

MANAGEMENT OF VALUE CO-CREATION IN PUBLIC SERVICE NETWORKS

- CASE CITY OF HELSINKI

Abstract

The aim of this study is to analyze the management of a service network in a city organization highlighting the importance of value co-creation. We build the theoretical discussion from network management theories with insights from the discussions on service-dominant logic. Case study research was conducted in the context of the Helsinki City investigating how Event's Unit co-creates value in their service network by improving the network management of a specific service path. Empirical data was gathered through semi-structured interviews and other materials such as reports etc. They showed that network management can be used to enhance the co-creation of value in public service value networks. Moreover, a new framework building from the empirical result and the theoretical discussions was created to emphasize the value creation and the specific processes in context of city services. The study showed the additional value from including the insights from service-dominant logic into the network management theorizing. It pointed out the need for deeper understanding on value creation within network and the specific process. The study provides an elaborated model on network management. 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, City Organization

1. Introduction

Network management as a phenomenon is poorly understood. This unstable theoretical foundation has led to the overall questioning of the manageability of networks (Järvensivu and Möller 2008, Rethemeyer and Hatmaker 2007, 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). Moreover, new kinds of cooperation and partnership are needed for the equal relationship. 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. 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 between the city organization and its customer (Ministry of Education and Culture). 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 (e.g. Möller 2006). 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 aim of this study is to analyze the management of a service network in a city organization highlighting the importance of value co-creation. We build the theoretical discussion from network management theories (Järvensivu and Möller 2008, Rethemeyer and Hatmaker 2007, Agranoff and McGuire 2001) with insights from the discussions on service-dominant logic (e.g. Gummesson 2006, Gummesson 2008, Lusch and Vargo 2010, 2004, Payne, Storbacka and Frow 2008). The main research question is: *How can the understanding on S-D logic be applied into the management of networks?*

2. Theoretical background

There are two main views to value creation contexts; the network and service system (Chandler and Vargo 2011, Barile and Polese 2010, Maglio and Sopher 2008). 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).

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. In S-D logic the conventional supply chain is replaced with *a service value network*, in which service becomes the mutual benefit of the co-creation process (Barile and Polese 2010). 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). The *capability to integrate and coordinate value activities* of each member is of high importance in the strategic nets perspective (Möller 2006). The increasing popularity of networks poses new challenges for management capabilities (Möller, Rajala and Svahn 2004, Möller and Halinen 1999). 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).

Public sector managers have 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). 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. In public network management, command and control need to be replaced with "soft guidance" (Agranoff and McGuire 2001). Also, actors may engage in management efforts. 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.

Kickert et al. (1997) claim that in public context networks fail due to lack of incentives for collaboration and due to barriers. Jyrämä, Hakio and Mattelmäki (2011) found that co-design methods were seen to influence positively trust and motivation within the case network. Co-creation can be emphasized through the adaptation of service dominant logic, which in a city context may be fostered through *informal network structures*. Kickert et al. (1997) suggest the use of win-win logic in evaluating the outcomes of networks. This view is consistent with co-creation. Furthermore, 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).

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). 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). 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 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). These varied and multiple touchpoints create a value field (Duncan and Moriarty 2006). Value co-creation may be facilitated by three kinds of encounters: communication encounters, usage encounters, and service encounters (Payne, Storbacka and Frow, 2008).

Payne, Storbacka and Frow (2008), Brown and Bitner (2006), and Nenonen and Storbacka (2010) all highlight the *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). For this reason Duncan and Moriarty (2006) emphasize the importance of good cross-functional management in the field of value interactions. Hence internal marketing and cross-functional operations become crucial (Nenonen and Storbacka 2010, Brown and Bitner 2006). The *ability to manage customer expectations, communications and promises* between all parties throughout the whole co-creation process are the requirements of successful value co-creation management (Payne, Storbacka and Frow 2008, Brown and Bitner 2006, etc.).

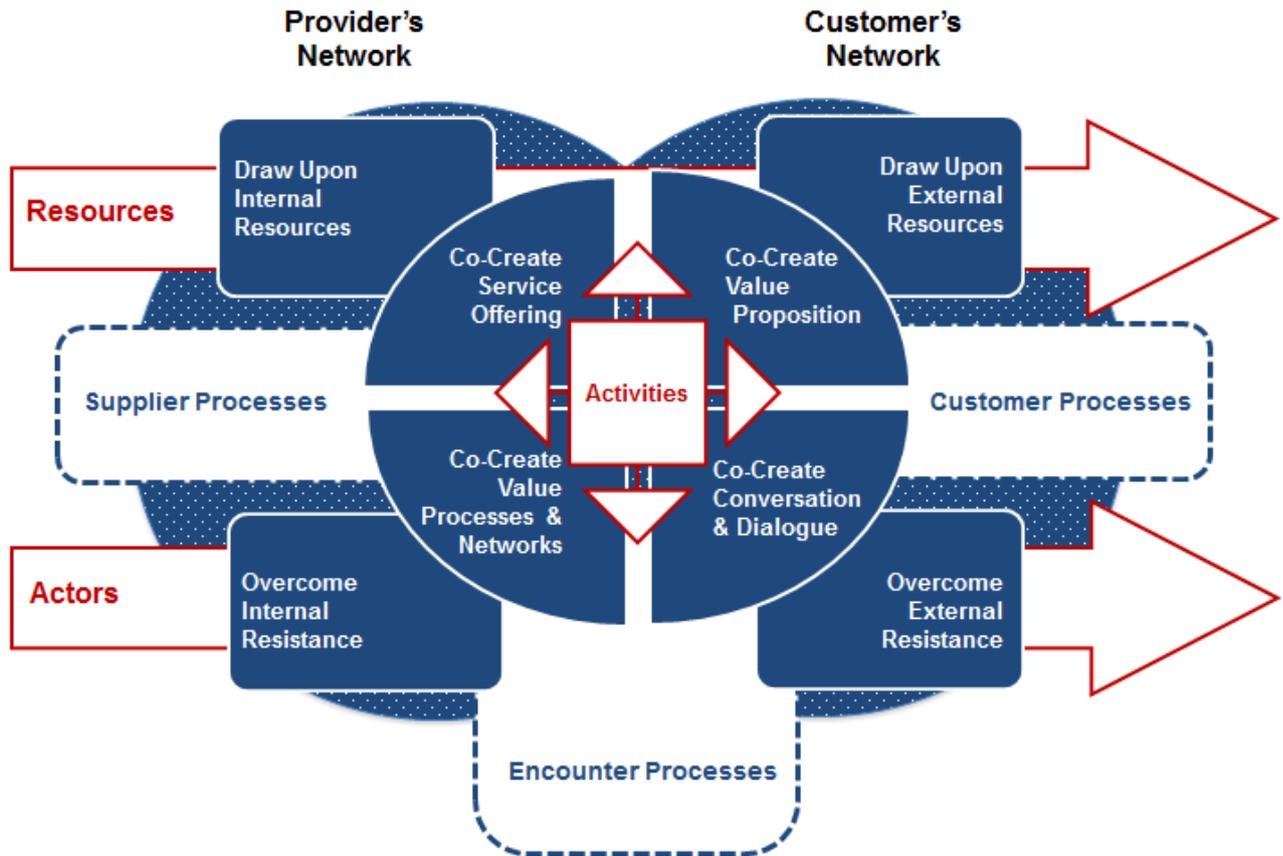
Emphases on the processes of co-creation are justified, as both networks and service can be viewed as processes (Vargo and Lusch 2004, Håkansson and Johanson 1992, etc.). Also since S-D logic is an outward looking view (Vargo and Lusch 2004, etc.), the level of S-D will be illustrated in the encounter 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).

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: 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).

The study's theoretical framework summarizes the perspectives adopted from network and S-D approaches. 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.

Figure 4: 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.

3. Research design

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). 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). 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 is a pilot project for numerous new things, which were explored by the city of Helsinki. This method was also chosen due to limited resources. 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. This second stage hence involves analytical generalization of the findings (Yin, 2003). Empirical data was collected through *semi-structured thematic interviews* (Hirsjärvi & Hurme, 1980). The themes of the interview were set based on the theoretical framework of the study.

In-depth interviews were conducted with nine (9) people with different roles and functions within multiple organizations related to the service network. 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 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 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.

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 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*. Second, the process of analysis continued with *close reading* of the transcripts to get familiar with the data (Moisander & Valtonen, 2006). Finally, the results of interviews as well as structured interview were pattern matched with the themes. 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 the recommendations section.

4. Results

4.1 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 it 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

The first component 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. 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.

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). 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. Frustration towards the service is apparent in some departments, where the internal communication was not up to the bar. 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. This took a toll on the internal processes of the service and created increasing internal resistance.

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. The challenges of communication were largely due to the siloed organizational structure. A strong dialogue between the actors took place in internal meetings. 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. 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. 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 stated that "*I was not given a chance 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.

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). 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. 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.

"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 information flows from the development team back to the home organizations is in a key position. 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.

4.2 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). *Overcoming internal resistance* is derived from the management system, and from management and leadership (Nenonen and Storbacka 2010). 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. 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. Top-level commitment was vital for the information flow, and ultimately for the level of satisfaction within a department.

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. 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.

4.3 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). 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).

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. 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.

4.4 Management of the service co-creation process

According to Payne, Storbacka and Frow (2008) value co-creation may be facilitated by three kinds of encounters: communication encounters, usage encounters, and service encounters (Payne, Storbacka and Frow, 2008). *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. The respondents had opposing views on the quality of information and guidance provided to them. Therefore, it seems that some users are better equipped in using the service than others. Moreover, dialogue may be more active towards some segments, under serving other parts of the clientele. *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. *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 *emotions* of the customers seemed mixed, leaving some responders with negative experience of the service, and others with a positive experience. The differing views continued with questions related to *cognition*; to customer promises and value explaining messages (Payne, Storbacka and Frow 2008). 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. 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. A contrasting view was again placed by the respondents who had positive experiences. The empirical data indicated that the service proposition is not yet well accepted by the customers and service promise is still under construction and the customer is not yet given the promised extra value via the new service. 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. Moreover, the actors feel positively towards the service and believe that it will function properly in the future, after the service is further developed.

5. Discussions

In S-D logic services are seen as solutions for complex needs via resource applications. 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. 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.

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). According to Provan and Milward (2001) public networks are most effective when they solve problems and serve their customers. 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).

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).

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.

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. 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 network, which was researched in the present study, was found to have gone through minor changes throughout its development. 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. Also a resource that was frequently brought up was time. 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. This again comes back to the involvement of top management and to the commitment of the actors.

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. 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 in 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.

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.

Network managers may enhance co-creation by facilitating communication interactions, knowledge application, and development of relationships (Ballantyne and Varey 2006). 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. 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. 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.

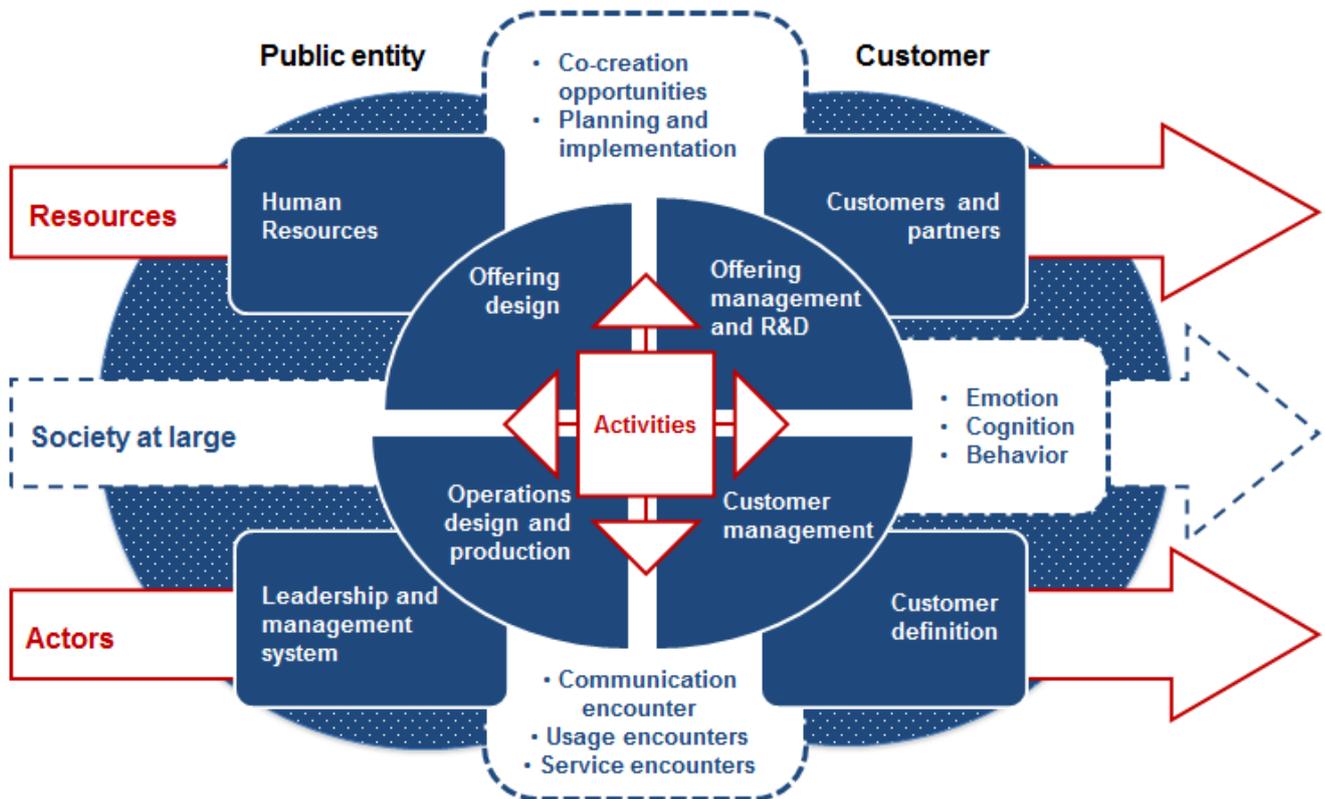
“These kinds of projects have failed in the past due to the old ways of working within the city organization, due to bureaucracy and so on. Because we have this organizational structure in which it is very difficult for departments to communicate with each other.” Member of the management team

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.

Based on our results we propose an adapted model for analyzing network management with emphasis on value co-creation in a following way: Provider’s network in the renewed theoretical framework is called the *Public entity*. Also, the customer network is now simply named *Customer*. 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 customers. 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. 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.

The Figure 4 below illustrates the findings of the present study in relation to the Theoretical Framework. The most important factors to co-creation regarding the resources, actors, activities, and processes are highlighted in the new framework.

Figure 4: 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. When *managing the network actors*, resistance can be overcome by leadership. The process of service development started with the identification of who the customer was, which 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.

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. 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.

The customer processes of emotion, cognition, and behavior had an impact on the co-creation of value to the customer. 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. This calls for better processes thinking and process management, which also improves the internal operation of public organizations.

The present research has 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. 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.

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.

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