaction. Provan and Milward (2001) argue that effectiveness of public sector networks should primarily be evaluated at a community level and this measure to which extent the network manages to meet the requirements from the local area that is being served by the network. Building on this, we argue that the public transport network is highly effective as the services meet the requirements of the customers. Not only does the network meet the customer demand, but they are also managing to meet the requirements of the owners. By delivering public transport services that meet both quality requirements and environmental requirements to an acceptable cost for the community, the network has gained considerable legitimacy and external support from all stakeholders.

Although network effectiveness should be evaluated by the contributions to the community (Provan & Milward, 2001), it is also important to evaluate the effectiveness at the network level and organisational level, considering the perspectives of the participants in the network and their motivation for contributing. At a network level, effectiveness can be evaluated in terms of member commitment to network goals and integration and coordination of services (Provan & Milward, 2001). As already discussed, the broad participation in creating a common vision ensured member commitment to the network goal. Today the network, with Ruter in a lead position, manages to coordinate its services efficiently, and the services are integrated and overlaps to a low extent. Because of this, we argue that the network is effective on a network level. At an organisational level, the network effectiveness can be evaluated based on how the network involvement benefits the individual organisation (Provan & Milward, 2001). Effectiveness at this level thus varies depending on the organisation in focus.

There is a possible tension between the effectiveness criteria at the three levels that Ruter must be aware of. The needs and expectations of the stakeholders at the different levels can vary and sometimes be conflicting, and the effectiveness on one level can compromise effectiveness at another level. One example where community-level considerations were emphasised over other levels, was during the establishment of Ruter. In this process, all public transportation services were unified and customer communication was directed through one brand. This made it easier for customers to travel seamlessly but inhibited the operators to communicate their brand clearly. We suggest that in situations where community-level considerations compromise the individual organisation's needs, Ruter should be understanding and make an effort to rationalise their decisions towards the operators.

5.1.4 Efficient coordination through a lead organisation

Managing the public transport services in the region is a complex task, where various actors are involved in the different activities. Faerman et al. (2001) argue that lead-organisation governance can be more efficient in large and complex networks. We found that Ruter manages to coordinate activities between the actors

in the network, and as a lead organisation, they address network level needs and external demands.

The position as a lead organisation allows Ruter to make key decisions and deploy resources within the network, which is important for efficient coordination. However, our findings indicate that the tension between efficiency and involvement is present in this network. Operators want to be involved at an earlier stage to take part in the decision making and be able to influence Ruter. Along with Edelenbos and Klijn (2007), we argue that involvement at an earlier stage can increase the level of trust because operators feel that their contributions are important. Broader involvement also reinforces the collaborative environment and can increase the level of commitment from the members. It is important that Ruter balances this tension because involving operators and partners in all decisions can compromise efficiency, as it is time consuming and resource intensive.

The external dynamic environment requires the actors in the network to be increasingly flexible and explore new opportunities. A large focus on operational efficiency can have an inhibiting effect on flexibility as these two characteristics have fundamentally different features. Efficiency favours routines, norms and standardisation, and the objective is to eliminate slack resources. On the other hand, it requires additional resources for an organisation to be flexible, and engage in explorative and innovative activities. When moving towards the third phase, flexibility becomes important for the network in order to respond and adapt to industry changes. We will further discuss how the network can balance this trade-off by directing attention towards learning and co-creation.

5.2 Co-creation in Ruter's network of partners and operators

Our findings illustrate that the network has characteristics that can facilitate interorganisational learning, and that there is a great potential for creating new knowledge. Organisational learning is by several researchers found to be a result of interaction and collaboration (i.e. Dodgson, 1993; Hardy et al., 2003), and is thus a motive for engaging in interorganisational relationships. This section provides a discussion of how the network assists and impedes the process of interorganisational learning and co-creation.

5.2.1 Exploration in the network

Engaging in interorganisational relationships are, as argued by Grant and Baden-Fuller (1995), of special importance in industries which are characterised by technological changes. This is because the actors collectively can engage in exploratory activities and acquire knowledge they otherwise would have had challenges with developing themselves. This is in accordance with our findings, where we found that the actors in the network view the network as a source of learning and have a strong wish to participate in projects. The industry is facing uncertainty due to rapid technological changes, and the operators regard the network as an opportunity to participate in explorative activities to create new and common knowledge.

Although willingness to learn and acquire knowledge is present, each firm's ability to participate in learning processes is affected by their financial resources. Several of the actors have limited resources, which inhibits them to conduct exploratory activities on their own, as explorative activities are often costly and come with uncertain returns. The risk of failure in explorative activities is high, and especially for the actors with limited financial resources, it can have fatal consequences. To commonly test new industry technology reduces each firm's risk associated with acquiring new knowledge. Sharing costs related to explorative activities is found to be a motive for engaging in network activities, as also discussed by Barringer and Harrison (2000).

The network has until now successfully exploited the knowledge and resources, as they have had a strong operational focus on improving services and meet the growing demand from customers. Even though exploration is crucial now when the network is transitioning, it is important not to disregard exploitation. The network needs to balance exploration and exploitation in order to continue to improve their day to day services, create new knowledge, and retain the learning outcomes.

5.2.2 How similarities and differences affect the actors' learning outcome

The network has various characteristics that can contribute to a good learning environment. It consists of actors that deliver similar end services and aim to solve the same problem. Although the actors in the network show similarity and focuses on the same objective, some of them vary greatly and deliver complementary solutions with distinct business models. Powell et al. (1996) argue that the heterogeneity in the network can facilitate knowledge creation, and building on this we stress the importance of creating cross-organisational ties to facilitate interorganisational learning. In the ongoing project on electric buses, only the bus companies are directly involved. Our findings indicate that Sporveien is capable of, and willing to, contribute with valuable input, because they possess great knowledge about, and have experience with electric power infrastructure. We argue that this project could be an opportunity for facilitating interorganisational learning by leveraging on the actors' differences.

From a learning perspective, it is argued that collaborating with actors that have similar businesses are beneficial for understanding and absorbing the knowledge (Lane & Lubatkin, 1998). The learning outcome from exploration is thus dependent on how similar the actors are. In the ongoing project on electric buses, the three participating bus operators have similar business models and the technological distance is small. Through this project, they gain distinct knowledge by testing three different solutions, but we argue that they easily can leverage on each other's learning and experience, due to the similarity of their businesses. Although the other actors in the network will learn from this project we argue that the bus companies will more easily acquire the knowledge and transform this into a valuable learning outcome. In addition to the explicit knowledge that is generated and described in reports from these pilots, the bus companies that participate in the project are more likely to acquire tacit knowledge based on own experiences and personal reflections. In this way, the participating firms can obtain knowledge that can generate a competitive advantage, even though knowledge regarding best practices are shared within the network.

In interorganisational knowledge sharing processes where learning outcomes are shared throughout the network, there is always a risk of free riders. Some of the network members are competitors and have expressed a fear of sharing because of

this. However, literature on knowledge sharing and learning emphasise that a firm's ability to absorb new knowledge is greatly affected by their previous experience and in-house expertise (Mowery et al., 1996; Zahra & George, 2002). Building on this, we argue that the fear of sharing is unnecessarily high, as the firms that possess the most relevant knowledge are the ones that will benefit the most from sharing learning outcomes. These firms can more easily relate to the shared experiences and assimilate and apply it to their own business.

5.2.3 Is Ruter a facilitator or a bottleneck in interorganisational learning?

Ruter possesses a central position in the network, and as argued by several researchers (i.e. Lin et al., 2003; Tsai, 2001), centrality is a great advantage to easily access resources. With this position, Ruter can efficiently manage and coordinate the network's activities. Accordingly, we argue that Ruter holds a solid foundation for balancing exploration and exploitation activities, because of their centrality in the network. The positive effects of explorative activities are favourable for Ruter as the lead organisation, but the other actors in the network may not always experience the same effects. The network is characterised by dyadic ties which creates a strong relationship between Ruter and each actor, however, we argue that this bilateral communication inhibits the process of sharing knowledge across all actors in the network. There are several reasons why these strong dyadic relationships have developed. First of all, there is a buyer-supplier relationship between Ruter and the operators, where the actors focus on establishing valuable ties to the buyer and deliver the services as expected. Secondly, this buyer-supplier relationship constrains to which degree the bilateral business plans and agreements can be shared in the network. Furthermore, several actors are direct competitors and show a low willingness to share information with the other actors, in fear of revealing information sensitive to their businesses. Finally, Ruter is a publicly owned company and falls under the policy of public procurement. According to these policies, Ruter must treat all operators and potential operators equally. Sharing information solely in the network can give a competitive advantage to current operators, and thus this information shared in the network must be available to the public. Another discussion concerns whether or not Ruter interprets these policies too strict, but assessing this is not within the scope of our study, and exceeds our competence. However, we found this factor to inhibit the process of sharing knowledge and to jointly explore new innovative solutions.

The low network density is a result of how the network is structured around one central actor. Although this structure can impede knowledge sharing and co-creation across the organisations, we argue that this structure has been crucial for how the network has evolved. Without a central entity that coordinates the services, it would be difficult for the network to obtain the current level of efficiency. The structure also affects how trust is distributed in the network, and we will discuss this in the following section.

5.2.4 Trust as an important mechanism in co-creation

Trust is important in interorganisational learning and knowledge sharing processes (Dodgson, 1993). It is shown to positively affect the collaborative learning environment, as it yields positive expectations and creates strong ties. We found that the level of trust towards Ruter has increased. We argue that one reason for this is the strong dyadic relationship between each actor and Ruter, and the ongoing communication and follow-up. This is supported by Gulati (1995) who argues that repeated ties between firms build interorganisational trust. On a network level, trust has also increased, however, it has not experienced the same development throughout the network as within the centralised dyadic ties. We argue that the network governance has affected the distribution of trust. Lead-organisation governance yields interaction on a dyadic level but can undermine the relationships between the other actors, as suggested by Provan and Kenis (2008). As of today, the network dynamics to a low extent facilitate interaction between the operators and partners, which is an important factor for creating dense ties of trust.

We argue that Ruter to a larger extent should encourage involvement and participation in projects to strengthen relations between the actors, as this can breed trust. Lack of trust can inhibit interorganisational learning, and lead to unproductive knowledge sharing, thus lack of trust can be a barrier when transitioning towards the third phase. In the following section, we will elaborate on this argument, and discuss how the network can shift towards co-creation and innovation while continuing to efficiently deliver services.

5.3 Building the foundations for the transition towards the third phase

During its lifespan, the network has evolved in a positive direction with increased efficiency and improved interorganisational relations. The network shows characteristics that can facilitate successful learning processes and outcomes. However, there are still elements that should be improved in order for the network to enhance interfirm trust and to facilitate learning and co-creation at a pace that is necessary, due to rapid technological changes and changing external demand. As discussed above, we argue that breeding dense interfirm trust, create transparency and openness, and encourage involvement can improve the collaborative environment in the network and that Ruter as a lead-organisation has a particular responsibility for carrying this out.

Involvement and collaboration can increase the value creation in the network (Fjelstad et al. 2012). Some researchers and business futurist argue that we are in a transition where the traditional forms of governance are threatened by new innovative organisational designs (Applegate, 2006). To cope with a complex, rapidly changing, and uncertain environment, scientists propose collaborative communities as a way for firms to work together and create shared value (Adler & Heckscher, 2006). The purpose of collaborative communities is to “*provide an ongoing, trust-based environment in which firms can share technical and market knowledge with both current and potential partners without fear of exploitations and with the expectation of a common gain*” (Snow et al., 2011, p. 12). We argue that the network of Ruter and the operators and partners should explore characteristics of a collaborative community because they serve a similar purpose. Trust is important for successful knowledge sharing, and building trust should be a priority in the network. Collaborative communities with high levels of trust are argued to facilitate both collective development and increased efficiency and effectiveness in the network (Snow et al., 2011, p. 13). We suggest that the network should move in the direction towards a collaborative community, as the characteristics of this model can assist the network in achieving a balance between efficiency and co-creation that is suitable for collectively adapting to industry changes.

5.4 Limitations

We have applied a case study research design, and thus the findings are unique for this particular case. However, we believe that there are elements from our study that can be used to compare similar networks in other regions or industries. Several success factors from this case can be useful for the discussion on network evolution. We acknowledge that there are some limitations to our study. Although we examined the network as a whole, our initial focus was on the “*Operator and Partner Forum*”, and at the beginning of the data collection, our scope might have been too focused on this arena for collaboration. Through the interviews we have gained a thorough understanding of how the collaboration takes place on a dyadic level, however, we have not been able to directly observe the dyadic interplays. Furthermore, we conducted all the interviews with Ruter before the interviews with the operators and partners, and this may have given us a biased starting point.

6.0 CONCLUSION

Our research contributes to the network literature by describing how a specific business network evolves over time in order to meet technological changes and changes in the external demand. We also provide insights on how the network currently emphasises efficient coordination and how it can shift the focus towards co-creation, creating a balance that allows the network to be optimised for both efficiency and co-creation.

We find that the network is effective and well-functioning at an operational level, but that certain attributes of efficiency are to some extent limiting the networks ability to mobilise the actors to participate in and contribute to explorative activities. We also find that mechanisms to secure efficient coordination inhibit the development of network level trust. In this way, an excessive focus on efficient coordination can impede co-creation and harm the collaborative environment. However, there are some elements from efficient coordination that is crucial for a complex network to serve its purpose, and exploration should not come at the expense of the network's ability to efficiently deliver public transport services to the customers. Nonetheless, exploration and co-creation make up a part of the overall network objective, as "making the public transport a natural first choice" requires enhanced capacity of the actors to solve problems and to serve constantly more demanding customers. Furthermore, we find that trust is a mechanism that positively influences the collaborative environment. High levels of trust are important for the network to excel in explorative activities, however, high levels of trust are not found to significantly compromise efficient coordination.

As our thesis looks at the network as a whole, it has contributed to gaining an understanding of how the network has evolved to coordinate efforts to deliver highly efficient services. Furthermore, we have discussed the rationale for public sector networks to engage in exploratory activities. Further attention should be devoted to studying the network when transitioning from a focus on efficiency to a focus on innovation and co-creation, to support the success factors we found to be important. Future research should also be conducted on the organisational level to examine how firms in the network learn from such collaborative and explorative activities.

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8.0 APPENDIX

8.1 Interview guide: Ruter

Introduksjon

[Formålet er at intervjukandidatene skal bli kjent med intervjuerne, og bli kjent med formålet med intervjuene og prosjektet]

Fortelle kort om prosjektet

Opplyse om opptak og transkribering, samt anonymitet.

Bli kjent

[Hvem er denne personen og hvilken rolle har vedkommende i selskapet]

Fortell litt om deg selv:

- *Hvor lenge har de jobbet i selskapet?*
- *Hvilken stilling har du i dag? Tidligere roller*
- *Tidligere stillinger før ansettelse i selskapet?*
- *Hvor lenge har du vært involvert i samarbeidet?*
- *Hvordan har du vært involvert i samarbeidet? Operatør og Partnerforum?*

Overordnet om samarbeidet

- *Hvordan vil du beskrive operatør- og partnersamarbeidet i dag?*
- *Hvordan er det sammenlignet med i begynnelsen da du ble engasjert?*
- *Hvordan vil du beskrive utviklingen? Resultater/problemer?*
- *Hva ønsker du/din virksomhet å oppnå gjennom samarbeidet (mål/ambisjoner)?*

Opprettelse av operatør- og partnerforumet

[Kartlegge motivasjonen for dette forumet, hovedårsaker, hvilken måte vedkommende har vært involvert i opprettelsen av forumet. Spørsmålene er rettet i hovedsak mot ansatte i Ruter, men også nøkkelpersoner fra partnere som har vært sentrale i opprettelsen/startfasen.]

Kan du fortelle litt om opprettelsen av forumet? [Åpent spørsmål]

- *Hva var tanken bak å opprette forumet? Motivasjon?*
- *Når ble denne ideen først tatt opp?*
- *Vanskelig å få gjennomslag?*
- *Tid fra idé til virkelighet?*
- *Hvem spilte sentrale roller i opprettelsen/startfasen?*
- *Hvilken rolle hadde du?*
- *Hvor mange medlemmer var med i starten?*
- *Hvordan opplevde du at dette forumet fungerte i startfasen (1. året)?*
 - *Hva ble forumet brukt til?*
 - *Hva fungerte godt? Ikke så godt?*

Første møte med Operatør og Partnerforum

[Disse spørsmålene er myntet på personer som ikke har vært engasjert i opprettelsen av forumet. Formålet er å finne ut når vedkommende først ble introdusert for Operatør- og Partnerforumet og om han/hun har vært med fra begynnelsen av eller om personen ble ansatt eller introdusert for det på et senere tidspunkt.]

- *Når ble du introdusert for dette forumet? Når fikk du vite om det og når var første møte?*
- *Fortell litt om ditt førsteinntrykk av forumet. [Åpent spørsmål]*
- *Hva visste du om forumet før du ble en del av det?*
- *Hva var dine første tanker rundt denne måten å dele informasjon på/samarbeide?*

Medlemskap

[Formålet er å se om bedriften/vedkommende har endret oppfatning av forumet gjennom tiden, hvordan de ulike selskapene engasjerer seg]

- *Hvor lenge har selskapet du jobber i vært representert i dette forumet?*
- *Hva er selskapets motivasjon for å delta i forumet?*
- *Hvordan har synet ditt på forumet endret seg gjennom årene/tiden?*
- *I hvor stor grad har du/selskapet vært engasjert?*
- *Hvordan vil du beskrive de andre medlemmene i forumet? Hvor mange kjenner du?*
- *Er det store forskjeller mellom medlemmene/selskapene? Deres deltakelse i forumet.*
- *Hva tror du er grunnen til at noen deltar mer enn andre?*

Møtenes innhold og gjennomføring

- *Hvordan opplever du møtene som holdes i forumet?*
- *Er temaene relevante for deg og din organisasjon/funksjon?*
- *Opplever du at du kan påvirke? Hvorfor/hvorfor ikke?*
- *Tas det beslutninger i forumet? I så fall, hva slags beslutninger og hvordan?*
- *Opplever du at dere som er med deler informasjon? Hvorfor/hvorfor ikke?*
- *Hvordan legges det til rette for aktiv deltakelse av operatører og partnere under møtene?*
- *I hvilken grad oppmuntrer Ruter partnere og operatører til diskusjon?*
- *Hvordan påvirkes informasjonsflyten av konkurransen blant operatørene?*
- *Hva er sammenhengen mellom operatør- og partnerforumet og dialogkonferansene?*
- *Hvilke saker/temaer tas hvor? Hvem deltar på dialogkonferansene?*

Kommunikasjon og infrastruktur mellom møter

[Formålet er å få et overblikk over hvordan informasjonen flyter og hva man gjør før og etter møter]

- *Hvordan fungerer forumet utenom møtene?*
- *Hvordan vil du beskrive informasjonsflyten etter og mellom møtene?*
- *Er det andre fora hvor man møter partnene sammen eller hver for seg?*
- *I hvilken grad kan operatører og partnere påvirke hvilke temaer som blir diskutert på møtene? [Er det mulighet for å komme med forslag til hva som blir tatt opp]*

-
- *I hvilken grad tar partnere og operatører initiativ til diskusjon i forkant eller etter møtene?*

Initiativ og engasjement

[Formålet er å kartlegge hvordan de ulike aktørene i forumet koordineres og jobber sammen]

- *På hvilken måte igangsettes nye prosjekter og initiativer?*
- *Tar andre enn Ruter initiativ til nye tiltak, prosjekter og saker? Eksempler? Hvem? Hvor ofte?*
- *Hvordan blir nye initiativ igangsatt av Ruter mottatt blant operatører og partnere?*
- *Hvordan fasiliterer Ruter nye initiativer sammen med den enkelte aktøren?*
- *På hvilken måte blir nye initiativer fra den enkelte operatør presentert til forumet?*
- *I hvilken grad og hvordan deles resultater og innsikter fra initiativer som involverer to eller flere partnere? Eksempler?*

Tillit og deling

- *I hvor stor grad deler du og din organisasjon informasjon, kunnskap og ideer som er nyttige for de andre i samarbeidet?*
- *Hva deler dere? Med hvem? Eksempler? Hvorfor?*
- *Hva deler dere ikke? Eksempler? Hvorfor?*
- *Hvor stor tillit har du/dere til de andre partnerne i samarbeidet?*
- *Hva er ditt inntrykk av de andre operatørene og partnernes tillit til deg/dere og hverandre?*
- *Hvordan har tilliten (eller mangelen på det) utviklet seg i din tid? Eksempler på handlinger, uttalelser, tiltak som har fremmet eller svekket tillit?*
- *Hva skal til for at tilliten kan vokse?*
- *Hva truer tilliten?*

Strategi og struktur

[Formålet er å kartlegge hvordan aktørene i forumet opererer, hvilke roller de ulike aktørene har/tar på seg. Finne ut om nettverket har formulert en felles strategi og visjon, og hvor godt er denne kommunisert. Spørsmål knyttet til de ulike aktørenes kontrakter med Ruter for å få et overordnet bilde av de juridiske forpliktelsene.]

- *Slik du ser det, har operatør- og partnernettverket en felles strategi i dag? I så fall, hvordan vil du beskrive den? På hvilken måte har strategien utviklet og forandret seg?*
- *Hvem er delaktig i utvikling/formulering av nettverkets strategi/strategiske retning?*
- *Er det formulert en felles visjon for forumet? Hvem har vært involvert og hvordan har prosessen foregått?*
- *Hva ønsker man å oppnå gjennom forumet og strategien?*
- *Er formålet med forumet noe annet i dag enn hva det var ved begynnelsen?*
- *Hva mener du at forumet kan brukes til utover det man gjør i dag?*
- *Hvilke muligheter og utfordringer ser du for forumet i tiden fremover?*

Avslutning

[Formålet er å runde av intervjuet, ta opp overordnede tanker rundt muligheter og utfordringer. Finne ut om det er temaer kandidaten mener vi burde ha tatt opp.]

- *Hvordan har forumet bidratt til utviklingen av kollektivtilbudet i Oslo?*
- *På hvilken måte har forumet bidratt til/hindret utvikling av selskapet?*
- *Hva anser du som neste fase i utviklingen av operatør- og partnerforumet?*
- *Hva ser du på som de største utfordringene?*
- *Hva ser du på som de største mulighetene?*
- *Kjenner du til andre nettverk som organiseres på samme måte?*

- *Er det andre relevante temaer vi ikke har vært innom?*
- *Noen spørsmål du synes vi burde ha stilt?*

8.2 Interview guide: Operators and partners

Introduksjon

[Formålet er at intervjukandidatene skal bli kjent med intervjuerne, og bli kjent med formålet med intervjuene og prosjektet]

Opplyse om prosjektet.

Opplyse om opptak og transkribering, samt anonymitet.

Bli kjent

[Hvem er denne personen og hvilken rolle har vedkommende i selskapet]

- *Hvor lenge har du jobbet i selskapet?*
- *Hvilken stilling har du i dag? Tidligere roller*
- *Tidligere stillinger før ansettelse i selskapet?*

Overordnet om samarbeidet

- *Hvordan vil du beskrive operatør- og partnersamarbeidet i dag?*
- *Hvordan er det sammenlignet med i begynnelsen da du ble engasjert?*
- *Hvordan vil du beskrive utviklingen? Resultater/problemer?*
- *Hva ønsker du/din virksomhet å oppnå gjennom samarbeidet (mål/ambisjoner)?*
 - *Ønsker du/dere et samarbeid utover koordinering og styring av kontrakt og tjenesteleveranse (f.eks. tjeneste- og teknologiutvikling)?*
 - *Hva med samarbeid med andre aktører i nettverket enn Ruter?*

Medlemskap og egen deltakelse

[Formålet er å se om bedriften/vedkommende har endret oppfatning av forumet gjennom tiden, hvordan de ulike selskapene engasjerer seg,]

- *Hvor lenge har selskapet du jobber i hatt kontrakt med Ruter og vært representert i dette forumet?*
- *Hva er selskapets/din motivasjon for å delta i forumet?*
- *Er dere pålagt å delta i forumet gjennom kontrakten, eller er dette noe dere gjør av eget initiativ?*
- *Hvordan har synet ditt på forumet endret seg gjennom årene/tiden?*
- *I hvor stor grad har du/selskapet vært engasjert?*

Førsteintrykk av forumet

[Formålet er å finne ut når vedkommende først ble introdusert for Operatør- og Partnerforumet og om han/hun har vært med fra begynnelsen av eller om personen ble ansatt eller introdusert for det på et senere tidspunkt.]

- *Åpent spørsmål: Fortell litt om ditt første møte med forumet.*
- *Hva var dine første tanker rundt denne måten å dele informasjon på/samarbeide?*

-
- *Dersom vedkommende har vært med helt fra starten av:*
 - *Hva ble kommunisert som formålet med å opprette dette forumet?*
 - *Hvem spilte sentrale roller i opprettelsen/startfasen?*
 - *Hvor mange medlemmer var med i starten?*
 - *Hvordan var de forskjellige selskapene representert?*
 - *Hvordan opplevde du at dette forumet fungerte i startfasen (1.året)?*

Medlemmer og deltakelse i forumet

- *Hvordan vil du beskrive de andre medlemmene i forumet? Hvor mange kjenner du?*
- *Er det store forskjeller mellom medlemmene/selskapene og deres deltakelse i forumet.*
 - *Hva tror du er grunnen til at noen deltar mer enn andre?*
- *Hva anser du som det største hinderet for en mer aktiv deltakelse i forumet?*
- *Hvordan påvirkes informasjonsflyten av konkurransen blant operatørene?*
- *I hvilken grad tar partnere og operatører initiativ til diskusjon i forkant eller under møtene?*

Kommunikasjon og infrastruktur

[Formålet er å få et overblikk over hvordan informasjonen flyter, hvordan de ulike aktørene er med på å påvirke hvilke saker som blir tatt opp, og]

- *Hvordan vil du beskrive informasjonsflyten i forumet? Både under og etter møtene*
- *Hvordan fungerer forumet utenom møtene?*
- *Hvordan legges det til rette for aktiv deltakelse av operatører og partnere under møtene?*
- *Savner du en mer aktiv deltakelse fra operatører og partnere?*
- *I hvilken grad kan operatører og partnere påvirke hvilke temaer som blir diskutert på møtene? [Er det mulighet for å komme med forslag til hva som blir tatt opp]*
- *I hvilken grad er du fornøyd med forumet slik som det fungerer i dag?*

Initiativ og engasjement

[Formålet er å kartlegge hvordan de ulike aktørene i forumet koordineres og jobber sammen]

- *På hvilken måte igangsettes nye prosjekter og initiativer?*
- *Hvordan fasiliterer Ruter nye initiativer sammen med den enkelte aktøren?*
- *Har dere vært involvert i noen konkrete initiativ?*
 - *Har dere vært involvert i arbeidet om en felles visjon?*
 - *Har dere vært involvert i arbeidsgruppa som jobbet med serviceløft høsten 2015?*
 - *Hvis ja, hvordan har dette fungert?*

-
- *På hvilken måte blir nye initiativer fra den enkelte operatør presentert til forumet?*

Strategi og struktur

[Formålet er å kartlegge hvordan aktørene i forumet opererer, hvilke roller de ulike aktørene har/tar på seg. Finne ut om nettverket har formulert en felles strategi og visjon, og hvor godt er denne kommunisert. Spørsmål knyttet til de ulike aktørenes kontrakter med Ruter for å få et overordnet bilde av de juridiske forpliktelsene.]

- *Hvordan vil du beskrive nettverkets strategi i dag? På hvilken måte har strategien utviklet og forandret seg?*
- *Hvem er delaktig i utvikling/formulering av nettverkets strategi?*
- *Kan du fortelle litt om hvilken kontrakt ditt selskap har med Ruter?*
- *Hvordan påvirkes deltakelsen i forumet av kontraktene?*
- *Hvilken type informasjon som blir sett på som forretningshemmeligheter kunne vært nyttig å dele i forumet for å bidra til felles utvikling?*
- *Hva må dere rapportere om til Ruter?*
- *Hvor ofte?*

Avslutning

[Formålet er å runde av intervjuet, ta opp overordnede tanker rundt muligheter og utfordringer. Finne ut om det er temaer kandidaten mener vi burde ha tatt opp.]

- *Hvordan har forumet bidratt til utviklingen av kollektivtilbudet i Oslo?*
- *På hvilken måte har forumet bidratt til/hindret utvikling av kollektivtilbudet?*
- *Hva anser du som neste fase i utviklingen av operatør- og partnerforumet?*
 - *Hva ser du på som de største utfordringene?*
 - *Hva ser du på som de største mulighetene?*
- *Er det andre relevante temaer vi ikke har vært innom? Noen spørsmål du synes vi burde ha stilt?*
- *Kjenner du til andre nettverk som organiseres på samme måte?*