

Public service journeys – the introduction of networks and co-design

ABSTRACT

Purpose

The aim of the study is to analyze a new service concept creation within a city organization. The paper provides new understanding on how service design and network approaches are applied and created simultaneously in a city project to improve its service offer. The study focuses on the analysis of the network structures and service design within the interplay of various actors offering complex city services that imply co-operation from various city offices and customers for joint value creation.

Methodology/approach

The builds on a qualitative case study the data being interviews and document and action research on using services design methods, e.g. co-design and design games on planning a service .

Findings

The research findings show that municipal network structures hold both formal and visible as well as informal and hidden roles and functions. It can be proposed that without the informal and hidden part the network structures may not create the hoped for change in organizational culture from bureaucracy towards service dominance. The barriers created by relying mainly on formal existing actor roles might cause reluctance to co-operate, whereas building the informal network creates a more open atmosphere for collaboration and joint service creation.

The service design methods used enhanced the working of service development networks. They enabled lowering the formal roles and functions and building the informal ones, enabling the new way of working by jointly creating value, i.e. service dominant logic, within a previously bureaucratic culture.

Research implications

The research results point out the importance to include the hidden informal networks structures in the analysis. It also creates new insights on the linkages in using service design not only to build new services but also to create functioning networks rather than artificial ones.

Practical implications –

The results point out that application of service design and co-design methods to brake the barriers and create enablers for development networks such as to enhance informal network structure creation and open atmosphere provide better ways to engage in the network activities towards creating a service dominance within organizations, especially in a city context facing long bureaucratic traditions.

Originality/value –

The context of a large capital city creates a topical setting to analyze how service is created to replace previous rather strict bureaucratic culture to provide services by inter office networks structures and by using service design methods. We propose that research combining network and service design approaches, provide us with both new practical ways to develop services by and with network structures and how combining this with service design enables us to see and lower key barriers for change.

Key words Network creation, public city organization, services design, co-design, design games

1. Introduction

As the needs and the ways of thinking of people have changed there seems to be a gap in between the customers and people and the services designed to fulfil their needs (Thackara, 2005, Siodmok, 2008, Burns et al., 2006). This has created a new era of services, often called the era of service-dominant logic, where service is within a core of any offering (Vargo and Lusch, 2004, 2008). In the service-dominant logic service is seen as solutions for complex needs that call for new combinations of resources and processes. Thus new networked ways of fulfilling the needs are searched for (see e.g. Möller et al., 2007).

Prior research has analyzed the key concerns in new service development, including the challenges of multi stakeholder development processes (e.g. Kushida and Zysman, 2009) and the role of culture and organizational structures in enabling service dominant logic to emerge within organizations (e.g. Lee et al., 2009). However, the role of service design in these processes has received less attention despite the growing interest for these methods among the researchers and practitioners alike (see e.g. Buchanan, 1992, Mattelmäki, 2006)

The present study investigates service environment that is composed by complex needs in networked structures, and the emergence of service dominant logic within a city organization. The study focuses on the analysis of enablers and barriers for the service development networks and the role of piloting service design approaches in this process. The interplay of various actors offering complex city services that imply co-operation from various city offices and customers for joint value creation is of interest.

In the empirical analysis, we focus to analyze a new services concept's creation phases within a city organization and the role of service co-design workshops in such service creation processes. The study sheds light on the challenges and potential benefits of service development networks and service co-design methods in the context of an organization-wide multi-stakeholder network, elaborating the barriers and enablers of joint action.

The current article poses questions: *What kinds of enablers and barriers can we identify for service development networks in a city organization?*, and *How can we use service design means and practices, such as visual, collaborative and empathic methods, to plan and improve public services offer within a network of various city offices?* Particular attention is paid to the context of public organization, the city, and the silod structure of the organization that creates multiculturalism.

The paper provides new understanding on how service design and network approaches are used and created simultaneously in a city project to improve their services offer. The analysis points out new insights for both network and services literature as well as service design discussion.

The paper proceeds first to present the theoretical foundation of the research. Then the methodology is presented followed by presentation of the empirical context and results. Finally, the paper concludes by highlighting the key findings.

2. Theoretical framework

The theoretical framework of the research builds on network theories and service design. Moreover, the context of public organization is considered. This study relies mainly on the industrial networks or IMP approach (e.g. Håkansson and Snehota, 1995) seeing markets as networks: firms are in many ways linked to each other, and a firm's identity is constructed by its relationships with other actors (Håkansson and Johanson, 1992). The key concepts in network theories are the actors, activities and resources (see figure 1.)(e.g. Håkansson and Snehota, 1995, Araujo and Easton, 1996)

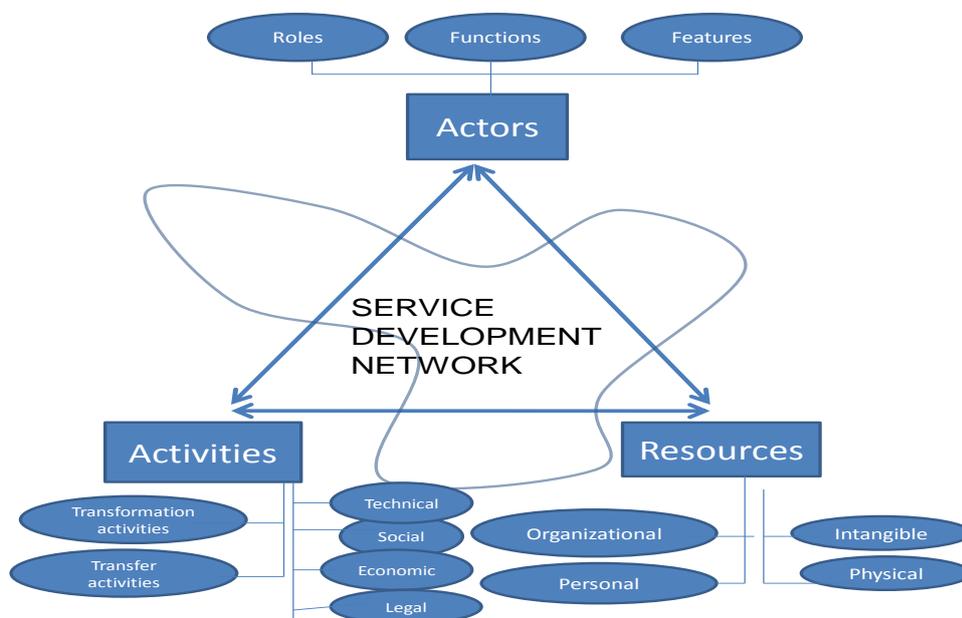
The early network approach views actors mainly as firms, although it is theoretically acknowledged that actors can be individuals and different collective actors to firms (e.g. Håkansson and Snehota, 1995). Further research has enlarged the actor concept including for example governmental agencies, teams and individuals (see e.g. Jyrämä, 2002, Salmi, 1995). Järvensivu and Nykänen (2008) further elaborate that in fact networks can be any instruments that enable different actors' joint activities. In this study we use the network framework to analyze the internal organization of a city consisting of independent departments that are here perceived as actors. The independent departments are represented by individuals engaged in the service development networks.

In the context of network studies, activity can be seen as consisting of two aspects, the activity bonds, i.e. the relationships used to exchange resources and the activity patterns, the ways in which the exchange relationships are maintained or changed. Håkansson and Snehota (1995) describe the activity as subject to routinisation and constrained by institutional rules. The activity is mainly seen as economic activity; selling and buying. However, the activities may also include

social activity that the actors share (see for example Eriksson et al., 1996, Jyrämä, 2002) or any activities technical, juridical etc. that are relevant for the relationship (e.g. Håkansson and Johanson, 1992). In this study we wish to keep the types of activities open, they may be economical, technical or social etc.

By resources, network theory refers to any material or immaterial elements that are exchanged within the relationships. Usually the resources are complementary, creating within a network a combination that cannot be achieved by one actor alone. (see e.g. Äyväri, 2007, , Holmlund and Törnroos, 1997). The types of resources exchanged in the city service development networks may be material or immaterial, or inherent within the organization or the individuals.

Figure1. Network structure



Adapted from Rautvuori (2010)

Characteristics for network relationships are trust, commitment, common orientation, reciprocity, dependency from one another, various types of ties, and investments to the relationships (e.g. Araujo, 2007, 2004, Easton and Araujo, 1994, Håkansson and Snehota, 1995; Salmi, 1995). Or, as Järvensivu and Nykänen al (2008) summarizes; joint expectations, aims and trust. The enablers or barriers of network activity are intertwined with these characteristics.

Networks are flexible and do change overtime. However, they can, for example, prevent the creation of “other relationships” or act as barriers. When creating new network structures, as in

the researched case, the actor's previous relationships and reputation may enable or prohibit the working of the network (Håkansson and Snehota, 1995, Möller et al., 2009, 112-113). The previous relationships and the reputation are used as indicators of the actor's capacity to co-operate.

The network activity does not occur in a vacuum but is intertwined with its context, the culture, values and norms inherent within the actors (e.g. Salmi, 1995, Araujo, 2004). The role of language as key issue enabling interaction has been topic of current research, for example in the context of international relationships (e.g. Piekkari and Muukari, 2008 Lucas, 2006, Minbaeva, 2005), but also within local context such differing professional backgrounds. Moreover the role of culture and context, the spaces, activities, power relations etc. are been found to be important in creating joint activities especially in the context of sharing knowledge (see e.g. e.g., von Krogh, 2001, Cross et al., 2006, Jones, 2006) Thus, to summarize, the culture, background of the actors, language and other issues related to the context such as trust or space of the network may act either as an enabler or a barrier for interaction.

These enablers or barriers are widely recognized, yet difficult to manage. Network management or leadership has tried to develop methods for creating positive culture and context for networks to act. Håkansson and Ford (2002) even state that networks cannot be managed as they are constantly changing, complex entities. It has been proposed that the network management is often context specific and requires deep understanding on networks and characteristics of networked activities (e.g. Nykänen et al., 2009, Järvensivu et al., 2008).

The key obstacles for networked ways of working seem to get highlighted in public organizations, such as cities, where the traditional culture is built on hierarchies and the organizational structure is bureaucratic (e.g. Bäcklund, 2007, Bäcklund et al., 2010) and dependent of political decision-making processes. Furthermore, the different city departments represent distinct professional backgrounds that have developed particular languages and values and norm for activities, such as health care, architecture or city planning. The public organizations hierarchical structures and traditional cultures challenge the collaboration, networking, between the departments.

Design has been proposed as a way to influence (manage) complex systems and cultural environments like organizations (Buchanan, 2004). It can be proposed that networks as complex changing cultural entities could similarly benefit from design. Design can be used as tools for change, as it helps people to see the familiar in unfamiliar way and thus, can supports –or even

provoke- in seeing the current system's lacks and benefits (Coughlan and Prokoff, 2004). Service design is often described as holistic human-centered and iterative approach that considers strategic perspectives, systems, processes, and even detailed customer experience related design decisions (e.g. Moggridge, 2007)

Organization's or network's activity and success are not results of intelligence or technology, but results of people's ability to work together, as the actors are always represented by people. Burns et al. (2006) emphasize that the key to the success of organizational changes and transformation processes depends on how well the individuals' (referred as the employees and the customers of companies or public services, systems and products) needs and expectations have been taken into account during the process. (see Hakio and Mattelmäki, 2011b)

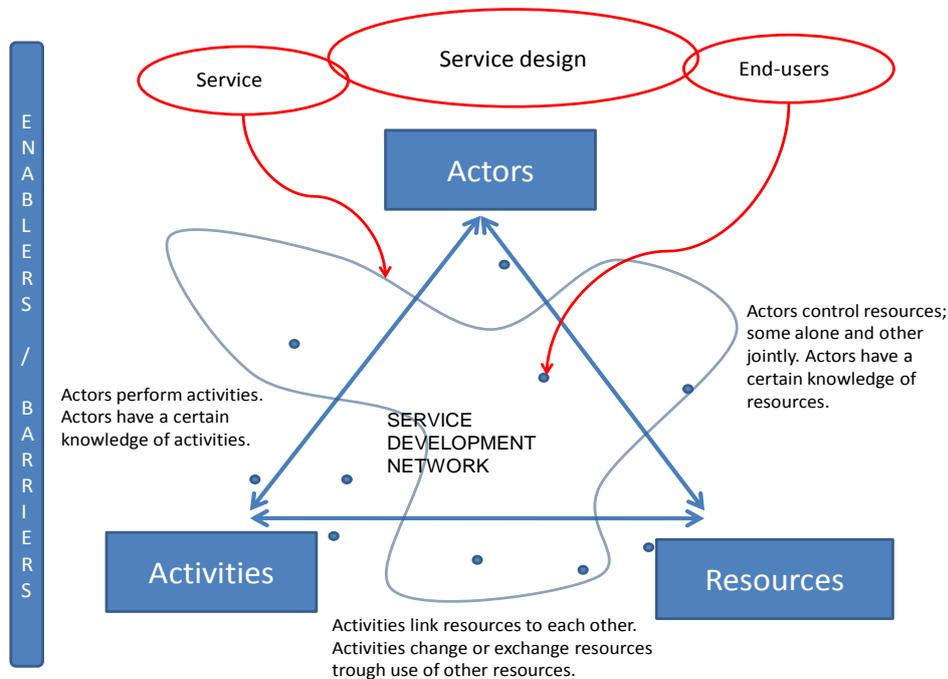
The service development networks create a platform for cross-functional collaboration and interaction to create value jointly with and to customers. The network activity consists in everyday level project meetings and cooperation which in a traditional hierarchy is organized along formal rules and norms that does not usually support the participatory work models where different groups of stakeholders as well as the users can influence and contribute the process. However, it is exactly in these implicitly informal encounters when people interact with each other when empathy can occur (e.g. Martin, 2009). The network barriers relating to the public organizational context, for example hierarchical and silod culture, create challenges for networking (see also Provan and Milward, 2001).

We believe that applying empathic approach (Koskinen et al., 2003, Fulton-Suri, 2003) as well as traditional design competences such as explorative, visual and participatory methods (e.g. Sanders, 2000), such as co-design and design games (e.g. Brandt, 2006, Vaajakallio et al., 2008, 2009) can offer an alternative and novel approach to organizing and facilitating cooperation between the different stakeholder groups in the public sector and bring forth more enthusiastic, efficient and productive networking model. The informal atmosphere of such events challenges the traditional and familiar approaches opening up opportunities for "out of box thinking" and "something new" (see Hakio and Mattelmäki, 2011a, 2011b).

To summarize the theoretical discussion on the study builds on network theory, especially focusing on the barriers and enablers for network activity. A special emphasis is made to connect the co-design methods and view their role in developing enablers or overcoming barriers for

network activity. We argue that managing and creating network activities within complex service context with differing actors can benefit from service design thinking and methods to ensure the working and success of the networks.

Figure 2. The framework of the study



Adapted from Rautvuori (2010)

3. Research Design

In order to analyze the new service development networks and to understand the role of service design in the specific context of our case, the city organization, we have to try to be very sensitive to the context of the phenomenon. Thus, a qualitative research approach, more specifically a qualitative case study, was chosen as the study method. Our case, the city's service development networks, is intrinsic in its nature. It was selected because in its particularity and ordinariness, the case itself is of interest (Stake, 2000). Abductive, qualitative research approach is taken in the analysis in this study (Dubois and Gadde, 2002, Shank, 2002: 119). The rich case data provides us with both practical and theoretical implications.

The background for this case study was the City's new strategy, where the development of internal and external networks, user-driven innovation and business –friendly attitude were emphasized. To implement the strategy the City had started pilot projects consisting of service development networks combining actors from various city departments and customer representatives. All the services included to the pilot service development network projects are complex by nature and are aimed at business customers, namely the permit process for private outdoor event organizers (1), guidance for starting a business (2), support for business investment (3), engaging private health-care and social entrepreneurs (4). The service development networks were allocated to the City's Economic and Planning Centre.

Within the service development network project, the City wished to introduce service design methods, and had engaged two external serviced design consultants. The consultant conducted visits to customer premises, called "safaris". In addition the City wanted to build research connections to the development work. This study is part of this collaborative work, which included three parts conducted by students and researchers from different disciplines, namely marketing and design. This paper reports the results of two of these research projects on network and service design, or co-design in more particular, approaches combined.

The methodology of the study builds from two sets of data. First is a qualitative case study on three service development networks – service journeys 1-3. Data consists mainly of interviews and documents. Second, action research on using co-design methods, e.g. design games on planning a service journeys for the City and interviews on service development network 4.

In this study, the first analysis is based on the transcribed interviews, although other kinds of material (web pages, contracts, information letters, seminars etc) have been gathered to deepen our understanding of the case. Altogether nine interviews of city officials and business customers for the service involved in the development networks were interviewed. The case material on networks was analyzed first each service development network at a time followed by comparisons between the selected three service development networks. The analysis was based on the framework of the study (Figure 2, see p. 8).

The platform for conducting the service design action research was a fourth beginning pilot service development network, which was at very early stage. The role of action research in this case was to support the planning and launching phases of the new network as well as support the future

work of two service design consultants. Therefore three co-design workshops were organized by researchers to introduce the participatory, empathic and collaborative work model as well as the customer-centric mindset of service design to all the stakeholders involved. These co-design workshops were documented by videos, photographs and notes. These co-design workshops were organized independently from the service design consultants' work.

Table 1 Data collection methods and conceptual issues in each phase of the empirical study

Research phase	Data collection	Conceptual issues
Identifying networks	Interviews of project manager Reports, seminars etc.	Network framework; actors, activities and resources
Enablers and barriers for service development networks	Interviews of key actors within the service development networks	Network framework; Culture/context
Co- design workshops	Interviews Observations Action research	Culture Sharing Motivation

In line with the abductive research approach (Dubois and Gadde, 2002), we analyzed the data collected and compared it to the theoretical premises throughout the research process. Table 1 summarizes the analytical framework and concepts used in each phase of the research process. In reality, the concepts and theories are intertwined; for example, while the network theory framework was used in each of the phases, the role it played was emphasized in Phase 1. In addition, data triangulation and multiple analysis methods were used to improve the transparency of the research and the reliability of its findings.

4. Findings

The network analysis of the enablers and barriers of the service development networks strengthened the issues discussed within the theoretical part. The role of trust, motivation, shared goals and shared language and previous relationships were found to be important as enablers for network activity. Moreover, attitude or general openness for new ideas was found as an important fact affecting the network activities. For example, a project manager stated: *"Development work requires understanding of the other and the others role within it "*

The identified barriers also included aspects similar to theoretical discussions such as hierarchical culture and silod organizational structure, as expected. However we also discovered issues that have not been elaborated as network barrier previously, such as reluctance for change, discussed more in organizational setting, and the concreteness of aims or activities. As an example, a participant said: *" I feel that by not being active is way of protecting oneself and wishing to keep the current status"*

It was interesting to note that the barriers identified we more connected to the context whereas the enablers were more related to either individual factors or culture. For example, the specific context of public organization, the City, created barriers for joint activity, such as silod departments and perceived high hierarchy, as a participating entrepreneur reflected: *"for good network relationships you need to act according to the local terrain, to acknowledge that within a city they are more formal"*. Whereas, for example, trust is often build on previous experience and relationships, relating to the organizational culture or individual experiences.

The service dominant logic present in the strategic discussions seemed less evident in the everyday activities of the networks. For example, in the strategy the customer or end user orientation was highly emphasized, whereas in practice the customer-company actors participating in service development networks perceived it quite novel yet important to be considered as subjects rather than objects. However, this new role as a subject included only few customer companies, and mainly the ones already somewhat familiar with city services. The city actors stated that it was sometimes even more important to learn about other city departments' processes and services in order to interact than the customers themselves. On the other hand most participants in the service development networks felt that they had learn a lot about customers during organized "safaris" - visits to their premises, which were conducted by the service design consultants in the service development networks – service journeys 1-3.

Interestingly the research pointed out the key role of network creation, the role of formal, artificial networks was seen as a barrier for network activity, and the lack of informal and personal relationships hindered the working of the networks. As the service development networks were organizationally created, as interpreted by the participants “artificial”, rather than naturally evolved, they reflected the hierarchies and existing culture. The individuals were more operating in formal than informal domain in the networks’ practices, such as meetings and workshops. They felt presenting respective organizations rather than their own special competencies.

Next we shall discuss how these identified barriers might be managed by service design approaches. In the following we will focus on the applied co-design approach called design games (Brandt, 2006). This approach aims at creating and facilitating dialogues among people that are not necessarily familiar with each other and supports them to reach a common goal. The collaboration is structured in teams that are given game rules and typically also customized game boards and tangible items as the elements of the game and collaboration (see figure 3-4).

Figure 3. Example of the co-design workshop setting service development network – service journey 4.



Figure 4. Different tangible materials supported and focused and visualized the conversations between participants. It is easier to understand and emphasize different point of views, when the conversations have been visualized on the table.



The co-design workshops offered tools to make sense of the rather abstract tasks of making services more customer-oriented and change them into concrete issues that can be negotiated. For example, one of the empathic design tools was in creating entrepreneur profiles in one workshop and then working with them in the next one. The profiles created faces for the customers and provided concreteness of their needs. The making of actors visible and tangible in the public service field turned out to be useful also in terms of perceiving the overall picture of the current situation, as well as envisioning the future services and collaboration formats from a 'human-sized' perspective. (see Hakio and Mattelämäki, 2011)

One of the key issues in the co-design workshops was that they forced the participant actors out from the organizational culture and tradition, away from the formal domain to meet the other in informal encounters. This helped to create trust and build relationships even between the actors that did not previous knew each other.

Workshop tasks and instructions supported the equal participation of the stakeholders so that the service users as well as the employees of the organization got a chance to express their opinions and contribute to the joint making, overcoming barrier of hierarchical organizational culture. This was also important, because it was known already in advance, that different actors coming to the workshop had quite different perceptions and experiences of the current situation and motivation for joint activity. Visual and tangible materials created a common ground for the conversation and worked as reminders or visual notes of the discussions. It also encouraged participants to create and build new elements e.g. missing actors or spaces (see figure 5-6) that would be needed in the field. (see also Hakio and Mattelmäki, 2011a, 2011b)

Figure 5. Visions of a new place, where public services for entrepreneurs could be implemented in a centralized way.



Figure 6. Representations of different actors in the field. Also some new roles that are needed were identified.



Yet, some of the barriers identified created challenges for the service design workshops as well. For example, the lack of common language, concepts and shared understanding of the service development task created challenges for collaboration. Moreover, as the service development network was a pilot project the participating actors might have felt unease about the goals and roles within the network. Creating trust and confidence to try out such design approaches is one of the key issues in the long run (Hakio and Mattelmäki, 2011a).

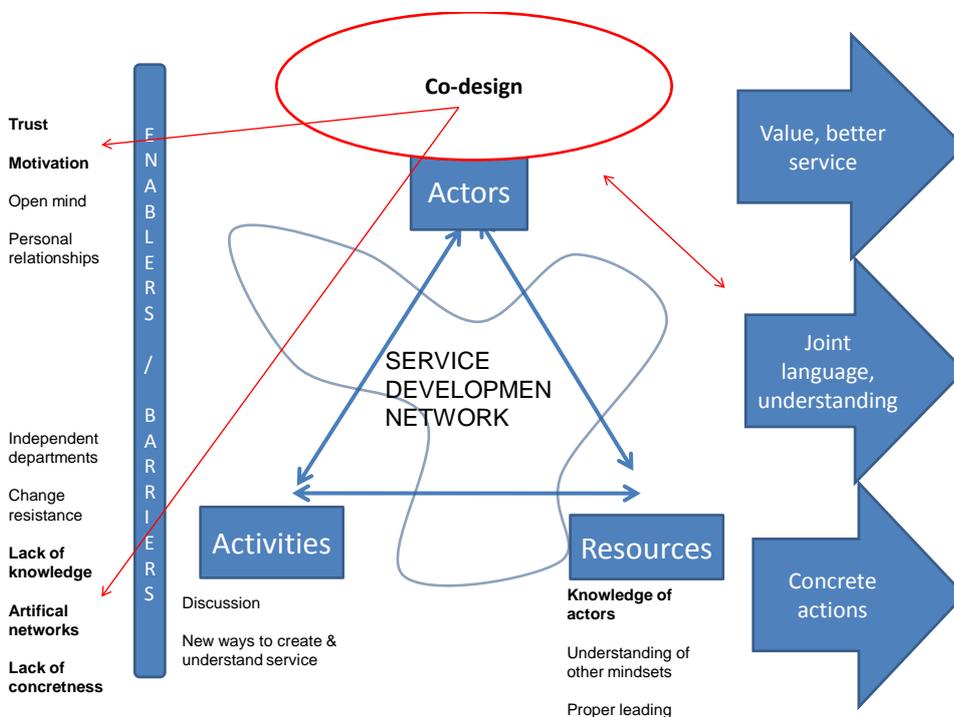
Moreover, in organizational level, the city had engaged in several development projects and a fatigue for developing work could be detected (see also Bäcklund et al., 2010) and participants were somewhat skeptical about being able to put the jointly created ideas into practice in their home departments. The hierarchical and silod organizational culture also created challenges for joint working in co-design workshops in the form of fear of losing face.

5. Discussion

To summarize we emphasize that the research findings show that municipal network structures hold both formal and visible as well as informal and hidden roles and functions. It can be proposed that without the informal and hidden part the network structures may not create the hoped for change in organizational culture from bureaucracy towards service dominance. The barriers created by relying mainly on formal existing actor roles might cause reluctance to co-operate, whereas building the informal network creates a more open atmosphere for collaboration and joint services creation.

The service design methods used, both consultants and researchers practices, enhanced the planning and creation of networks. They enabled lowering the formal roles and functions and building the informal ones, enabling a new way of network working by jointly creating value, i.e. service dominant logic, within a previously bureaucratic culture. (see figure 7)

Figure 7.



Adapted from Raurvuori (2010)

The research results point out the importance to include the hidden informal network structures in the analysis. It also creates new insights on the linkages in using service design not only to build new services but also to create functioning networks rather than artificial ones. Hence the study provides deeper understanding on the inner logic of networks. This was seen as the key factor for succeeding in network management (see Nykänen et al. 2009, Järvensivu et al. 2008)

The study highlights how the artificial application on networks structure to create collaboration faces major barriers. The application of service design and co-design methods to brake the barriers and enhance informal network structure creation and open atmosphere create better ways to engage in the transformations and in the activities towards creating a service dominance within organizations, especially in a city context facing long bureaucratic traditions.

To conclude we wish to point out the this study provides new understanding on how service design and network approaches can be used simultaneously to enable service development networks to overcome the key barriers and how the service design can be used to manage networks. Even in a challenging context of public City, organization with long tradition in silod departments and strong hierarchies. The results point out new insights for both network and services design discussions.

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