Aalto University
School of Economics

Management of Value Co-creation in Public Service Networks - Case City of Helsinki

Organization and Management

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MANAGEMENT OF VALUE CO-CREATION IN PUBLIC SERVICE NETWORKS

- CASE CITY OF HELSINKI

Master´s Thesis
Heidi Hänninen
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ARVON TUOTANNON JOHATAMINEN JULKISISSA PALVELUVERKOSTOISSA

– CASE HELSINGIN KAUPUNKI

Pro gradu -tutkielma
Heidi Hänninen
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AALTO UNIVERSITY SCHOOL OF ECONOMICS
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ABSTRACT
16.06.2012

MANAGEMENT OF VALUE CO-CREATION IN PUBLIC SERVICE NETWORKS – CASE CITY OF HELSINKI

PURPOSE OF THE STUDY
This thesis will be conducted as a case study for the Helsinki City Economic and Planning Center as part of the "Palvelupilotti jatkotutkimushanke" project. The purpose of this research is to give the city of Helsinki insights into the development and management of value co-creation in networks, especially in the light of the previously recognized enablers and barriers of the service networks (Rautvuori 2010). The topic is highlighted, as in the recent years cities are encouraged to give up the old hierarchical service systems and to create networked ensembles that place the customer in the center of all activities. It is also widely recognized that value for the customer, and for the network as a whole, is created in co-operation with the different actors of the network. The management of public service networks hence needs to be changed.

METHODOLOGY
The research was carried out in a qualitative case study format. The case study research had two stages: data collection and analysis. First the theoretical framework was conducted from the literature to identify the core issues related to network management, co-creation of value, service logic, and service management. Empirical data was gathered through seven semi-structured interviews in late 2011 and early 2012. The theme interviews (Hirsjärvi and Hurme 1980) were first written open into transcripts, followed by close reading (Moisander and Valtonen, 2006). The second stage then involved analytical generalization of the findings (Yin, 2003). Finally the results were pattern matched with the themes of the interviews and analyzed. Based on the analysis recommendations to the city of Helsinki could be made.

FINDINGS AND CONCLUSION
Network theory and S-D logic have similarities, which allow the theoretical application of S-D logic into the management of public networks. Network management can be used to enhance the co-creation of value in public service value networks. The study found that to improve the co-creation of value, network managers in city context should: 1) in Management of Network Activities focus on interaction design, dialogue creation, and relationship building, 2) in Management of Networks Actors focus on customer involvement and encounters, and top management support, 3) in Management of Network Resources focus on knowledge management, and process management.

KEYWORDS

Co-Creation of Value, Network Management, Service Dominant Logic, Public Service Networks, City Organizations

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ARVON TUOTANNON JOHATAMINEN JULKISISSA PALVELUVERKOSTOISSA – CASE HELSINGIN KAUPUNKI

TUTKIMUKSEN TAVOITTEET
Tutkimus tuotetaan case -tutkimuksena osana Helsingin kaupungin Elinkeinopalvelun Palvelupilotti jatkotutkimushanketta. Tutkimuksen tavoitteena on antaa Helsingin kaupungille näkemyksiä asiakaslähtöiseen arvon tuotannon johtamiseen palveluverkostoissa. Tutkimus toteutetaan verkostojohtamisen näkökulmasta, ja se pohjautuu Rautvuoren (2010) tunnistamiin kaupunkiorganisaatioiden palveluverkostojen esteisiin ja edellytyksiin. Aihe on korostunut erityisesti viimeaikoina, sillä kaupunkiorganisaatiot pyrkivät tuottamaan asiakaslähtöisiä palveluita verkostoissa, vanhoista siilomaisista organisaatiorakenteista huolimatta. Verkostojohtaminen kaupunkiorganisaatioissa on täten muutoksen alla.

TUTKIMUSMETODIT
Tutkimus on luonteeltaan laadullinen case-tutkimus. Tutkimuksen teoreettinen viitekehys perustuu verkostojohtamiseen, arvon tuotantoon, palvelu logiikkaan, ja palvelujohtamiseen. Empiirinen tutkimusmateriaali kerättiin seitsemän teemahaastattelun ja kolmen strukturoidun haastattelun avulla (Hirsjärvi and Hurme 1980). Haastattelut kirjoitettiin auki transcripteiksi, minkä jälkeen haastattelut syväluettiin (Moisander and Valtonen, 2006). Seuraavalla askeleella tulokset analysoitiin ja yleistettiin (Yin, 2003). Lopuksi tulokset yhdistettiin toisiinsa, minkä avulla Helsingin kaupungille voitiin antaa suosituksia.

TUTKIMUSTULOKSET
Verkostojen johtaminen ja palvelulogiikan mukainen arvon tuotanto sopivat teoreettisesti hyvin yhteen. S-D logiikkaa voidaan siis soveltaa julkisien palveluverkostojen johtamisessa. Tutkimuksen tulokset korostavat, että arvon tuotantoa julkisissa palveluverkostoissa voidaan parantaa usealla tasolla. Julkisien verkostojen johtajien tulisi: 1) verkoston aktiviteettien johtamisessa painottaa asiakkaiden vuorovaikutteisuuden suunnittelua, dialogin luomista, sekä suhteiden johtamista, 2) verkoston toimijoiden johtamisessa painottaa asiakkaiden osallistamista ja kohtaamista, sekä ylemmän johdon tukea, 3) verkoston resurssien johtamisessa painottaa tiedon hallintaa ja prosessijohtamista.

AVAINSANAT
Arvon tuotanto, Service Dominant Logic, verkostojohtaminen, julkiset palveluverkostot, kaupunkiorganisaatiot

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1. Introduction

The role of the creative industry and cultural sector in the economy of Finland is increasingly larger. The industry of events organizing alone grew by around 30% from 2005 to 2008. The impact of culture on the economy of the Helsinki region is higher than that of the rest of Finland (Tilastokeskus, Kulttuurintuotos, 2011). Therefore culture is at a focal point when developing the competitiveness and economic wellbeing of Helsinki (Helsingin kulttuuristrategia 2012-2017, 15.5.2011). Being the center of cultural activity in Finland, the city of Helsinki has recognized a need for establishing a new cultural strategy in 2011. The strategy will begin in the year of 2012 when Helsinki is the Design Capital of the World, and has been the capital city of Finland for 200 years. The creation of a nourishing, favorable and supportive environment for the creative businesses is an important goal for the city of Helsinki. A special events strategy has been developed to guarantee a smooth administration and good prerequisites for event's organizers (Helsingin kulttuuristrategia 2012-2017,16.11.2010). Therefore the region offers excellent opportunities for the research of services offered for the cultural sector.

The public services offered for the cultural sector by the city of Helsinki are closely linked with many actors of the city organization. These include for example Public Works Department, Real Estate Department, and of course the Cultural Office. All of these actors have impacts on the services offered for private event's organizers. Agranoff and McGuire 2001 state that the use of networks in public management is increasing. Most cities become involved in multiple networks, which have different purposes: strategy making, resource exchange, or promotion of specific projects. A *network* in a city context is defined as a collection of programs and services that span a broad range of cooperating but legally autonomous organizations (Provan and Milward 2001). In the present study, network is defined as interconnected organizations linked in production, distribution and the use of goods and services, within an industrial system and hence bound by reciprocal relationships (Easton 1992, Järvensivu and Möller 2008).

However, network management as a phenomenon is poorly understood. This unstable theoretical foundation has led to the overall questioning of the manageability of networks (Rethemeyer and Hatmaker 2007, Möller 2006). Järvensivu and Möller (2008) claim that due to the varying views of networks, there is no unified and general theory of network management, only partial descriptions and theories focusing on some aspect of the broad content of network management. Möller (2007) argues that the "non-manageability" view of network is valid in the network economy as such, but is not implacable to the intentionally created "strategic nets" or "value nets". Furthermore Möller (2007) states that the manageability of networks is dependent upon *the degree of strategic intent* within the network. Järvensivu and Möller (2008) on the other hand highlight that the key issue is not whether networks can or cannot be managed. Instead we have to look at what kind of governance or managerial solutions are most suitable for the network type in question. Therefore the extent of management that may be applied to a network depends on the perspectives, background assumptions, and definitions that are accepted regarding “networks” and “management”.

This study adopts the *strategic value networks view*, in which the networks are consciously built and managed with certain goals in mind (Möller, Rajala, Svahn 2004). Compared to other network approaches it is seen as more managerially oriented and its goal may be to produce management recommendations (Easton 1992). Network management may hence be seen as a tool to achieve various objectives, such as customer orientation. In this research the management of networks is defined as “*improving the ability of the networks to operate towards accomplishing its varying objectives, or as the means by which network members influence each other and/or the network as a whole in order to improve network cooperation*” (Järvensivu and Möller 2008, p.6) The focal organization of a network and the way it handles its individual relationships is in the concern of this research study approach (Easton 1992). The resource based approach to networks is critiqued for not giving much direction to the development of relationships or to building a network (Möller, Rajala and Svahn 2004).

Traditionally public services have been organization oriented instead of customer oriented (Vuokko 2004). As a result services have been highly structured and fragmented to a point, where listening to the customer has been almost impossible. However, in the modern highly competitive markets, consumer satisfaction is of importance for all organizations, including the city organizations. In the recent years cities are encouraged to give up the old hierarchical service systems and to create networked ensembles that place the customer in the center of all activities. Moreover, new kinds of cooperation and partnership are needed for the equal relationship between the city organization and its customer to function properly (Ministry of Employment and Economy).

Rautvuori (2010) found that commitment from the management and good tolerance for risk are needed for public organization to become more customer oriented. The mindset of workers needs to be changed and the relationships between different actors needs to be good, as co-operation and working towards a mutual goal, are in key position. Vuokko (2004) agrees, stating that the change is not possible simply by altering the structures or hierarchies of the organization, but by modifying the mindsets of the people within the organization.

Relationships and their management are justly highlighted when dealing in a network context (Kleinaltenkamp and Ehret 2006). It is also widely recognized that value for the customer, and for the network as a whole, is created in co-operation with the different actors of the network. This view has been actively discussed in marketing research ever since Vargo and Lusch (2004) first introduced The Service-Dominant Logic (S-D logic) in 2004. The concept is defined as *“a value co-creation model that sees all actors as resource integrators, tied together in* *shared system of exchange – service ecosystems or markets"* (Vargo 2011 p.220). Relationships are at the core of their view, making the view inherently customer oriented and applicable to network perspectives. Therefore, the present research will examine value co-creation in public service networks from S-D logic's point of view.

1.1. Introduction of the case

This thesis will be conducted as a case study for the Helsinki City Economic and Planning Centre as part of the "Palvelupilotti jatkotutkimushanke" project. The project was initially launched to improve the services offered by the city of Helsinki to private companies. Another key aspect of the project was to highlight customer orientation by increasing the understanding of service paths and value creation from the network management point of view.

The development of new and innovate service paths for private companies started in 2009 with three pilot projects, one focusing on the events organizer's permit application process. The simplification of this service path is one of the specific issues raised in the Cultural Strategy of Helsinki 2012-2017 (Helsingin kulttuuristrategia 2012-2017, 16.11.2010). This service path was studied as part of a research conducted by Rautvuori (2010), who focused on defining the city's service network structures and identified the requirements and barriers of the networks in question.

This research will continue with the previous study of service networks in the context of city organizations, and investigate how Helsinki's service organization, the Event's Unit ("Tapahtumayksikkö"), co-creates value in their service network by improving the network management of a specific service path, in this case the events organizer's permit application process. The research will take a Service Dominant Logic point of view (Vargo and Lusch 2004, etc.), in researching the nature of public value service networks, and the management of value co-creation within the networks.

The purpose of this research is to give the city of Helsinki insights into the development and management of value co-creation in networks, especially in the light of the previously recognized enablers and barriers of the service networks. Recommendations on how the case organization can improve co-creation by network management will be given based on the existing literature and the analysis of the empirical material.

1.2. Research questions

This study will look at the management of a service network in a city organization. The research is based on Network theory and Service Dominant Logic, highlighting the importance of customers in value co-creation. The research has two main questions, which are then divided into sub-questions. These questions are:

1. What is the role of network management in value co-creation?

- What are the specificities of network management in public organizations?
- How can the concept of S-D logic be applied into the management of networks?

2. How can value co-creation be enhanced with network management?

- How should the identified requirements and barriers of the network type be noticed when improving public network management?

1.3. Structure of the research

This research focuses on network theory and service dominant logic. The study will therefore begin in section 2.1. with a review of literature on public organizations in network context, and take a closer look at service value networks in public organizations. Second, in section 2.2., the management of networks according to their value creation type, and at different levels of a network will be discussed. Another key aspect of network theory is the role of network managers, which will be explored in subsection 2.4.. Second, the review of previous researches will move to service dominant logic and its influence on the management of co-creation. In chapter three the emphasis will hence be on exploring the concept itself, and how it has influenced the way value is seen. The management approaches to value co-creation will be explored further in section 3.2.. Chapter four will synthesizes the main theories and concepts into a theoretical framework.

The research methods will be presented in chapter five. It includes sections in which the case study approach, data collection methods, as well as issues related to reliability and validity will be discussed. The results found from the empirical research will be analyzed and discussed in chapter six. The results will first be explored based on themes withdrawn from the theoretical framework found in chapter four, and then in the light of the research questions presented in subsection 1.2..

Finally, recommendations for the city of Helsinki will be given based on the empirical findings, in chapter seven. The conclusion of the study includes discussion of the limitations of the study, practical implication, and recommendations for further research.

2. Public networks and their management

This second chapter will explore existing literature and theories related to first public organizations in network context, and second the management of these networks.

2.1. Public organizations in network context

There are four sectors in the Finnish society. These are the private sector, the public sector, the third sector comprising out of non-profit organization, and the fourth sector, consisting out of households and individuals. The state, municipalities and cities are part of the public sector, which in total stands for more than 50% of the Finnish GDP (Vuokko 2004). The boundaries between the market and the state are likely to blur due to increased networking. What emerges, are networks of public and private sector agencies, including third sector voluntary organizations.

Networks are neither hierarchies nor markets, they are in between and overlapping. They are clusters of relationships based on informal mutuality or shared norms, not on formal authority relationships (Jackson and Stainsby 2000). The notion of marketing broadens when the concept of networks is added in the equation: the target groups of a city organization's marketing will then include the citizens and inhabitants, potential inhabitants, workforce, companies, travelers, internal clients, decision-makers, media, and other organizations in the region (Vuokko 2004). This chapter reviews the characteristics of public networks, the components of public service networks, and their enablers and barriers.

There are two main views to network theory. Many researchers see the Resource Dependence in Networks (RDT) as the core theoretical perspective (Agranoff and McGuire 2001, Klijn and Teisman 1997, Rethemeyer and Hatmaker, 2007). The basic assumption of this view is that all organizations must exchange with others as no-one possesses all of the resources, which are needed to sustain operations and to achieve goals (Rethemeyer and Hatmaker, 2007). The relationship between buyers and sellers of manufactured products has been the basis of the second popular view into networks; this is highlighted in Industrial Marketing and Purchasing Group's (IMP Group) study and ARA-Model (Håkansson and Johanson 1992). This view, which states that relations are the building block of networks, is shared by many researchers (Saz-Carranza and Vernis, 2006). These relationships define the network position a firm has in the network (Möller, Rajala and Svahn 2004). The researchers hence utilize both the resource based approach as well as views on social exchange. What differentiates this approach from the rest is its desire to understand the totality of these relationships among firms interconnected in production, distribution and the use of goods and services in an industrial system. The focus is therefore on the network as a whole (Håkansson and Johanson 1992). This view, which is also highlighted by Rautvuori (2010), is adopted in this study.

Järvensivu and Möller (2008) discuss about two views of business networks "*network of organizations*" and "*network organization*". Network of organizations is any group of organizations, or actors, that are interconnected in reciprocal and enduring exchange relationships. This view is close to the approaches of economic sociology, social networks and industrial networks. Network organizations on the other hand are defined as "*any collection of actors that pursue repeated, enduring exchange relations with one another and, at a same time, lack a legitimate organizational authority to arbitrate and resolve disputes that may arise during the exchange*" (Järvensivu and Möller 2008 p.5). Highlighting the intentionality of network arrangements and strategic relevance of network relationships, this view is clearly in line with the strategic network approach. Möller, Rajala and Svahn (2004) continue the definition of strategic networks by differentiating between "*nets*" or "*networks*". A net is a network organization, formed by a group of companies. It is built consciously and its members have fixed roles. A network on the other hand is a network of companies or a network environment, formed by the relationships between companies and organizations. It is broader than the industry itself and in principal borderless (Möller, Rajala and Svahn 2004). The role and extent to which networks can be managed depends on the distinction between networks of organizations and network organizations (Järvensivu and Möller 2008).

Public sector networks are different from those of the private sector, as financial performance is not a viable way of assessing the effectiveness of a public network (Provan and Milward 2001). In fact, these networks are most effective when they enhance the capacity of organizations to solve problems and to serve their customers. However, governments seldom create directly value (Rethemeyer and Hatmaker, 2007). They rely heavily on other organizations as problems have grown complex and governments are less trusted as service providers.

There are two main categories of networks in the context of public organization. These are *policy networks* and *collaborative networks.* In public policy, networks are seen as ways of improving the chances of solving wicked problems, like unemployment and inner city housing problems (Jackson and Stainsby 2000). Therefore, in general policy networks refer to public agencies, legislative offices, and private sector organizations that have an interest in public decisions within a particular area of policy (Rethemeyer and Hatmaker 2007). Collaborative networks can be defined as "*collections of government agencies, nonprofits, and for-profits that work together to provide a public good, service, or "value" when (a) a single agency is unable to create a good or a service on its own and (b) the private sector is unable or unwilling to provide the goods or services at all or in the desired quantities*" (Rethemeyer and Hatmaker 2007, p. 620). Moreover, collaborative networks include the set of agencies and organizations that provide a service or a good together, while policy networks are more inclusive, encompassing those parties that have an interest in how that good or service is being provided. Both networks need "steering" from the public officials.

Provan and Milward (2001) state that operational and interorganizational networks have become common ways of delivering public services. Public organizations are responsible for providing good services to their customers, and they are required to make efforts in satisfying their customers' needs. However, the public sector is often accused for being production-oriented instead of customer-oriented. In these public organizations, it is sufficient if the services are merely provided. However, the pressure for being more customer-oriented exists (Vuokko 2004). By satisfying the customer and by maintaining a customer-driven focus, the organization can be assumed to be effective, not only to its customers, but also to its stakeholders, all of whom benefit from the rewards of a customer-driven organization (Provan and Milward 2001). Therefore, the central idea behind customer-orientation in public organizations is to learn about the needs of their stakeholders, and to take them into consideration in the organization's marketing actions (Vuokko 2004). The goal of most public networks is to enhance client services through improving access, utilization, responsiveness, and integration, while maintaining or reducing costs (Provan and Milward 2001).

However, there are downsides to cooperation and networks in public organizations. Autonomy is reduced, resources are shared, and decency is increased, however they are not as important for the public organizations as they are for private, as the motive for profit is absent in public organizations (Provan and Milward 2001). In networks of providers however, services can be offered effectively while maintaining acceptable levels of autonomy. Challenges to networked processes in public organizations arise from artificiality, lack of trust, lack of common understanding and vision, lack of commitment, low level of value or resources, and inability to transfer what was learned into actions (Rautvuori 2010).

To conclude networks are becoming more common in the provision of public services. Moreover pressure towards customer centrism exists also in public context. This study adopts the IMP group's view to networks. Furthermore the network under study is a collaborative network with strategic goals.

2.1.1. Public service value networks

In value network approach, the organization is assumed to be part of a larger network of organizations that co-create value together (Basole and Rouse 2008, Lusch et al. 2010). To be more precise, the social and economic actors are loosely connected through institutions and technology, to co-produce the service offerings, and to exchange service offerings (Lusch et al. 2010). This perspective shifts the focus from dyadic one-to-one relationships to networks of interorganizational relationships within an ecosystem. Products and services are designed, created, delivered, and provided to customers in complex processes, exchanges, and relationships. This value network perspective takes a shift from resource-based view to examining the resource dependency, transaction cost, and actor-network relationships. Therefore, it combines numerous network theories.

The structure and dynamic of a value network, as well as customer expectations influence the complexity of the service ecosystem. Basole and Rouse (2008) have developed a model for understanding the nature, delivery, and exchange of service value, and assessing the complexity of service value. What they found was that value in service economy is delivered through complex indirect and direct relationships between value network actors driven, and ultimately determined by the end consumer. The complexity of a service value network depends on the number of actors, but also on the conditional probabilities of these actors, who are involved in delivering the service. Also what was found was the importance of ICT in reducing the issues of complexity for consumers, as it provides a greater level of network integration, information visibility, and means to manage and anticipate change (Basole and Rouse 2008). IT supports the service-centered view, as it distributes information and business processes throughout the service networks. Furthermore, Lusch et al. (2010) go as far to as referring IT as the key driver of the need, and acceptance of S-D logic. This section explores the components of public networks; the actors, resources, and activities of public network, and value networks, exploring their enablers and barriers.

2.1.1.1. Actors, resources, and activities in public service value networks

The aim of Industrial Marketing and Purchasing Group's ARA-Model, which Rautvuori (2010) found as the most suitable approach when looking at networks in a city organization, is to provide a basis for studying the "*roles of actors and sets of actors in industrial development processes, given the relation between industrial stability and development*" (Håkansson and Johanson 1992, p.28). This subsection reviews the three components of the ARA-model: actors, resources, and activities.

Actors perform activities and/or control resources (Håkansson and Johanson 1992). Network actors may in principle be individuals, organizations as well as networks. The type of the actor influences what kind of roles it may adopt (Järvensivu and Möller 2008). In Basole's and Rouse's (2008) conceptual model of service value networks, there are four types of actors who influence the firm's ability to produce and deliver value to its customers: *suppliers*, *other customers*, *competitors*, and *complementors*. Value networks are also shaped and influenced by government agencies, research and development institutions as well as by educational institutions and industry associations. In the municipal context, the roles, functions and features that actors have may be both formal and visible or informal and hidden (Jyrämä, Hakio and Mattelmäki 2011).

Activities take place when one or more actors "*combine, develop, exchange, or create resources by utilizing other resources*" (Håkansson and Johanson 1992, p.30). The performance of activities requires *resources*, which is the third component of ARA-model. All resources are heterogeneous and controlled by actors, either by a single actor or jointly by several actors. Likewise resources can be categorized into tangible and intangible resources. What Rautvuori 2010, Jyrämä, Hakio and Mattelmäki 2011 found was that in city netowrks activities were mostly transfer activities of social functions. Even more so, these informal or hidden aspects were found to be in central position when changing the organizational culture from bureaucracy towards service dominance (Jyrämä, Hakio and Mattelmäki 2011). These three components of the ARA-model can be brought together and analyzed with four "forces": the *functional interdependence* of the network, its *power structure* and *knowledge structure*, and *inter temporal dependence* (Håkansson and Johanson 1992).

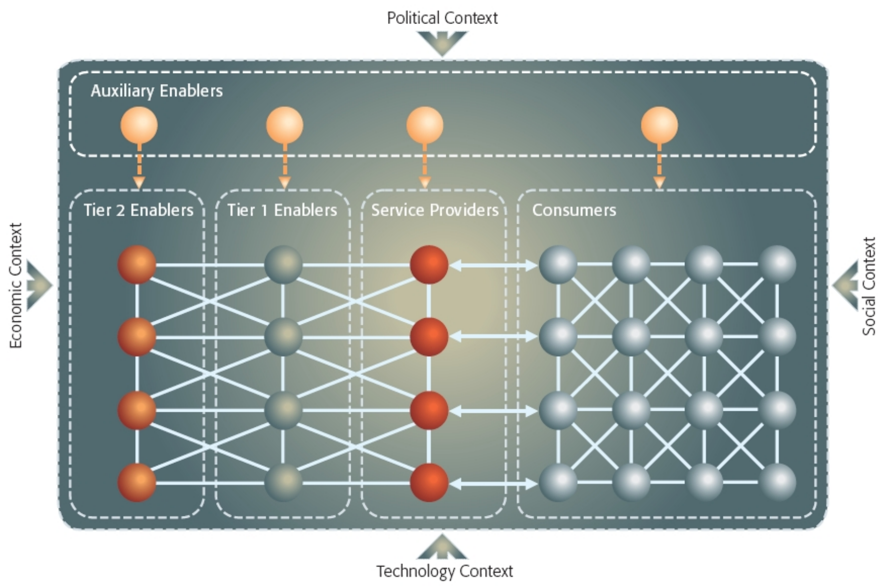
Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011) studied a network formed by the city of Helsinki's events unit's service development process, which is the specific research context of this study. Rautvuori found that in the event's organizers' service network, there were in total 13 representatives from different bureaus and agencies, four from the private sector, and two outside service design consultants. As the new service, targeted to facilitate the permission application process, influences most of the city's units, many of them were involved in the development process of the new service (Rautvuori 2010). Based on the ARA-model Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011) developed a structure for a development network in a public organization's context.

The actors of the network were encouraged to speak up and bring new ideas into the discussions. This required commitment, honesty and active participation from the actors (Rautvuori 2010). Resources may include tangible assets as well as intangible assets. The flow of these resources determines the future and functioning of a network (Håkansson and Johanson 1992). From tangible perspective, resources were seen as facilities where meetings etc. could be held. As the project had a common goal, the actors understood the opportunities of the project and therefore remained motivated throughout the process.

Good network relations required a good manager according to the actors of this specific network. The events unit was seen as being responsible for the project. Network management though was seen more as coordination and leading of the project (Rautvuori 2010). In fact, the role of the network manager may vary from a facilitator to an orchestrator of relationships (Rethemeyer and Hatmaker, 2007). The events unit did not manage the network strongly as decision-making is done in many different units. According to the actors, a stronger execution of actions would have required stronger leadership (Rautvuori 2010). Major management challenge of the network was the commitment level of different city units. In general the actors found the new service to be extremely successful. They also encouraged the city to use similar networks in other context in the future.

Basole and Rouse (2008) illustrate the value service network with a node-and-arc representation visualized below in Figure 1. It is constructed from five types of actors: *consumers, service providers, tier 1 and 2 enablers, and auxiliary enablers*. The authors further argue that the value in service networks is created through a complex set of B2B, B2C and C2C relationships, and influenced by the *social, technological, economic, and political context* in which it is embedded (Basole and Rouse 2008). Chandler and Vargo (2011) state that visualizing the network is important, as it enables the researchers to 'see' the network context, as well as the market structure.

Figure 1: A conceptual model of service-value network

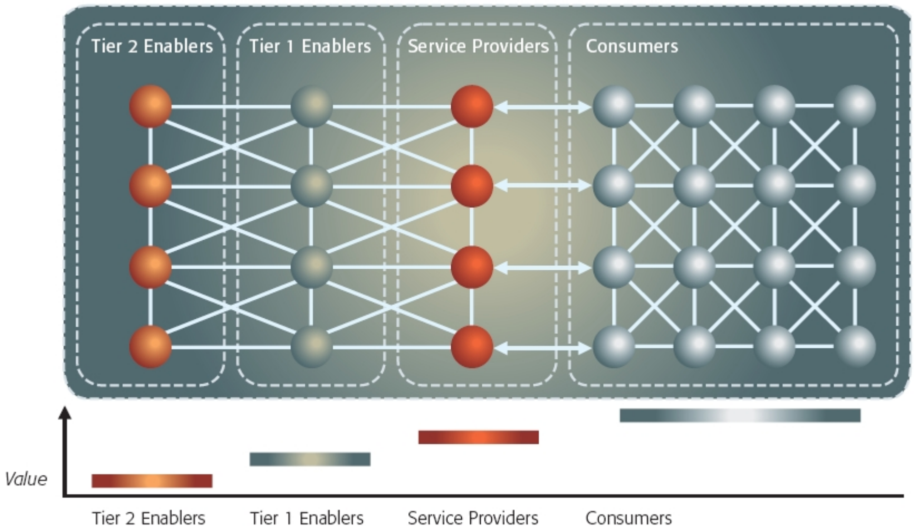


Source: Basole and Rouse 2008

The Figure 1 above illustrates Basole's and Rouse's (2008) model of the service value network. In it, *consumers* trigger all activities in the service value network. Their role is therefore very central: they demand product and service customization, speed, and quality. In this case the users of the service are both the event's organizers as well as the internal customer; the units that work with events. Usually consumers will use and continue to use a product or service only if their value preferences and criteria are met or exceeded by the service provider. Due to this, service providers will receive benefits only when consumers are satisfied enough (Basole and Rouse 2008). *Service providers* provide services to consumers, who can then experience, use, and consume the value they desire or expect to be embedded in the particular service. In this model, the service provider is also the focal actor of the service value network. Furthermore, in this case study the service providers are the same units of the city of Helsinki, which work with events. *Enablers* help the service providers to create, design, initiate, and deploy the service. *Tier 1 enablers* provide direct goods and services to the service provider, *tier 2 enablers* provide goods and services to tier 1 enabler. In this case an enabler is for example the IT department of the city of Helsinki. *Auxiliary enablers* are essential to the entire ecosystem, not specific to only one industry. Actors are embedded in an ecosystem and cannot hence be seen as isolated from institutions, technologies, politics, and social contexts. These can have a deep impact, and must hence be considered when conceptualizing the structure or dynamics of a service value network. ICT can be used to link and coordinate activities between service providers, customers, producers and enablers (Basole and Rouse 2008). In this ICT‘s role is of high importance as the service is electronic and web-based.

Each actor contributes value to the overall value offering by focusing on their core competencies and cooperating with other network actors. However as it will be discussed in chapter 3, the consumer co-creates value by using the product or service. The authors propose that “*the nature and extent of B2C service value determines B2B service value, as well as the value of products and other value enablers*” (Basole and Rouse 2008, p.58). The nature of value is visualized in the Figure 2 below.

Figure 2: The nature of value in networks



Source: Basole and Rouse 2008

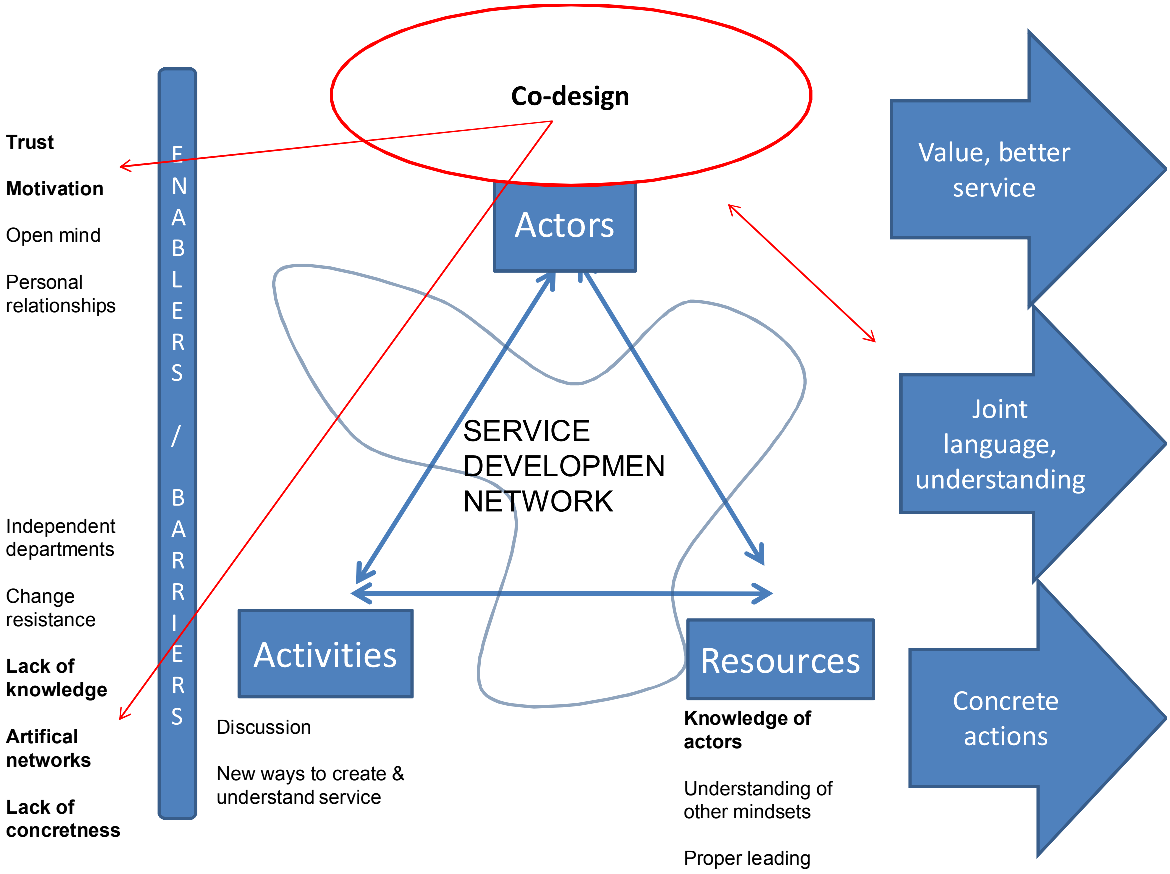
In conclusion, the design and management of networks are centered on both creating and controlling the structures from which the value systems evolve. However, in all cases network’s customer value drives the value network. As for example, if a customer hates a DVD-player, the efficiency of the DVD-player’s supply chain cannot compensate for players not being sold. The complexity of value networks limits its abilities to optimize allocations of resources (Basole and

Rouse 2008). The issue of complexity is crucial for the network, which is studied in the present research. The actors of the network have not been accustomed to working together. Also, the customers have to change their working methods. Hence, the operations of the network need to be coordinated into a coherent whole, and the customer has to be the driver of the network's value creation.

2.1.1.2. Enablers and Barriers to public service networks

Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011) researched service development networks in a city context and found that barriers to network processes were usually related to the context, while enablers were more connected to either individual factors or culture. This subsection will explore these enablers and barriers of networks. The Figure 3 below illustrates the enablers and barriers to service development networks in a public context, as well as the influences of co-design on the network.

Figure 3: Network's enablers and barriers



Source: Rautvuori 2010, Jyrämä, Hakio and Mattelmäki 2011

What Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011) found was that co-design methods were seen to influence positively trust and motivation within the case network. The methods also increased knowledge and concreteness of the outcome. Co-creation can be emphasized through the adaptation of service dominant logic, which in a city context may be fostered through *informal network structures*. Moreover, informality could be enhanced through co-creational methods, which create value jointly with the organization and its customers (Jyrämä, Hakio and Mattelmäki 2011).

In general, the most important enablers in municipal network processes were found to be confidence, motivation and commitment, open mindedness, personal contacts and common goals as well as target inside the network. The commitment of actors was seen as a major factor in the success of the network. Trust was built as a result of ideation processes and through unofficial events, such as 'safaris'. The network as a whole also had a common understanding of the project. Major contributors to this were information flows and learning (Rautvuori 2010). Challenges to information flows seem to arise from differences in the organizational cultures, and the existence of major power distances, as well as if relationships are not seen as trustworthy (Saz-Carranza and Vernis, 2006).

Major barriers to the process on the other hand were found to be the actors' independence, artificiality of the network, resistance to change and lack of resources (Rautvuori 2010). The way collaboration is seen may vary according to organizations, as it may be unclear which organizations are included in the network (Saz-Carranza and Vernis, 2006). Barriers are created when too much emphasis is given to the existing actor roles. This inhibits the co-creational aspect; whereas informal networks create an atmosphere that is open for collaboration and joint service creation. Culture, background of the actors, language and other factors related to the context may act as barriers or enablers for interactions within a network (Jyrämä, Hakio and Mattelmäki 2011). The organizational cultures of a city's organizations affect the network's functions. This is highlighted in decision-making processes, as decisions have to be done on multiple levels. Also some units of the network may have more power in the decision-making process than others. Problems lie in the independence of different units. This is a barrier to the customer-centricity of services, as while actions may be customer-centric from the individual units' point of view, it may not be so when looking at the service as a whole (Rautvuori 2010).

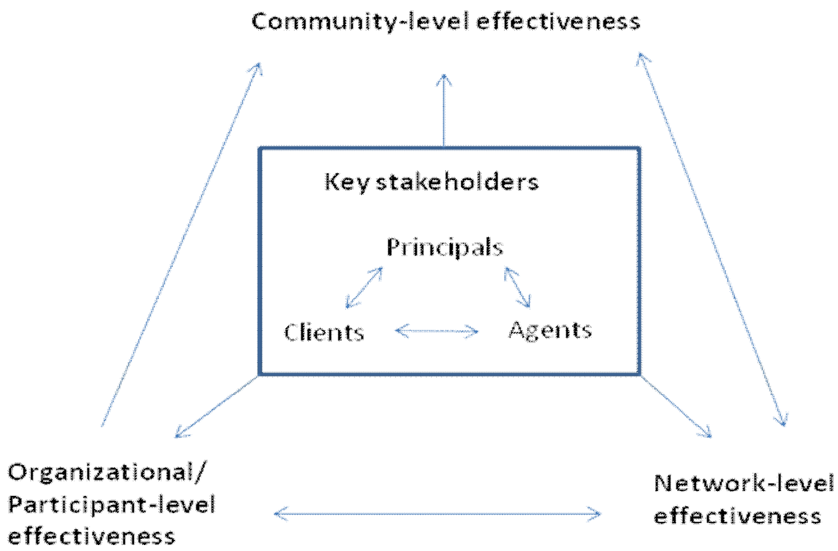
Concluding, networks have enablers and barriers. These enablers of networked processes are often related to individual factors, while barriers are usually related to the context. Service dominant logic, which will be discussed in the section 3.1, seemed to be less evident in the everyday functions of the network, while customer orientation had been highly present in the strategy discussions. The participation of both customers and organizations was seen as a novel working method in the city context (Jyrämä, Hakio and Mattelmäki 2011).

2.1.2. Evaluation of public service networks

Kickert et al. (1997) claim that in public context networks fail due to lack of incentives for collaboration and due to barriers. Therefore managers of policy networks should improve the conditions in which the actors interact. Success of the network may be facilitated with good external and internal communication, and with seamless integration of actions and actors (Möller, Rajala and Svahn 2004). For this to be possible, the project needs to be planned and followed carefully. Hence strong key persons are needed. A network in public context can also be evaluated based on how the interaction between actors took place. In other words how the interaction process was executed (Klijn and Teisman 1997). Therefore emphasizing link creation improves the quality of the policy making process, and of co-creation. Moreover, the final success of a project is determined by the end customers, and the value they see in the new process or product. Strong market-orientation and identification of customer needs are hence also needed (Möller, Rajala and Svahn 2004).

Provan and Milward (2001) argue that public services need to be evaluated on three levels of analysis: *community, network, and organizational/participant level*. These are of concern to three categories of network constituents: *principals*, who monitor and fund the network and its activities, *agents*, who work in the network, and *clients*, who are the actual recipient of the service provided by the network. Similarly, Saz-Carranza and Vernis (2006) argue that networks must be evaluated based on three levels: each *individual member organizations* (micro), the *network as a whole* (meso) and the *network and its stakeholders* (macro).The model by Provan and Milward is illustrated in Figure 4 below.

Figure 4: Network effectiveness at different levels



Source: Adapted from Provan and Milward 2001

According to Möller, Rajala and Svahn (2004) *external measures* of the level of success may include the effects on the brand or image, or on market position, operational measures on the other hand may look at improvements on the usability of the actual process, service, product or technology and the overall impact it has on the value creating system. In Provan's and Milward's (2001) model these would be addressed at the community level and network level.

The broad community-based networks must be judged by the contribution they make to the communities they are serving, *network effectiveness at the community level* refers to this (Provan and Milward 2001). Networks must be evaluated as service-delivery vehicles that provide value to a local area. Community value may be increased by improving the customers' access to services, enhancing its utilization, reducing unneeded services, lowering of costs and by enhancing customer satisfaction and final outcomes. Effectiveness can be evaluated by assessing the outcomes for the population being served by the network, and by examining the overall cost of service for that client group (Provan and Milward 2001).

Network level effectiveness may be simply evaluated based on the flow of agencies to and from the network. The actual range of services provided by the network, rather than the number of actors in the network, and the extent to which services are actually needed by clients and provided by the network are also ways of estimating the effectiveness of a network. The strength of the relationships between network members and the administrative structure of the network are also ways of evaluating the effectiveness of a network (Provan and Milward 2001).

Internal measures of network's success according to Möller, Rajala and Svahn (2004) include for example, the degree to which old and new information were combined, utilization of resources, and how well the schedule was met. Once again, what should be emphasized are motivation and facilitation of trust and knowledge sharing as the base of common learning process. *Organizational/participant level effectiveness* acknowledges that individual agencies and their managers are partially motivated by their own interests because network members have to ensure the survival of their own agency. The importance of network involvement can be evaluated by the client outcome, legitimacy, resource acquisition, and cost (Provan and Milward 2001). Organization and network level effectiveness criteria can be mostly satisfied by focusing on community level goals. Public service delivery networks must be build and maintained at the organization and network levels, however the final network effectiveness will be judged by the community level stakeholders (Provan and Milward 2001).

Saz-Carranza and Vernis (2006) highlight that networks need to be first internally efficient, in other words, the actors need to see participation in the network as valuable to them. Second comes the network level as a whole, the network has to be justifiable and fair to its participants. Third comes the external efficiency, which refers to the wellbeing of stakeholders. This level is especially important to public or cross-sectors networks (Saz-Carranza and Vernis, 2006). Network effectiveness is ultimately a result of the interactions of all the three levels present above. When a process criteria is used to evaluate public networks, not only are the results evaluated but the way these results were obtained. The criterion is based on interactions (Kickert et al.1997). Openness is seen as important, as actors who participate in the network may influence the game, which will be discussed in section 2.2.1, if they wish to. However, even the best of processes do not guarantee good results. Therefore the result has to also be evaluated. Kickert et al. (1997) suggest the use of win-win logic in evaluating the outcomes of networks. This view is consistent with co-creation and of joint learning. S-D logic and value co-creation are also firmly linked with the process, not only with results (Vargo and Lusch 2008, Prahalad and Ramaswamy 2004, etc). Therefore a process view to evaluating the functioning of a network is suitable for the present study. The analysis will therefore be qualitative and focus on interactions. Moreover, the network is considered as successful only if the community in general and its customers particularly are better served by an integrated network than they are by independent agencies (Provan and Milward 2001).

To conclude, network management can be evaluated based on how it enhances the interaction between actors. Network management can be seen as successful if it is able to foster cooperation and remove barriers of that cooperation (Kickert et al.1997). Once again, in accordance to value co-creation, network managers need to build towards a win-win-situation in which the outcomes of all actors are improved. Network management will be explored in the following section 2.2..

2.2. Network management

The following chapter explores network management in the light of power distribution, value creation systems, and network levels. It is found difficult to form one single recommendation on how to manage networks based on the theoretical research. Moreover, due to the variances in the way networks and their management is seen, it can be said that there is no one correct way of managing a network (Möller, Rajala and Svahn 2004, Möller 2006). Context plays an important role in network management (Agranoff and McGuire, 2001). In fact, network management studies in public context try to provide an understanding of the specific context type, where bureaucracy is no longer the primary tool for “social steering” (Rethemeyer and Hatmaker, 2007).

Järvensivu and Möller (2008) claim that the management of networks and the management of organizations are fundamentally comparable as they both pursue value-creation. Therefore network management employs techniques similar to organization management. However, network management is different from hierarchical management as management occurs outside the common basis of authority; network managers hence lack the right to impose sanctions directly on others (Rethemeyer and Hatmaker, 2007). If networks as value creating systems are different from hierarchies and markets, we need to identify which management mechanisms are unique to the networked way of organizing business activities. Järvensivu and Möller (2008) created a '*metatheory for network management'*. Their model is heavily based on Agranoff's and McGuire's (2001) management functions. The network management framework by Järvensivu and Möller (2008) has four levels, which will be reviewed in the following sections. The first level of the framework is the *basic-level contingency of management*, which refers to the modern industrial and institutional socio-cultural structures of the organization. Second level is the *function-level contingencies*, which determines the mode of governance, whether it be markets, hierarchies or networks. Third level is based on the characteristics of the network. These characteristics influence the management tasks, which the *task-level contingencies* refer to. The last and fourth level is the *role-level contingencies*, which looks at the characteristics of actors, as the capabilities and power of actors determine the roles they may adopt (Järvensivu and Möller 2008).

The basic level of management is founded on the idea of value creation (Järvensivu and Möller 2008). A value creation system can always be defined according to its set of actors, resources, and activities. It therefore follows the logic of industrial network theory's ARA-model, which was explored in section 2.1.1.1.. The following sections will review the other levels of Järvensivu's and Möller's (2008) model, first the functions level, second the tasks level, and third the roles level.

2.2.1. Management functions in network context

The function level of network management focuses on governance modes, which are different according to the context of operation. In any value creating system, there are requirements for managerial work, which are then transformed into management functions without which the system would not be able to create value successfully. In networks, these governance modes are mutual adjustments, alliances, voluntary-trilateral, and mandatory-trilateral (Järvensivu and Möller 2008).

As stated before, the function level of network management is related to the value creation system, which in this case is the network. In terms of networks as value creating systems, the four key management functions according to Järvensivu and Möller (2008) can be defined as follows: "*managers need to make sure that the organization knows what value it targets to make and how it can bring about this value (planning), structuring and coordinating resources and activities to bring about value (organizing), directing and energizing people to carry out the value-creating activities (leading), and checking that the value is indeed created as planned (controlling)*" (Järvensivu and Möller 2008, p.18). Järvensivu and Möller found the management functions of networks to be *framing* (“planning”), *activating* (“organizing”), *mobilizing* (“leading”), and *synthesizing* (“controlling”). Management activities in public network context include the selection of actors and resources, influencing the network conditions (Kickert et al. 1997).

Klijn’s and Teisman’s (1997) view to the management of networks arises from the dual nature of networks: they are both the cause and the effect. Their network management process model differentiates between the “games” that are seen as single issues and “networks” that are the organizational and social contexts where the games take place. Klijn at al. (1995) identified two dimensions of network management: *network restructuring* of building and changing the institutional arrangements of a network, and *game management*, managing interactions within the network. According to the game management theory, policy network managers focus on the games, which can be seen as the action channels and rules (game management), and the network as a whole; its structure, context, and membership (network restructuring) (Saz-Carranza and Vernis, 2006).

To summarize, the required actors, resources and activities need to be structured and coordinated to generate the value that is targeted. What also needs to be ensured is that actors are mobilized and energized so that the needed value creating activities can be performed. Finally management needs to check that the targeted value is in fact being produced and possible corrective actions are made. Without these basic requirements, the value creation system will not produce value in the expected manner or value is not produced at all. However, even though these functions are the same, the management tasks differ between different types of networks (Järvensivu and Möller 2008).

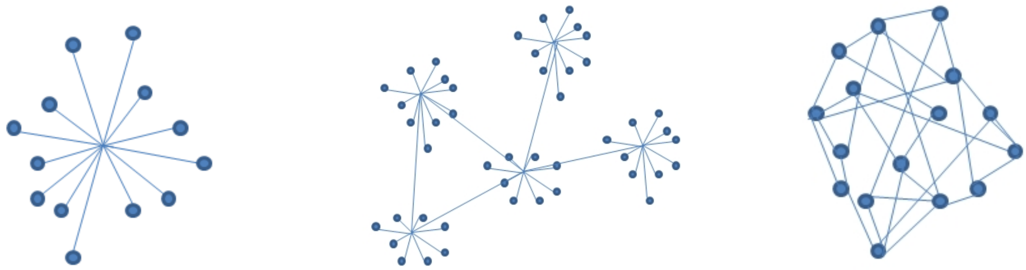
2.2.2. Management tasks according to network’s value creation system

Network management tasks vary according to the network’s characteristics and value creation system. *Task-level of network management* aims at identifying these characteristics, which will determine the kinds of management tasks that are required. The structure of the network, its relation to the environment and the type of value creation it pursues are all relevant factors determining managerial tasks (Järvensivu and Möller 2008). In public network context these management tasks are said to include opportunity provision and interaction guidance (Kickert et al. 1997). This section will explore first the types and structures of networks, and second the value creation systems, which influence network management.

The variables of the ARA-model: actors, activities, and resources, are related to each other in the overall structure of networks. Also the structure and role of actors varies according to the network type in question; from networks that are highly coordinated and managed by a single entity, to loose and decentralized co-operational networks (Möller, Rajala and Svahn 2004).

Barabasi (2002) identified three types of networks, which are cluster networks, multilateral networks, and decentralized networks. These network types are illustrated in the Figure 5 below. The number of networks and their type furthermore influences the knowledge flow and development of ideas within a network, and therefore the management of the network as a whole.

Figure 5: Cluster network, multilateral network, decentralized network

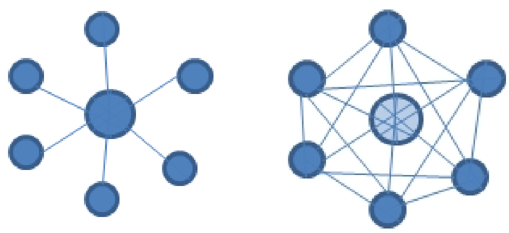


Source: Barabasi 2002

Cluster networks, which the first picture in Figure 5, hold relatively little new information for its participants. The exchange of knowledge between actors is restricted, complicating the formation of new information. *Multilateral network,* which is depicted in the middle picture in Figure 5, is constructed from numerous sub-networks and their businesses or technologies, which are joint by the bonds between the focal firms. *Decentralized networks,* which is depicted in the last picture of Figure 5, are constructed from numerous actors, which are all on the same level and often are all involved with each other. These kinds of networks picture industries rather than business networks (Möller, Rajala and Svahn 2004).

However, the degree of manageability and roles that actors may take, are also dependent on the form and structure of the network in question (Möller, Rajala and Svahn 2004). Figure 6 below illustrates two forms of networks, which influence the way a network can be managed.

Figure 6: Centralized & Decentralized network



Source: Barabasi 2002

In *centralized networks*, the focal firm should have a strong role. In these kinds of networks, the focal firm is able to evaluate the members, motivate them and to manage the overall R&D of the net. Partners on the other hand have to commit to the project, be prepared to be flexible, and to actually want to be part of the project (Möller, Rajala and Svahn 2004). The picture above also illustrates a network without a strong focal firm, a *decentralized network*. When a network is formed in this way, the so-called focal firm may only summon up the network, recruit partners and manage the knowledge sharing. Partners may freely innovate and take advantage of their special capabilities (Möller, Rajala and Svahn 2004). This requires strong know-how in networking and relationship management. Ostrom (1990) suggested that simple networks need a manager, but complex network require a mediator.

The management of strategic networks may also be researched based on value creation systems, which Möller, Rajala and Svahn (2004) categorize into emerging business nets, renewal nets, and current business nets. The managers of *emerging business nets* are needed to create a culture, which fosters learning and open communication. Tasks of the network managers hence include partner selection, development of commitment, motivation, and mutual vision. And finally above all, the management style needs to promote creativity. In *Renewal nets* the managers need to be able to foster learning, create trust, and have project management capabilities. The managers need to give enough space to the partners so that the actors may also develop their own capabilities through mutual learning. Special attention needs to be given to removing of obstacles set by the differences between organizational cultures. The distribution of the so-called 'silent know-how' via dialogue and narratives, is important in renewal nets. *Current business nets* are based on well-known value systems, and should hence run like clockwork. Cooperation within the network is a major concern for the network managers (Möller, Rajala and Svahn 2004, Möller 2006).

In summary, according to this view the underlying *characteristics of the network's value creation system,* whether they are stable, emerging or renewing, require different managerial capabilities (Möller, Rajala, Svahn 2004, Järvensivu and Möller 2008). The *capability to integrate and coordinate value activities* of each member is of high importance in the strategic nets perspective (Möller 2006). The manifestations of value coordination are the *information and management systems* that combine the business processes of each actor together. These may include monitoring of the efficiency or production, logistics, customer delivery, and service. Furthermore this may lead to the coordinated management of a complete value system, which is also called *network orchestration*. The combination of tools used in supply chain management, enterprise resource planning and customer relationship management are required to reach this state of network management (Möller 2006). The task of leaders is to create conditions, which ensure that the individuals take responsibility of their behavior as well as the behavior of the network as a whole. Public sector manager therefore has to be skilled in both relationships management and management of groups that come from a variety of professional and organizational backgrounds, each with their own specific interests, values and beliefs (Jackson and Stainsby 2000).

2.2.3. Network management capabilities

The increasing popularity of networks poses new challenges for management capabilities (Möller and Halinen 1999). Another view into network management is to review management at different levels of networks. In fact, Ford (to be published) argues that as actors and activities are *interactively defined*, actors exist simultaneously on numerous levels. The focus of business operations should be on the structures of relationships. Hence managers have to manage interactions on numerous levels of operation. When a network is review from different levels, starting with the smallest component of and finishing with the largest, the 1st level is the *Management of a strategic relationship level,* 2nd level is the *Networks and partnership portfolio level*, *Strategic networks level,* is the 3rd level, and 4th and final level is the *Cluster/ industry/ macro network level*. This subsection will review management capabilities necessary at the different network levels just described.

Relationships management capability is a competence of handling individual exchange relationships. Managers need to decode how to produce customer value, and how to evaluate customer life-time value and investments. The management of customer encounters is also a key aspect of relationship management. What is important to the perceived level of satisfaction is information sharing, trust, and commitment (Möller and Halinen 1999). Negotiation and mediation skills are also needed (Kickert and Koppenjan 1997). To navigate in a network, management needs to develop an understanding of the relationships from which the network is formed. The better their vision is, the better the changes of foreseeing for example strategic changes influenced by specific actors, competitors, or government agencies (Möller and Halinen 1999, Easton 1992). This capability is important for the *strategic relationship level*. Strategic relationships levels, or “Managing exchange relationships”, are views to the core resource of a firm: its capability to create, manage, and conduct important relationships (Möller and Halinen 1999).

Portfolio management capability refers to the firm’s competence in managing supplier and customer portfolios. Efficient portfolio management ensures stable and long-term profitability for the firm. Therefore the aim is to optimize the resources of the company (Möller and Halinen 1999). Portfolio management capability is closely related to the *Networks and partnership portfolio level,* in which roles and positions within the network are highlighted (Möller, Rajala and Svahn 2004, Möller and Halinen 1999).

Net management capability refers to the firm’s capability to mobilize and coordinate the resources and activities of other actors within the network (Möller and Halinen 1999). This capability is highlighted in *Strategic Networks level,* on which it is important to realize that network managers can build networks in which their company is in a central position (Möller, Rajala and Svahn 2004). Kickert et al. (1997) state that networks do not have clear goals, clear hierarchies, or decision procedures. Therefore a network manager in public context has to have a high tolerance for ambiguity, and the creation of an environment for joint action is crucial for the network's success.

Network visioning capability is closely related to organizational learning as this capability is based on the systematic generation and evaluation of information received from the networks (Möller and Halinen 1999). Management at this level is highly based on industrial network approach, as what the manager is looking at is the large scale network of an industry (Möller, Rajala and Svahn 2004). The prerequisite of network management at the *Cluster/ industry/ macro network level* is good vision of the clusters and industry in which a company operates. Möller and Halinen (1999) talk about "industries as networks", where understanding the networks, their structure, processes and evolution is crucial for network management.

To summarize, networks, which are based on relationships, can vary from closed strategic networks to large industrial networks. These levels, ranging from macro networks to individual relationships, determine the focus and challenges of network management. At one level network management is concerned with the restructuring of a network, and at another level it involves improving the conditions of co-operation within a network structure (Järvensivu and Möller 2008).

2.2.4. Role of the manager in public networks

Characteristics of the actors determine the roles that they may take. The managerial roles that actors may adopt are fundamentally related to their resources and capabilities (Järvensivu and Möller 2008). One actor may have more than one role to handle the network management tasks. Researchers have identified numerous roles that managers may take. Snow et al. (1992) defined three managerial roles of architect, lead operator, and caretaker. Knight and Harland (2005) on the other identified six roles: advisor, information broker, network structure agent, innovation facilitator, coordinator, and supply policy maker. Heikkinen et al. (2007) found as many as 12 roles. However, these roles are context dependent and the types of roles presented by researches are also dependent on the specific characteristics of their study.

Role of the manager in public networks is that of a *mediator*, *process manager*, *and network builder* (Kickert et al. 1997). It is not that of a system controller, which is the classical perspective to management in public context. Also, multiple actors may engage in management efforts. These efforts may be independent, uncoordinated, or even have conflicting objectives. Hence, it should not be taken as granted that there is only one network manager, and that that is a public official (Rethemeyer and Hatmaker, 2007). This section reviews the role a manager may have in public networks.

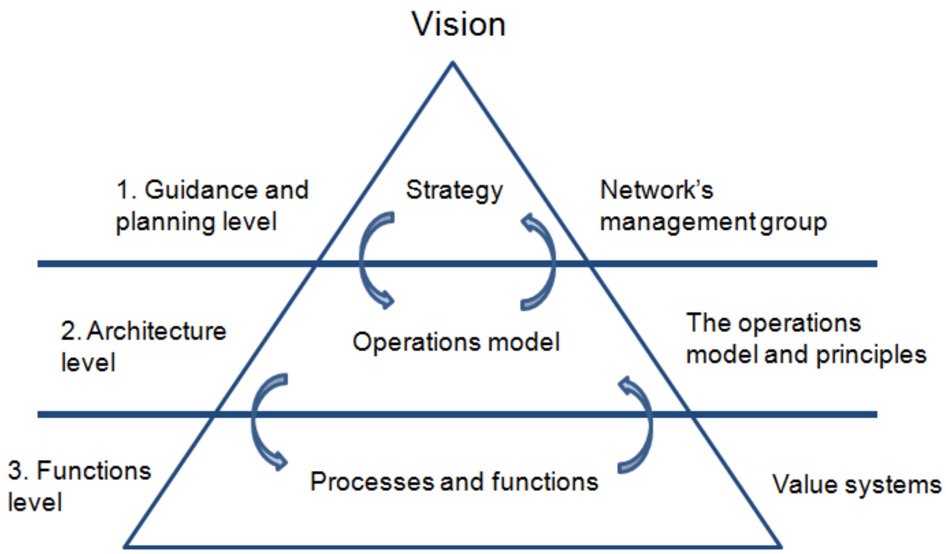
Public networks are always led or managed by one or multiple government representatives (Agranoff and McGuire 2001). The central force holding the network together is its leader. He or she elicits common goals, creates an atmosphere of trust, brokers organizational and individual contributions and deploys energies. What is important to note is that these are not attributes related to personal aspects or talents, they are roles adopted by the manager in the system of strategic interactions.

Managing a network is a means of achieving joint problem solving in a situation of multi dependency. In other words, managers need to consider the actions and reactions of other organizations when setting their own strategies (Jackson and Stainsby 2000). In public network management, command and control need to be replaced with "soft guidance" (Agranoff and McGuire 2001). Managers will hence need diplomacy to foresee potential conflicts of interest, and manage these conflicts when they arise. The ability to take risks and to manage a number of differing cultures is crucial in coordinating the constituent elements of a network. As networks are constellations of power centers, network managers need to be able to negotiate information out of power center and encourage information sharing for the benefit of the whole network. After all information is the basis of learning and knowledge creation. A manager has to have a strong tolerance of ambiguity and uncertainty, and abandon traditional linear thinking, as a strategy does not move linearly and the network's life cycle is fuzzy in its early stages (Jackson and Stainsby 2000).

Rethemeyer and Hatmaker (2007) argue that there are three general assumptions, which create an incomplete picture of network manager's responsibilities. First, one states that collaborative networks and policy networks are different entities that can be analyzed and managed separately. Second assumption is that public managers alone act as network managers, and thirdly, that there is only one network manager. The introduction of the idea of multiple network managers by Rethemeyer and Hatmaker (2007) implies that the functions presented by Agranoff and McGuire (2001) and Järvesivu and Möller (2008) are not performed by a single manager. The number of functions performed by a single manager depends on their formal role within a network, the social control mechanism they have at hand, and where their interests are at (Rethemeyer and Hatmaker, 2007).

Möller, Rajala and Svahn (2004) state that the organizing and management of a network is guided by its goal and the value system which is needed to realize that goal. The highest level of network management is formed by the top management of the network. They are responsible for deciding on the second level of network management: the management system, network structure and the operations principles of the network. The third level is formed by the value system's operation processes, through which the network members execute the goals of the network. However, also this operational level is planned by the top management (Möller, Rajala and Svahn 2004). The Figure 7 below illustrates three management levels aiming at the previously mentioned criteria.

Figure 7: Network's management levels



Source: Adapted from Möller, Rajala and Svahn 2004

As the model illustrates, the top management has an important role in the success of a network. When a network is formed, issues of top management structure and distribution of decision-making power should be clear. Also the goals of the networks and strategies to obtain them have to be understood by everyone. These are the basis for determining the roles and tasks of each actor in the network. Top management should also be concerned of building a common culture for the network (Möller, Rajala and Svahn 2004).

To summarize, the development of network management should be concerned of the coordination of networks and their positions, and the development of knowledge management practices, which is important to the exploitation of experiences and learning that takes place within networks. However, in this study, the network has a clear focal organization. Coordination of processes and functions will take place hence in a more hierarchical management system.

3. Service Dominant logic and value co-creation management

This chapter will explore the changes that Service Dominant Logic (S-D logic) has made into the perceptions of services, resources, relationships, and on value. Value co-creation management is reviewed using the marketing perspective, the process based view and business model view.

3.1. Service dominant Logic approach to value creation in networks

Vargo and Lusch claim that businesses, marketing, governments and politicians should focus on service and value, and abandon the goods/services and producer/customer boundaries (Gummesson 2006, Gummesson 2008, Lusch and Vargo 2010). This new perspective called 'The Service-centered view was first introduced in 2004 by Vargo and Lusch (Vargo and Lusch, 2004). The approach which later on developed into 'The Service-Dominant View' focuses on *intangible resources*, *relationships*, and *co-creation of value* rather than on the exchange of goods. S-D logic combines resources and processes in a way, which answers to complex scenarios, making it highly compatible with network approaches (Vargo and Lusch 2008, Ford to be published). Ford (to be published) claims that S-D Logic's view to networks is similar to that of IMP group's view of networks, which was reviewed in chapter 2.1.1.1.. They both are concerned of the behavior of practitioners.

Vargo and Lusch have emphasized that S-D logic is not a theory, but rather a statement of a 'potential potency'. They also argued that it is not a paradigm as it does not have a "worldview" status. Archrol and Kotler (1999) also argue that S-D logic is not distinct from the 'old way of thinking', and does not therefore provide a true shift in logic. It should be regarded as a philosophy of science rather than a dominant logic of the market. Sweeney agrees that S-D logic does not represent a full paradigm shift (Sweeney 2007). Instead S-D logic should be regarded as a mindset (Vargo and Lusch, 2008a). S-D logic might, on the other hand provide a more suitable language for marketing (Archrol and Kotler 1999). Sweeney comments that S-D logic may be perhaps more appropriate in some context than other, and suggested that a multi-paradigm approach is suitable in most cases. Therefore one should not totally abandon traditional marketing theories such as the marketing mix, market segmentation or target marketing. The context of public networks has its own characteristics, as found in the previous chapter. The applicability of S-D logic and public networks will be discussed in section 6.6. The current chapter will review the concept of S-D logic in more details.

3.1.1.Foundational premises of the Service Dominant logic

The reorientation of one's mindset towards the S-D logic is guided through a framework of foundational premises (FPs) defined by Vargo and Lusch. These FPs will be discussed in this section. The vibrant discussions around S-D logic, which are still ongoing, also handled the FPs. Originally in 2004 there were eight premises that explained the concept. As the S-D logic is seen as an open-source evolution, open for debate, the FPs have been revised since their first publishing (Vargo and Lusch 2004, 2008a). These premises have been developed with the help of discussions in the scientific community, and in 2008 ten modified FPs were revealed. There were four major reasons for the need of modification. First, the lexicon of the first FPs was found to be too Goods- Dominant (G-D). Second, the scientific community found the wordings of the FPs overly managerial. Third, the interactive and networked nature of value creation was not explicitly stated in the first FPs. And fourth, the phenomenological and experimental nature of value creation was not explicitly stated. Also, Sweeney critiqued the original FPs' of being too broad for operational definition and measurement (Sweeney 2007). Figure 8 illustrates the original as well as modified foundational premises of S-D logic.

Figure 8: The Original and Modified Foundational Premises of S-D Logic

	Original FP	Modified or New FP
FP 1	The application of specialized skill(s) and knowledge is the fundamental unit of exchange	Service is the fundamental basis of exchange
FP 2	Indirect exchange masks the fundamental unit of exchange	Indirect exchange masks the fundamental basis of exchange
FP 3	Goods are a distribution mechanism for service provision	Goods are a distribution mechanism for service provision
FP 4	Knowledge is the fundamental source of competitive advantage	Operant resources are the fundamental source of competitive advantage
FP 5	All economies are services economies	All economies are service economies
FP 6	The customer is always a co-producer	The customer is always a co-creator of value
FP 7	The enterprise can only make value propositions	The enterprise cannot deliver value, but only offer value propositions
FP 8	A service-centered view is customer oriented and relational	A service-centered view is inherently customer oriented and relational
FP 9	Organizations exist to integrate and transform microspecialized competences into complex services are in the marketplace	All social and economic actors are resource integrators
FP 10		Value is always uniquely and phenomenological determined by the beneficiary

Source: Vargo 2009

FP 1: Service is Fundamental Basis of Exchange

People have distinctive physical and mental skills and can achieve scale effects by specialization and exchange. The target of exchange can be either the output, or the performance of the specialized activities (Vargo and Lusch, 2004). FP 1 was in its original wording found to be "*The application of specialized skill(s) and knowledge is the fundamental unit of exchange*". However, it was found to be too goods-dominant as "unit of exchange" suggests that the output of exchange is units, whereas in S-D logic exchange is seen as a process (Vargo and Lusch, 2008a). FP 1 was simplified to explicitly state the central role of service in exchange.

FP 2: Indirect Exchange Masks the Fundamental Basis of Exchange

FP 2 entails that because of the vertical, large and hierarchical market system, the direct interaction with the consumer is non-existent. People are further microspecializing and hence the skills-for-skills nature of exchange is masked. As workers do not pay each other or see the end consumer, they have ignored issues of quality and the internal as well as external customers (Vargo and Lusch, 2004). The original FP was modified from *"Indirect exchange masks the fundamental unit of exchange*" as "unit", similar to the case in the first FP, is found inappropriate and "basis" more suiting (Vargo and Lusch, 2008a).

FP 3 Goods are Distribution Mechanisms for Service Provision

The FP 3 has remained the same. The application of specialized knowledge, mental skills and physical labor are at the heart of exchange, instead of the physical good. The tangible products can be seen as embodiments of knowledge or activities, in other words as appliances for the performance of a service. For example, the use of a washing machine replaces the need for laundry service in most cases. The appliance, the washing machine, serves as a medium for meeting the higher-order needs and satisfactions of a consumer (Vargo and Lusch, 2004). The value of goods is derived through use; it is not build-in.

FP 4: Operant Resources Are the Fundamental Source of Competitive Advantage

"Knowledge is the fundamental source of competitive advantage" stated the original FP. Mental skills are the foundation of competitive advantages (Vargo and Lusch, 2004). However, what knowledge and skills stand for, are the operant resources. In 2004 the distinction between operant and operand resources was not clear and hence the term was not used in the original FP. Now that the lexicon has developed, the concept can be applied into the modified FP (Vargo and Lusch, 2008a). Competition improves mental skills, and enhances the learning process. In the end, the firms and organizations that are able to learn are the ones that succeed. As knowledge is an important factor for the success of the organization, so is information. It is the flow of information, which is at a key position in the service-provision chain. Value is ultimately co-produced with the suppliers, business partners, and consumers (Vargo and Lusch, 2004).

FP 5: All Economies are Service Economies

FP 5 states that our worldviews are changing, and as a result services are becoming more apparent to us. Due to specialization no single entity is producing all the activities and processes it needs. Hence outsourcing takes place, creating further possibilities for the service economy (Vargo and Lusch, 2004). Originally the FP was "*All economies are services economies*". The transition from the use of the plural "services" term into the singular "Service" was made to clarify that the usage of resources for the benefit of another entity as a process (Vargo and Lusch, 2008a).

FP 6: The Customer is Always a Co-creator of Value

In the S-D logic, the customer is involved in the co-creation of value. The original FP 6 "*The customer is always a co-producer"*, however uses the goods-dominant lexicon as "producer" refers to the making of units. The collaborative nature of value creation needed to be highlighted and hence, co-creation replaced co-production. However, Vargo and Lusch see value co-production as a subpart of value co-creation (Vargo and Lusch, 2008a). Value is co-created as consumers must learn how to use, maintain, repair and adapt the appliance to their special needs and wants, usage situations and behaviors. As the consumers continue to use the appliance, they are in fact continuing the marketing, consumption and value creation process (Vargo and Lusch, 2004)

FP 7: The Enterprise cannot deliver value, but only offer value propositions

"The enterprise can only make value propositions", is what the original FP 7 said. The original FP was revised to convey better the idea that an enterprise cannot single handedly deliver value. Both the "beneficiary" and the "creator" collaboratively create value (Vargo and Lusch, 2008a). Due to the value being co-created, the consumer is at the focal point of marketing. Value is created once the good is consumed. Hence, an unsold good has no value and a service provider cannot produce anything without the consumer. Focus is on the value creation process; how value merges from the consumer and how it is perceived by him/her, rather than on value distribution (Vargo and Lusch, 2004).

FP 8: Service-centered view is inherently customer oriented and relational

The interaction process with the consumer begins with the individual consumer's problem, continues with the development of a solution and with the delivery of that solution to the consumer. Consumers look for services, which satisfy their needs, they do not need the actual physical good. They need to perform mental and physical activities for their own benefit, to have others perform these activities for them, or to have goods that assist them with these activities. This is what the FP number 8 stands for. The original form of the FP was "*A service-centered view is inherently customer oriented and relational"* (Vargo and Lusch, 2004). It had to be altered to emphasize how in S-D logic value creation is an interactive process, instead of one entity creating value and the other destroying it. Hence, the firm and the consumer must be seen in a relational context. Moreover, as value is determined by the unique experience a consumer has with the service, S-D logic is inherently customer oriented. Therefore no "consumer orientation" is even needed in the S-D logic (Vargo and Lusch, 2008a).

FP 9: All Social and Economic Actors are Resource Integrators

FP 9 was not introduced in 2004 as part of the original FPs. It was added to them in 2006 by Vargo and Lusch. However, it too changed in 2008. The original form of the FP was *"Organisations exist to integrate and transform microspecialized competencies into complex* *services that are demanded in the market place"* (Vargo and Lusch, 2006). They found that a firm is not the only resource-integrator, and in fact individuals are the resource integrators, not organizations (Vargo and Lusch 2008a). What Vargo and Lusch decided to do, is to adopt the term used by the IPM Group, "actors" (Håkansson and Snehota 1995). They further identified that the parties of an exchange relationships are both "economic and social actors" (Vargo and Lusch 2008a).

FP 10: Value is always uniquely and phenomenologically determined by the beneficiary
This FP is the most recent of the FPs. The need for the formulation of the tenth FP was founded in the fact the previous FPs did not explicitly state S-D logic's experimental nature of value. The final and the newest addition to the FPs is intended to correct that.

To conclude, currently S-D logic is more deeply rooted than it was initially though. Vargo states that "*S-D logic is essentially a value co-creation model that sees all actors as resource integrators, tied together in shared system of exchange – service ecosystems or markets*" (Vargo 2011 p.220). Barile and Polese state that even though S-D logic was initially a "theoretical proposal" focusing on marketing, it can now be generalized to the functioning of markets, general management and all its sub-disciplines (Barile and Polese 2010).

3.1.2. From goods-dominant to service-dominant

Vargo and Lusch saw that there are two logics or mindsets when dealing with the division of goods and services. The first one is the old "*goods-dominant (G-D) logic" which sees services as intangible goods that differ from the actual tangible product in a way, which forces modification upon, for example, the distribution practices when compared to the tangible goods. The other logic is the "service-dominant (S-D) logic", which views the service as a process of using ones resources for the benefit of and in conjunction with another party – as the fundamental purpose of economic exchange*" (Vargo and Lusch, 2008b, p.254).

There are two main reasons why S-D logic is gaining more popularity compared to the old G-D logic. Even though services are starting to dominate many national economies, S-D logic is not based on this. Instead it is primarily found on the premises that the traditional goods-based classification is inadequate in describing the changes in the economic system at large (Vargo and Lusch, 2004). When the limitations of the G-D logic have been noticed, new sub-disciplines of marketing have appeared to repair the defects of the old view (Vargo and Lusch, 2008b). The second aspect on why S-D logic is emerging, is our increasing ability to separate, transport and exchange information between the goods and people, as well as increased outsourcing due to specialization (FP1). However, these changes do not change the nature of what is being exchanged: the applied knowledge and skills, which Vargo and Lusch call a service.

In S-D logic, the purpose of economic activity is service. They are produced rather than provided (Vargo and Lusch 2008b). Services, in the service-dominant view, are not seen in the traditional way, in which they are residual. It is a process of doing something for another party. In S-D logic a service is defined as "*the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or entity itself*" (Vargo and Lusch, 2004, p.2). Goods are exchanged due to their nature as appliances of service provision (FP3). The offerings that consumers buy (goods and services), render service, which ultimately creates value (Vargo and Lusch, 2004). However, Archrol and Kotler (1999) found the word "service" to be distractive in understanding what S-D logic is about. They suggest that we look beyond the word service and "*visualize the key elements of the conceptual system in which the service-centered logic claims to be embedded- elements such as knowledge resources, relationships, and networks.*" (Archrol and Kotler 1999 p.330)

A shift in the focus from goods to services, from output production to value creation, is vital for the well-being of a firm. The focus of G-D is on producing tangible outputs, where value is embedded in the manufacturing process. As a result of the process standardized and inventoriable goods are produced (Vargo and Lusch, 2008b). In the traditional G-D logic the customer and the firm are separate entities; the firm creates value, which is then destroyed by the customer (Vargo and Lusch, 2004). In G-D logic customers are simply the recipients of goods, they are seen as operand resource. Nevertheless, Archrol and Kotler (1999) argue that that the foundation of efficiency in exchange in modern economies is still based on mass production of standardized goods.

In S-D the focus shifts from one entity producing something for another, to a collaborative co-creation process between the entities. According to this view, value is being exchanged instead of products, in networks rather than in dyadic relationships. Hence, more emphasis has been given to relationships and interaction, highlighting the network approach. S-D logic therefore changed the way customers are seen. They are no longer targets; they are resources (Vargo and Lusch 2008b) and co-creators of value (FP6). Therefore, in S-D logic value is defined by and co-created with the customers (Vargo and Lusch, 2004).

In conclusion, quality is not a recurrent word in S-D logic; value has taken over (Gummesson, Lusch and Vargo 2010). If the actors of an economy are able to abandon the traditional goods-dominant logic, which sees value as something embedded in a product and created to enhance the good being sold, they may be able to create new opportunities for service provision and think in new innovate ways (Vargo and Lusch, 2008a). However, Archrol and Kotler (1999) emphasize that one should not overlook the physical aspects of a "service-product".

3.1.3. Operand and operant resources

On top of the shift in the way a service is seen in the S-D logic, resources are also seen in a different light. Companies are dependent upon the resources of other actors within a network. The basic assumption is that organizations use their relationships to gain access to resources which are vital for their survival (Håkansson and Johanson 1992). This affects the behavior of companies and forces them to enter exchange relationships. The position of a company in a network is determined by the quality of the resources it possesses and the demand that they have (Möller, Rajala and Svahn 2004).

Resources can be divided into two classes. The operand resources are "*resources on which an operation or act is performed to produce an effect*", while operant resources on the other hand are "*employed to act on operand resources*" (Vargo and Lusch 2004, p.2). In S-D logic, resources are not simply something that a firms or an organization has, they become. In other words, resources can also be seen as intangible and dynamic functions, which are not statistic of fixed (Vargo and Lusch, 2004). Knowledge and skills are operant resources, and are the foundation of competitive advantages, economic growth and key sources of financial wealth (FP4). The firm's resources are therefore no longer thought of as only operand, but also as operant (Vargo and Lusch 2008b). In S-D logic, resources are hence specialized competencies and customer needs, all considered active and operant for knowledge improvement and then applicable for business processes (Barile and Polese 2010). As an example, a firm has factors of production that are largely operand (components, life stock etc.) and operant resources (core competencies and organizational processes). The focus is no longer on the resources on which an operation or act is performed upon (operand resources, such as the components etc.) but on the resources, which actually produce the effect (operant resources, for example network partners) (Vargo and Lusch 2004).

From the consumer point of view, goods are the transmitters of operand resources, which are used as appliances in the consumer's value creation processes (Vargo and Lusch 2004). In S-D logic the customer is a co-creator of the service, an operant resource. What S-D logic points to is a more realistic view of what is actually happening; customers and citizens are taking own initiatives. They are active resources creating value for themselves and co-creating with others (Gummesson, Lusch and Vargo 2010). However, Archrol and Kotler (1999) argue that rather than focusing on operant and operand resources, the new marketing logic paradigm should focus more on networks and information flows of all kinds.

In conclusion, the complexity of innovation processes demands constant attention, the reorientation of needs, tasks and objectives due to internal constraints and external opportunities are required (Barile and Polese 2010). S-D logic's emphasis on continuous learning process implies that dynamic adaptation changes contextual conditions. This process of learning is crucial in S-D logic, to achieve positive results. Financial outcome is seen as feedback received from the market. Firms or organizations can always do better; the S-D logic sees marketing as a continuous learning process (Vargo and Lusch, 2008a).

3.1.4. Relationship as resource integrators

The S-D logic's point of view on relationship is conceptualized in the network-with-and-within-network nature of value creation (Vargo 2009). The S-D way of conceptualizing relationships "*brings into focus the purpose and activities that motivate relationships and provides the glue that creates network structure. That is, the purpose of interaction, and thus of relationship, is value co-creation through mutual service provision. But value co-creation is a complex process involving the integration of resources from numerous sources in unique ways, which in turn provide the possibility of new types of service provision*" (Vargo 2009, p.377-378).

Before value can be realized, an input must be integrated with resources gained privately (personal, family etc.), publicly (government, education etc.) or from the market (FP9) (Vargo 2009). These resources are integrated based on interactions and networked relationships (Barile and Polese 2010). Value creation is an interactive process of continuous series of social and economic processes. Therefore the customer and the firm are in a relational context. Since value is ultimately determined by the beneficiary of the service, the S-D logic is inherently customer oriented (Vargo and Lusch, 2008a). Furthermore, Vargo and Lusch argue that the concept of "consumer orientation" stems from the inadequacy of the G-D logic, as by its nature, no such distinction is needed in S-D logic (Vargo and Lusch 2004).

Transactions are bounded relationships within the system (Vargo 2009). But they can also be seen as platforms in the ecosystem of relationships (Vargo 2009). Archrol and Kotler (1999) state that the service-for-service model is an inefficient and unbalanced view into value exchange. Industrialization hasn't masked the true nature of exchange, as exchange takes place in complex and multilateral systems. These systems create enormous value and improve the standard of living. The notion of a business relationship as a unique yet varying process, is according to Ford (to be published) an important analytical and practitioner perspective.

As conclusion, the notion of resource-integrating actor (Vargo and Lusch 2008) is important. The term "actor" was adopted from the IMP Group, as the resource integrators can also be individuals instead of organizations (Vargo and Lusch 2008a). The adaptation of the term "actor" eliminated the thought of producer-consumer distinction, while the ARA model describes the resource integration aspect of S-D logic (Vargo and Lusch 2008b). S-D logic is applicable to the way managers are seen in network management context; as mediators and facilitators. This highlights interactions and soft guidance (Kickert et al 1997).

3.1.5. Value creation in S-D logic

This subsection will review the shift S-D logic made in the logic of value creation. The mindset changed from seeing production as merely firms making something, to a process assisting customers in their own value creation. Value is no longer thought of as something being produced and sold but as something co-created (Vargo and Lusch 2008b). Therefore value emerges and unfolds over time, rather than being a discrete, production-consumption event (Vargo 2009, Ford to be published). S-D logic's emphasis on value is understandable, as service relationships depend on the ongoing exchange of values (Woodruff and Flint 2006). The resource based view is criticized for not explaining the value creation, and for not making distinctions between value capture and value creation. Furthermore, IMP Group's contribution to value discussion is minimal (Archrol and Kotler 1999, Ford to be published). This subsection will first examine the concept of value creation and its nature, and second the importance of context to value creation.

Gummesson (2008) suggests that we should change our point of view from linear value chains to value networks. Vargo (2009) on the other hand says that S-D moves from the "social matrix" to "value creation matrix" that takes into account the broader, relational context of mutual value creation through service exchange. This view is consistent with Gummesson's many-to-many marketing and IMP group's insights on relationships as organized patterns of structures in a networked form. Gummesson (2006) goes even further by stating that the variables of relationships, networks, and interactions, should form the basis of future marketing theory. Interaction is what takes place between parties in a relationship. Furthermore relationships are building blocks of networks. However, Chandler and Vargo (2011) state that while the IMP group and Gummesson's (2008) many-to-many marketing both highlight relationships and interactions; their emphasis is not on value creation.

If companies were to understand better the value chain and consumption processes of their customers, they would be able to improve their value propositions (Gummesson 2008). This idea also applies well with Nenonen's and Storbacka's (2010) idea of highlighting the importance of good configurational fit between the organization's business model and the customer's processes. Hence, the customer value chain has to be researches as well. This would lead to positive effects on quality, productivity and profits (Gummesson 2008).

Nature of Value

S-D logic represents a shift in the way value is seen; it is seen in the light of a process derived from for example co-creation and innovation withdrawn from customers, learning, and links between actors in a network (Flint and Mentzer, 2006). Depending on one's point of view value can be seen as something found in use, or as added into a product/service. One may also have economic or phenomenological points of view to value.

In S-D logic value is gained in-use (Vargo and Lusch 2004, Flint and Mentzer, 2006 etc.). It is not something added into a service or product. The 'value added view' to value takes the seller's perspective. It sees value as something created, originally owned, and offered for sale by a seller, meaning that the product/service has value independent from customers' perceptions (Woodruff and Flint 2006). The customer is underemphasized in this 'traditional view'.

Value is created for business customers when the products, information, support personnel, logistics services, and other services etc. of the suppliers' are incorporated into specific customer processes, operations, and facilities that constitute multiple use situations (Flint and Mentzer, 2006). Moreover, Ford (to be published) states that the "*value for an actor of an episode in business relationship is the link between that actor's specific problems at that time and its interpretation of the episode*" (Ford, to be published. pp. 17). In other words, value is highly connected with the actors' interpretations of the situation in which value is created and exchanged.

Value refers to the customer's meaning attached to a product/service relative to a use context, rather than value being contained in the product/service (Woodruff and Flint 2006). Archrol and Kotler (1999) emphasize that consumers create value via consumption. Value therefore has dynamic components to product/service possession, which include for example the convenience of use, information value, prestige and symbolic value, and after-sales services. However, value is also created after consumption in the form of maintenance service, resale etc (Archrol and Kotler 1999). Value according to S-D logic is therefore gained in context (Vargo 2009). Context frames the exchange, service, and the perspectives of actors bound in a unique service ecosystem (Chandler and Vargo 2011).

One can also take an economic perspective into defining value, i.e. in the light of those aspects that involve the *monetary trade-off* between comparative benefits versus costs (Holbrook, 2006). Second perspective is the *economic worth*, which focuses on extracting as much value from the customer as possible, or in when taking the customer's point of view; the equivalence they are getting for their money (Woodruff and Flint 2006).

To conclude, the nature of value is an interactive experience of relativistic preference. Value resides in consumption experience, not embedded into the object (Holbrook, 2006). The interactive nature of value refers to the relationship between a subject (customer) and an objective (product). It is also situational as the value perception varies from one evaluation to another, making it a personal experience. Finally, as we make judgments of attitude (like/dislike), affect (favorable/unfavorable), evaluation (good/bad), opinion (pro/con) etc. value is also based on preference (Holbrook, 2006). Woodruff and Flint (2006) claim that for S-D to succeed as a paradigm shift, marketing thought and practice must be founded on greater in-depth understanding of customer value phenomena. In other words, the phenomenological experience perceived by a customer interacting with products/services in use situations determines the value (Woodruff and Flint 2006).

Context of value creation

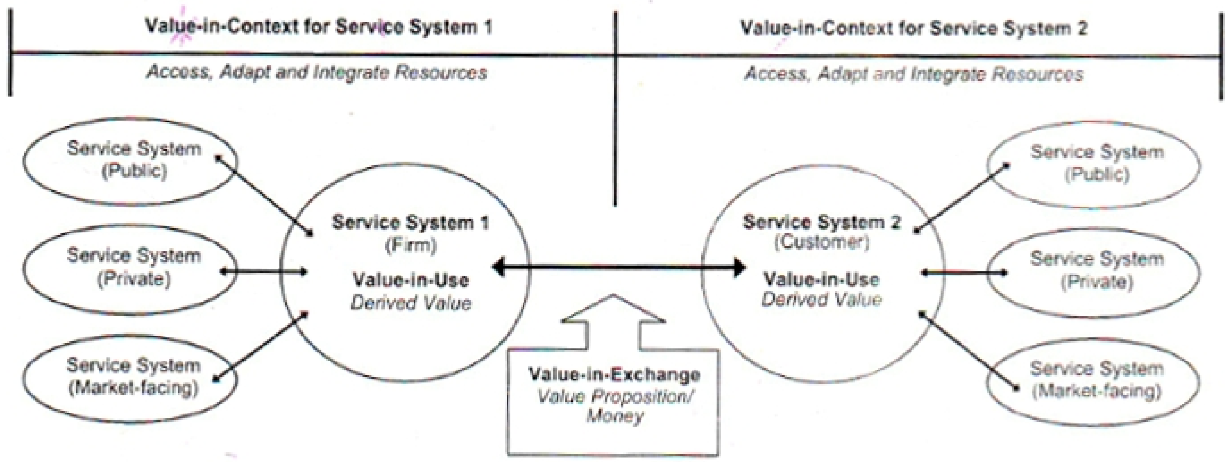
There are two main views to value creation contexts; the network and service system. Modern consumption and exchange processes are complex, and hence, value creation occurs in complex hierarchies (Archrol and Kotler 1999). Vargo and Lusch emphasize that "*the venue of value creation is the value configurations- the economic and social actors within networks interacting and exchanging across and through networks. Consequently, value creation takes place within and between systems at various levels of aggregation*" (Vargo and Lusch, 2008a p.5).

The interactions of different actors bring together the networks in which they are embedded (Chandler and Vargo 2011). Archrol and Kotler (1999) argue that "*if the analyses emerging from the service-centered view are pointing us in a particular direction, it is toward understanding of the consumer and consumption as a network phenomenon*" (Archrol and Kotler 1999 p.327). Networks are implicitly integrated into the S-D logic. The focus of networks as the fundamental units of analysis is a significant ontological step from the theory of the firm as well as from dyadic exchange theory (Archrol and Kotler 1999). The firm's network, or what the S-D logic calls as the "beneficiary" network, is not the only network one should be concerned of when thinking about the value co-creation (Vargo 2009). Due to its relational nature, the customer's network has to be included in the equation. In one sense, the whole notion of B2B and B2C vanishes, as the customer is only one part of a larger ecosystem of actor-to-actor transactions (Vargo, 2009). Consumer as co-producer is projected into the network phenomenon (Archrol and Kotler 1999). In S-D logic the consumer's role as co-producer is central. Therefore, networks do not consist of firms exclusively but of customers as well. Customers are no longer thought of as isolated entities but they are more and more thought of in the context of their own networks (Vargo and Lusch 2008b).

In S-D logic the conventional supply chain is replaced with *a service value network* (Barile and Polese 2010). The consumption by the "ultimate consumer" is surrounded by a network of consuming businesses and governments. The business ecosystem, according to Vargo (2009), has to been seen as network-within-network relationships, where the customers' networks are also included. This view is similar to Gummesson's "many-to-many" orientation (Gummesson 2008) as well as the business model view of Nenonen and Storbacka (2010), who argue that business models can be used as a tool to define the network, in which the firm operates and hence improve its value co-creation. The enhancement can be reached when firms design their business models to have a high degree of internal and external configurational fit (Nenonen and Storbacka, 2010). In these service value networks a win-win logic of collective satisfaction and participation is fostered, which strengthens the effectiveness of value co-creation. Service becomes the mutual benefit of the co-creation process (Barile and Polese 2010).

In line with the network perspective is the view that businesses are increasingly viewed as “organizers of value creating systems” (Normann 1997, in Barile and Polese 2010). S-D logic is also applicable to the discipline of *service systems* (Maglio and Sopher 2008). Vargo et al. (2008c) argue that in fact, the proper unit of analysis for the service-for-service exchange is the service system. A service system represents any value co-creation configuration of people, technology and value propositions connecting internal and external service systems, and shared information (Vargo and Lusch 2008a). These systems may consist out of individuals, families, firms, or nations, who are engaged in joint service provision. What S-D logic emphasizes is the view that no network can create value on its own. Other actors, service systems, are required for adequate value creation (Mele et. al 2010). Value co-creation among service systems is illustrated in the Figure 9 below.

Figure 9: Value co-creation among service systems



Source: Vargo et al. 2008c

The Figure 9 above depicts how value is created in context, in use, as well in exchange. In the service system model, firms interpret and react to the dynamics of the system they are a part of, the network that unites them (Vargo, 2009). According to the S-D logic all business consists of relational service activities. The relationships between the providers and customers surrounded with other interactions, are the fundamental actors of a market, and therefore they must support the integrated and relational service-providing system (Barile and Polese 2010).

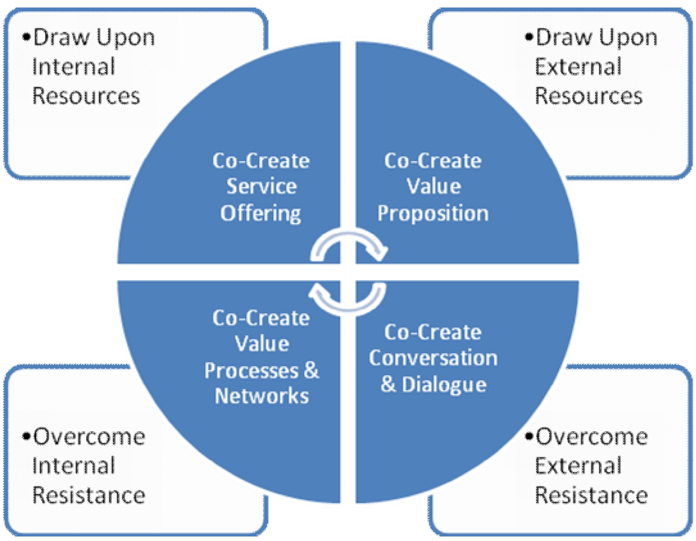
To conclude, a good understanding of the market is therefore needed. The overlapping collections of networks can over time be viewed as service ecosystems (Chandler and Vargo 2011). The network perspective is therefore embedded into the service system view of the value creation context.

3.2. Management approaches to value co-creation

Like found on the previous section 3.1.5, the nature of value changes dramatically when one moves from G-D to S-D logic. The co-creation of value is desirable as it can help to highlight the customer's or the consumer's point of view and therefore enable the company to improve its value offering (Payne, Storbacka and Frow, 2008). Co-creation can be viewed from multiple perspectives; the company's, the customer's, the supplier's, the network's and so on. Role of the producer has traditionally been viewed as the development and delivery of goods and services, and the role of the customer as consumption of those goods and services (Jaworski and Kohli 2006). However, there is relatively little information on how customers engage in the co-creation of value (Payne, Storbacka and Frow, 2008). This section will review the management of value co-creation. The topic will first be explored from a marketing perspective, second from process perspective, and third from business model perspective.

The Figure 10 below describes the value creation of S-D logic according to Vargo and Lusch (2008b). The notion of customers as co-creators is central to S-D logic. Value is co-created in networked relationships, as was found in section 3.1.5, where the customer has an active role in the value processes. The consumer can hence be seen as a resource, a co-creator of the value.

Figure 10: Value creation and service-dominant logic



Source: Vargo and Lusch, 2008b

The Figure 10 above illustrates how the components of value creation are withdrawn from both internal and external factors. To co-create successfully one has to overcome resistance while utilizing resources to their fullest. Co-creation takes place in between these two forces. Both the value proposition and the final service offering are therefore co-created (Vargo and Lusch 2008b).

3.2.1. Marketing perspective to co-creation management

Prahalad and Ramaswamy (2004) state that customer-company interactions are at the heart of co-creation. Furthermore, in S-D logic, marketing is seen as the process, which facilitates interaction with the customer (Vargo and Lusch 2004).

Brown and Bitner (2006) have created a model called the *Service Marketing triangle*, which represents the parties that work together to develop, promote and deliver services: the company, customers and providers. The model takes in the Vargo's and Lusch's (2008b) value co-creation idea. It presents the internal and external resources and resistances of S-D logic in the context of marketing. Between these points, three forms of marketing take place: external marketing, interactive marketing and internal marketing, similar to customer value creating processes, Supplier creating processes, and encounter processes in Payne, Storbacka and Frow's (2008) model, which will be reviewed in subsection 3.2.2..

External marketing is the "traditional marketing" making promises, or *value propositions* as S-D would call them (Vargo and Lusch 2008b). Value propositions include products, services, processes, experience, and networks of relationships, all dimed at superior value creation (Flint and Mentzer 2006). In *interactive marketing* promises are kept or broken. In Vargo's and Lush's (2008b) model this would refer to the *co-creation of the service delivery*. The Brown and Bitner (2006) model states that *internal marketing* is concerned with training incentives, technologies, and other enablers of successful service. This would translate into and the *ability to co-create value processes and networks* in Vargo's and Lusch's value creation model (2008b).

Brown and Bitner (2006) highpoint that promises as the core of marketing. *Keeping promises* is the first best practice suggest by them. Second, comes always *taking the customer's point of view*. Firms effective in keeping their promises are usually engaging effectively in co-creation. The delivery of these promises takes place in the *encounter process of a service* (Payne, Storbacka and Frow, 2008). According to Ford (to be published) actors may have two abilities, which influence their ability to deliver and keep promises. The first is *Problem-Coping Ability*, it is a promise made to the counterpart, and the actor's capability to cope with the particular problem the counterpart is facing. *Fulfillment Ability* is a capability to fulfill the promise the actor made to its counterpart.

Historically in relationship marketing the firm creates a relationship with the customer, which furthermore creates satisfaction and generates loyalty. Focus is on the firm, and quality is assessed based on what the company could do for the customer. Now a new direction has merged: *mutual satisfaction*. Providers have expectations for their customers, paying bills on time as an example, just as customers have expectations for the company (Oliver 2006). Sweeney found that customer co-creation may be facilitated by *customer empowerment* and *customer participation* (Sweeney 2007). Agranoff and McGuire (2001) highlight that empowerment is based on information rather than authority in network management. The importance of information for co-creation is also emphasized by Ballantyne and Varey (2006) and Flint and Mentzer (2006).

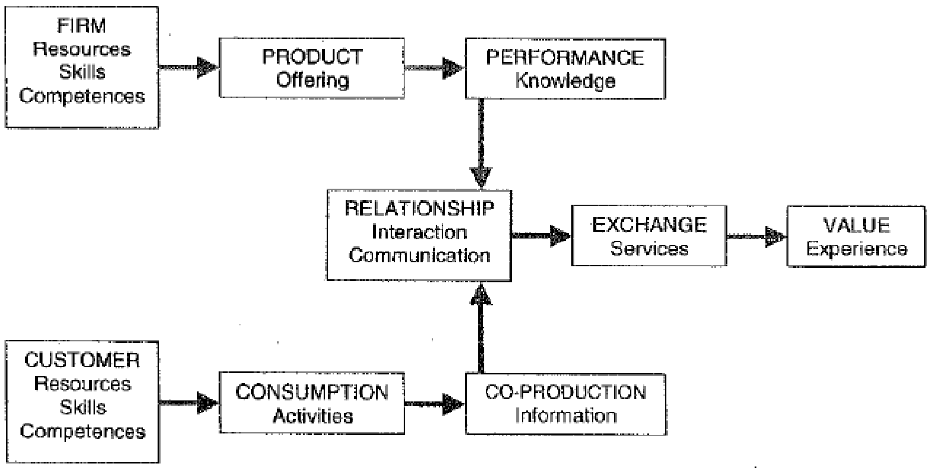
In summary, a basic premise for successful co-production is for the firm to have a deep understanding of its customers, their processes, and their procedures as well as an understanding of the relevant competitive and environmental factors (Brown and Bitner 2006, etc). The utilization of relevant information and the creation and nurturing of network linkages have been in the focus of S-D logic's theoretical framework (Archrol and Kotler 1999). Successful co-creation requires trust, value placed on the other's insights, complementary skills and perspectives, knowledge and experience, and setting of conversation. Participants of co-creation must be selected based on their ability to listen, build, and create rather than merely say their ideas. As the customer's role is emphasized in co-creation, so are the rewards in the results of co-creation. Co-creation is likely to result in deeper bonds with the customer: with more trust, commitment and loyalty, which are the ultimate goals of network management (Jaworski and Kohli 2006).

3.2.2. Process based model to value co-creation management

In the co-creation process the supplier creates a superior value proposal, and the customer determines the ultimate value when consuming the service. Processes include procedures, tasks, mechanisms, activities and interactions, which are meant to support the co-creation of value (Payne, Storbacka and Frow, 2008). Customers can also co-create value through co-design by giving direct feedback and indirect feedback, which influence the development and modification of the products and services, and their design (Flint and Mentzer 2006).

The Figure 11 below by Holbrook (2006) illustrates the process of value co-creation. It highlights the relationship between the customer and the firm, similar to the views of Prahalad and Ramaswamy (2004) who state that dialogue, access transparency, and understanding of risk-benefit (*DART*), are the main variables to be concerned of in value co-creation. They claim that a high quality interaction with the customer and the organization is the new source of competitive advantage, as those interactions enable the customers to experience, and moreover to co-create value. In the relationship Holbrook (2006) emphasizes interaction and communication. From these components the service exchange takes place, and value is experienced.

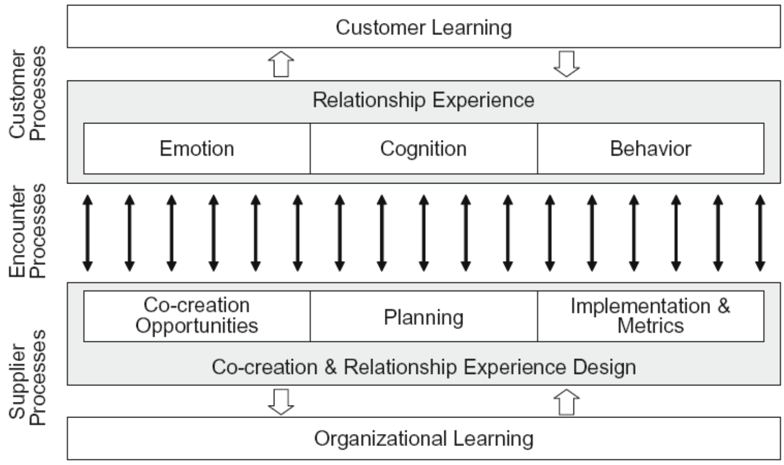
Figure 11: Process of value co-creation



Source: Holbrook 2006

Payne et al. (2008) have created a framework for the management of value creation. This process based model focuses on how suppliers can manage the co-creation of value. It provides a structure for customer involvement, and places the customer and the company at a high level of importance as co-creators of value (Payne, Storbacka and Frow, 2008). The framework is founded on three main components: *customer value creating processes, supplier creating processes, and encounter processes*. In the service process, the touchpoints with the brand experience are of high importance (Duncan and Moriarty 2006). These touchpoints are created when the customer or a stakeholder uses a product or a service, or even when this product or service is being discussed with another entity. They can hence be considered as important operant resources, as they are points where an "*act is performed that produces effect*" (Vargo and Lusch 2004 p.2). True to the co-creational nature of value creation, touchpoints are always jointly created (Duncan and Moriarty 2006). Figure 12 below illustrates the framework.

Figure 12: Process based framework for value co-creation management



Source: Payne, Storbacka and Frow, 2008

What is important for the model presented above is *learning*. The experiences of co-creation are transformed into learning processes, which will impact how the customer engages in future co-creation activities with the supplier. The customers have to learn how to use, maintain, repair and adapt the offering to fit their individual needs, usage situations and behaviors. The supplier on the other hand will be able to learn more about the customer as a result of organizational learning, and can hence improve the design of the relationship experience and therefore enhance co-creation with the customer (Payne, Storbacka and Frow, 2008). Because of the co-creational nature of value in S-D context, customer value becomes something a seller proposes and a customer then judges in two forms: in exchange value and the value found in use (Ballantyne, and Varey 2006).

Customer value creating processes

A customer can be customer (payer of a service), a consumer, a competence provider, a controller of quality, a co-producer, a co-creator, or a co-marketer. The *experience* a customer has during the relationship is central. The customer's value creation processes can be defined as "*a series of activities performed by the customer to achieve a particular goal*" (Payne, Storbacka and Frow, 2008, p.86). The amount of information, knowledge and skills, as well as other relevant operant resources a customer can access to and use are key aspects for the customer's value processes. For example, does the customer have enough knowledge on how to use the service and resources to require it? The competitiveness of a supplier can hence be increased either by adding to the customer's total pool of resources, which helps the customer to utilize available resources more efficiently and effectively (Payne, Storbacka and Frow, 2008). For example, manuals and handbooks on how to use the service could be made easily available to customer in a downloadable form.

The relationship experience a customer has is based on three elements, which can be looked at from two approaches: the information-processing approach, and the experiential approach (Payne, Storbacka and Frow, 2008). The elements are: cognition, emotion, and behavior. *Cognition* is both an information-processing approach focusing on memory-based activities, and on processes that are more sub-conscious and private in nature. *Emotions* in this framework refer to feelings, moods and affect-based personality characteristics. They are more than just attitudes and preferences. *Behavior* is an action stemming from, and resulting in experiences (Payne, Storbacka and Frow, 2008). This experience leads to customer learning.

Customer satisfaction and the degree of customer involvement determine whether the relationship is ongoing. The supplier needs to therefore provide the customer with experiential interactions and encounters, which the customer will perceive as helpful in their resource utilization (Payne, Storbacka and Frow, 2008). Satisfaction can be defined as a pleasurable fulfillment of some need, goal or desire (Oliver 2006). Loyalty on the other hand is a deeply held commitment to the provider despite switching incentives that might be situated or driven by competitive forces. As services are exchanged for services in S-D logic, the service rendered by the firm are matched by the services consumers provide (Vargo and Lusch 2004 etc). Oliver (2006) states that the behavioral dynamics of this relationship determine the satisfaction and loyalty of both the firm and the customer.

Traditionally quality has been seen as something satisfying the customer. However it does not account for the expectations held by customers, and the changes occurring in these expectations. Expectations go hand in hand with promises, which are emphasized by Brown and Bitner (2006). Expectations set a baseline around which performance is judged (Oliver 2006). If the service is above the customer's expectations, the level of satisfaction is high, while if it is below the expectations the customers will be dissatisfied. The roles of customer encounters, and the company's personnel in these encounters is critical. These will be discussed further in the upcoming sections.

Supplier processes

Like previously mentioned, the recognition of customer's processes is important. Based on this knowledge companies can develop a full understanding of where its offering fits within the customer's overall activities (Payne, Storbacka and Frow, 2008). This is where the supplier's value creation for the customer begins from the supplier's perspective. Supplier processes are: a review of the co-creation opportunities, planning, testing and prototyping the value creation opportunities with the customers, implementing customer solutions and managing customer encounters, as well as developing metrics to assess whether the enterprise is making appropriate value propositions. By first starting with the customer's processes, the supplier can design its own processes to fit in well with those of its customer's. If this command is adapted, superior insights and opportunities for value co-creation may arise (Nenonen and Storbacka 2010, Payne, Storbacka and Frow, 2008).

Co-creation opportunities are the strategic options the supplier has for creating value. These opportunities are largely dependent on the nature of their industry, their customer offering, and their customer base. Opportunities may be provided by technological breakthroughs, changes in industry logics, and changes in customer preferences and lifestyles (Payne, Storbacka and Frow, 2008). Duncan and Moriarty (2006) take the firm's perspective and state that touchpoints should be seen as opportunities to add value to product offering, gather feedback to monitor customer satisfaction, and to deliver additional brand messages to increase for example brand knowledge and to strengthen the customer-brand relationship.

Planning of co-creation is an outside-in looking process, as according to the S-D logic one must first look at what customer processes a supplier wishes to support, and only then look at one's own processes. This is opposite to the traditional inside-out way of looking at business operations. Planning should emphasize the cross-functional view of the company, as different customer encounters are often delivered by different organizational functions (Nenonen and Storbacka 2010, Payne, Storbacka and Frow, 2008).

The development of suitable *metrics* is another key aspect for the supplier. Due to the cross-functional activities the measurement of the relationship performance should include a range of metrics used for measuring all the processes, functions, and channels used to engage and interact with the customer (Payne, Storbacka and Frow, 2008).

Encounter processes

The customer and the supplier are involved in a series of two-way interactions and transactions, which are called the encounter processes (Payne, Storbacka and Frow 2008). The final service quality may be measured by how the service is perceived and experienced by the customers. Therefore the critical service encounters to the customer perceptions have to be researched. This emphasizes the role of interpersonal interactions between customers and employees and how the specific features of the service encounter can build or destroy customer relationships (Brown and Bitner 2006). Value co-creation may be facilitated by three kinds of encounters: communication encounters, usage encounters, and service encounters (Payne, Storbacka and Frow, 2008).

Communication activities are used to connect with the customers, as well as to promote and enact dialog. The customer engages in dialogue with the company at every stage of the value creating process. It is a form of interaction that supports co-creation of value and should be seen as an interactive process of learning together (Payne, Storbacka and Frow, 2008, Ballantyne and Varey 2006). In *dialogue*, organizations do not try to "hear" the customer, to learn about them by identifying their needs and wants, but to "co-create" the voice of the customer. Both the firm and the customer do the asking, listening, observing and experimenting, in other words, both of them engage in a learning experience (Jaworski and Kohli 2006, Ballantyne and Varey 2006). Sadly however, the majority of firms only rely on marketing research as the "co-production" mechanism to know how its value propositions are perceived (Archrol and Kotler 1999).

Jaworski and Kholi (2006) present a three step model for entering a dialog with the customer, to co-create the voice of the customer. 1) Both the firm and the customer are engaged in learning effort. 2) The needs, wants, and capabilities and priorities of the customer as well as those of the firm are the subject of learning. 3) The firm and the customer jointly decide what part of the production process each will participate in, and what part of the design or configuration of the product or service each will produce. This will require an open dialogue, conversation over many periods of time, which shape the topic, methods, and opportunities of the co-creation process. All parties co-determine the topics of discussion. However, Gummesson (2008) argues that dialogue can be applied into marketing when understood in a bigger picture of the relationships net: marketing is interactions within network of relationship.

When we think about dialogue as learning, in the marketing perspective, dialogue is not so much a method of communication but an orientation to do it (Ballantyne and Varey 2006). 1) Dialogue aims at developing an understanding of each participant's point of view and interaction sets up suitable conditions for listening and learning together. 2) Dialogue could lead to common agreement on any particular issue. 3) Dialogue creatively disrupts the taken for granted and unspoken assumptions that restrict commitment and satisfaction to the ordinary. However, all communicative interaction in its various forms supports learning about the customer and. This learning supports trust and the appropriate knowledge application and development of the relationship in general (Ballantyne and Varey 2006). If communication transforms into a dialogue the co-creation of knowledge might generate value in new ways and cost efficiencies could result through interdependencies so created. After all, a service is a communication experience (Duncan and Moriarty 2006).

Usage encounters refer to the practices a customer has when using the service or product, and includes the services created for supporting such usage (Payne, Storbacka and Frow, 2008). There are additional ways in which customer can co-create value for companies. The brand and relationship equity can for example be enhanced via customer communities and loyalty programs, where customers add brand meanings in new ways, which were not thought of by the company itself (Vargo 2009).

Service encounters include the interactions customers have with customer service personnel or service applications. Ultimately value is embedded in personalized experiences (Payne, Storbacka and Frow, 2008). These may be encounters with the company or actual consumption of the service. The communication in these touchpoints transforms a transaction into a dialogic interaction that conveys personal connections and surrounds the event with an emotional halo of liking the experience (Duncan and Moriarty 2006). The firm's contact personnel mediate the relation between the firm and its customer base (Oliver 2006). Therefore customer benefits and value creation are often times in the hands of the frontline personnel, not the marketing department. "Employees are the product" and "employees are the brand" are views adopted by S-D appreciative companies (Brown and Bitner 2006). Hence it is crucial that firms also satisfy their customer contact personnel (Oliver 2006).

The management of value co-creation in customer experiences involves determining the channels, which might be used by customers and the types of encounters inherent within them (Payne, Storbacka and Frow, 2008). Encounters can be categorized based on the three elements of the customer relationship experience. They are: *emotion-supporting encounters*, which include themes, metaphors, stories, analogues, surprises, and design; *cognition-supporting encounters*, such as scripts, customer promises, value explaining messages, outcomes, references, testimonials, and functionality; and *behavior and action-supporting encounters*, for example trials, know-how, communication, and usage of the product or service (Payne, Storbacka and Frow, 2008). What are also important are the opportunities for positive critical encounters, where customers can work on their negative experiences.

To summarize, Payne, Storbacka and Frow (2008) argue that this framework of mapping the customer, supplier, and encounter processes provides a tool for managing the process of value co-creation, and developing relationship experiences. The total experience a customer has of a service is a result of the encounters between the customer processes and the supplier processes. Varied and multiple touchpoints create a value field (Duncan and Moriarty 2006). Measuring the quality of service encounters is fundamental for excellent firms driven by service logic. The fit between the content and execution of these processes is at a key position. The promises given to the customer at the early stages of the service process need to be kept and met in the next stages. The co-creation of positive value at touchpoints creates and strengthens relationships (Brown and Bitner 2006, Payne, Storbacka and Frow, 2008, Duncan and Moriarty 2006). The *ability to manage customer expectations, communications and promises* between both parties throughout the whole co-creation process are the requirements of successful value co-creation management (Payne, Storbacka and Frow, 2008).

3.2.3. Business model approach to value co-creation management

Nenonen and Storbacka argue that firms can improve their value co-creation radically if they design their business models to have a high degree of both *internal and external configurational fit* (Nenonen and Storbacka 2010). Their finding is the basis of a framework, a tool for strategic work, which looks at the design principles, resources and capabilities of a firm. Business models are externally oriented, as they focus on value creation for the customer. They highlight the relationships that firms have with network actors, but they should also illustrate the resource and capability base of the firm (Nenonen and Storbacka 2010). This view is consistent with the Industrial Marketing and Purchasing Group's ARA-model, as well as with S-D logic.

Nenonen and Storbacka propose that the business model framework contains three types of components: design principles, resources, and capabilities. *Design principles* guide the organizational principles, which allow optimal integration of resources in the value co-creation process. The importance of *resources* in value co-creation is emphasized in S-D logic, where application of operant resources is the basis of all economic activities, and all actors are resource integrators (Vargo and Lusch 2008a). *Capabilities* are the third component. Capabilities can be internally or externally oriented. Internal capabilities refer to the firm's ability to improve efficiency and operational performance of business processes, where as relational capabilities are the firm's abilities to manage the content and structure of their interactions and exchange between suppliers and customer (Nenonen and Storbacka 2010). Capabilities are also emphasized in the network theory, reviewed in section 2.2.3, by Möller and Halinen (1999). All of the elements of a business model are presented in four dimensions: market, offering, operations, and management.

Table 1: Dimensions and Design Elements of a Business Model

	Design principles	**Resources**	**Capabilities**
Market	Market and customer definition	Customers and brand	Market and customer management
Offering	Offering design and earnings logic	Technology	Offering management and R&D
Operations	Operations design	Infrastructure, suppliers and partners	Sourcing, production and delivery
Management	Management system	Human and financial resources	Management and leadership

Adapted from: Nenonen and Storbacka 2010

An organization that wishes to offer competitive value propositions has to identify the infomediarie that are able to support the value network. Then the organization has to create an appropriate architecture to integrate these actors with the organization's value network, in support of co-created value (Lusch et al. 2010).

Effective business models are said to have a good configurational fit between the elements of the table above. In fact, it is proposed that the effectiveness of a business model in value creation is defined by the internal configurational fit of these elements, and the external configurational fit with the customers' and suppliers' business model. Internal configurational fit may be achieved by analyzing the 12 identified design elements of a business model, illustrated above, and modifying those that are not compatible. Higher external configurational fit on the other hand may be achieved by altering the company's business model, or by modifying the firm's customer, supplier, and partner portfolios (Nenonen and Storbacka 2010).

To summarize, what the frameworks by Payne, Storbacka and Frow (2008), Brown and Bitner (2006), and Nenonen and Storbacka (2010) all highlight is *customer involvement at every stage of service or product delivery*. Managers need to look for new ways in which to involve the customer in co-creation behavior (Payne, Storbacka and Frow, 2008). Careful thought on which kinds of encounter types support the cognition, emotion, and action-based learning of customer has to be made. Marketing communication and dialogue are also seen as having a central role in co-creation of value. For this reason Duncan and Moriarty (2006) highlight the importance of good cross-functional management in the field of value interactions. Execution of cross-functional cooperation however can be problematic. For many companies internal silos may have to be knocked down or linked in hybrid ways. Hence internal marketing and cross-functional operations become crucial (Nenonen and Storbacka 2010, Brown and Bitner 2006). Making touchpoints requires a cross-functional committee whose responsibility is to plan, prioritize, monitor and make adjustments where necessary to manage the ongoing process that seeks to identify, leverage and design positive customer touchpoints (Duncan and Moriarty 2006).

4. Theoretical Framework

The purpose of this study is not to form a management theory but to look at *how value co-creation may be improved in a network context with the appropriate network management functions*. S-D logic provides a suitable worldview for this purpose.

To look at the management of a network, and the value co-creation within it, we must first look at what the network itself is like. Network managers have to understand the nature of their network environment and how to act in it; networks are investments that require different kind of management, commitment and risk management (Möller, Rajala and Svahn 2004). Regardless of the type of a network, its purpose, or location, how to maintain progress, manage performance, balance between commitment and flexibility, as well as how to build alliance capacity, and network knowledge management are issues which have to be fronted by all network managers (de Man 2004). Emphasis is on the actors, activities and resources within the network, which Rautvuori (2010) found as suitable components of a network in municipal contexts. This study builds upon on Rautvuori's (2010) findings on the type of networks in municipal context.

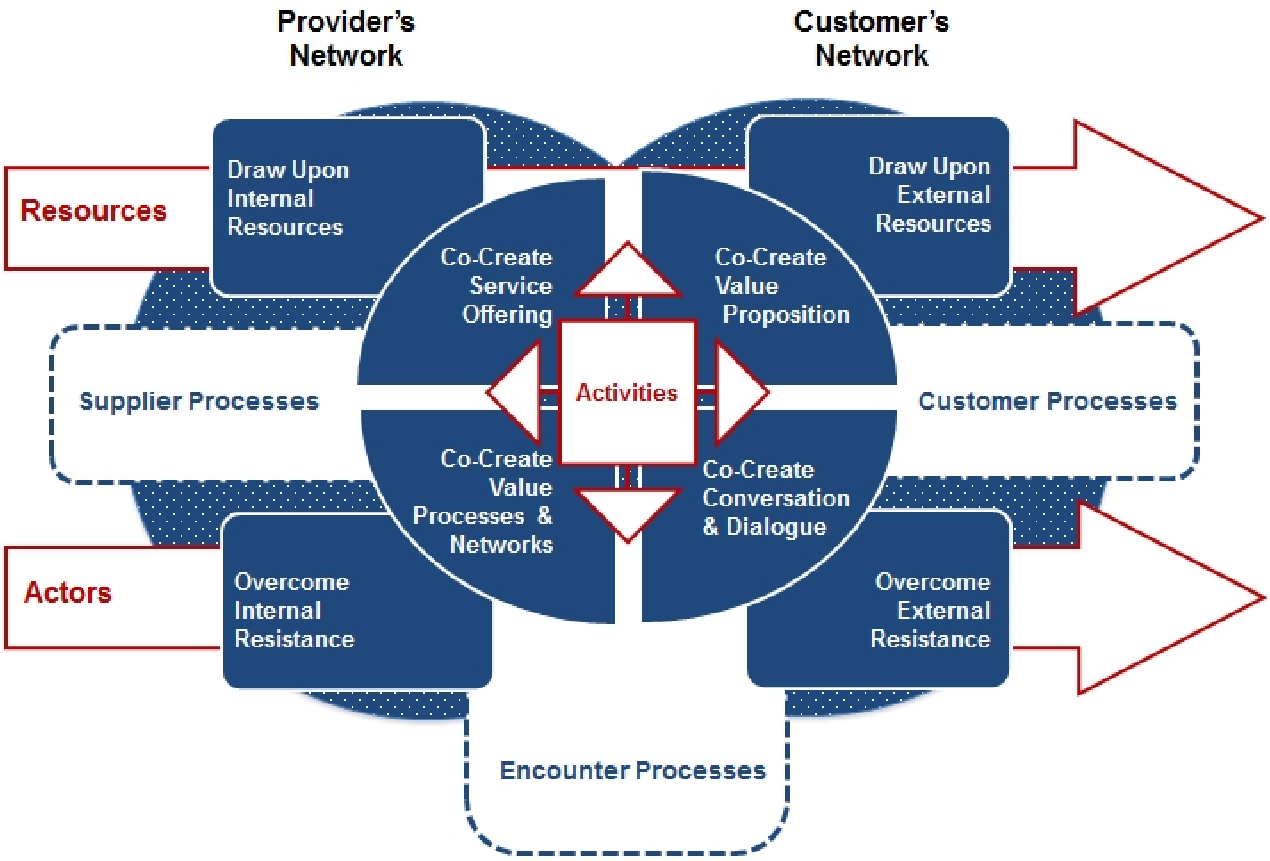
Value in S-D logic is phenomenological, and can be found in usage situations, value is in-use. In this study value is derived from the touchpoints in the encounter processes and interactions. Emphases on the processes of co-creation are justified, as both networks and service can be viewed as processes (Vargo and Lusch 2004, Håkansson and Johanson 1992, etc.). Also since S-D logic is an outward looking view (Vargo and Lusch 2004, etc.), the level of S-D will be illustrated in the encounter processes of the service. By first looking at the customer processes (Payne, Storbacka and Frow, 2008), it is later possible to achieve higher configurational fit by justifying the internal processes to those of external (Nenonen and Storbacka 2010).

This study will give recommendations to the city of Helsinki in how the barriers and enablers of networks should be considered when managing a renewal net from an S-D logic point of view. Difficulties may lie in low speed of decision-making, unethical behavior and strain on social ties, complex knowledge management and changing power balances (de Man 2004). What complicates the issue of network management further is the fact that network management seems to differ also at different levels of management (Järvensivu and Möller 2008). Clarity is needed on what views are useful in network management's different aspects (Möller, Rajala and Svahn 2004).

The co-creation process of a value service network will be researched via looking at the management system, dialog etc. that facilitate *trust and informal structures of the network*, which are the bases of S-D logic in municipal networks (Vargo and Lusch 2008b, Jyrämä, Hakio and Mattelmäki 2011). When we have identified the basics of the service value network, its process, and management, we can apply the information and look deeper into the value creation and service-dominant logic of the network. This is done by combining the Vargo's and Lusch's (2008b) co-creation model with the elements of Nenonen's and Storbacka's (2010) business model.

When the elements of the service process of a network and the management of co-creation are brought together via the models described previously, we get the theoretical framework of his study. Figure 13 below illustrates this theoretical framework.

Figure 13: Theoretical Framework: Management of co-creation process in public networks



Source: Based on Vargo and Lusch 2008, Nenonen and Storbacka 2010, Payne, Storbacka and Frow 2008, Brown and Bitner 2006, Vargo and Lusch 2008a, Håkanson & Snehota 1995, etc.

The framework is divided into *co-creation processes*, the *resource binding activities* of the ARA model and of S-D logic, as well as to *internal and external resources and actors*. It takes on the service system view of S-D logic (Vargo and Lusch 2008a, etc.), in which the network of the company and the customer are interlinked.

Resources, which are important for co-creation of value are: human and financial resources and technology (internal), as well as customers and brand, infrastructure, suppliers and partners (external) (Vargo and Lusch 2008, Nenonen and Storbacka 2010, Payne, Storbacka and Frow 2008). *Actors* of a network may be influenced by the management system, and leadership (internal), and by defining the market and customers (external). Network management is often seen as a method to influence the games, structures etc. of the network. The resources and actors are brought together with *activities*. What can be co-created are the service offering, value proposition, value processes and network, and conversation and dialogue. Service offering and value proposition are linked with resources while processes and networks, conversation and dialogue are connected with actors (Vargo and Lusch 2008, Nenonen and Storbacka 2010, Payne, Storbacka and Frow 2008).

Three types of *processes* take place in the co-creational activities, they are: supplier processes, customer processes and encounter processes. *Supplier processes* are seen as the co-creation activities, which the supplier can influence on: the creation of opportunities, planning and implementation. *Customer processes* are linked with emotions, cognition, and behavior. *Encounter processes* take place between these two; they are related to communication, usage and service (Nenonen and Storbacka 2010). When these elements are brought together we have a model, which can be used to the assessment of value co-creation management with a network management perspective.

5. Methodology

The research method of a study depends on the nature of the research as well as on the research questions (Hirsjärvi & Hurme, 1980). The main research questions of this study are: "*What is the role of network management in value co-creation?*" and "*How can value co-creation be enhanced with network management?*". The research is conducted in case study format, as it is a suitable research strategy when the phenomenon under study is complex, novel, involves multiple organizations and people, and takes place in a real-life context (Eisenhardt 1989, Buber, Gadne, Richards 2004, Yin 2003).

One of the strengths of qualitative research is its ability to access directly what is happening in the world, to examine what people do rather than asking them to comment upon it (Silverman 2006). It is used to research phenomenon and to receive rich and deep data, with emphasis on validity. The researcher takes a subjective view, trying to get the 'insider's view'. It is especially useful for understanding the rationale or theory behind a relationship, which in this study is the relationship between network management and S-D logic (Eisenhardt 1989). The trustworthiness of qualitative research is questioned due to the nature of the subject being research, as they are often complex, and as the data generated is rich yet messy (Richards 2004).

Quantitative methods on the other hand are used to find facts or cause of phenomena without a subjective interpretation. Quantitative data may indicate evidence to relationships, which may not seem significant to a researcher. The use of quantitative data also keeps researchers from being misguided by possible false impressions gained from qualitative data (Eisenhardt 1989). The researcher takes a distance to the data, and the reliability of data is important, as it has to be replicable and "hard" (Rohit 1983). In general, qualitative study methods include case studies and in-depth-interviews, while quantitative methods for example structured interviews and surveys (Hirsjärvi & Hurme, 1980), which are the main data collection methods of this research.

The acceptance and requirements of qualitative methodology in marketing is relatively recent according to Richards (2004). However, the use of mixed methods is gaining more and more popularity (Bazeley 2004). The use of mixed methods in this study refers to the use of both qualitative as well as quantitative approaches. This is done as often when marketing scholars study processes, they frequently use only survey methods. However, these methods can only be used to complement the analysis of processes within an organization, and may result in having a fragmented view to the process as a whole. To address and understand behavior as well as performance, a researcher has to obtain different kinds of data as well as different methods of analysis (Richards 2004). As the phenomenon that is researched in this study is complex, and due to the factors mentioned above, the use of mixed methods will be appropriate for this research.

Further, the use of *triangulation of methods* may be useful, as it leads to the use of qualitative as well as quantitative methods. Triangulation usually refers to a process, where multiple perspectives are used, to verify the repeatability of interpretations, and to ultimately clarify the meaning of the phenomenon (Rohit 1983, Stake 2000). Reality is seen as imperfect and apprehensive, hence researches have to use triangulation from many sources to try to understand the phenomena. The research issues can be interpreted by qualitative methods as well as by quantitative methods. Perry (2004) states that obtaining *a realism paradigm* is appropriate for most marketing management research, This view is also adopted in this study. Realism sees the people's perceptions as a window to the external reality, which may be blurry and complex (Richards 2004). However, when a study tries to examine the characteristics or quality of a phenomenon to understand it, qualitative approach is seen as more appropriate than quantitative (Hirsjärvi & Hurme, 1980). This is the approach of this study, and the emphasis will hence be on qualitative methods.

5.1. Case Study

Stake (2000) states that case study is a study approach rather than a research method. In fact, case study is defined by the case itself, not by the methods used in the research. Case study is defined in this research as "*a research strategy which focuses on understanding the dynamics present within single settings*" (Eisenhardt 1989, p.534). Case research is a justifiable research approach as the context and the phenomena are not clearly distinct (Perry 2004). It is also used to investigate a new research area or a contemporary phenomenon, which takes place in a real life context (Eisenhardt 1989). Furthermore it is also seen as appropriate when the situation is complex and involves more than two people and their organizations (Yin, 2003). Because the research on the public sector as a context for the co-creational process of service networks is relatively new phenomena, the use of a case study is justifiable. As the data is case specific, and the objective is to understand external reality constructed from meanings and structures, relying on only quantitative methods would yield inappropriate results (Perry 2004). Furthermore, Stake (2000) claims that "*Case study can also be a disciplined force in public policy setting*" (Stake 2000, pp. 448). The weakness of case studies is the requirement of prior knowledge on the issues; on the other hand the strength of this method is that the results should be *replicable* (Rao and Perry 2004).

This study is based on a single case study (Yin, 2003). It is a justifiable research method when the case is unique. The event's organizer's service was unique in many ways as it a pilot project for numerous new things, which were explored by the city of Helsinki. A single case study, compared to multiple case study may be used to test if the study's propositions are correct, to extent a theory, or to challenge it. It contributes to knowledge creation and theory building. This method was also chosen due to limited resources. Multiple case studies in this research would have meant that the workload of the research would have been too high. As the study focuses on a single case, the research is able to focus on finding out as much as possible on the case. In these kinds of *intensive case study* research, the target is to provide a thick, holistic and contextual description of the phenomenon (Eriksson and Kovalainen 2008).

Case study research has typically two stages: data collection and analysis. First the theoretical framework was conducted from the literature to identify the core issues. The first stage is either confirmed or disconfirmed by the second stage. This second stage hence involves analytical generalization of the findings (Yin, 2003).

5.2. The collection of data

Interviewing is seen as one of the most powerful ways to understand human beings (Fontana and Frey 2000). The *framing of an interview* refers to the type of the interview, techniques that will be used, and the ways of recording the data, which all influence the results of the interview. Interviews may take multiple forms, the most common way being individual face-to-face verbal interaction, but it can also be done in groups, or mailed or via telephone in the form of questionnaires. These interviews can be structured, semi-structured or unstructured. However it has to be noted that interviews are not neutral tools of data gathering as they take place in an interactive process between two or more individuals. Therefore the results are *negotiated and contextually based* (Fontana and Frey 2000, Holstein and Gubrium 1997). And as a result interviews are *representations of the experiences* people have (Silverman 2006).

Research interviews target data collection, and hence have a previously set goal (Hirsjärvi & Hurme, 1980). On the other sides of the interview spectrum are open interviews and questionnaires. *In-depth interviews* may be used to obtain rich and detailed information. Interviews are more flexible and the respondent can be motivated throughout the process. They also result in narrative examples of situations. *Questionnaires* on the other hand are easy tools as people are used to filling them out. However, as they have become more and more common, people might not respond to all of the questionnaires that are sent to them. The main differences between these methods are related to the level of structure and the role of interviewer (Hirsjärvi & Hurme, 1980). These two interview types are the main data collection of this research, and will be described next in more detail.

Theme interviews

The purpose of *semi-structured interviews*, which take place on the field, is to understand a phenomenon (Fontana and Frey 2000). Interviews are a source of empirical data about the *social construction* people are settled in (Holstein and Gubrium 1997). The use of semi-structured interviews is highly appropriate when the issues are not daily topics of conversation or when they may be sensitive by nature (Hirsjärvi & Hurme, 1980). In this research, the phenomenon is abstract by nature. Hence the narratives and experiences that are gained from in-depth interviews are found suitable for the purposes of this study.

Knowledge is constructed in collaboration with the interviewer and the interviewee. *Constructivism* sees data as mutually constructed and all interviews are treated as topics (Silverman 2006). The data will hence consist of multiple local and specific worldviews and meanings (Perry 2004). For this reason Holstein and Gubrium (1997) argue that researchers should take a more '*active'* perspective to the interview, to not worry about interactions and to in fact consciously attend the interview process and its production. Silverman (2006) notes that *active listening*, in which the interviewee may freely talk and ascribe meanings while the interviewer keeps in mind the broader aim of the research, is key to the collection of rich data. However, in this research the researcher is not actively involved in the creation of the findings nor is the researcher objective and isolated (Perry 2004). Instead the research tries to "*build a rapport with the participants to encourage them to share their perceptions of reality, but do so in a way that minimizes their influence*" (Perry, 1998a, 2001, in Perry 2004, p. 52).

Hirsjärvi and Hurme (1980) call this semi-structured interview style as *thematic interviews*. What is typical for this method is the use of few themes, which are then further explored during the interview. In these types of interviews the respondents should be able to bring out all points of views that they think are important. Also the reactions of the respondent's should be as specific as possible. The interview should help the respondent to describe the phenomenon's meanings. And finally, the personal context of the respondent is important, as they affect the meanings that respondents attach to the phenomenon (Hirsjärvi & Hurme, 1980). While the results of these kinds of interviews usually give improvements to the issue under study, the depiction of the phenomenon is often time imperfect and fuzzy (Perry, 2004).

The most important step in thematic interviews is the formation of the actuals themes around which the interview will be established (Hirsjärvi & Hurme, 1980). Based on the themes the interviewer may form the actual questions, which are adjusted throughout the interviews. The interviewer may deepen the conversation as much as is seen necessary and acceptable to the respondent. Both '*what'* questions (concerned with identity) and '*how'* questions (concerned with construction of for example narratives) have to be made (Holstein and Gubrium 1997). However, the interviewer may be too restricted by the themes that were previously drafted and therefore is not able to ask some questions that would be important to ask or ask all questions when it would not be necessary. Close listening is important so that the interviewer does not reply questions that were already answered to in some form or another by the respondent (Hirsjärvi & Hurme, 1980).

The themes of the interview were set based on the theoretical framework presented in chapter 4, and can be found from appendix 1. The themes were used in all interviews, and each theme had numerous questions. However, the extent to which some themes could be addressed was dependent on the interviewee. Therefore, the questions were modified to suit all interviewees. All of the interviews were recorded and later on written open into transcripts. The themes were:

1) Management of value co-creation
    a. Value creation to the client according to S-D logic
    b. Value creation to the company according to S-D logic
    c. Co-creation
    d. The service
2) The functioning of the service network
    a. Description of the network
    b. Functioning of the network

In this study the interview process started with a summary of the study's purpose, the benefits to the interviewee and any ethical concerns related to the research. Then the questioning began from general broad questions and moved on to more detailed and *probing questions* as the interview went along to gain more knowledge into issues, which were not addressed clearly enough in previous answers. The interview was finished with questions related to new issues that the interviewee would like to bring up, and who else should be interviewed.

The interviews were conducted in late 2011 and early 2012. It is important to note that the interviews were held in Finnish, and as a result any errors made in the translation of quotes are done by the researcher herself. The interviewees were decided based on recommendations made by the key informants. *Snowball sampling* was also used when further recommendations rose (Eriksson and Kovalainen 2008). The interviews were all conducted in the premises of the interviewee's workplace and they took half an hour to an hour. The persons that were interviewed are presented in chronological order in the table 2 below.

Table 2: Interviewed persons

Organization	**Name**	**Involvement**	**Date of the interview**
Pelastuslaitos	Heidi Partanen	Development team	12.10.2011
Tapahtumayksikkö	Päivi Munther	Development team & management team	18.10.2011
Tapahtumayksikkö	Saila Machere	Development team & management team	19.10.2011
Ympäristökeskus	Elina Pahkala	Development team	25.10.2011

IT Department	Mika Kuivamäki	Development team & management team	27.10.2011
Ympäristökeskus	Tanja Rajamäki	Development team	8.11.2011
Rakennusvirasto	Leena Ström, ,	”Issuer”	16.1.2012
Rakennusvirasto	Eerika Poikolainen	“Issuer”	16.1.2012
Rakennusvirasto	Jouni Paasonen	Development team	16.1.2012

Structured interviews

Online based structured interviews were the second main method of data collection. All respondents are asked the same questions in *structured interviews*. All of the interviews are done in the same way, and little room for flexibility can be found. For these reason the interviewer should give the same explanations to all respondents of the structured interview, and remain neutral in the situations (Fontana and Frey 2000). The conversation, which takes place in the interview, is therefore seen as a potential source of bias and error (Holstein and Gubrium 1997). Errors may appear due to the respondent’s desire to please the interviewer or from false memories. The nature of structured interviews may also yield errors, in the wording, structured interview administration etc. But errors may also rise from the interviewer’s communication skills or characteristics (Fontana and Frey 2000). The questions may be misleading in the sense that they may represent the researcher’s point of view more than the respondent’s (Hirsjärvi & Hurme, 1980). We have to assume that the respondents will answer to the questions truthfully and that these questions will give enough evidence on the indicators of the variable in questions (Fontana and Frey 2000). The setting of questions can be seen as the major challenge of the structured interviews, as they cannot be revised or explained in the situation.

The standardized structured interview takes a *positivist approach*, as they are supposed to bring out facts about behaviors and attitudes (Silverman 2006). The goal of this kind of quantitative approach is to explain and to predict a phenomenon (Hirsjärvi and Hurme, 1980). *Surveys* can be used to the verification of hypotheses as they are supposed to bring out true findings (Perry 2004). The statistical data received from surveys, provides access to patterns, trends, and underlying dimensions that would not be evident in the detailed qualitative data (Bazeley 2004).

The customers’ perceptions were researched via online based structured interviews. In total there were 40 questions related to themes withdrawn from the theoretical framework. Majority of the questions were quantitative by nature, with 1-5 scales, however open-ended questions were also included in the survey. The questions can be found from appendix 2. The themes of the structured interviews were:

1) Encounter processes

   a. Communication encounter
   b. Usage encounters
   c. Service encounters
2) Customer processes (Experience)
   a. Emotion
   b. Cognition
   c. Behavior
   d. Customer Promises

The structured interview was sent to 17 individuals, who at the time of the research had used the new service and or been involved in the development of the service. The structured interview gained only 4 answers within its two-week reply time. The city of Helsinki was not able to find a second target group for the online structured interview, and therefore the online survey only yielded 4 answers. Hence, the results will be addressed with a qualitative approach. Also due to the small sample size, the focus of the analysis will be placed on the thematic interviews.

5.3. Data analysis and interpretation

The information received from the theme interviews with the city organization's personnel functions as the primary data of this research. The data is analyzed to gain an understanding of the phenomena under study (Moisander & Valtonen, 2006). In this research, the phenomenon is the co-creation of value in networks that take place in city organizations. The goal of interpretation on the other hand is to provide *new meanings for the phenomenon* (Moisander & Valtonen, 2006).

When complex and ambiguous phenomena are studied, such as co-creation of value, completely explicit and systematic analysis is often times not possible. As this research takes a qualitative approach, it has to be noted that the analysis of qualitative data deals also with creative aspects such as improvisation and imagination, on top of techniques and methods (Moisander & Valtonen, 2006). For this reason the intuition of the researcher is important for the analysis (Gummesson 2004). Yin (2003) states that the strategies and techniques for analysis within case studies is not well set yet, and as a result the analysis of case study evidence is difficult.

Analysis in case studies may be done within the case or cross-case. Typically this involves detailed case study write-ups from each site, which may be descriptive but turn out to be central for the generation of insights (Eisenhardt 1989). Yin (2003) recommends that all single case studies should consider the analysis techniques of *pattern matching*, *explanation building*, *time-*

series analysis, and logic models. The first two techniques were seen as the most suitable for this study, and will be explained in more detail in the upcoming section.

The data was triangulated first by looking at the data received from the data collection, then according to the themes, which were found from the theoretical framework. Finally the results of these analyses were combined and compared with each other according to the research questions.

First, the data received from interviews was written open into *transcripts*. These transcripts are open to numerous interpretations, as the codes, beliefs, and events of both the interviewer and interviewee shape the interpretation. Meaning is hence formed in the interpretation of the dialogue, which takes place with the interpreter and the text. Therefore, the interpreted meanings are not fixed, as there is no fixed reality that could be discovered through the use of correct methods (Moisander & Valtonen, 2006).

Second, the process of analysis continued with *close reading* of the transcripts to get familiar with the data (Moisander & Valtonen, 2006). While the reading of transcripts continued, marks and notes were made onto the papers. The transcripts were then organized together in accordance to the themes described in section 5.2. When the data was divided under the research themes, analysis on how the themes withdrawn from the theoretical framework are applicable to the case study, could begin.

Finally, the results of interviews as well as structured interview were pattern matched with the themes. *Pattern matching* compares the empirical patterns with previously predicted ones. If these patterns match, the internal validity of the result is enhanced (Yin 2003). After this causal links were formed based on explanation building. The goal of the second analytic technique, according to Yin (2003) is to build an explanation about the case. In *explanation building* the causal links of the phenomenon are formed. Causal links into the previously described propositions of the case may lead to recommendations, which are given in section 8.1. This is a iterative process, where initial statements made about the propositions and compared with the initial findings of the analysis, and then revised as many times as the data is saturated.

5.4. Validity and reliability

Validity and reliability can be ensured with *contingent validity*, when the context of the case and interviews is appropriate, and the people who reflect upon the issues are related to the phenomena (Perry 2004). *Internal validity* may be obtained when the samples that are selected give rich information to the research. *External validity* on the other hand highlights the importance of selecting samples, which are selected with theoretical replication on mind. Validity may also be constructed with triangulation of interview data from other sources, such as seminars and internet sites is also important for the reliability of qualitative data, and by keeping the initial theoretical framework flexible (Perry and Rao 2004).

If the research is unable to capture the most relevant characteristics of the phenomenon, the validity of the research construct is poor (Hirsjärvi & Hurme, 1980). The poor validity of the content of the research may be a result of poor execution of interview themes and questions. This can be prevented with planning and the preparation of optional questions that can be presented. This method takes into account the various perspectives people may have to the phenomenon at question. The trustworthiness of interviews is dependent on their validity and reliability. Theme interviews are used to gain as close resemblance of reality and results as possible (Hirsjärvi & Hurme, 1980).

Reliability refers to how consistently the techniques measure the concepts, enabling the replicability of the results (Perry Rao 2004). The reliability of methods is highly dependent on the theoretical framework that was previously set (Hirsjärvi & Hurme, 1980). A means to achieve high level of reliability may be the structuring of data collection process and interpretation, as well as the development of an interview guide (Perry Rao 2004). Reliability of the study is also dependent on how well the worldviews of the interviewees were captured: what is that the researcher's perception on how well results and reality match is an indicator of reliability (Hirsjärvi & Hurme, 1980). The reliability of this study is ensured with the selection of good interviewees, the use of recording in the interviews, and the use of appropriate analysis tools

To conclude, the goodness of research may be evaluated based on how well the chosen methods of data collection provided answers to the research questions, whether the background assumptions were correct, and if the research methods were applied well enough for the results to be credible (Bazeley 2004). As stated previously, this study is conducted in the form of case studies. They can be used to refine theories and for suggesting complexities for further research. Moreover, they also help to establish what the limits of generalizability are for the phenomenon under study (Stake 2000).

6. Analysis and discussion

The results of the in-depth and structured interviews are analyzed and discussed in this chapter. The data will first be analyzed and discussed trough network management and co-creation management. Due to the limited amount of data received from the customer structured interviews, these results will be mainly analyzed in the context of management of service co-creation process. Finally the results will be analyzed and discussed through the research questions of the present study.

6.1. Management of the network activities

The first theme of the theoretical framework *Management of network activities* consisted of indicators describing the co-creation of service offering, co-creation of value proposition, co-creation of dialogue and co-creation of processes and network (Vargo and Lusch, 2008b). The following quote illustrates that the service process has changed since the establishment of the new online service. Decision-making is much more complex, and transparency as well as cooperation between bureaus has increased.

"*It feels like before the decision making used to be made in a single line within one office, and these lines were separated from each other... But now the decision making process is not a single line anymore but a complex labyrinth within the multiple offices. Of course to the client is seems as if there is only one line, however, within the offices there is an increasing number of connections and linkages*." Member of the development team

6.1.1. Co-creation of service offering

The first piece of Management of the network activities is according to the framework the *Co-creation of service offering.* It is derived from co-creating the service offering, by designing the offering and the earnings logic (Nenonen and Storbacka 2010).

While the customer's point of view was emphasized throughout the design process, the actual delivery of the service promise was not as carefully planned. However majority of the officials feel that the service is easy to use by the clients.

"I have used the service myself and also tough other on how to use it, and found it to be good. It's easy to use, it's informative. There are lots of instructions on how to act within the service, it's clear, and it's suitable for both small and large companies. The only mandatory fields in it

are the name of the event, contact information and billing address." Member of the management team

On the other hand, when the application form has been made as comprehensible and easy as possible, some important nuances have been left out of the form, and the processing of applications is seen as inconvenient by some of the officials. This is evident from the following statements.

"The service itself is a challenge. It doesn't work always and the customer may not even be able to fill it. The form cannot be trusted. And I believe it's quite complicated as some customers send the same application in three times… It seems a bit rigid. --- I've found it as dreary and inflexible. There are so many trivial questions there." Member of the development team

Actors from different fields and customer segments should have been listened to so that the final service would be suitable for various customer groups. One of the city's representatives actually stated that: "*In its present form the service does not scale according to the event's size and therefore does not suit the needs of small or big events*." Like the previous quotes illustrate not all actors are satisfied with the results of the co-creation process. The results of the co-creation process will be further discussed in section 6.4.

6.1.2. Co-creation of value proposition

The second component of the management of network activities is the *Co-creation of value proposition*, which is constructed from offering management and R&D (Nenonen and Storbacka 2010).

Like mentioned previously, the service promise seems under-designed at the moment. The lack of emphasis placed on internal processes was highlighted numerous times by the interviewees. The interviewees felt that even though they could express their opinions their input was not necessarily listened to and hence was not seen in the final service. Many questioned the importance of their input stating that due to their somewhat small role in the final service it was not important to listen to them. However, this took a toll on the internal processes of the service and created increasing internal resistance.

"I think there have been a lot of meetings and we have been able to state our opinions --- but I am not sure if they have been taken into consideration or not. But they have tried to be open. But because it is so customer centric, or maybe it is because of it, not all of the things that we would have wanted to incorporate into the service, or those that would have helped our work, were included in it." Member of the development team

According to S-D logic, the customers either accept or reject the proposed value proposition (Vargo and Lusch 2008b, Flint and Mentzer 2006, etc.). At the time of the interviews, majority of the applications come in to the departments via old application channels. Therefore, not all of the customers accept the value proposition. Some departments are not even promoting the service publicly as they are not confident in it. Frustration towards the service is apparent in some departments, where the internal communication was not up to the bar. Better dialogue with the customers could have led to a better formation of the service offering.

At the moment the interviewees saw that it was important to continue the development process. The representatives of the IT department and the event's unit both wished that the new service would be fully embraced by the other departments. By the time of the interviews, the departments did not have a lot experience of the service and trust towards its proper functioning was poor.

Dissatisfaction with the service is furthermore stemming from the poor responsibility taking of the departments and the mismatch of inner processes. Moreover, these issues have resulted in some inner conflicts between the departments. This is furthermore influenced by poor information flows within the offices, the degree of top management involvement, and lack of process thinking.

6.1.3. Co-creation of dialogue

The third component of the management of network activities, *Co-creation of dialogue*, was researched based on market and customer management (Nenonen and Storbacka 2010). In the interviews, the importance of communication and dialogue gained especially high importance.

Communication was a challenge during the operations of the development network, and it has remained so also in the current service network. This is largely due to the silod organizational structure. It could clearly be seen in the data, as bureaus could talk about different things but use a same term. Also the extent to which information was distributed back to the actor's own organization depended on the organizational culture of the bureau in question. Some departments were well informed about the development network's operations, while others had no idea what was taking place. In other words, the information and know-how transfer was weak.

During the development work, both the traditional and bureaucratic, as well as new type of unofficial ways of communicating and working together existed. Some of these aspects were bound to the old ways a city organization operates. However, novel methods of working together were discovered.

"Even though the world view and the process were both new, and we brought in a lot of new things, the communication was very old fashioned outside the meetings of the team. I think that was the only new thing, and the rest was just like it has always been. And it is not very efficient. I mean all the e-mails and such." Member of the management team

In the meetings that the member of the management team is talking about, a strong dialogue between the actors took place. However was no strong chairman dominating the discussion. While the process sometimes was seen as moving at a too slow paste, the actors were satisfied that they could freely bring up their problems and have the teamwork on them together. Openness and interactivity were promoted and nothing was seen as set in stone. Furthermore, the group was well informed what the wished outcome of the service was, and that it was going to be electronic. This method was well appreciated by all of the actors. The meetings, which felt unofficial, such as trips to events, and visits to the client's premises, the safaris, created a team spirit. Even though the actors did not recognize these events as methods of team building, they highlighted the importance of getting to know each other via these kinds of fieldtrips. This made the communication with the network more unofficial, and the relations more friendly. These visits were important also for knowledge creation and gave insights to the customer's perceptions and views.

Like mentioned previously, while the working methods were appreciated, some felt that their input to the ideation process was not valued. They felt that they were listened to, but their views were not executed. Others on the other hand felt that they were able to influence everything they wanted to. Also the new meeting procedures gained some opposing views.

"Well, it has been a while since I graduated, and the mind maps and such were just emerging back then. So it was something I was not used to. You know when those kinds of things are applied that… well it takes a long time when the floor is yours. I am used to things being quickly pushed through, and then moving on." Member of the development team

Dialogue with the customers however was minimal, and the new service has not been well communicated to the customers. A customer who responded to the structured interview's questions simply stated that they were not contacted to participate in the development of the service, one of them even stated that "*I was not given a change to influence on the service*", indicating a strong disappointment. These customers wished that "*professional event's organizers*" would have been contacted when the service was constructed.

Learning however did take place. The customers, who were involved in the development process, were seen to have gained knowledge on why the bureaus are interested in certain things and why the applications need to be sent on time. Moreover, the bureaus learned about the customers and about themselves as a result of the co-creation process.

6.1.4. Co-creation of processes and network

The fourth and final component of Management of network activities is based on Co-creation of processes and network. In this component, the operations design and sourcing as well as production and delivery were researched (Nenonen and Storbacka 2010).

"We should have started form it [service process] rather than the client's service. To first identify the customer, and realize what the big picture is, is the core thing. From there one can move on to identifying how the process serves the customer: through the development of the service process. And after it works, only then focus on how it [physical service] is seen by the customer." Member of the management team

The service process caused a lot of trouble for the departments. The lack of emphasis on internal processes gave rise to much of the current problems of the service. The lack of process thinking was seen as a barrier. Due to it, some of the entities, the IT department as an example, which should have been involved in the development process from the beginning, were left outside the project. The old silos are still in place; they are just not visible to the client. Furthermore this influences the experience customers have on the service.

The service functions as a communications channel between the customer and the bureaus. However, there is no strong owner of the process. The service process from the step one onwards seems unclear to the actors. The management of the service process is substandard as the entity, which starts the service process has not been explicitly designed and communicated to the network actors. This problem would be addressed in the future development steps. The inner dysfunction of the service is also apparent to the customer. While the customer may get the appearance that the service is unanimous, as they currently only send one application, the permits quite the contrary come from multiple sources and the customer might not even get results from all of the bureaus. In other words, the customer has to assume that they have all the required permits even though they would not get responses from all of the bureaus.

While the absence of in-depth dialogue with the customer may have hindered the value co-creation, so did the IT department's late influence on the project. Some steps had to be taken backwards when the IT department finally was included in the project. This also influenced the IT department's ability to learn from the experience. During the later periods of the project, the customer centrism was said to have almost been forgotten. The roles and goals of the offices came up again as major issues. However, some said that due to the customer centrism, their voices were not heard anymore. The co-creation of value for the internal actors at the moment is not very apparent.

"In the end we all work like we used to. And for now we are not getting any more information than we used to about the decisions that others made. So I think the network is not that well-formed. I mean the team and the people who were involved in the development have become familiar to me, but maybe now that we are moving to the next step in the development, the information will be easier to get… What others are doing. Then I would see it as a network." Member of the development team

Concluding, the information flows from the development team back to the home organizations is in a key position. Market management is not evident in the case due the context in which the service takes place. However, customer management is important also in public services. The service process requires that some emphasis is placed also on internal processes. The harmony between internal and external processes would lead to a better service experience by the internal as well as external customers. This is highly linked with process thinking.

6.2. Management of the network actors

The Management of network actors is derived from overcoming the internal resistance and from overcoming external resistance (Vargo and Lusch, 2008b).

Three major roles rose from the actors during the development project. The actors of the network were unanimous in their opinion that the project was facilitated by the event's unit. They were described as the "owners" of the project, who led the project, and inspired the participants throughout the ideation process. However, the importance of the IT department was also highlighted by the interviewees. When the IT department was included in the development process, they were instantly seen as the co-leaders of the project. However, the service designers' role was not clear to all. Their work was not visible to the other actors. Some were even questioning why they were needed in the first place, while others thought that they were useful in keeping in mind the customer's point of view. The other actors of the network were seen to have equal roles by the interviewees. At times the actors were also confused on who were participating in the development project, as not all of the bureaus were actively involved in the process. Also the roles of the service designers and customers were not clear to all.

"I'm not quite sure when the change was made, because there were the service designers, which were bought in with cold money, and who were just hanging around. So I'm not sure when the responsibility over the service was given to the city. I'm not sure about that thing. And now those IT people are continuing the process. I'm still quite confused about the service designers; I don't know what they were needed for." Member of the development team

Surprisingly, the customers were seen merely as information providers in the beginning of the project, and as testers of the final product. Hence, they were not actively part of the project when it comes to S-D logic. Some actors questioned if the customers were able to voice their opinions clearly at all, as they were sitting across the table with entities, which are crucial for their functioning. Others also wondered if the customers were able to influence the final service adequately.

6.2.1. Overcoming internal resistance

Overcoming internal resistance is the first component of Managing network actors. It is derived from the management system, and from management and leadership (Nenonen and Storbacka 2010). Like mentioned previously the event's unit was seen as the leader of the process, and towards the realization of the service the event's unit and IT department were seen as co-leaders.

Resistance to change existed. However, the Safaris and other untraditional methods of working together opened the eyes of the actors. The network managers thought it was important to give people space and changes to voice their opinions. The actors were satisfied with this management style.

The leaders of the project felt pressure as the development project was a pilot project in numerous ways and hence the city did not have guidelines to the management of the new aspects involved in the project. Also, while the actors were satisfied with the management approach adopted by the event's unit, some of them simultaneously felt that the logical ownership of the process and the service might not be theirs as the event's unit does not give permits or licenses and are not therefore involved in the actual service process. The actors also felt that the process was at times too slow. This was seen to be caused by the high turnover of the actors, and the overly large emphasis on ideation and the customer's point of view. However, the network managers saw that this was also due the role of top management.

"I asked for people who can make decisions, not necessarily in a heartbeat, but in cooperation with directors. Still there were lots of so called pointless meetings where people were just sitting there with no real power or knowledge of why they are in the meeting the first place! And then not even... the directors also have to go to the next level and then again to the next level. So the results of the meetings were awfully poor in this [city] organization." Member of the management team

The leaders of the network wanted to have both workers and managers involved in the development process to ensure that people who had experience of the actual work as well as people who could make decision would be involved in the process. The absence of top management was however seen positively by the representatives of the departments, as actual cooperation with other departments, rather than just top management talking about this kind of cooperation was rare at their level. As they were able to participate in the development process, they felt that they were able to produce a tool, which will useful for their work in the future.

When the interviewees were asked if they had wished for some changes in the management, they rarely had any criticism. However, few pointed out that the IT department should have been involved in the project since the beginning of the project. Also the new working methods presented by the event's unit and the consultants seemed for some as artificial.

"The management group, which is the events unit, and the IT department should have run the whole thing together. The event's unit could have been the crazy architect but the IT department could have been there to smooth out the process in the light of what is feasible and what is not. There would have been less chaotic ideation when someone could have said what the limits are. I would have started from that… And left the service designers out." Member of the development team

In the key position is the flow of information between the actors involved in the development process and their office, as well as their top management. The responsibility of the department's representative in the development project was large. As an example, the office, which is supposed to start the service process, feels like the role was placed on them by "some top level managers" and felt confused about their role.

"In the meetings there were the people who had internalized this thing and their supervisors but then there are lots of people who have not. And they have not accepted the thing and they have not been given enough information. We cannot go to every department and ask if the right people are involved in the process." Member of the management team

The challenge for this kind of project is that the director or manager of each bureau has to first motivate their team and explain why the bureau is involved in the development project. The top level is needed to give the strategic guidelines and to encourage the workers to do their best. Top-level commitment is vital for the information flow, and ultimately for the level of satisfaction within a department.

One of the interviewees wondered if the upper management levels should have been familiarized better to development work so that the requirements of this kind of work could have been discussed beforehand with the managers. The leader of this kind of a project should, according to the respondent, also allow mistakes and be able to learn from them, in other words the process should take an iterative form. Moreover, the leader should be enthusiastic of the project, and be able to inspire other members of the development team.

6.2.2. Overcoming external resistance

The second component of management of network actors is *Overcoming external resistance*, which is based on market and customer definition (Nenonen and Storbacka 2010). It was stated numerous times that what was new in this project was the fact that the work started with definitions of who the customer is. However, the comments made by the customers in the structured interviews illustrate that the involvement of customers, and the emphasis on their processes, is not evident to all customer who use the service. Major concern of the customers is whether their applications will be handled or not. The promises set by the service are hence not fulfilled. The customers also acknowledge that the units within the city organization have some uncertainties related to the service.

Nevertheless, this project was different from the rest of the city's projects as it raised the questions of "who is the customer". This was seen as a positive thing. Hence, the worldviews of the actors had to be changed from the traditional organization centric view to customer centric (Vuokko 2004). It was seen as a difficult task by the management, as the departments were highly attached to emphasizing their own interests. However, customer centrism and S-D logic could be seen from even the individual office's actions.

"At least our department has strived towards making instructions more customer-centric. That they are not anymore like… "Do this and now you should have done this, and you did this wrong", but more guiding. --- We have tried to be less bossy and more instructing and advising. Of course we still need to do things according to the law but we have to tell what they are and how customers can act according to them." Member of the development team

Some interviewees however wondered if the content of the service is more suitable for large customers. The event's organizers are asked a lot more in the new service and smaller organizers may get anxious due to the large number of questions they are presented with. One actor gave an example of a small event organizer, who had been filling out the application for the entire day, and when the application was finally sent, the office received it blank. It seems as if none of the actors are confident that the service actually works for the client. The following statement also highlights again that the service promise is not met at the current state of the service.

"The work we are doing at the moment is focused on getting the service in such a form within the city organization that we can inform our clients about it and trust in the service. The service can be used, but trust means that the application is processed." Member of the management team

As a conclusion, the role of information flows and top-level commitment are important to the internal actors. The actors engaged in the development process need to carefully designed and also communicated to all of the participants. Communication of the development process back to the bureaus is also essential. However, in accordance to S-D logic, also the external customer should be involved in the creation of a service.

6.3. Management of network resources

The Management of network resources in the framework of the present study is drawn *upon internal resources*, and from *external resources* (Vargo and Lusch, 2008b). However due to the context of the network, there was a lack of emphasis placed on resources. Therefore these two components will be analyzed under a single heading. The Management of network resources is therefore based on the human and financial resources, technology and from customers, brand, infrastructure, suppliers and partners (Nenonen and Storbacka 2010).

According to Rautvuori (2010) the key resources of the development network were the knowledge of the actors, understanding of other mindsets and good leading. Tangible resources were merely seen as physical locations of the meetings. In the present study it was found that the degree of involvement between the actors varied also according to the resources each department had. This was linked with the general attitude of the entire department.

"It is very difficult to distribute tasks when people are not sure if their managers will give them permits to do those tasks and use your time for them. --- So collective responsibility taking was very poor during the development phase. And it still is." Member of the management team

"We are so occupied that it annoys me that we could not use more time to bring our views more to the front. I just did not have the time. --- People have really invested in this service and I feel like we have used half the resources for this project. It would have been nice if someone would have been appointed to this so that we could have participated [in the project] more." Member of the development team

However, the motivation of individual actors also varied based on how much the law influenced their work. This was also linked with the level of flexibility. Bureaus, which were in close relations with laws and regulations, were not as flexible as those who were not dealing with laws and regulations. However, the individuals had varying views, some saw the new service as a means to ease their own work and hence saw the development project in a positive light, while others were complaining and saw their roles within the networks as forced, as artificial. Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011) found this as a barrier to co-creation. These attitudes were hence influenced by the organizational culture of the office and were also reflected in the way customers were seen. As a representative one of the office's stated:

"I was quite irritated in the beginning because some of the members of the team did not have a friendly attitude towards the customer. But it did change as we moved on; people realized that this was done to ease the lives of everyone." Member of the development team

The actors complained about how much resources the service requires from them. As the service process was designed more from the customer's point of view, giving little room for internal processes, the service requires more work from some departments. This is a barrier towards the acceptance of the service in these specific departments. However, all of the actors saw that the service will render positive outcomes some day in the future.

"Not only the people but the bureaus have to commit to it [service] and in their own way support it. And to be given resources! Because I feel that it is not only the e-service but the development of operations [which is developed]. --- And it can clearly be seen that some departments were given more resources to work with the development work." Member of the development network

In conclusion, human resources are central to service networks in public context. As resources are managed by the top management, the importance the development work has to be communicated to them. When the actors are given time and resources to work on the project, their responsibility taking is improved and their general attitudes towards the service are more positive.

6.4. Management of the service co-creation process

In S-D logic marketing is seen as the process, which facilitates interaction with the customer (Vargo and Lusch 2004). Furthermore, Prahalad and Ramaswamy (2004) saw these customer-company interactions to be at the heart of co-creation. Payne, Storbacka and Frow (2008) call these as encounter processes. According to them value co-creation may be facilitated by three kinds of encounters: communication encounters, usage encounters, and service encounters (Payne, Storbacka and Frow, 2008). These encounters will be analyzed based on the structured customer interviews. *The customer experiences* on the other hand are based on three customer processes: emotions, cognition, and behavior (Payne, Storbacka and Frow 2008). They were the second major theme of the structured customer interview.

6.4.1. Managing encounter processes

Communication encounters are highly related to the creation of dialogue and learning (Payne, Storbacka and Frow, 2008, Ballantyne and Varey 2006). The respondents of the structured interview however did not have knowledge of with whom they were engaged in a dialogue with. The findings show, that the respondents are unaware with which departments they are dealing with, and hence are doubtful if they have applied for all the necessary applications.

One of the customers interviewed for this study had extreme difficulties in finding the service or any information regarding it, another had no such difficulties. The respondents had opposing views also to whether or not they received enough guidance on how the service should be used. The allocation of information in case of problems, due to technological errors etc. received also mixed feelings. Therefore, it seems that some users are better equipped in using the service than others and hence do not need as much guidance in using it. It may also be that some users had prior knowledge of the service and hence did not have to start their learning experience from level zero. Moreover, dialogue may be more active towards some segments, under serving other parts of the clientele. Like one of the respondents summarize:

"I feel that the service complicates communications in its current form. The units do not seem to know their roles and the users of the service have an extremely fuzzy image of what things are actually under control and what are not." - A customer of the service

Usage encounters are related to the actual use of a service (Payne, Storbacka and Frow, 2008). While the respondents liked the appearance of the service, the actual use of the service received mixed feelings. The flow of information in the form of dialogue had influences on what kind of perceptions the respondents had on the use of the service; negative or positive. The respondents, who felt under informed and guided, had a negative stance towards using the service, while others whose knowledge base seemed wider, had a positive attitude towards the system.

However, all of the respondents seemed unaware of how to give feedback, an important aspect for dialogue, and furthermore for co-creation. Critical encounters were hence absent (Payne, Storbacka and Frow 2008). Nevertheless, when asked if the new service had changed the individual's perceptions of the city's units, a respondent stated that:

"Understanding that the state officials and event's organizers are, after all, on the same side of the table helps the cooperation and communication. No hiding or moping, but [the service offers] opportunities to ask guidance without a fear of ban for one's actions." - A customer of the service

Needless to say, this comment was given by a respondent who had a positive attitude towards the service. He or she highlights dialogue, which takes place between the state officials and the customers. However, the same respondent also stated:

"*I was unable to provide the requested maps as attachments, from a computer in the city's network, due to some restraints. I also did not find the kinds of maps that the service required, or not the kinds in which I could have done some markings. Does this require too advanced computer skills*?" - A customer of the service

Service encounters take place between the customer and the service personnel, or the service application, which in this case is the online service platform (Payne, Storbacka and Frow, 2008). The respondents felt that the personnel had contacted them if their applications needed additional information. They were also relatively unanimous in their opinion on the quality of service received from the personnel; none of them perceived it as poor.

Therefore, the findings show that the service encounters with the personnel are of good quality. The problems seem to be embedded in the logic of the service; its processes. The findings related to customer processes, which influence the customer's experience will be discussed next.

6.4.2. Managing customer processes

The respondents appreciated the visual appearance of the service. However their *emotions* seemed mixed, leaving some responders with negative experience of the service, and others with a positive experience. The respondents were asked if the service made them feel stressed, and as the previous results indicated, the respondents with a negative take on the service felt stressed, while the others did not. Moreover, their views to whether or not customers were listened to when the service was developed were consistent with their opposing views. The respondents who felt like no customers at all were consulted when the service was created also felt that the current service is a backwards step in the event's organizers services. The respondents also questioned if he / she would receive any support from the city if it was needed. The emotions of the respondents towards the service were blatantly different.

The differing views continued with questions related to *cognition;* to customer promises and value explaining messages (Payne, Storbacka and Frow 2008). Once again, the respondents who felt that they were able to find all the information they needed, also felt that the service was designed from the customer's point of view. The finding further highlights the importance of dialogue, and knowledge transfer to the how customer centric a service is seen. One respondent states: "*I would need a clearer description of the service. It is unclear to me which permits I do not have to apply after this service*." This customer has obviously not understood the idea of the service, which was promoted by the state officials: the idea of being able to apply for all permits via this new service.

Behavior is linked to the user's ability to use the service. An interesting finding was that the perceived number of mistakes found in the service was also bluntly different according whether the respondent saw the service in a positive or negative light. The respondents with negative experiences felt that the service was not easy to use; they were not able to tend to all the matters that they should be able to; and the service in fact made their functioning more difficult. All in all, the service seemed to have a major negative influence in the respondents' processes. A contrasting view was again placed by the respondents with positive experiences.

At this point, the results of the structured interviews were expected in regards to how the respondents felt on the *promises* the service made to them. Respondents who felt like the service did not meet their expectations, and who could not trust the service, had naturally a negative experience. They also indicated a strong negativity towards having to use the service in the future. However, what was surprising was the fact that the same respondents felt that they nevertheless got all of the decisions and permits from the state officials on time. This apparently had no positive influence on the customer experience.

6.4.3. Evaluation of the outcome of the co-creation process

At the moment of the research the departments had not experienced any new value realizations as a result of the new service. However, they did see possibilities in the increasing transparency of operations. After all this may result in the development of internal processes, and in learning. The development project however has reinforced the relationships of the actors, and this was emphasized as a positive thing by all the interviewees. Once the internal processes of the organization are in line with the customer processes, the operations will flow more smoothly (Nenonen and Storbacka 2010).

The starting point of the service was the client's needs. The worldview has therefore taken steps from a traditional organizational centrism towards customer orientation. However, the empirical data indicated that the service proposition is not yet well accepted by the customers. Nevertheless the sift in the logic was also evident as it was now the responsibility of the bureaus that in the end the customer has all the relevant permits it needs.

"This is a guiding service, to which a lot of supporting actions such as information buttons, guides and so on have been added to. I would see that it is at least for the new event's organizers a safer way to operate. Plus for the students of the industry, this service can be used as teaching material. But it is not the customer's concern anymore to contact us. We have to make sure that we get the necessary information. So it is our responsibility to dig out the

information, not the clients' responsibility to understand our world." Member of the management team

While the management is satisfied with the content of the service, it seems that some actors would still wish to make changes in the guidelines that are given to customers. They were concerned with keeping the promises given to the customers. This was also supported by the customers. For example, at the moment if a customer has a question related to a point in the service, it is quite impossible to know whom to contact.

"It must be [a challenge] for the client to be sure that all the permits are okay. Because at the moment the client needs to follow which department have given the green light, but there are no traffic lights in which all lights are turned on when everything is okay. So the client has quite a bit of responsibility." Member of the management team

To conclude in the light of these statements from the network managers, it seems that the shift in the worldview, which was earlier described, did not fully take place yet. The service promise is still under construction and the customer is not yet given the promised extra value via the new service. However, the actors feel positively towards the service and believe that it will function properly in the future, after the service is further developed. Major concern of the customers is whether their applications will be handled or not. The promises set by the service are hence not fulfilled. The customers also acknowledge that the units within the city organization have some uncertainties related to the service.

6.5. Network management's role in value co-creation

The first major research question of the present study was "*What is the role of network management in value co-creation?".* This subsection will answer to the first research question by first discussing the findings of the specificities of network management in public organizations, and second how S-D logic may be applied to the management of networks in the light of the findings of the present study.

6.5.1. Specificities of network management in public organizations

There are two main categories of networks in the context of public organization. These are *policy networks* and *collaborative network.* The network in the present research is a collaborative network, a collection of public organizations, companies and agencies, which together co-create a service (Rethemeyer and Hatmaker 2007). In the case network, there were in total 14 departments, 2 service consultant, 4 entrepreneurs and political actors involved in the development work (Rautvuori 2010).

From the literature review, network management in public context was found to take on a form of *steering towards a joint problem solving*. This view by Kickert and Koppenjan (1997) is compatible with S-D logic. The hierarchical management style is not compatible to public networks. Moreover, it does not motivate the actors of a network towards the co-creation of knowledge and of value. Also, unofficial work methods were found to have a positive impact on co-creation. One of the members of the management team stated that she felt her role to be that of a '*facilitator'*. Facilitator is one of the game management, network interaction management, methods (Kickert and Koppenjan 1997).

"I use this term called facilitator, as we were kind of the people who inspired people to think differently. And maybe at least provoked people to think that things can be done differently." Member of the management team

However, mediation and arbitration are also needed. In other words, channels for communication need to be opened and resources gathered even when conflicts arise (Kickert and Koppenjan 1997). Table 3 below summarizes the managerial functions, tasks and roles, which were reviewed in section 2.2.. The key factors found from the empirical data, which are related to network management in the specific case context are listed below each section in italics.

Table 3: Network management requirements and processes in public context

	Functions –level Governance modes, which are different according to the context of operation.	**Tasks-level** Characteristics of the network determine the required management tasks	**Roles-level** The managerial roles are fundamentally related to resources and capabilities.
Requirements of network management	Have a clear picture of the network by identifying its structure, distribution of power, clarity of the network, and level of strategic intent.	Set common goals. Create an atmosphere of trust and facilitate information sharing, which bases learning and knowledge creation.	Skilled in relationships management, diplomacy, conflict recognition & management. Strong tolerance for ambiguity and uncertainty.
Requirements of network management that are highlighted in the empirical findings	*Identify key actors, and resources. Identify who or what holds power over the functioning of the network.*	*Communicate the goal of the network. Develop activities, which foster information transfer and flow.*	*Facilitator, who can both manage the process and relationships.*

Processes of network management	Activation/deactivation and synthesizing to generate patterns among actors, which foster coproduction. Framing and mobilizing to manipulate perceptions of dependence.	Build communication channels, experiences in co-working, long-term relationships, design incentives and penalties, and create a sense of the future.	Managerial abilities affect how collaboration is build. It is fostered through trust, common purpose, mutual dependency and resource availability.
Processes of network management that are highlighted in the empirical findings	*Identification of key actors. Communicate the development process to all interest groups.*	*Motivate actors, use co-creation, and continue the development process after initial launch.*	*Process management skills and resource management skills are needed.*
Context: Public Organizations	Joint problem solving: “soft guidance”.	Improve interaction between actors: foster cooperation and remove barriers.	A mediator, process manager, and network builder.

Source: Source: Agranoff and McGuire 2001, Barabasi 2002, Jackson and Stainsby 2000, Järvensivu and Möller 2008, Möller and Halinen 1999, Möller, Rajala and Svahn 2004, Kickert et al. 1997, etc.

It was found from the empirical data that three aspects of Järvensivu’s and Möller’s (2008) network management model were highly important for the management of public networks. First, *activation of the right participants* is a crucial task of network governing (Agranoff and McGuire 2001, Järvensivu and Möller 2008). However in public context the managers may not have sufficient power on the mobilization of right actors.

“I think it has been important that the attitude [of the actors] has been right. That they want to do things! --- In my opinion it was a challenge to find the right participants who really wanted to develop this thing further.” Member of the development team

It was also found from the empirical data that the network managers asked for certain types of actors to engage in the development function. However, it is the responsibility of the top managers to allocate the resources to developmental work.

”*Maybe [it is a challenge for management] that each department’s director or manager, when a decision regarding this kind of a development work is done, should motivate the team and the middle level as well as the lower level personnel by stating that “hey, we are involved in this thing, so do your best”. That it is not just another project. The upper management needs to give the strategic guidelines according to which people have to work.”* Member of the management team

Hence, the power a network manager in a public context has over the function of activation is limited. This is also evident in the “soft guidance” management approach, which was highlighted in the literature research. Even though the case network of the present study is centralized in oppose to decentralized, the power the network manager has is limited due to the public context. Therefore problems need to be solved jointly, as the research indicated, and the role of the manager is that of an orchestrator (Rethemeyer and Hatmaker, 2007) and facilitator (Kickert and Koppenjan 1997, Rethemeyer and Hatmaker, 2007).

Second, *the identification and elimination of barriers* is related to the management function of synthesizing in Järvensivu’s and Möller’s (2008) network management model. Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011) found that the barriers of service networks in city context were often related to the context. Enablers on the other hand were connected to individual factors or culture. Network manager has to blend in the various participants and their sometimes varying goals and values. This was found to be an important managerial issue also in the empirical data. Hence diplomacy and skills in relationship management are needed. The attitudes of the actors, and the varying organizational cultures of the actors influenced tremendously the work of the network. Once again, the removal of barriers and improvement of interaction is highlighted.

Thirdly, framing, which intends to *create an understanding on the value that the network should produce*, was found to be important for the management of public networks (Järvensivu and Möller 2008). Motivating and inspiring the participants should be standard parts of network management, and it was also emphasized in the empirical data of the present research. The service logic received some change resistance. One of the members of the management team stated that not all of the actors saw the service as a coherent whole; they rather focused on the individual service points.

“A major pitfall in my opinion has been the level of process knowledge. --- First you should understand the complete service. At times it still seems that people might not necessarily understand what they are part of; instead they focus on their own operations and do not want to look outside of them. --- This slows down our work tremendously. --- People do not understand that the customers seek conditions in which they are able to organize the event. They do not apply for individual permits.” Member of the management team

The actors of the network stated that they saw the Event’s Unit as inspiring, focusing on novel ideas. The managers also noted that work towards the motivation of actors was of high importance throughout the development work. The empirical data furthermore supported the view withdrawn from the research, in which the manager’s role is that of a mediator and process manager. In fact, the manager of the network herself stated that she is promoting a new management method in the city; process management.

In summary, network managers in public context may face many obstacles that are not common in the networks consisting of private organizations. The mobilization of right participants requires work. Activation of the network requires support from the top management. Like Rautvuori (2010) and Jyrämä, Hakiao, and Mattelmäki (2011) found, the major barriers of network management are related to the context. However, as the researchers found the enablers to be individual factors and culture, motivation of actors and inspiring them should be the foundations of network management in public context. For this to be possible, the manager should be a facilitator, and have knowledge of both relationship management as well as process management.

6.5.2. Application of S-D logic into network management

In S-D logic services are seen as solutions for complex needs via resource applications. The fundamental difference between S-D logic and G-D logic is that value is produced rather than provided. As value is determined by the customer, S-D logic is also inherently customer oriented. This naturally creates a need for different kind of management style; co-creation needs to be facilitated (Vargo and Lusch 2004, Vargo and Lusch 2008a, Vargo and Lusch, 2008b).

Emphasis of S-D logic is on relationships and interactions, which are the basis of value co-creation. The context of value creation in S-D logic is networks, which are the concept's fundamental units of analysis (Vargo and Lusch, 2008a). Similarly, IMP group's approach sees markets as networks (Håkansson and Snehota, 1995). However S-D logic emphasizes value more than IMP group, whose contribution to value discussion is minimal (Ford to be published). Resource based view is criticized for not making a difference between value creation and value capture (Archrol and Kotler 1999).

In public organizations customer-orientation can simply be seen as the attempt to learn about the stakeholders (Vuokko 2004). In the present study the client was at the focus of the development work throughout the functioning of the development network. The unofficial visits, 'Safaris' and events were designed to learn from the customers. As the goal of the service was to help the customer in their processes, the network succeeded in the being customer-oriented. However, this is only one perspective. Good intentions do not guarantee a good quality service; it is the experience of the customer, which determines whether the service is a success. According to Provan and Milward (2001) public networks are most effective when they solve problems and serve their customers.

S-D logic takes on a process view: resources have to be used, applied, or integrated to create value. Value is therefore contextual and created between one or more actors, in a networked relationship (Vargo 2009, to Vargo and Lusch 2008b, Barile and Polese 2010). This process view applies well with Payne, Storbacka and Frow's (2008) model, in which processes between the customer and the organization are highlighted. Therefore, the focus should not be placed purely on external factors. What is important is the configurational fit between internal and external processes (Nenonen and Storback 2010).

It is important to note, that S-D logic is not only about producing value to the customer but also for the organization. However, the findings show that the actors currently see little value in the new service for them. While they all have a positive take on the future, they all stated that the service could have been designed to meet their needs better. Therefore the customer-orientation taken in the beginning of the development work has been overwhelming, leaving little room for process management views.

"The biggest benefit [for internal processes] at the moment is the improved smoothness of actions and therefore the service may seem as more coherent to the clients." Member of the management team

As processes were not addressed in the beginning of the development work, the service process is somewhat unclear to both the customers and to the service providers. The touchpoints of co-creation within the service have hence been under-designed. This creates dissatisfaction for all of the network actors. In accordance to the nature of co-creation, and of S-D logic, the value proposition is either accepted or rejected by the customer. If the promises and expectations are not met, the service experience is negative. Therefore the management of promises is important (Brown and Bitner 2006).

"At the moment --- it [application] continues its way within the service process as fragmented pieces and might not come together into the coherent whole again so that from the customer's point of view it [the application] would come back as one package, either as approved, declined, or how ever it will be given." Member of the management team

To summarize, this study agrees with Archrol and Kotler (1999) who emphasize the importance of networks relationships, and knowledge resources. In network theories actors, activities and resources are highlighted (Håkansson and Snehota, 1995). Furthermore one needs to also consider the network-within-network relationships when applying S-D logic into network management. The network in which the service is provided is not the only context one should be concerned of but also your internal as well as external customers' networks. Therefore, in municipal context, net management capability should also be highlighted. Furthermore the bonds, the relationships and interactions between the actors should be attended for. Hence, knowledge management should be designed to penetrate all the relevant networks and network levels.

6.6. Enhancing value co-creation with network management

Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011) found that co-design methods influence positively trust and motivation in service networks, situated in city context. This section discusses the components of value co-creation, which can be influenced by network management.

The present research shares the views of Ballantyne and Varey (2006) who highlight the importance of exchange activities to co-creation, which in accordance to S-D logic are facilitated by *communication interactions*, *knowledge application*, and *development of relationships*. The present study supports these views. One needs to note that co-creation may take place during the development of a new service as well as during the service process itself.

The network, which was researched in the present study, was found to have gone through minor changes throughout its development. Rautvuori (2010) found that in the development of the service network, there were in total 13 representatives from different bureaus and agencies, four from the private sector, and two outside service design consultants. During the early stages of the development work the network was building up its form, and some of the actors were left out of the development work. According to Rautvuori (2010) the project manager felt that it was unnecessary for some of the actors to be part of the project, as their roles in the final service would be minor. However, what was found in this study was that the actors who were involved in the final service network were perplexed to why the actors, who would have had valuable insights into the service, were left outside the development work. Furthermore the interviewed members of the development network felt that if the representatives of their units were not present in the meetings of the network actors, the issues important for their work were not attended.

From the activities of the development network, the Safari's, which were unofficial by nature and took place outside of the organization's premises, were praised. They enabled the actors to experience the customer's world and to step outside of one's own point of view. Moreover, the actors said this experience to be important for the understanding of the customer's point of view. What hindered the actions of the network was the at times lagging speed of decision making. This again comes back to the involvement of top management and to the commitment of the actors.

Like found on section 3.2.1, Kickert et al. (1997) saw *interactions* as the major evaluation criteria of public networks. The execution of interaction process can be used as an evaluation tool in public networks (Klijn and Teisman 1997). In other words, communication is an essential factor of co-creation. What may act as barriers of interactions in municipal context, are culture, background of the actors, language and other factors related to the context (Jyrämä, Hakio and Mattelmäki 2011). They are crucial for co-creation in public networks. Brown and Bitner (2006 p.396) suggest that "*applying service marketing knowledge, skills, and best practices in corporate strategy and business education are ways to "lead through the service-dominant logic*". Therefore to manage these interactions in public networks one needs to have understanding of marketing, skills and capabilities needed for the specific network in question, and an understanding of the strategic intent and value creation system at hand. Network managers need to promote and sell their views when dealing in the public context.

"It was very important [for the success of the project] to sell the idea of service design and customer centrism to the development team. --- And as this was a pilot project on so many levels, it was very difficult to sell these ideas to the team. They got a bit confused because there were so many new things combined into the project." Member of the management team

A resource that was frequently brought up was time. Some of the actors felt that they did not have enough time to focus properly on the development of a new service. Others felt that they did not have time to learn to use another new system. Moreover, some felt that the new service requires too much time to use. The allocation of time is linked with top management. After all in public context the top management dictates how much resources an officer may use for development work. Also in some units the work related to events is highly seasonal. Therefore season workers would be needed to guarantee high quality service for the event's organizers.

According to the literature, the customer's relationship experience is based on cognition, emotion, and behavior (Payne, Storbacka and Frow, 2008). The customer should be allowed to *co-construct the service experience* to fit the customer's context (Prahalad and Ramaswamy 2004). However, like previously mentioned, the current service might not scale to the needs of all of its customers. As value is contextually based, the value is unique for all customers (Vargo and Lusch, 2004, Vargo and Lusch, 2008a, Chandler and Vargo 2011). In the light of this statement, an online service seems like a good platform for service processes.

Like was found from the literature review, *communication and dialogue* are also at a key position in co-creation. The importance of dialogue for value co-creation has been emphasized by multiple researchers (Prahalad and Ramaswamy 2004, etc.). The target of dialogue should be to understand the points of views of both customer's and the firm's. To learn from each other is essential to co-creation.

The model by Payne, Storbacka and Frow (2008) also highlights learning processes. It has an impact how the customer will engage in co-creational processes with the supplier in the future. With dialogue customers should be able to produce different *experiences*. Duncan and Moriarty (2006) state that a service is an *experience of communication*.

A common agreement via open conversation should also be made on how the actors will be engaged in the production process. Mele et al. (2010) share this view; they argue that the competitiveness of a value network is dependent on its ability to learn. The co-creation of knowledge and of learning calls for an open attitude towards the topics of conversation (Ballantyne and Varey 2006, Jaworski and Kholi 2006). Evidence of this can be found from the empirical data.

"To give space, to give changes to speak out, and to voice one's opinions, and room for people to be themselves [needs to be given]. And to give these people room to be themselves. These are important. And to be heard." Member of the management team

As a as a summary, the importance of organizational culture on knowledge managements was highlighted numerous times information needs to flow to all interest parties so that the networks within the network are also motivated and activated. Service network managers in public context need to know what the strategy of the network is, have skills in marketing, and in relationship management as well as in process management. Essentially, co-creation in this context can be seen as the application of knowledge, which is based on what was learned from dialogue held with the customers. Therefore the ultimate evaluation tool of a co-creation process should be how the customer experiences the service.

6.6.1. Considerations regarding the requirements and barriers of public service networks

Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011) found the enablers of public networks to be trust, motivation, open mind, and personal relationships. Other enablers of the network process were seen to be common goals and target setting. The present study also found that motivation, communication and relationships management are key tasks of network management in public context. The barriers on the other hand, according to Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011), were the independence of departments, resistance to change, lack of knowledge, artificiality of networks, and lack of concreteness. Also, lack of resources was seen as a barrier. This research supports these views.

Like mentioned in the previous chapter, network managers may enhance co-creation by facilitating communication interactions, knowledge application, and development of relationships (Ballantyne and Varey 2006). Rautvuori (2010) found that the inability to transfer what was learned into actions is a barrier to networks in municipal context. This study supports the view. It also hinders co-creation of value within networks.

"These kinds of projects have failed in the past due to the old ways of working within the city organization, due to bureaucracy and so on. Because we have this organizational structure in which it is very difficult for departments to communicate with each other." Member of the management team

What were identified in the literature as major challenges to information flows were differences in organizational culture, lack of trust, and major power distances (Saz-Carranza and Vernis, 2006). The present study supports these findings. Organizational culture was also seen as the major factor impacting information flow in the empirical data. The level of dialogue varied within the units, which were involved in the development of the service and within the units that currently work with the new service. Units, in which the information flow was more frequent and stable, were more satisfied with the current system than the units in which information flow was minimal. Network actors need to be committed to transfer the knowledge they have gained to the rest of the organization.

"It [motivation and commitment] does not come from up but it means that in the meetings there are always people whose responsibility it is to take the information of what we will do how we will do it to their departments. Because it is not your colleague who can say to you what we are going to do. In the end it is always the duty of your superior to distribute responsibilities. --- So the involvement of these two [workers and managers] was very important." Member of the management team

Moreover what can be seen as utter most importance for the management of co-creation in public networks is the relationship managing capability. Resistance to change and lack of vision were also seen as major barriers to network processes (Rautvuori 2010). Therefore, the manager of a network in public context should be given tools and guidelines on how to manage people who are used to highly hierarchical working conditions but due to co-creation should now work in less formal conditions, without losing their motivation or commitment.

"The city organization does not have a strategy or a guideline on how these kinds of projects, which cross multiple departments, should be managed and how people can be motivated so that they will stay in the project and commit to it." Member of the management team

To summarize, knowledge management and relationship skills are needed to minimize the barriers, and to leverage on the enablers of network processes. However, uneven distribution of resources and goal setting are related to the strategies of each unit. Therefore, network managers in municipal context should be given clear guidelines as to how these issues may be dealt with in a city organization. This would also clear issues related to power and motivation.

7. Conclusion

The target of the present research was to *study network management in a public organization, with special attention to co-creation and the service logic*. The research was carried out in a case study format. To gain insights into the networked co-creation processes in the case network, a total of nine people within the service value network were interviewed. The customers' points of view could not be fully researched due to the small sample size of the online structured interview. Therefore the emphasis of the present research has been on the government officials' perceptions. . The final conclusions of this research will be presented in the following chapter.

The two main research questions of this study were: *"What is the role of network management in value co-creation"* and *"How can value co-creation be enhanced with network management?".* The results were gained through a review of existing literature and empirical data gathered from the research case, a service value network from the city of Helsinki. The target of the present research was to look at the phenomenon from both internal and external perspectives. However, the customer data was limited and therefore the study focused on the views of internal actors. The two research questions had each sub-question, which were researched in the literature review.

It was found that the use of networks in service provision is increasing in the public context as well. Also issues related to the role of customer in the service provision have been under discussion (Provan and Milward 2001, Vuokko 2004). Under study were factors related to the characteristics of public networks, value networks, as well as their barriers and enablers. These enablers of networked processes are often related to individual factors, while barriers are usually related to the context (Jyrämä, Hakio and Mattelmäki 2011). Nevertheless, what is important to note is the fact that the customer's value drives a value service network (Basole and Rouse 2008). Therefore network management in public context may be evaluated based on how interactions are executed and enhanced. Network management can be seen as successful if it is able to foster cooperation and remove barriers of that cooperation (Kickert et al.1997).

Network management, management functions, and manager's role were further explored. These chapter formed the basis of two sub-questions: "*What are the specificities of network management in public organizations?*" and "*How should the identified requirements and barriers of the network type be noticed when improving public network management?*". Järvensivu and Möller (2008) claim that the management of networks and the management of organizations are fundamentally comparable as they both pursue value-creation. Therefore network management employs techniques similar to organization management. However, the type and context of networks influences their management (Järvensivu and Möller 2008).

The research then moved to the exploration of value co-creation. S-D logic was used to research resources, relationships and value with service logic, as the concept was found highly compatible with network theories. Moreover the management perspectives to value co-creation were researched. Value according to S-D logic is phenomenological, it is derived from usage situations and interactions (Vargo and Lusch 2004, Holbrook, 2006, Woodruff and Flint 2006). Furthermore context frames the exchange, service, and the perspectives of actors bound in a unique service ecosystem (Chandler and Vargo 2011).

These discussions gave theoretical foundation to the sub-research question of: "*How can the concept of S-D logic be applied into the management of networks?*" and ultimately to the two main research questions presented above. The firm's network, or what the S-D logic calls as the "beneficiary" network, is not the only network one should be concerned of when thinking about the value co-creation (Vargo 2009). Due to value's relational nature, the customer's network has to be included in the equation as well. S-D logic is applicable to the way managers are seen in network management context; as mediators and facilitators. This highlights interactions and soft guidance (Kickert et al 1997).

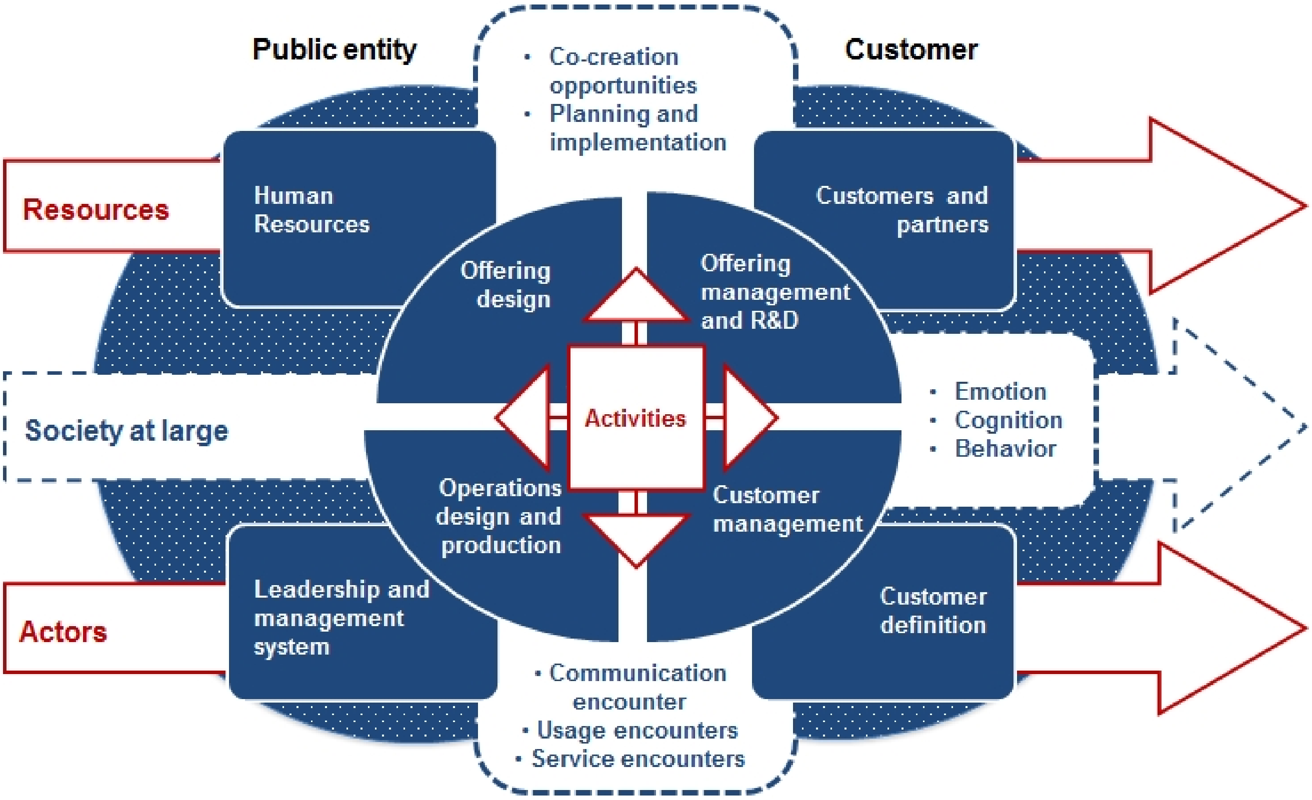
The theoretical framework of the present study was developed based on the main theories found from network theory (Håkansson and Johanson 1992, Håkanson and Snehota 1995, etc.), S-D logic (Vargo and Lusch 2004, 2008 etc.), management of value co-creation (Vargo and Lusch 2008a, Nenonen and Storbacka 2010 etc.), and value service networks (Payne, Storbacka and Frow 2008, Brown and Bitner 2006 etc.).

Case study was chosen as the research method of the study, and therefore the study is qualitative by nature. The discussions leading to this, as well as to the uses of thematic interviews and structured interview were presented in chapter 5. However, as mentioned previously, the data received from the online based structured interviews was limited and hence its contribution to the present study was minimal. In total four responses to the structured interview were gained and seven thematic interviews with the representatives of city organization were conducted.

The results of the thematic interviews were analyzed and discussed based on the theoretical framework and research questions. As the network of this study is placed within a public organization and its customers are businesses instead of consumer, the theoretical framework presented in chapter 4 needed to be altered. The adjustments done to the framework as well as the final conclusions of the study will be presented next in the final chapter of the research.

The Figure 14 below illustrates the findings of the present study in relation to the Theoretical Framework described in section 4. The most important factors to co-creation regarding the resources, actors, activities, and processes are highlighted in the new framework. Also three modifications to the original framework were done. These changes will be explained next.

Figure 14: Adjusted Theoretical Framework: Management of co-creation process in public networks



Resources in the theoretical model were withdrawn internally from human and financial resources as well as technology, and externally from customers, infrastructure and partners (Vargo and Lusch 2008, Nenonen and Storbacka 2010). In regards to the *management of the network resources*, the empirical data gave support to the importance of human resources in public networks. Human resources can be seen as the most important internal resources, while customers and partners are the most important external resources.

The findings of the study indicate that the allocation of relevant actors is important for the functioning the network. The process of service development did start with the identification of who the customer was. This was something new for the organization in question. Also the roles of the actors changed during the development process. The managerial team increased in size when the IT department was included in the development work. Also a unit, which in the development phase was an "ordinary" member of the network, received a highly important role in the final service network. What is important to note is that the actors did not request these roles, they were appointed to them. Therefore overcoming internal resistance towards roles is of high importance.

First change in the framework was that the network names were changed to suit better the context. Provider's network in the renewed theoretical framework is called the *Public entity*. Also, the customer network is now simply named *Customer*. The overcoming of internal resistance is highlighted in the findings of this study. When *managing the network actors*, resistance can be overcome by leadership. Customer definition on the other hand is a means to overcome external resistance. The management system and leadership style have high influence on co-creation in public context. The managers fostered co-creation for instance through informal working methods (Jyrämä, Hakio and Mattelmäki 2011). The management system needs to be designed so that the top management level is also activated. Other activities, which were emphasized in the findings, included the co-creation of dialogue and value processes. Dialogue and conversation were crucial for the satisfaction of actors, both at the individual level and at the organizational level. It is crucial to understand that these actions are based on interactions. Therefore customer and market management need to be emphasized also in public networks. This is a mean to increase the quality of customer experiences, and therefore of the overall service quality. The management system is therefore important also for the execution of interactions between customers and the network in question.

Like mentioned previously, both theoretical as well as empirical findings highlighted interactions. In the theoretical model these interactions were seen as encounter processes related to communication, usage, and the actual service (Payne, Storbacka and Frow 2008). Therefore in *management of the network activities*, processes leading towards enhanced interaction were emphasized. These processes were identified in the literature as: communication encounters, usage encounters, and service encounters. These touchpoints should hence be carefully designed, and the processes behind them clearly specified to all actors involved in the service provision. This requires opportunities of co-creation, which has to be noted when planning and implementing the supplier processes.

Second, supplier processes in the framework could not be clearly linked with only the supplier, as the network is set in a public organization and it has both internal and external customer. Furthermore these customers are other organizations. Due to the nature of the case network, its context and customers, the supplier processes of co-creation opportunity creation, as well as planning and implementation were moved in the theoretical framework in between the public entity and the customer. The customer processes of emotion, cognition, and behavior had an impact on the co-creation of value to the customer.

Thirdly a factor was added into the framework; the society at large. The political forces, which influence public organizations, were not included in the first framework. However, as their influences on the operations of the network are noticeable, society at large had to be included as a force affecting the entire service value network.

Offering design and management also have to be highlighted as the design of the offering influences highly the customer experience. The empirical findings also stressed the importance of production and operations design. They impact the service process, service points, service experience and therefore the customer experience and customer satisfaction. Nevertheless, they are also important for the organization's internal operations and may hence result in improved profitability, or ultimately superior service offering. This calls for better processes thinking and process management, which also improves the internal operation of public organizations.

The present research has some limitations. S-D logic has not been researched in a case study format in a similar context before, therefore no prior research on the suitability of the method could be found. Nor could similar researches be used as benchmarks. Also due to the qualitative nature of the research the generalizability of the study results is poor. However, in qualitative studies, this is expectable. Furthermore the results of the study have remained somewhat superficial, as the customer perspective could not be used to evaluate the outcome of the co-creation process. Also as the development of the service took place more than two years after the interviews were held with the government officials, time may have influenced their perceptions, memories, and opinions. The study was however able to research how value co-creation as a concept can be applied in a public network, as well as identify key areas which should be noticed when managing co-creation of value in the specific case context.

Based on the findings, further research should be conducted on the role of top management in the management of value co-creation in public networks. Also, as information management was seen as a major factor in the success of a network, the flow of information and knowledge creation in networked processes within a public service network should also be researched. Furthermore, the role of the customer in these kinds of public service networks could also yield interesting research results, which could not be utilized in the findings of the present research. Co-creation of value within the context should be further researched, as the findings of the present study supported the view that interactions are crucial for the success of public networks.

To conclude, managers need to pay attention to defining the market and customers and to the selection of actors. Co-creation of value can be emphasized with dialogue and facilitation of encounter processes, which are the basis of interaction. With process thinking, the transparency of actions within the silos of the organizations can be enhanced and therefore internal operations may be improved on. This improves customer satisfaction as well as creates cost savings for the public organization. Further recommendations to the city of Helsinki are discusses in the next chapter.

7.1. Recommendations for the City of Helsinki

As the present research was conducted to the city of Helsinki, this subsection will give recommendations for the enhancement of co-creation in service networks, based on the theoretical and empirical findings of the study. These recommendations are related to eight aspects of network management, to: 1) interactions, 2) dialogue and communication, 3) customer involvement, 4) top management support, 5) relationship development 6) knowledge management, 7) resource management, and 8) process management.

Interactions are the key in co-creation of value whether with internal or external actors. Therefore the planning and execution of communication cannot be highlighted enough. Dialogue needs to take place between all network actors. However, it is also important for the motivation of the actors that concrete actions are taken based on the discussions. While informality in meetings should still be promoted, discussion needs to be led so that they flow one from topic to another. Moreover, information has to flow from bottom-up and top-down.

Trust needs to be built also via relationship development. The findings of this study further support the views of Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011) that informality is important for co-creation. It can be used to foster relationships development, creation of network roles, and furthermore the creation of trust, which is essential to networked processes in city organizations. The goal of co-creation of value in this context should be a win-win situation, which is fostered with collaboration. Learning is essential when dealing in complex environments.

The importance of actors was highlighted in the theories related to networks and to S-D logic. Human resources were found as the most important resource of the network. Naturally actors are the ones creating value. Service dominance can be further highlighted in the city organization's networks by activating the customers more dynamically in the development processes. customer perspective was not as evident in the network's later operations. Furthermore, as customer satisfaction determines the success of a network in public context, the importance of co-creating the value proposal is highlighted. Iterative processes and experimentations with the customers and government officials may help the acceptance of the value proposition (customer) and felling of inclusiveness (city organization). While the creation of the new service started with the identification of who the customer is, the

While service dominance is evident at the strategic level of the city organization, the adaptation of the new worldview has faced some challenges. The findings of this research illustrate that the organizational cultures of the departments, and their possible reluctance to change, are highly correlated with the laws that these departments have to follow. However, the actors' perceptions are surprisingly also linked with the level of top management support. Clearly defined requirement and responsibilities of the development work need to be also communicated to the top management. The departments, which were given sufficient resources to take part in the network processes, were more satisfied and willing to change. Furthermore, this study found also a link between the satisfaction of departments and the quality of knowledge management within the departments. Therefore network managers should design information flows carefully. The more the actors within the departments felt they were informed, and were able to participate in the development process, the more satisfied they were and hence more willing to adopt new working methods. These can be seen as methods to decrease the "artificiality" of networks, which Rautvuori (2010) and Jyrämä, Hakio and Mattelmäki (2011) found as barriers to networked processes.

The findings of this study also led to the conclusion, that the level of process management needs to be increased in the city organization. The service should be seen in its full spectrum, not only as separated pieces of service points. Furthermore customer orientation should not overshadow the importance of developing internal processes and transparency of operations.

Challenges to the requirements of network management arise from the traditional hierarchical organizational culture of the city organization, and its silod organizational structure. Furthermore the study found that the actor's roles may change, and multiple actors may take part in the management of the network. However, the role of network manager in city organization is that of a facilitator and management style needs to be 'soft'.

In summary, network managers in city organizations may enhance co-creation of value by emphasizing the following aspects:

- in Management of Network Activities:
    - Interaction design
    - Dialogue creation
    - Relationship building
- in Management of Network Actors:
    - Customer involvement and encounter
    - Top management support
- in Management of Network Resources:
    - Resource management
    - Knowledge management
    - Process management

To conclude, the findings of this research highlight the factors of co-creation that be enhanced with network management, in the specific context of municipal organizations. When managers in public organizations are aware of these network management areas, they may improve the co-creation processes leading to a better value promise, delivery, and ultimately to a better customer experience. Therefore, the study offers new perspectives to managers of public service networks on how customer satisfaction may be increased.

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Appendices

Appendix 1: Interview themes

Tausta:
- Missä organisaatiossa on töissä
- Mikä oli rooli ja tehtävä kehitysverkostossa, sekä tällä hetkellä nykyisessä palvelussa

Theme 1: Verkoston nykytilan kuvaus:
- Miten oli mukana kehittämistyössä ja mitä tekee nyt.
- Mitä verkostoja näki kehitysvaiheessa sekä nyt: miten ovat muuttuneet (oliko selvää ketkä osallistuivat ja mitkä roolit heillä oli, ketä palveluverkostoon nyt heidän mielestään kuuluu). Esimerkkejä?
- Miten kuvailisi syntynyttä palvelupolkua sekä verkostoa yleisesti.
- Näkee palvelun ympärillä olevan verkoston, millainen se on.
- Millainen suhde eri toimijoiden välillä on nyt.

Theme 2: Palvelupolku verkoston toiminta

- Mitkä olivat tärkeimmät tekijät projektin onnistumiselle.
- Millaiseksi kommunikaation rooli koettiin.
- Kuinka kommunikaation toimivuus on varmistettu.
- Kuinka suhteita ylläpidettiin ja toimivuutta luotiin (yritettiinkö suhteita ylläpitää myös epävirallisin keinoin ja ilmapiiriä, mihin luottamus pohjautui, rakennettiinkin toimivuutta yksiköiden yli, yksilöihin vai myös organisaatioiden välistä, miten erilaiset organisaatiokulttuurit vaikuttivat suhteisiin, mikä loi paineita suhteille ja mikä taas loi luottamusta). Esimerkkejä?
- Mikä oli mielestäsi tapahtumayksikön rooli toiminnassa (miten tehtävät jaettiin ja kuinka palvelun julkaisuun valmistauduttiin yms.). Esimerkkejä?
- Millaisia haasteita näit verkoston toiminnassa.
- Millaisia rooleja verkostossa nousi esille? (Esim. ideoija, vetäjä, innostaja yms.) esimerkkejä?
- Millaisia ominaisuuksia kyseisenlainen verkosto yleensä vaatisi mielestäsi. Esimerkkejä?
- Onko verkoston johtaminen jatkunut myös kehitystyön jälkeen? Esimerkkejä?
- Minkä organisaation koetaan vetävän palvelua nyt?
- Kuinka yhteistyö elinkeinopalvelun (”keskusorganisaation”) kanssa sujuu. Esimerkkejä?
- Oletteko ottaneet käyttöön toiminnassanne jotain mitä opitte verkostossa, anna esimerkki oppimisesta verkostossa. Esimerkkejä?

Theme 3: Arvonluonti asiakkaille SD:n mukaisesti:
- Mikä koettiin olevan tärkeää asiakkaalle, millaisissa tilanteissa asiakas tarvitsee palvelua.
- Mikä on sähköisen palvelun tehtävä/merkitys asiakkaalle ja hänen toiminnalleen. Esimerkkejä?
- Millaisena koette oman roolinne olevan asiakkaan näkökulmasta.
- Millaiseksi kuvittelisit palautteen olevan asiakkailta sekä muilta organisaatioilta.

Theme 4: Arvonluonti yritykselle SD:n mukaisesti:

- Tärkeimmät uuteen palveluun liittyvät tehtävät ja resurssit teille.
- Mihin prosesseihin osallistuu?
- Miten suhteita sisäisiin sekä ulkoisiin asiakkaisiin ylläpidetään. Kuinka yhteistyö toimii. Esimerkkejä?

Theme 5: Co-Creation (Lupausten tekeminen & osallistaminen):

- Miten ideointi tapahtui ja kuinka sitä vietiin eteenpäin. Esimerkkejä?
- Luotiinko dialogia (tuliko paljon ehdotuksia ja keskustelua muiden ehdotusten pohjalta, ketkä pääsivät vaikuttamaan keskustelun ja ideoiden etenemiseen). Esimerkkejä?
- Miten tämä valikoitui kehitettäväksi palveluksi.
- Kuinka palveluprosessia lähdettiin luomaan.
- Miten asiakkaan ajateltiin osallistuvan palvelun prosesseihin.
- Millaisena asiakkaan roolin koettiin olevan lopullisessa palvelussa. Esimerkkejä?
- Helpotettiinko asiakkaan toimintaa palvelussa jollain tapaa? Esimerkkejä?
- Muokattiinko palvelu asiakkailta saatujen ehdotusten perusteella? Esimerkkejä?

Theme 6: Palvelu:

- Miten toimii mielestäsi.
- Mitä haasteita palvelu asettaa asiakkaalle, entä omalle työlle. Esimerkkejä?
- Koetko, että palvelu on sinulle hyödyllinen, miten on vaikuttanut työhösi. Esimerkkejä?
- Miten toimivuutta ja kehitystä on mitattu.
- Mikä on erityisen onnistunutta palvelussa yms.? Esimerkkejä?
- Onko jokin epäonnistunut?
- Miten itse kehittäisit palvelu tulevaisuudessa.
- Onko kaupunkiorganisaatio vaikuttanut jollain erityisellä tapaa palvelun kehittymiseen, esim. siihen kuinka asiakas on nähty ja voitu ottaa huomioon.
- Miten palveluun suhtaudutaan yleisesti organisaatiossasi. Esimerkkejä?

Muuta

- Kommentoitavaa, tai sanottavaa aiheeseen liittyen?
- Mitä pitäisi ottaa huomioon tätä tutkimusta tehdessä?
- Nimeä henkilö, joita olisi hyvä haastatella tähän tutkimukseen liittyen.

Appendix 2: Structured interview

Olen käyttänyt palvelua/ en.
Osallistuin kehitystyöhön/ en.

1) Kohtaamisprosessit

Kommunikaatio (yhteydenpito ja dialogi): Sain tiedon palvelusta helposti. Palvelun osoite ja ohjeet olivat selkeät. Tiedän kuka organisoi palvelua, ketkä ovat siinä mukana. Yhteystiedot ovat selkeästi esillä ongelmatilanteissa. Olen ollut yhteydessä palvelun järjestäjiin, kommunikaatio toimi/ ei toiminut.

Käyttö (kuinka palvelua käytetään ja tukipalvelut): Mitkä ovat palvelun tärkeimmät prosessit (pullonkaula yms kriittiset). Onko muuttanut omaa toimintaa, jos on parempaan/ huonompaan. Palautteen antaminen on mahdollista.

Palvelu (kohtaamiset palvelun ja henkilöstön kanssa): Henkilökunta on asiakaspalvelualtis. Palvelu on suunniteltu minun lähtökohdistani.

2) Asiakasprosessit (Kokemus)

Tunteet (”emotion supporting encounters” design, tarinat yms.): Kun käytän palvelua, se tuntuu minusta vaivalloiselta/ ahdistavalta/ stressaavalta/ huojentavalta/ yms. Koen että uusi palvelu vastaa odotuksiani. Tunnen, että palvelun kehittämisessä on kuunneltu asiakkaita. Uusi palvelu on mielestäni edistysaskel tapahtumajärjestäjien palveluihin/ vanha oli parempi. Koen, että saan tukea jos sitä tarvitsen. Palvelu on mielestäni hienon näköinen. Onko muuttanut mielipiteitä tapahtumayksiköstä/ kaupungin virastoista, luotanko yms.

Kognitio (”cognition-supporting encounters” asiakaslupaus, toiminnallisuus, kommunikaatio): Tunnen että palvelu palvelee tarpeitani. Löydän tarvitsemani tiedot. Antamani palaute on otettu vastaan.

Käyttäytyminen (”behavior and action-supporting encounters” käyttökokemus, testaus): Palvelu on selkeä käyttöinen. Olen saanut ohjeita kuinka palvelua käytetään (askeleet ovat selkeät, tiedän miten palvelua käytetään). Palvelussa on ollut virheitä. Olen pystynyt hoitamaan haluamani asiat palvelun kautta.

Lupausten pitäminen: Saan vastauksen/päätöksen luvatussa ajassa. Luotan palvelun toimivuuteen.

Kehitysehdotuksia, kuinka toiveita voitaisiin kuunnella paremmin, vapaa sana palvelusta.

3) Omat tiedot

Organisaationi. Yhteystiedot.