USER-INVOLVED SERVICE INNOVATION

THREE PARTICIPATING PERSPECTIVES ON CO-CREATION

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2015

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Abstract

Scholars suggest that the involvement of customers and other stakeholders in the innovation process is a key success factor and makes companies more competitive. This thesis work is built on the research of Kristensson, Gustafsson, and Archer (2004) suggesting that ordinary users and/or customers are capable of developing ideas that are more innovative than those of professional service developers.

As a consequence, more and more organisations alter their innovation strategy accordingly. In order for a company to improve innovation processes, it is vital to foster a practice that is open to external ideas and knowledge. However, when external ideas meet internal innovation practices, complex organisational situations arise. New roles for those involved affect hierarchies and knowledge sharing opportunities.

This thesis discusses three different perspectives on the same process. The different perspectives provide an opportunity to study both individual and structural challenges. This research aims to identify the challenges that an organisation faces during the transformational processes implied by the adjustment from a traditional product innovation structure to an open service innovation culture. The theoretical aim is to problematise dimensions of openness, both on an individual level and on a structural level, based on these insights. In order to problematise openness, this qualitative study involves two main cases and three confirmation cases. It aims to determine how users and other external parties, top management, and middle managers experience open innovation processes for an increased understanding of co-creation in practice. The results describe interactions between organisations and users or external stakeholders, as well as internal interactions within the organisation. Top management is dedicated to the idea of increased openness, but detect structural issues that need to be addressed in order to implement user-involved innovation. Among middle management, some individual aspects such as attitudes and relational issues matter, as well as organisational structures and practices. Users have mixed opinions about their participation in the process. Favourable experiences, such as benevolence and deepened relationships, are balanced by unfavourable experiences such as incapability and intrusion. Different dimensions of openness regarding open innovation practice as well as a relationship approach are discussed. In this work a relational focus is emphasised, where innovation involves multiple interactions and on-going conversational learning.

The findings can assist managers in their work to create conditions for open innovation. Managers can benefit from this research by developing a better understanding of how different stakeholders experience co-creation of value. This is relevant for innovation managers in the process of redesigning innovation processes as it can help them to understand different aspects of the interactions involved.

Sammanfattning

En större öppenhet i innovationsprocesser är numera en strategi som allt fler organisationer ställer om sig till. Det förmodas göra företag och andra organisationer mer framgångsrika på marknaden. Detta arbete bygger på tidigare forskning av Kristensson, Gustafsson, and Archer (2004) som föreslår att vanliga användare och/eller kunder är kapabla att skapa innovationer som är mer innovative än de som tas fram av professionella tjänsteutvecklare.

För många kräver detta en omställning avseende innovationspraktik och innovationsstrategi. För att lyckas med denna omställning krävs en ambition att skapa en organisationskultur som uppskattar och kan ta tillvara både kunskap och idéer utifrån. Emellertid har det visat sig vara en omställning fylld av utmaningar. När externa idéer krockar med interna strukturer och attityder så uppdagas komplexa situationer att hantera. I denna studie är avsikten att förstå olika upplevelser av användarinvolverad innovationspraktik utifrån olika perspektiv. Detta arbete är baserat på en tjänstelogik, som innebär att värde skapas i kontext och kan ej ensidigt skapas av företaget i innovationsprocesser. Utmaningar identifieras och problematiseras och kontextens betydelse betonas för att förstå både latenta och uttalade behov hos användarna. Detta kvalitativa forskningsarbete bygger främst på två fall samt ytterligare tre fall som empiriskt stöd. Syftet är att förstå hur en användarinvolverad innovationsprocess upplevs av medverkande parter, vilket leder till en problematisering av öppenhet i öppna innovationsprocesser. Det teoretiska syftet är att problematisera dimensioner av öppenhet, både på individ- och strukturell nivå.

Parterna består av kunder och ytterligare en grupp externa intressenter samt led_nings- och mellanchefsnivå internt. Från ledningens sida finns ett tydligt ställningstagande för en ökad öppenhet i innovationsprocesser men det saknades förståelse för hur interna strukturer och medarbetares praktik skapar hinder. För den enskilda mellanchefen, som i hög grad berörs av en förändrad innovationspraktik, finns utmaningar i form av attityd och relationella aspekter utöver organisatoriska strukturer. Användarna vittnar om blandade känslor i sin upplevelse. De är positivt inställda till att bli involverade och visar välvilja att bidra till organisationens utveckling. Ett starkare band mellan dem som användare och den berörda organisationen beskrivs. Detta ställs emot känslan av att inte riktigt förstå sin roll och vilja undvika tydliga krav på sin medverkan. I studien problematiseras öppenhet som begrepp i öppen innovation och ett relationellt fokus är betonat, som bland annat innebär att innovation innebär många och komplexa möten och där lärande sker genom en pågående dialog.

Ett praktiskt bidrag från detta arbete är ökad kunskap kring hur olika parter upplever samskapande av värde i praktiken. Sådan kunskap underlättar när ledning ska ställa om organisationen från relativt slutna innovationsprocesser till mer öppna.

Nyckelord: öppen innovation, användarinvolvering, samskapande av värde, tjänstelogik

Preface and Acknowledgements

The theme of this work is co-creation. What happens when the innovation practice transforms into something that involves more people, both inside and outside an organisation? And how is this change experienced by those involved? The situation I have had an opportunity to study is when a user-involved innovation method is introduced as part of an innovation practice. What I bring into my academic work is an interest in practice, all issues and dilemmas that occur between people *because* we are human. That is why I decided to try to understand these matters from the perspective of different actors.

October, 2015, Eskilstuna

Carina Sjödin

Publications

Appended papers

Paper I: Sjödin, C., and Kristensson, P. (2012). "Customer's experiences of co-creation during service innovation." International Journal of Quality and Service Sciences, 4(2), pp. 189-204.

Sjödin collected and analysed the theoretical data and was the main author of the paper. Kristensson reviewed and assured the quality of the paper.

Paper II: Sjödin, C. and Kristensson, P. (2011). "From a closed innovation culture to an open." Van der Rhee, B. and Victorino, L. (ed), The 12th International Research Symposium on Service Excellence in Management (QUIS 12) (pp. 927-934). Ithaca, NY June 2-5, 2011

Sjödin collected and analysed the theoretical data and was the main and corresponding author of the paper. Kristensson reviewed and assured the quality of the paper.

Paper III: Sjödin, C. and Kristensson, P. "Co-creation: how middle managers experience user involved innovation". Submitted to Journal. 2015.

Sjödin collected and analysed the theoretical data and was the main and corresponding author of the paper. Kristensson reviewed and assured the quality of the paper.

Other publications

Sjödin, C., C. Nygren, and T. Backström. (2009). Visitor involvement and extensive networking. Organising work for innovation and growth - Experiences and efforts in ten companies. M. Döös and L. Wilhelmson. Stockholm, Vinnova.

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1 Introduction

This chapter introduces the research by presenting its background, followed by the research aim and research questions. It concludes by noting research delimitations and introducing the structure of the thesis.

1.1 Background

Industries in the Western world are undergoing a shift. This shift involves moving from a traditional goods-centred economy into a service economy. 80 percent of the Swedish workforce worked in the service sector in 2012 (IFN, 2015). Large companies, such as for example Ericsson and Volvo, are discussing service, soft products or service product systems as a way of staying competitive. Manufacturing production is becoming more service-intense (Swedish National Board of Trade, 2010). For companies, this shift involves adopting new working methods, new ways of interacting with stakeholders, such as customers, and new ways of discussing and defining value. The focus has shifted from the view of 'What can you do for me?' to an approach of 'What can we do together?' (Bendapudi and Leone, 2003) Prahalad and Ramaswamy (2004) describe the new role of customers: their role has progressed 1) from isolated to interconnected, 2) from uninformed to being informed, and 3) from passive to active.

One aspect to discuss further is the customer's role of being informed and what this means in the context of user-involved innovation. Prahalad and Ramaswamy (2000) state that customers create a whole new dynamic in the market through their active participation. Two concepts in this 'service-dominant logic' that are relevant to economic and other developments are 'value-in-use' and 'co-creation of value' (Vargo and Lusch, 2004). The involvement of customers and other stakeholders in the innovation process is proposed to be a key success factor that makes companies more competitive (Alam, 2002). As a consequence, more and more organisations alter their innovation strategy accordingly. For organisations used to working according to a more traditional innovation practice with few – if any – contact points with customers or other relevant stakeholders, this shift involves major challenges (Olivia and Kallenberg, 2003). For example, new and necessary competencies that are needed in order to become more open include the ability to absorb and exploit information as well as the ability to collaborate with many external parties simultaneously. Furthermore, internal collaboration in an open innovation practice can be challenging. This new way of working affects both the individuals and the structures.

Moving from a goods logic to a service logic involves establishing a relational practice, which is characterised by complex and engaging interactions and an on-going dialogue with stakeholders. For example, openness needs to be problematised

and discussed from a relational perspective. This thesis aims to problematise openness. Innovation as a practice in companies is evolving. Innovation models and innovation practice in companies are, by tradition, often described as inside-out processes in which innovation, for the most part, is an internal activity and is also closely connected to product development (Chesbrough, 2011). Closed innovation, as this approach is called, is challenged when life cycles for both products and services tend to be shorter and companies can no longer rely on their own research and development departments to contain all the necessary knowledge necessary to develop new ideas. Today, however, innovation activities are often described as democratised, distributed over entire organisations and departments (von Hippel, 2005), and co-created with customers, users or other stakeholders (Kristensson, Gustafsson, and Archer, 2004). One assumption made about open innovation is 'that useful knowledge is widely distributed, and that even the most capable R&D organisations must identify, connect to, and leverage external knowledge sources as a core process in innovation.' (Chesbrough, H., Vanhaverbeke, W. and West, J. 2006, p. 2)

Open innovation can be organised in different ways. It is important to acknowledge that open innovation per se is not a new concept or a fashion fad. Openness exists to some extent in every innovation practice where people interact with each other and share experience and knowledge. It is relevant to study open innovation due to the shift towards a service-oriented innovation practice, and for this transformation openness is a provision in order to learn about the value-creating situation. Methods and models differ but certain characteristics are central. The need to understand user or customer experience is one of them. Innovations can be the result of both internal and external ideas and interactions to gain knowledge. Knowledge in this situation can, for example, be rich data about user context. In order for companies to understand user needs, both latent and expressed, new methods for exploring both the user situation and the more peripheral context need to complement current innovation practice. An open innovation practice involves interactions on different levels, both internally and externally. Mulej et al (2006) suggest that one way of increasing innovation capacity is to adopt a synergy of systems theories. The systems theories combined have two things in common: they all support creativity and holism as the necessary worldview and methodology, and they all believe in the human capacity of co-operation (Mulej et al, 2006). The field of systems theories is relevant for analysing open innovation. In the present work it is acknowledged as such, but not further discussed.

One motive for involving users more closely in the innovation process is the need to better understand user needs and desires. As argued by Kristensson, Gustafsson and Archer (2004), traditional market research techniques, such as surveys, do not provide enough information in this regard, as this information is referred to as sticky and personal and something that may not even be evident to the user him or herself.

They further conclude that ordinary users develop ideas using a divergent way of thinking compared to professional developers. Those ideas are assessed to be more original but less realisable.

The term 'user-involved innovation' is not to be mistaken with 'customer-led innovation' or 'customer-driven innovation'. It is not as much about what the customer wants in order to solve a specific problem, but instead focuses more on latent needs and service innovation potentials. In the cases presented in this thesis, the users are, for example, not active in an actual design process; this means that they participate as contributors of self-generated documentations of their service encounters and contribute to the identification of potential service innovations.

Interactions with customers involve the element of trust. Gustafsson, Kristensson, and Witell (2012) suggest that in order to enable bilateral trust and high-quality customer information, communication should be 'frequent, bidirectional, face to face, and active.' (ibid. p 314) If a communication is active, it is less of a challenge for companies and customers to meet and learn from each other. Some examples of user-involvement in innovation can be found within the health sector. Patients are users in a health care system. Engström (2012) describes a process for making use of the patient as a co-creator, building on the notion that the patient is the only actor to experience the health care system from all kinds of perspectives: being a patient and interacting with different departments and institutions within the hospital (for example), but also being a person who is sick at home in a different context. Engström further emphasises the patient's active role, rather than being a passive receiver of services. The patient has a unique perspective in this context, and is considered a valuable asset in developing new and better health care experiences. The model for this purpose is a collaborative approach, based on self-generated data from personal diaries written by the patients (Engström, 2012). Elg et al. (2015) list different user contexts for the patient. In-situ documentations originate from the hospital to related agencies such as pharmacies, local health centres and situations in the private sphere, including the workplace and the patients' home environment.

The point of departure for this licentiate thesis are these changes: going from mostly internal innovation processes to interactions with external contacts; and going from research and development departments and expert functions being in charge of innovation processes, towards opportunities for interactions both internally and externally with ordinary users and other employees. Vargo and Lusch (2004) suggest that a relational approach to understanding value creation is vital when moving from a mainly transactional practice to a practice focusing on experiences. This involves creating opportunities for a multi-perspective exchange and room for reflection about new roles and positions. Furthermore, it also involves a shift from the perspective of 'value-in-exchange' to a thinking based on 'value-in-use' and 'value-in-context' (Vargo et al., 2008). 'Value-in-context' emphasises a systems approach. Scholars

such as Chesbrough (2011) and von Hippel (2006), among others, suggest that redefining the concept of value is a critical part of a transformation. This can be discussed on different levels: both on an individual level and in a group or department setting. Companies of different sizes and in different branches are expressing a willingness to adopt these ideas. This motivates studies to understand challenges in practice during the transformation, as manifested by the cases in this study. This thesis presents experiences gained from 1) the introduction of a user-involved service innovation method in companies and 2) the interactions this involves, both between users and the companies and internally within the companies.

1.2 Aim and research questions

The aim of this thesis is to increase the understanding of how different actors or participants experience a user-involved innovation process. The theoretical aim is to problematise dimensions of openness, both on an individual level and on a structural level based on these insights.

The main research question aims to problematise openness. Which dimensions of openness occur in a user-involved innovation practice, and how can these affect the transformation into a service-oriented innovation practice? In order to identify and problematise dimensions of openness three questions need to be addressed. Research questions 1 and 2 involve the perspectives of different actors: the user perspective in the first, and the perspectives of middle and top management in the second.

RQ1: How do users and other external stakeholders experience co-creation of value?

RQ2: How do middle and top management experience co-creation of value?

RQ3: Which are the enabling and limiting factors for organisations transforming into open innovation practices?

1.3 Focus and delimitations

The research subject of innovation and design is multidisciplinary and contains theories from several different research fields. This work bears proof of this fact. One part of the theoretical framework in this thesis comes from service marketing and service management. Service-dominant logic and theories about including users and stakeholders as active contributors to the innovation process are examples of that. Innovation models and processes are discussed in innovation management theories both from a technological perspective and from a business perspective, often closely connected to organisational theories. In this thesis, the focus is on human interactions and the technological perspective is not discussed. The results could also be discussed in relation to the research field of psychology, but this is beyond the scope of this thesis. Even though discussion about company structure is part of this thesis, the focus is on openness and innovation rather than organisational theories. The field of theory

on open innovation is especially relevant for this study, as value creation is understood as interactions between a company and its customers (Prahalad and Ramaswamy, 2004). Openness regarding open innovation is a vague concept and there is a need to problematise it, as suggested by Dahlander and Gann (2010). Drawing on the work of Dhalander and Gann (2010) and Gassman (2006) this thesis discusses different dimensions of openness when organisations transform into open innovation practices.

The focus is on relational interactions both between users and the company, and between individuals and groups within the company. It is people-centric, and the ambition is to study practices and specifically gain knowledge about user-involved innovation in order to complement existing theories concerning user-involved innovation. The idea of co-creation of value is also a central aspect in human-centred design that this thesis discusses as it relates to co-creation of value. In human-centred design one main goal is to collaborate with end users in order to create products and services closer to their needs (Steen, 2011). This connection is also discussed in this thesis.

By problematising openness and by adding a relational perspective to service innovation, this thesis contribute new understanding to the research field of open innovation with a service orientation, and more specifically to user-involved innovation by problematising different dimensions of an open innovation practice. This work focuses on the early stages of the innovation process, and mainly on the process of identification of service innovation potentials compared to a specific idea development. The process of doing this is studied rather than the quality of the innovations per se.

1.4 Presentation of licentiate thesis structure

The work behind this thesis is characterised by a desire to understand what happens in everyday situations when innovation practice is organised in new ways where new roles occur. Real situations or dilemmas evolve from a service-oriented innovation process, which is the starting point for this research work. 'Previous research' is introduced under background, since it defined the design of the case studies, and in the following Chapter 2, the 'Theoretical framework' is presented. In Chapter 3, 'Method', both the design of the studies as well as the methodology are presented. In addition, ethical considerations are presented in this chapter. The empirical results are described in the attached publications (articles 1, 2 and 3 are annexed), but are also presented as short summaries in Chapter 4. Furthermore, additional empirical data is also presented in Chapter 4. This data, which emerged during the process, is not completely covered in any of the articles. The research questions are discussed together with empirical findings linked to theory in Chapter 5, 'Discussion', followed

by Chapter 6, 'Conclusions', which includes contributions and a critical review of the thesis. Future research is also mentioned in this final chapter.

2 Theoretical framework

As stated in the background discussion, innovation as a practice in companies is currently undergoing a transformation. More and more organisations are changing their strategies to reflect a more service-oriented approach. This motivates a presentation of relevant theories from the field of service marketing, service management, and service innovation. For companies, these shifts involve adopting new working methods, new ways of interacting with stakeholders, such as customers, as well as new ways of discussing and defining value. In this chapter, service-dominant logic is introduced even though it is not a true theory, since the service-dominant logic includes a discussion of the concept of value. Open innovation is also presented here, both as it relates to user-involved methods for innovation and in general. Gassmann, Enkel and Chesbrough (2010) and Huizingh (2011) present future perspectives, which will be addressed in this thesis work. Dahlander and Gann (2010) discuss definitions of open innovation and present opportunities for research as well. This thesis problematizes openness relatively these suggestions.

2.1 Service innovation

Users contribute to and provide insights for companies about the contexts involved in the moment of value creation. Normann (2002) labels this part of co-creation 'the moment of truth'. The 'moment of truth' is a micro situation of client interaction with the firm. In order to discuss value and quality in that micro situation, Normann (2002) suggests that the most important question to ask is what the mechanisms are that lead to an experience of quality and value for the user. Empathy is a key word in this situation, where representatives from the company use this to understand the user experience.

The terms 'customer', 'user', 'consumer', and 'stakeholder' are used interchangeably in the literature. In this academic context they represent different actors in the service system, different constellations of resource integration. The terms 'service innovation', 'new service development', and 'product development' occur in the theoretical framework to describe innovation in general. The difference between service innovation and new service development is not exactly defined in theory, but most new service development (as well as product development) literature tend to be more closely connected to closed innovation models, whereas service innovation is more frequently used to describe open processes. However this is not always valid. The term service innovation is used in this work to discuss innovation because of its covering of the open process.

There are many different ways to define innovation as a phenomenon. Mainly, it requires the occurrence of something new that results in some kind of value for a stakeholder. Value in this sense does not have to be monetary. Bessant and Tidd

(2007) divide innovation into three core themes: to generate new ideas; to select the good ones from the bad ones; and to implement them. The OECD (1992) more specifically defines innovation in the Oslo Manual as follows: 'An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations.' (p. 11) Fonseca (2002) suggests innovation to be when new meaning emerges in everyday work conversation: '… new patterning of our experience of being together.' (Fonseca p. 5) This perspective stresses the importance of conversation in an on-going innovation process. Conversations can in this aspect be an interaction or different interactions to increase understanding of context.

The involvement of customers as co-creators in new service innovation is increasingly being suggested as a successful strategy to improve the success rate of new services. In the context of business markets, Prahalad and Ramaswamy (2000) state that 'customers are fundamentally changing the dynamics of the marketplace. The market has become a forum in which customers play an active role.' (p. 80) In a similar vein, Vargo and Lusch (2004) claim that customers are always co-creators of value. Among others, Kristensson, Matthing, and Johansson (2008) that customers are a source of creative ideas that can be worthwhile for innovation. Service providers have engaged customers in their development work in order to enhance the innovativeness of their offerings and deepen their relationships with key customers. In an open innovation context, user knowledge is both distributed and democratised. Information from such a context is presumed to be of high quality, since the user perspective is equally important as expert knowledge. Organisations need to be interconnected with such external knowledge. An open innovation process occurs when internal resources and external resources connect to make innovation happen (Lindegaard, 2010), i.e. external partners are integrated into company processes. Normann (2002) presents the term 'relationing' as a longer-term relationship with users, for example, previously perhaps simply regarded as quick and random meetings. Relationing, according to Normann (2002), is the strategic focus of the company.

2.2 Service-dominant logic

Vargo and Lusch (2004) first presented the idea of service-dominant logic and co-creation of value in the *Journal of Marketing*, and it was the starting point of a renewed scholarly discussion about value and how value is created. This perspective is fundamental for this thesis concerning the concept of value and the importance of context in order to understand value. It defines the ontological perspective on the relation between service and the traditional division between services and products. A relational approach represents a dimension or an aspect of systemic thinking. This is why it is relevant for a discussion about innovation in general and not only for a

discussion about innovation in services. Furthermore, innovation in service industries can be very traditional and influenced by a product orientation in practice. 'Value is created collaboratively in interactive configurations of mutual exchange.' (Vargo, Maglio and Akaka, 2008 p. 145) Value is interactional, meaning that value is jointly created by both companies and customers. For this thesis this is a starting point, but is mostly referred to as a service orientation rather than a service dominance.

A service-dominant logic (Vargo, Maglio and Akaka, 2008) has a systemic approach, compared to a goods-dominant logic, which is firm-centred. The goods-dominant logic defines value as an exchange of goods and money, and further suggests that the firm can produce value and determine value beforehand independently. In a service-dominant logic, value is always co-created within a service system. A service system can be a firm but is also part of other systems, such as for example infrastructure. Value depends on context and evolves in use. Value understanding cannot be distanced from its context and the integration of resources and competences in the service system. The most important premise of the service-dominant logic is the idea that value is always co-created and that relational aspects are vital. Innovation in the service-dominant logic is about developing more effective value propositions for participating in beneficiaries' resource-integrating, value-creating practices through service.

One way to understand service-dominant logic is to compare triggers for innovation for a goods-dominant company with those of a service-dominant company (Vargo and Lusch, 2004). These differences can also be discussed in terms of systemic thinking versus un-systemic thinking. In order to understand latent needs in the customers, one needs to engage in a dialogue and interact. The triggers for goods mentioned here require little if any interaction or empathy in the development process.

Triggers for innovation in a goods-oriented process can, for example, be technological skills, in-house competences and capabilities, and demands from the market (often based on traditional surveys). Triggers for a service-oriented process are suggested to be based on the understanding of both expressed needs and latent needs of the user or customer. The understanding of present and future context related to competences and skills as resources is another trigger (Vargo and Lusch, 2013).

Fonseca (2002) suggests innovation to be when new meaning emerges in everyday work conversation: '… new patterning of our experience of being together.' (Fonseca p. 5) This perspective stresses the importance of conversation in an on-going innovation process. A conversation can in this aspect be an interaction or different interactions to increase understanding of context. Companies or organisations position themselves according to their ability to foresee shifting preferences from users by detecting latent needs. (Fonseca, 2002)

Vargo, Maglio and Akaka (2008) discuss a service system as a unit of analysis for value co-creation. A service system is described as a 'configuration of resources including people, information and technology connected to other systems…' (p. 145) A system can be an individual, a group, or any other constellation of any size. Value is created in use and also depending on context, according to Vargo, Maglio and Akaka (2008), meaning where and when resources are integrated. Value-in-use can be compared to the idea of service-in-exchange, when something is produced and delivered by one unit and the price for using this unit contains the value. Value-in-use cannot be considered simply an integration of resources between two systems. In addition, other stakeholders contribute directly or indirectly with resources as part of this context. They further emphasise the importance of stakeholders in the process of co-creation. Some stakeholders are internal and can for example be employees, while others are external, such as shareholders. 'System well-being' is mentioned as a desired outcome, and is suggested to be measured by looking at how well a system can adapt and adjust to its environment. In order to achieve this well-being, a system has to make the most of all different resources, such as knowledge and skills, both internal and external (Vargo, Maglio and Akaka, 2008). This is especially true for the service innovation process. Furthermore, Vargo, Maglio and Akaka (2008) address some important issues to study further, including the kinds of processes that are involved in value co-creation. Adding to this, Vargo and Lusch (2008) define value as the improvement of a system's well-being, and this takes place in a particular context. They further present what they refer to as a 'service ecosystem', where social norms and behaviour matter, and where resource integration is a central practice. Resource integration comprises interactions, and these interactions are dependent on which actors and contexts are involved.

2.3 Open innovation and user-involvement

Openness as a concept is in need of clarification and conceptualisation, according to Dahlander and Gann (2010). They indicate that there can be positive as well as negative effects of openness. For example, costs relating to openness have yet to be clarified (ibid, 2010). Another aspect concerns the implication that external knowledge is both available and useful, but how to integrate this in a company is not thoroughly investigated (ibid, 2010). 'Openness is in part defined by various forms of relationships with external actors and is thus closely coupled to a broader debate about the boundaries of the firm.' (ibid., p. 700) Gassman and Enkel (2004) categorise open innovation into three categories: inbound, outbound, and coupled activities. Dahlander and Gann (2010) discuss openness and value by separating activities involving transactions and not involving transactions. Wallin and von Krogh (2010) confirm that it is challenging to implement open innovation and that managers need to address non-technical issues of motivation, knowledge types, and governance. Wallin and von Krogh (2010) especially emphasise the integration of new knowledge.

The general idea with open innovation is that companies can and should make use of both internal and external ideas to create value – that is, useful knowledge is distributed, according to Chesbrough et al. (2006). 'The systemic nature of innovation makes companies increasingly dependent on others.' (ibid. p. 244) The open innovation paradigm differs from the closed innovation perspective, in the way in which user knowledge is regarded. Prahalad and Ramaswamy (2004) present a frame of reference for creating value according to a systemic approach where interactions between users and the company are labelled as building blocks.

In an open innovation practice, user knowledge is distributed, democratised and of high quality, since it is supposed to represent the user perspective. Organisations need to be interconnected with external knowledge like this. In a firm-centred and more closed innovation perspective, conversely, external knowledge is not in high regard (Prahalad and Ramaswamy, 2004, p. 9). An open innovation process takes place when internal resources and external resources connect to make innovation happen (Lindegaard, 2010). External partners are integrated in what Normann (2002) presents as the concept of relationing.

As a contrast to the perspective on co-creation of value, Verganti (2009) describes companies that focus on design-driven innovation and where value and meaning can be created within the firm. The design-driven firms aim for a broader perspective and move away from the users (Verganti, 2009). A design-driven approach can be discussed in relation to a service-dominant logic (Vargo and Lusch, 2004) because they both share an interest in the understanding of context. One important actor in a design-driven innovation process is the so-called interpreter (Verganti, 2009). The interpreter can exist in many different contexts and study the same user but from their specific perspective (ibid.). The design driven firm also places a value on relations: not with the users directly, but with the different interpreters in surrounding systems (Verganti, 2009). The interpreters provide information about how people live their lives and how they interact with technology, for example. Design-driven firms aim to create products that will last longer than other products on the market. Both the design-driven approach as well as the service-dominant logic are interested in context, either from a direct involvement such as co-creation or through interpreters. Meaning is a result of interactions between users and products, and meaning is suggested by the firm. According to a service-dominant logic, the nature of the relationship between a user and a producer is democratic and interdependent, since firms cannot create value on their own (Vargo and Lusch, 2004). The quality of the co-creation experience depends on the infrastructure for interaction between the user and the company (Prahalad and Ramaswamy, 2004).

Rothwell (1994) described innovation models in terms of different generations from the 1950s onwards. In the early generations of innovation processes, it was primarily a closed and internal affair. As generations have progressed towards increased

integration with external agencies, for example customers or users, a fifth-generation innovation model is described for the future. According to Rothwell (1994) some of the main characteristics of the Fifth Generation (5G) innovation process are greater overall organisational and systems integration, which also includes external networking, as well as flatter and more flexible organisational structures that include devolved decision making. Rothwell's ideas about the 5G, as presented in 1994, involve external know-how and relations with customers, but he also suggests so-called leading-edge users to be relevant partners for co-creation and does not discuss input from ordinary users in his 5G model.

Open innovation processes depend on relations and knowledge. The character of both relations and knowledge differs from those of a firm-centred, closed innovation process. Von Hippel (2006) introduces the idea of lead users to describe users with specific needs that were not met by the company in their original offerings. Some early examples of lead users were athletes, surfers, and bikers, and these lead users performed their own innovation outside the company system. So in the cases of lead users, research and development departments still represent the practice of company innovation. Lead users are described as users with specific needs, and are quite different from ordinary users. This version of co-creation of value differs from the practice of ordinary users collaborating with companies in research processes.

There are indications that the involvement of customers as co-creators in a service innovation process generates better ideas, in the sense of more originality and creativity compared to professional developers (Kristensson, Gustafsson, and Archer, 2004). Companies use different methods to understand customers' or users' needs as triggers for innovation process. There are a number of ways to go about inviting users or stakeholders to contribute in the innovation process. Customer journey descriptions, surveys, focus groups, lead users, shadowing and many more methods and tools are used. The methods can be divided into two groups: either proactive market research techniques or reactive market research techniques. This thesis builds on the work of Kristensson, Gustafsson, and Archer (2004), as they state that ordinary users are capable of developing more creative and better innovations compared to specialist engineers in research and development. In their study, the suggestions from the users, for example, represent a higher degree of novelty in innovations. Furthermore, suggestions are presented closer to users' needs. This also highlights the importance of understanding customers' context and competences to enhance the quality of service innovation launches. Cooper (1999) states that innovation projects fail due to the missing voice of the customer. Kujala (2003) presents a review of benefits and challenges with user-involvement in the development of information systems. Among the benefits, Kujala (2003) mentions positive effects on user satisfaction and organisations' ability to understand requirements. Among the challenges are concerns about cost efficiency and concerns regarding the large amount of data collected in these processes. Another obstacle listed in the review is

the difficulty in motivating the developers, and that developers do not see the benefits of interacting with users (ibid.).

As already mentioned, customers play an important role for business, and managers benefit by engaging their users in an on-going conversation or dialogue regarding value-creating processes, as indicated by Prahalad and Ramaswamy (2000). The authors further emphasise that this dialogue should be between equals. The result of the dialogue is challenging for organisations and requires a new strategy. Learning, teaching, and the ability to transfer knowledge across boundaries are important skills (ibid.). As service concepts tend to be increasingly complex, with systems and individuals interacting across boundaries, the service delivery systems will be the subject of service innovation as well (Normann, 2002). As mentioned in Section 1.1, the health care sector can serve as an example (Engström, 2012). Health services are evolving, and patients are transitioning from being passive receivers of a service to taking a bigger role in the process. Knowledge in this sense can designate something that is missing, for example when patients move in this direction but still lack necessary knowledge and skills to play an active role in self-care (Normann, 2002). As mentioned in Section 1.1, sticky information can be another example of knowledge, as suggested by von Hippel (1994). Sticky information can be tacit, difficult and expensive to generate, and context dependent.

According to Vargo and Lusch (2004) customers are always co-creators of value. Olivia and Kallenberg (2003) discuss the transition from product manufacturing to being a service provider, and the managerial challenges that occur in this process. They stress the need to develop a capability to spread knowledge. Kandampully (2002) suggests that the abilities of a service organisation both to interact with customers and to maintain relationships with customers are core competences. He discusses organisational mind-sets and the importance of learning and un-learning at the same time. The present thesis discusses relational interactions between actors in co-creation and how they are perceived. Processes for social learning based on interactions, according to Sawhney and Pranelli (2000), are valuable for transforming different data into knowledge. Knowledge in this sense is defined as information with a certain meaning. Meaning in this case is context dependent.

One challenging question with user-involvement in health care innovation processes is deciding which users should participate. Enany, Currie and Lockett (2013) claim that user-involvement is 'unrepresentative and tokenistic'. They mean that self-selection, or the process in which people actively want to participate, and the professionals have preferences for selecting certain users for participation, leads to unrepresentative collaboration. These findings challenge the idea of inviting users to learn their needs and to understand context, if participants are not representative. Solbjor and Steinsbekk (2011) identify a paradox when involving users in health care development. Even though the professionals within the health care facility consider

user-involvement to provide new knowledge, they also consider user knowledge to be less valuable than professional knowledge.

Mckeown et al. (2012) see other values in co-creation and present three different benefits apart from money for user-involvement. They are labelled a more positive sense of self, social and relational benefits, and altruism in activism (ibid.). Engström and Elg (2015) present reasons why patients participate in service development. Among the motives are a desire to connect with others, the opportunity to contribute to something, and restitution after a non-satisfactory experience. An improved sense of relatedness is one advantage of participation (Engström and Elg, 2015).

User-involvement in the innovation process can be organised in a number of ways. Sandén (2007) presents a visualisation of six different ways in which users can be involved – or rather five ways, since the first merely involves the user in that particular role, with no other involvement than the transaction. The first step relates to the idea of value-in-exchange and does not really involve co-creation except from the fact that there is a transaction between a buyer and a seller. Sandén (2007) moves from symbolic involvement to what she refers to as involvement by strong control. The degree of control is matched by the different roles the user has as the involvement changes character.

2.4 Needs and context

According to de Brentanini (1991) companies need to identify and respond to market needs in the service innovation process and appreciate front line employees as a key source of information. The goal of innovation (both products and services) is to design an offering that satisfies the users with regard to the needs they have in the specific user context (von Hippel, 2005). Narver, Stanley and MacLachlan, (2004) present two kinds of needs a customer or a user may have. On the one hand, there are the expressed needs. These are the needs of which the customers are aware and that they can discuss in the concept of a solution to meet that need. Latent needs, on the other hand, are needs of which the customer is not aware. Latent needs are described as unthinkable. However, only latent needs yield a competitive advantage, according to Narver, Stanley and MacLachlan (2004).

Narver, Stanley and MacLachlan (2004) suggest three important principles for an innovative organisation:

- To be able to track and learn about customer needs (expressed and latent)
- To develop new offerings (products and services) to meet those needs
- To develop and implement internal processes enhancing both the understanding of needs and the design of offerings based on those needs

Market research techniques that capture value-in-use insights serve as better input to ideation and innovation compared to customer satisfaction surveys or similar market research (Witell et al., 2011). As previously mentioned, Normann (2002) refers to this as 'the moment of truth': the social act in which the user and the service provider interact (p. 68). Even though Normann (2002) refers to physical meetings between people as a service delivery moment, he recognises the complexity of features this meeting in context involves beyond face-to-face interaction. Context is an aspect of value (Ng and Smith, 2012). Context defines how objects and people interconnect by exchanging and integrating resources with each other. Context is dynamic and is constantly undergoing change (Ng and Smith, 2012). A context can be referred to as a user context or a user situation, but also involves other aspects, such as for example a cultural context on an abstract level.

2.5 Human-centred design

User experience is also a key word in human-centred design. The human-centred design process evolves from the physical and psychological needs of the user. It is more often a process used to design products, buildings and interfaces with technology. Sanders (2005) explains how the way we think about people in design processes has changed, from only being referred to as customers during the 1980s, to now being identified as co-creators. The point is that users have individual needs and capabilities and users should not be the ones settling for a design that was based on an average, non-existent person (Greenhouse, 2010). Steen, Manschot and De Koning (2011) identify benefits of co-design for services as well: benefits for the design project, benefits for the users and/or customers, and benefits for the organisation. A key word in a human-centred approach is empathy, and that is the common thread in value creation and design when involving users and discussing meaning. Wetter Edman (2009) discusses degrees of overlap between service-dominant logic and design thinking, and concludes that the concept of value is not well covered in design literature. There are two areas that overlap the most: one is around the discussion of the complex interaction of actors and systems, and the other is in the way experience is emphasised (ibid). Sanders (2002) connects social scientists with design and emphasises that user experience needs to be the source for inspiration. In order to access experience and understand what people say, make, and do, it is possible for the designers to empathise. She also highlights the need for designers to learn ways to become involved with users. This new way of working is challenging and involves a transformation from a linear into a continuous resonance with users (ibid). Another contribution from Sanders (2005) is a description of the experience domain for the user, since experiencing is a subjective event consisting of memories, the moment, and dreams.

2.6 Empathy and innovation

For Sanders (2002) empathy is a key word, and she suggests that social scientists need to be involved in design. Steen (2011) presents the idea of adding philosophy to design issues by discussing examples of tensions within human-centred design. One tension involves the problem of organising collaboration between designers and users to ensure that both perspectives contribute. A second tension concerns problems with visualising the future, and how to design for a future situation without being trapped in the current situation. Steen (2002) uses Levinas's (philosopher) work to address these tensions, stating that the challenge lies in the way individuals act with information, and the problem of translating all new information into something that is recognisable. Steen (2002), through the thoughts of Levinas, calls this a reduction of knowledge from the Other. In order to extract useful information, designers need to critically reflect on their own practice (Steen, 2011).

2.7 Summarising the key theoretical perspectives in this thesis

In this thesis, innovation is discussed close to Fonseca's understanding, focusing on interactions and relational issues regarding the concept of openness. Innovation becomes systemic and emergent, as well as co-created and on-going (Vargo and Lusch, 2013). Systemic thinking is not fully explored, but merely used to support the idea of understanding context for the users and other actors involved in the complex practice called co-creation of value. In this thesis users contribute with their input, and that input also makes them experts on their own contexts. However, in the cases presented in this work, the users did not have any control over the later phases of the innovation process. The theoretical framework is used in different ways. Some, such as service innovation and human-centred design, are used as a starting point to understand the research field. Systemic thinking is also a starting point, but is not explored in depth in this thesis. It represents, together with Fonseca (2002), assumptions reflecting the present author's views on innovation and how it is developing. Service-oriented theories tend to lean towards ideas of systems and holism. Previous research, by for example Kristensson, Gustafsson and Archer (2004), connects to the design of the present study as well as to user-involved innovation practice. The aim is to problematise openness, and this connects to the work by Dahlander and Gann (2010) and Gassmann (2006).

3 Method

This chapter presents the method applied in the research process, an introduction of the main cases and the confirmation cases, data collection, and data analysis. It concludes by presenting applied ethical considerations. My mission was to understand the experiences of different actors involved in a user-involved innovation practice. In order to do this interventions were made within company settings. These interventions included direct and indirect interactions. Interactions were direct; between different individuals, and indirect; when individuals connect to user-generated data.

3.1 Introduction to method

This licentiate thesis is based on two main qualitative case studies. In chapter three confirmation cases are presented as a way of validating the results. For both the main cases, the purpose was to understand and increase the knowledge regarding a transformation of innovation practices when adapting to a service-oriented and more open way of working. Since innovation becomes more complex when doing this, as described previously, there is an increased need to understand conversations and relations between those involved. The aim was to present three different perspectives of the same process. Relations and interactions can be between representatives of the organisation and the external part (this could be a user, a customer, or another stakeholder, but also between different individuals and/or groups in the organisation.)

The reasons for choosing a qualitative approach were the ambition to more closely approach the real situation set to study (Holme and Solvang, 1991) as well as to make it an iterative process in which the activities created new questions. Gummesson (2003) expresses a preference for the term data generation rather than data collection, since data in a social setting requires an interaction between the researcher and informants or respondents in interviews, for example. In a qualitative work pre-understanding, understanding and explanations are all vital parts for interpretations made in research (Gummesson, 2003). The pre-understanding for the realities of the companies involved in this research was limited. However, the pre-understanding regarding the value of customer involvement was well established both theoretically and empirically. In the process of categorising the material generated on the field, the lack of pre-understanding was a positive factor since the ambition was to identify innovation potentials from data with no relevance to, for example, organisational structure or assumptions made by the company beforehand. The participants were to behave as closely to their normal situation as possible. In addition, as suggested by Yin (2011), another purpose was to capture the different perspectives of those involved. Several actors were involved in this work, which collected perspectives

from top management, middle management, and users and other stakeholders. The overall aim was to understand service innovation practices in a co-creation situation.

The work has an inductive approach and aimed to understand how different actors experience co-creation in practice. The empirical data collection was complex due to the need to study different levels, and different individuals in different contexts. It was necessary to learn about individuals as well as company structures. Inductive work starts with studies of reality, or practice in these cases, which leads to concepts to study further (Olsson and Sörensson, 2011). The next step is to interpret how concepts are interconnected to each other, and this may lead to a hypothesis and new theory. This work does not result in new theory, but instead provides a deeper understanding from practice concerning the issue of co-creation. This may be described as an early phase of theory building. Scholars suggest a systemic approach to co-creation, and recommend that a holistic perspective be applied. This was done in the present study by including representatives for different perspectives and backgrounds in the activities of the case studies. Much emphasis in the study has been on dialogue and reflections, but there is nevertheless no guarantee that there was a shared meaning of concepts or a mutual understanding of the situations.

Carlile and Christensen (2005) problematise the creation of new theory, arguing that the same words can be used to mean different things. This challenges the research community when building on others' knowledge. Thus, Carlile and Christensen (2005) claim that theory needs to be framed as a verb rather than a noun, since the understanding of a phenomenon undergoes changes during both descriptive and normative phases. The preliminary phase, or the descriptive phase, can be divided into three steps: observation in order to create constructs, classification of the phenomena into categories, and, finally, defining relationships within these phenomena.

The results are based on data generated during the introduction of a user-involved service innovation method for companies. It is a behavioural research-based method that helps to analyse the experiences and understand the customers' and/or stakeholders' latent needs, which are used in identifying service innovation potentials.[1] This process and how it was executed are described in order to explain the context for data generation. There was a need to investigate how co-creation is experienced when involving customers in service development projects. By letting customers register and document their experiences, ideas and feelings as they interact with the service and company, i.e. the co-creation process, data is obtained that could be used for service innovation. This was a parallel process, as while generating data

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[1] The method is called the KIT method and more details on this method can be found on the web site www.kitmetoden.se. KIT stands for Knowledge intensive service development or, in Swedish, Kunskapsintensiv tjänsteutveckling

for research, companies gained data for innovation potentials. The interventions within the companies also served as data generation for the thesis work.

3.1.1 The process of user-involvement (KIT method)

In short, the method for user-involvement involved inviting users or external stakeholders to provide their unfiltered experience of a situation. The process was an open innovation process using the customers' experience as the resource for new ideas. It started with giving customers the task of focusing on feelings and/or problems they experienced as they were interacting with the service and the company, and thereby contributing ideas for future services. The experiences were recorded in real time, in-situ documentations, in order to obtain observations that were as unfiltered as possible. This was done for example by using digital cameras or simple tools such as a notebook and a pen. Subsequent to their observations, the users were interviewed about their experiences. The in-situ observations were put in a template so that they were all presented in a similar manner for further development. These data were compiled and categorised in order to work in a structured way.

The experiences were then analysed during workshop sessions; this was done in two loops in order to understand innovation potentials. The first loop involved categorisation of the observations, which in a structured way clustered observations and areas of interest. The second loop was through a dialogue-based process: identifying the latent needs during mapping of the observations. These represented an opportunity for a deeper understanding of why customers interact, and what they would like to experience. The outcome of the process was mainly insights and knowledge about users' expressed and latent needs. This step-by-step mapping of the documentation in combination with a workshop methodology led to new insights of service innovation potentials, or starting points for an idea generation process. Afterwards, idea generation and evaluation of ideas followed. In this thesis I focus on the early stages of the process. The final idea generation and the evaluations of ideas are not covered in this work. These phases took part after the research project.

3.2 Presentation of cases

In this thesis, two main cases are discussed. The cases represent two different companies that were in the midst of changing their businesses to reflect a service-oriented approach. In both cases, this was communicated by top management. The companies differed from each other. One was privately owned, while the other was a municipally owned company. One was local while the other was global. One of the companies was in a traditional service industry whereas the other company was in a technology-oriented industry. Despite their differences, they shared certain characteristics. Their innovation processes prior to this intervention were quite linear and mainly characterised by the inside-out model. Customers played an important

role but mainly through channels such as customer surveys, etc. A relational perspective was new to both these organisations.

Three additional cases were used to confirm the data. The main reason for this was the long period of data generation and the need for updated data. This was done through an opportunity to collaborate with certified consultants working with a user-involved innovation method as facilitators of an innovation process. In their roles they worked closely both with management (their clients) and users, who participated on the same terms as the participants in the two main cases. Access was granted to all relevant information concerning these three confirming cases. These cases involved a telecom operator, a staff restaurant, and a public transportation company.

3.3 Data collection

The process described for data collection was highly iterative and can also be perceived as data generation, in line with Gummesson (2003). In both the main cases data were generated in different steps, starting with preparatory interview sessions with management, followed by further interview studies conducted with ordinary users in the first main case, and with external stakeholders in the second main case. The second case was in a business-to-business context. During field studies, data were collected during and subsequent to workshops and other interventions. The final data were generated through deep interviews with professionals working according to a user-involved method. To strengthen the results, information for three additional cases beyond the two main cases was generated. For these cases, semi-structured interviews with consultants dedicated to user-involved methods were used. The companies in these cases were selected based on a single commonality: they were all undergoing a transformation process with the explicit aim of opening their innovation processes.

3.3.1 An iterative literature study

Literature studies were conducted, but primarily connected to the case studies and appended publications. One example is a literature study conducted prior to interviews with middle management, with database searches in March 2010 on ABI/Inform Global (ProQuest), IngentaConnect and ScienceDirect using the keywords 'service innovation' or 'new service development' combined with organisation. The reason for selecting both service innovation and new service development was that they are used interchangeably and the focus of the study was to collect what different scholars have said about the organisational aspects suitable for the implementation of service. The theoretical framework presented in this thesis is to be considered as a way of framing the different issues connected to the process and the research questions.

3.3.2 Semi-structured interviews

The interviews in the case concerning the company in the service sector – a zoo/amusement park – were conducted in a step-wise manner. Early in the first case study two researchers conducted a group interview with two respondents from the top management of the zoo/amusement park. This was done to establish early ideas of customers' importance for service innovation, as well as to get a better understanding of the company.

The second step was to construct an interview guide in accordance with Kvale's (1997) seven stages for designing and implementing an interview study. The advantage of this method is that it produces somewhat structured data, while still being combined in a conversational and rather informal manner. The case study included 29 qualitative interviews with families that focused on the user experience. During these interviews photo-elicitation was used as a way of encouraging the respondents to talk more than they probably would have without the photos (Epstein, Stevens, McKeever and Baruchel (2006). The photos acted as support for the memory and for the researcher to understand relevant contexts. An additional 11 interviews were conducted with users that focused explicitly on the experience of co-creation. The participants were asked to talk about their experience, with particular emphasis on the themes that were considered relevant for the study. After a few weeks, six follow-up interviews were conducted by phone to further understand the perspective of the users in this innovation practice.

The third step in this case study was to conduct six interviews with middle management of the company. For these interviews, another interview guide was developed. The respondents were asked to tell their story about certain themes. Among the themes were organisational culture, organisational structure, employee-management role, and external relationships. The themes were the result of a literature review focusing on the transformation to a service innovation culture from an organisational perspective. Organisations are encouraged to involve customers as co-creators of services. In order to succeed, some necessary adjustments are needed for organisations to perform in an open innovation environment. The aim of the literature review was to explore what has been studied about fostering successful service innovation.

The interviews in the second main case concerning the technology-oriented company started with two similar background interviews conducted with management representatives for the company. The first interview was a group interview involving four representatives of management. The second interview with management was with a representative for middle management in the same company but in a different context. Furthermore, a follow-up interview was conducted with the same representative of middle management.

Regarding the three confirming cases, data was generated through in-depth interviews with professional consultants. These interviews followed the same themes as the interviews in the other cases. These cases are referred to as confirmation cases in this thesis for two reasons: first, they were not planned for in the initial design of the case studies, and second they were based on the interpretation of secondary data.

3.3.3 Workshops

Workshops were used in both main case studies. During the preparatory stage, an initial workshop was held with a reference group consisting of a separate group of small business owners; this was done to test the design of the method, setting and tools, and to better understand difficulties for the participants. Based on those experiences a workshop was conducted for employees in the zoo/amusement park, comprising 15-20 participants. The participants represented all of the different business areas within the company on a middle management level. The purpose addressed to the participants was to analyse user-generated experiences in order to identify latent needs and service innovation potentials. The purpose for research was to observe employees' reactions to the user-generated materials, and also to observe employee interactions in a multidisciplinary setting.

In the second main case, a total of three workshops were held with different groups. Initially, before the field study, a workshop was performed with four managers. This workshop was designed with the purpose of understanding company context better from a specific company perspective. During the field study, designed as an intervention involving both company representatives and an external stakeholder in the business context, two workshops were held. The aim of the first one was to understand service innovation practices within the company; the participants were middle managers (four) and one representative for top management, working actively with service innovation. The second one involved different stakeholders in order to understand interactions between the company and external stakeholders. During the second workshop, field-generated data were used and the participants worked together to understand latent needs in this business context and to develop service innovation potentials.

The strength of workshops is that they form a platform for free discussion between different stakeholders, and further that this discussion is on non-competitive grounds (Soini and Pirinen, 2005). Workshops are also an opportunity for knowledge sharing in collaborative research (Soini and Pirinen, 2005). The following elements were vital parts of the workshops: the element of trust and clear roles for everyone involved, multidisciplinary groups, and tools to visualise group efforts.

3.3.4 Documenting observations

As mentioned, workshops were part of the process during the entire project. During the workshops, researchers were also facilitators. Data generated during workshops

were field notes based on observations. Participatory observation can be in conflict with one's role as facilitator (workshops and meetings) and there is a challenge in going from field notes to fuller notes. During the workshops, observations were captured with field notes. Yin (2011) recommends the transformation of such notes into more workable data as close to the occasion as possible: perhaps at the end of each day and/or session. This was done by reflection in the project group. During each of the workshops the entire project group was present and observant. The reflective discussion afterwards was helpful in identifying factors of relevance. Besides this opportunity to reflect on the work, material from each workshop was copied and saved.

3.3.5 Group reflections

During all the interactions with the companies involved in the studies, all steps were the subjects of discussion within the project group. Live field notes were discussed during debriefings of workshops and close to other interactive activities. The interpretations of field notes were discussed in a similar way as the process of identifying latent needs.

3.4 Data analysis: Categorisation and coding

All interviews and live field notes were categorised and analysed by an open coding system. After transcribing the interviews, they were read thoroughly and suggested themes were marked in the margins. The themes were then clustered and arranged so that categories evolved. No categories were decided beforehand. It was an emergent process, in which categories, patterns and themes evolved from the transcripts. The in-depth interviews were recorded. This may have caused respondents to be nervous (Hart, 2007), but all respondents agreed to be taped. The identified codes and themes were cut and pasted in order to cluster similar themes.

3.5 Ethical considerations

Some aspects are especially important in order to protect the individual participants, as suggested by the Swedish Research Council (Vetenskapsrådet). A codex for research within the social sciences is suitable to discuss regarding this work (God forskningssed, 2011). During this field research ordinary customers and stakeholders were engaged. They were all informed that they were participating in a research project; they were explained the aim of the project; and they were told that their participation was voluntarily and that they could leave the project at any time. They signed a written consent to participate.

1. The participants signed a written consent that their data may be used in research. During the interviews consent to tape the longer interviews was recorded on tape.

2. Participants were informed that they could choose to decline to participate. However, in those cases where employees were interviewed or participated in workshops, one can discuss whether or not the persons regarded participation as part of their job, and felt obligated to participate. In the present study, no one chose to officially decline participation.
3. No pressure was put on the participants. The customers were invited to participate on rather short notice. However, the external stakeholders in the second main case were recruited locally, so there may have been parts of that process that were not entirely transparent.
4. Data were treated with confidentiality.
5. The information was not used for commercial purposes.
6. The longer interviews were transcribed in full and the respondents were allowed to read the transcripts. No errors were found and therefore no text was altered.

4 Results

In this chapter summaries of the appended papers are presented, along with additional results not previously published. Paper I provides answers to research question one: how users and external stakeholders experience co-creation of value. Paper II provides a basis for discussing research question three: describing limiting and enabling factors for organisations transforming into more open innovation practices. Paper III provides answers to research question two: how top and middle management experience co-creation of value. In the section called 'Additional results', a problematisation of openness in the context of user-involvement is presented, as these different perspectives are discussed as one complex situation or system.

4.1 Main findings

Although open innovation is frequently used to describe companies' strategies and practices to stay competitive, there is a need to problematise this approach and study collaborative initiatives to learn more about it. This thesis aims to explore different perspectives on co-creation of value. One of the main findings concerns mixed feelings. Co-creation of value is a positive experience for users, but not entirely so. There is some confusion and stress involved regarding what to do and how to do it. Top management is positive about the experience but struggles with limitations regarding the organisation that is not problematised enough. For middle management there are some major concerns to address despite positive attitude and an eagerness to come closer to the customer. Their own work domain relatively an innovation practice' is the source of the problem.

When studying the complex situation of co-creation, involving the perspectives of users, middle management and top management, the results indicate that especially within a company there are some limiting practices and structural issues to deal with in order to ensure a good outcome of user-involved initiatives.

4.2 Summary of Paper I (context, results, contribution)

'Customers' experiences of co-creation during service innovation'

The purpose of this paper is mainly to understand how customers or users experience participation in a co-creating process. This summary focuses on results, as the methods and design of study are presented in Chapter 3. The article intended to present the customers' view since at the time of publication there was a focus on firm-centred articles about co-creation of value.

The participants do not have any previous experience of being invited to participate in an open innovation process aiding a company to perform better and create new services. Responses to customer satisfaction surveys or to participate in traditional market research are not activities that the customers associate with innovation. The customers present themselves as ordinary users, as creative as anyone, and while they admit to either suggesting new ideas at work or fixing things in their private roles, they do not identify themselves as entrepreneurs or inventors, or as being particularly creative. To be invited to partake in an innovation process is a positive experience and they admit to being useful in the role as ordinary customers or as service providers. They consider it a good and relevant practice when companies ask for outsiders' experiences and opinions, and they appreciate this initiative. However, here the results differ to some extent. Among users the openness and the opportunities to influence future services is considered positive.

In the case presented in this article, the participants have mixed opinions about their participation in the processes. There are favourable experiences, for example benevolence and deepened relationships, both within their own group of people and with the company involved. Among the unfavourable experiences are feelings of incapability and intrusion.

Starting with the favourable experiences, new bonds are created. Several participants express a strong sense of identification with the company when they are co-creators of new services. They act almost as if they are employed by the company, eager to understand and willing to develop an understanding even for situations with which they are not pleased. Participants make verbal statements such as 'It is fun to be involved in the project, I'm glad to help.'

Participants' stories contain various experiences relating to a deepened relationship. New bonds are a possible outcome of co-creation initiatives. The results suggest that a shared understanding of context, when internal and external actors meet in an open dialogue through tools and visualisations, creates a new bond between them. It also allows for understanding the complexity of the context as more perspectives are presented.

The opposite and more unfavourable experiences are the feelings of incapability and intrusion. While people are willing to contribute, both as customers and as external stakeholders, and receive the instruction to simply document anything that came to mind, several of the participants are worried about what they deliver, and whether or not it is what was expected. The following quote is given by a participant who thinks that the process is too demanding: 'It was very good to do this in real time but it was difficult to register everything.'

A sense of stress arises among those feeling lost in the whole procedure. Some participants have concerns about the risk of intruding, which adds to the negative

aspect of co-creation experiences. The feeling of intrusion can for example involve the recruitment process, the methods, and the instructions. The participants express an aversion towards a process that would have required too much of them and a lack of freedom in the execution. However, the dominant feeling of outsiders who participate is positive. Contributing makes the participants feel good about themselves and eager to perform well. These findings are in line with Hertel, Niedner and Hermann (2003), who report that users who innovate often are driven by internal needs, which may imply that the outsiders participated because they saw that their work could have benefits for themselves and/or for others.

4.3 Summary of Paper II

'From a closed innovation culture to an open'

This conference paper introduces a service organisation with a traditional culture of dealing with innovation that is very similar to an industrial setting of product development, and which has been experimenting with a user-involved service innovation method. It elaborates on the on-going challenges for this organisation to evolve into an open service innovation culture involving customers in the co-creation of value. The results presented in this paper are based on six semi-structured in-depth interviews with representatives from middle management within the mentioned service organisation. In addition, a focus group interview with two representatives from top management is conducted. Furthermore, an important part of the data collection involves observation and participation in meetings, and involvement during a workshop with representatives from middle management. Field notes are used as a data collection instrument to gather the input resulting from these interventions.

The results in this paper are presented as tentative as they are early findings from a work in progress. In order to better understand the perspective of management additional data are generated later in the process.

The semi-structured interviews cover the following themes: current innovation processes, experiences from user-involved innovation, internal communication and collaboration, and thoughts concerning users as co-creators of value

Regarding current innovation processes, the managers have a good understanding of how innovation is structured and act according to management strategy. New methods for identifying triggers for innovation are welcome as customer value and satisfaction are emphasised as important criteria for developing ideas. However, there is some confusion about how to perform in an open innovation practice.

Internal communication and collaboration are important aspects of knowledge sharing and are thus vital for new service development. An important dilemma is

observed relating to customers as co-creators of value. In spite of the widespread opinion that close relations with customers are beneficial and that openness is a necessary attribute in order to be a successful service provider, there are few direct and strategic contact points for enhancing interactions in a dynamic and on-going manner.

The study indicates that the traditional innovation model in the company runs on a one-year cycle where innovation is limited to a specific time frame and closely connected to the budget process, and where different departments are involved in a competition of available resources. Departments are hierarchical in their structure and there is a defined structure for internal communication. The tool for understanding customer needs is an annual survey on customer satisfaction. This survey is analysed and distributed after peak season and represents input for developing ideas in-house.

While all respondents claim that the customer satisfaction survey is the main tool for understanding customer needs and a trigger for innovation, only one respondent displays an understanding of how, why and by whom this tool was designed. However, all respondents express a willingness to open up their departments more than they are used to, and can verbally suggest several ways of interacting with customers in a less formal manner. Interactions with customers and spontaneous interactions between departments and individuals in the system or, in this case, the organisation, are not normally documented or reported. Some individuals keep journals or diaries as a reflective learning tool, but this is not part of an overall strategy. Thus new knowledge and relevant information from these observations and interactions are not often communicated to the proper level or the proper person or defined role.

The results from this study do not challenge existing knowledge as much as they support what scholars state regarding communication and knowledge sharing, among other aspects of service innovation. This is in line with the work of Martins and Terblanche (2003). However, the results suggest that even more variables need to be studied: for instance the presence of anxiety and trust within the system, as well as interactions with and attitudes towards users, as a way to understand the complexity of user-involvement in service innovation. An argument that can be made is that sometimes employees should disobey traditional rules. This can be seen as an asset for a service innovation culture rather than a problem. Champions of service innovation sometimes need to ignore old structures and formal hierarchies. They display a divergent way of thinking and have the ability to scan their environment and act when they see the need for change. However, the so-called 'dinosaurs' (Bechtold 1997), defenders of stability, are also important to keep the balance.

The results further indicate that service innovation processes need to be on-going, depending on interactions between agents on various levels, and that they are not

suitable to organise as one-year cycles. For management this involves a discussion about structures for self-organising and the distribution of power related to service innovation.

4.4 Summary of Paper III

'Co-creation: how middle managers experience user involved innovation'

This paper aims to increase the understanding of how middle management experiences co-creation of value. It suggests that user-involvement, as one aspect of open innovation, requires a new mind-set that breaks with the more traditional technology push view of innovation. In this paper it is argued that there are challenges both on the organisational and the individual levels in adapting to a more open process. The paper discusses how relational patterns within organisations may enable or complicate co-creation of value. The study shows how middle managers experience the introduction of a new method for service innovation, involving users and stakeholders during the early phases of new service innovation. The empirical data involve both expectations and assumptions concerning co-creation, and reactions and attitudes towards active participation in co-creation. From the perspective of middle management, value-in-use and the idea of co-creation of value are an attractive and accepted approach, but in practice the concept has yet to be implemented. Implementation involves the struggle of adopting a systemic rather than an unsystemic approach to innovation. This transformation is challenging. The way middle management handles interactions implies that sub-optimisation more often leads the way rather than a systemic approach. The study finds small examples of self-organised behaviour in favour of a relational approach by individuals pursuing on-going dialogues, but rigid organisational structures and communication systems interfere. One of the main findings concerns the defensiveness of the professional domain from an individual perspective. This implies that understanding value-in-use from a systemic perspective is not in place as part of the organisational culture.

The result of an on-going dialogue with users is challenging for organisations and requires a new strategy (Prahalad and Ramaswamy, 2000). This paper suggests that the process of engaging in interactions for this purpose is also challenging. The company may need to consider mixed emotions, structural difficulties and human attitudes getting in the way of the big picture. Even though there is a general agreement that an open innovation approach is both desirable and important, there are very few internal processes supporting such a mind-set. Middle management is not rewarded for casual conversations or random meetings, even though these may lead to an increased understanding of the user or customer. The different departments within companies do not think or act as a collective force. Instead innovation initiatives are kept within the different domains of expertise; this makes the individual

determined to defend expert knowledge and resist external input, which is perceived as a threat against it.

According to the collected data, the practice of co-creation provides new insights, a high degree of learning, and the service potential starting point evolved in new situations, without regard for departmental borders. This may cause problems for the later phases of the innovation process, because a sense of ownership over processes becomes blurred. Reactions and attitudes at a middle management level concern both structural aspects of interaction – for example how meetings are organised – and also the elements of trust and motivation for collaboration. Despite the positive feelings among management, there are some challenges to overcome concerning interactions. The findings clearly demonstrate that there will be reactions on a micro level. The strong willingness to move towards a more open innovation strategy is the strongest indicator of attitudes. Nevertheless, on an individual level the value-in-use concept is difficult to comprehend and adjust to everyday situations, which restricts openness.

Scholars (Martin, Horne and Schultz, 1999; Chesbrough, 2010; Leeuwis and Aarts, 2011) seem to agree that interactions with both users and other stakeholders are essential for successful service innovation. However research so far has mostly focused on presenting important capabilities and competences for an organisation to successfully work with service innovation. This paper aims to also understand the reactions and attitudes of middle management related to the process of creating innovation in another, more open way. Some inconsistencies are to be noted:

- The rhetorical idea of the importance of users' input versus actual initiatives or opportunities in practice to interact with users.
- Aiming for value-in-use but in reality having quite a traditional perspective on value creation through value-in-exchange.
- Innovation practice involving more internal competition than collaboration.

A lack of either preparedness or interest of companies for holistic, systemic thinking is apparent. More than anything, middle management wants to receive feedback or input regarding its specific department or professional domain. Innovation is found to be more domain restricted and less context driven.

4.5 Additional results

In this section openness is problematised in the context of co-creation of value when the participating different perspectives are discussed as one complex situation or a system. In addition, the results from the confirming cases are commented upon. Themes identified from both of the main cases are presented in Table 1 with the perspectives of the user/external stakeholder, top management and middle management. The themes were drawn from the analysis of the results, as described in 'Data analysis', with the intention of processing the results from the different

perspectives in relation to each other. This illustrates some of the enabling and limiting factors for organisations during transformation into more open innovation practices. These data can be traced to the early phases of service innovation, from attempts to understand customer experience to activities aiming to identify service innovation potentials. This process starts in an open manner and gradually in these cases narrows down to an internal innovation process.

Table 1. Characteristics of the three perspectives

	User	Top management	Middle management
Willingness	yes	yes	yes
Sense of urgency	no	yes	no
Trust	yes	yes	no
Relational approach	yes	yes	no
Rewards and benefits	no	yes	no
Defensiveness	no	no	yes
Identity as an innovator	no	yes	no
Sense of ownership ideas	no	no	no

The empirical data shows a general willingness to participate in open innovation practice situations, as long as there are tools fitting the situation and the participant and the situation does not create any confusion. Top management representatives express a sense of urgency and are actively looking for new methods and tools to understand customers' experiences. Neither the users nor middle management express that sense of urgency. Trust is another key word regarding this practice. Users feel comfortable and at ease sharing their experiences. Top management representatives are relatively comfortable but do show some hesitation about sharing freely.

Middle management representatives are not sure whether or not users want to collaborate, and display a lack of trust in different ways. They are especially concerned with other peoples' (users or colleagues) knowledge about their domains. The democratic aspect of knowledge is thus neglected. Secondly, they show a lack of trust regarding other departments or co-workers. As far as a relational approach, only the users discuss the experiences in terms of creating new and stronger bonds, understanding the company in a different way and presenting explanations for why

things are as they are; they display empathy in the process. Neither top management nor middle management representatives discuss any differences in how they perceive themselves or the company.

When it comes to rewards and benefits the users do not demand or expect anything in return for participating in this process. Both levels of management expect the users to demand something in return for their contribution. Internally, there are no fringes or benefits connected to working with innovation. New ideas from temporary workers can at best be rewarded with a lottery ticket or something equally modest. Defensiveness is especially connected to middle management. The level of defensiveness is not anticipated and top management does not address this as an issue. Users show no defensiveness.

Only top management members see themselves as actors in innovation. Middle management representatives do not describe themselves as part of innovation activities and show no identity as innovators per se. Users describe themselves as creative or as problem solvers but do not exhibit an understanding about their part in open innovation systems. It is a new experience for them. The sense of ownership of ideas is not an issue for the users. They present no claims or restrictions. For top management and middle management, ownership of ideas is a non-issue. There appears to be a problem in pursuing the development of ideas due to a lack of sense of ownership. Ethical issues are not highlighted, neither from the users' perspective nor from a company perspective.

The results of the three confirming cases are in line with the results presented in this chapter. These results are therefore not discussed further.

5 Discussion – the paradox within

The discussion begins with the cases. In response to Research Questions 1 and 2, it elaborates upon the paradox within the cases and mixed feelings among the participants in the co-creation of value. The discussion further moves to the openness in relation to theory and, in response to Research Question 3, the challenges regarding openness in relational innovation practice. Finally, it concludes by discussing the need for a deeper understanding of relational perspectives of co-creation of value.

5.1 Mixed feelings in the cases

The two initial research questions concerned the experience of three stakeholders in the co-creation of value:

> RQ1: How do users and other external stakeholders experience co-creation of value?
>
> RQ2: How do middle management and top management experience co-creation of value?

The two studied cases indicate that a transformation into a more open innovation practice is not entirely a positive journey for those involved. This is acknowledged by the interviews and the discussion in the three confirming cases. There is a generally widespread idea that openness and working more closely with users are beneficial and will lead to success. From a company perspective there is some sort of a commitment to this idea; however in practice there are both limiting and enabling factors for doing so. There are discrepancies between the interest that companies show in open innovation and the actions that they take towards reaching the goal of an open innovation practice.

Users are more willing and motivated than the company expects. Furthermore, users demand little or nothing in return for this. Middle management assumes that users are less willing to participate than they actually are. Intrusion is one factor to consider. Users do not want to be taken advantage of but gladly assist in improving or suggesting a new service. Middle management assumes that intrusion occurs earlier and more often. This results in an unwillingness to connect to users. Attitudes interfere, as well as a lack of understanding of others' interest in the process.

The results suggest that the greatest challenge when companies open their innovation practice is internal. To connect with users and other stakeholders presents less of a challenge. Gassman, Enkel and Chesbrough (2010) claim that intellectual property and patents determine how collaborative efforts develop. This may be true for product development in certain fields, but it is not the case in service innovation work.

Small- and medium-sized companies are not subject to as much research concerning open innovation as larger companies are (Gassman, Enkel and Chesbrough, 2010). In this thesis size does not matter during the introduction of a more open innovation practice. The limiting and enabling factors are quite similar in both cases, even though the settings are different. Gassman, Enkel and Chesbrough (2010) discuss the new role of research and development departments and the potential of being close to market and lead users. Ordinary users are not mentioned specifically. This work, among others (Kristensson, Gustafsson and Archer, 2004) suggests that the involvement of ordinary users is a way to go. The holistic model for open innovation is missing, according to Gassman, Enkel and Chesbrough (2010). What the results indicate is that the transformation of processes, as suggested by Gassman, Enkel and Chesbrough (2010), does move from stage-gate to probe-and-learn and, as far as structure goes, from working alone to involvement in alliances. Dahlander and Gann (2010) problematise open innovation and argue that scholars define openness differently when they study this phenomenon. Dahlander and Gann (2010) argue that openness needs to be studied in different settings, and also study how openness as a concept is changing due to other changes in society. As a conclusion, Dhalander and Gann (2010) suggest a need to study why certain companies make open innovation profitable while others do not. Adding to this discussion, the democratisation of knowledge needs to be addressed. In order for a company to open its innovation process, it is vital to foster a culture in which external ideas and knowledge are appreciated (Gassmann, Enkel and Chesbrough, 2010). Prahalad and Ramaswamy (2000) emphasise that this interaction should occur between equals. In this work it is clear that contextual knowledge from users is considered to be of less importance than expert knowledge.

5.2 Discussing openness

In further discussing RQ1 and RQ2, the research field of open innovation and user-involvement is challenged by multiple definitions and constructs. This lack of clarity is also present in practice in the companies examined in the case studies. Openness can be experienced in different ways. In this thesis, the term openness is used in the meaning of a way of introducing users and external stakeholders to contributing to an innovation practice. This is why the cases were interesting to study. Open innovation as a mantra or as a confession of the lips but with sincere intent is one thing; but it needs to be discussed and compared to the situations in which openness is understood as a trustful learning experience with room for emergence. There is a distinction between a relation or relations and a relational approach. The latter emphasises the actual meeting and what happens in that moment, and also involves a critical reflection inwards. In the practice of user-involvement and the search for service innovation potentials, a relational approach is suggested following the work of Normann (2002). Relationing as part of strategy (Normann, 2002) implies that a meta-level of thinking is required to not only change the image or the understanding

of the customer experience, but also to alter the self-image of the company accordingly. Hertel, Niedner and Hermann (2003) claim that individuals such as users have a strong desire to share thoughts, feelings and ideas in open innovation activities. This is confirmed in both cases. However, although users are more than willing to accept participation, the entire experience is not exclusively positive. Collaboration can also involve feelings of discomfort and negative experiences.

Contextual awareness involves an understanding of the complexity of a situation, rather than just how complicated the situation is. An entrepreneur can know his or her customers well but still lack understanding of the context in which the customer operates. User-involvement as a relational practice enables a method that is on-going, and provides a structured process without pre-defining what there is to learn about the user context. This can also be described as room for emergence, but still with tools provided to handle this potential knowledge. The situation is given, and is possible to address as a starting point for innovation. For companies' routines need to be questioned according to this mind-set of relational practice. The preparedness for this varies. For the individual there is a conflict between working according to the traditional practice and a user-involved practice.

There needs to be a discussion about the relation between openness and where in the innovation process openness is applied, as well as about how this is done. In this thesis, studies were conducted in the early phases of an innovation process. This started, as mentioned earlier, by inviting external stakeholders to contribute their non-filtered ideas and experiences. After this process, there is a need to approach these data in a structured way and to cluster the input. This categorisation can be done in a closed setting within the company or in a more open way by inviting others to participate in this activity. This is one example of when users' contributions are used in an indirect setting. Emergence is possible in this situation if domain- or department-specific structures and claims are not allowed to control this part of the innovation process. Emergence creates opportunities for identifying innovation potentials beyond the incremental or what is already a construct within the company. These activities involve complex analysis and interpretations combined with empathy to make sense of value-in-use and identify new service innovation potentials. This work presents a few mistakes to avoid: one of them is assuming that this knowledge is ready to use and easy for everyone to process.

5.3 Problematisations of openness in service innovation

This thesis touches upon limiting and enabling factors, which in part add to the understanding of open innovation practice. By analysing the experiences of different stakeholders in the process, and identify inconsistencies and paradoxes, the dilemma formulated in Research Question 3 can be discussed:

RQ3: Which are the enabling and limiting factors for organisations transforming into more open innovation practices?

When companies transform into more open innovation practices it affects the entire innovation process. It affects the circumstances surrounding early input for inspiration, the continuous work with ideation, as well as evaluating ideas for future launch. In this thesis the focus is on the early stages of the innovation practice. User-involvement has the potential to change the direction of idea development because such practice makes room for potential emergence. There are some challenges concerning openness and a relational practice. In the cases discussed in this thesis, companies were in the process of opening their innovation practice, and the presence of something old meeting something new created tension and dilemmas with which to work. Some of these dilemmas can be described as resistance to change in general, but others are emergent issues concerning the individual and the structure of the practice. When the participants in the studies describe the innovation process they are familiar with, the concept of openness is not an issue. Openness is discussed regarding customer surveys, benchmarking, and interactions with other actors within their field of business. In both main cases, the innovation practice resembles a second-generation market pull process, characterised by inside-out-thinking (Rothwell, 1994). The inside-out model starts with an idea of a market need as a trigger, but this is often manifested by an idea being generated inside a company, as illustrated in Figure 1.
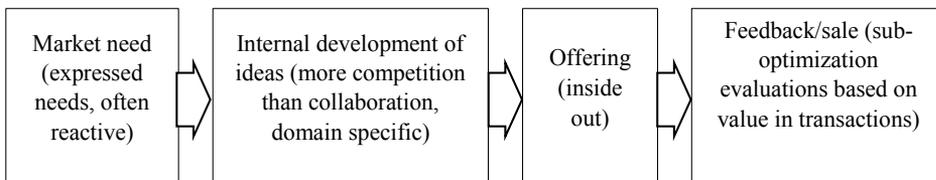

Figure 1. Description of the inside-out innovation model, based on Rothwell (1994).

In order to problematise openness regarding the transformation of an innovation practice, tensions and resistance towards openness can be identified. One major change is to move from a process that is organised according to an annual cycle into a relational approach where innovation is an on-going activity. The time restrictions for openness are not necessarily controlled by the company. While new knowledge may be gained from the user's 'moment of truth', and timing is essential, the time period for interacting with users needs to be on-going.

Another change concerns the question of who is to be involved in the innovation practice and how it is organised. This change involves a shift from innovation activities as part of specific domains or departments to multidisciplinary activities and exchanges taking place in temporary working groups. Hierarchies tend to matter

less and innovation is no longer restricted to be organised in silos. Regarding communication patterns, increased openness involves a change in both what needs to be communicated and how communication flows. A relational user-involved innovation process is more of a dynamic process. When innovation originating from silos is replaced by activities in multidisciplinary temporary working groups, and when information can move freely both within the organisation and in dialogue with external stakeholders, for example users, there is an increased risk for biased information. These temporary working groups can consist of representatives from different areas within a company or can also include external partners or stakeholders. Communication in this regard is conditioned by the existence of trust or lack of trust. Courage and tolerance may be relevant to address as well. This is valid both inside an organisation and in communication with stakeholders. Personal ties may compromise communication and challenge a relational approach. Different or various group formations most likely lead to different innovation potentials being identified. Sticky information about user context and a tolerance for emergence is conditioned by the level of tension that this creates within groups. The end result, the analysis, is thus subjective. One issue to research further research is how temporary and multidisciplinary working groups can or cannot evolve into innovation teams. The following figure presents an overview of challenges regarding openness. The terms in the illustration have evolved from empirical data as examples, but most of them are also covered in literature. They confirm or contribute to existing theory.

Overview of challenges regarding openness in relational innovation practice

User input	User or other stakeholder input is a defining factor for all stages in an innovation practice. It may create tension interacting with expert knowledge or domains within an organisation
Locus of control	Moving from company control of when, how and why interaction occurs, to a lack of control. Control affects quality of input. Interactions based on equality shift the locus of control towards users and other engaged stakeholders. The locus of control shifts to a locus of initiative.
Time for interaction	The practice of pre-defining time slots for interactions and exchange of data and possible new knowledge evolve into innovation as an on-going activity. Timing is also relevant due to in-situ documented input and how and when to communicate. In addition, direct and indirect interactions suggest the need for an interpreting sensibility to preserve original experiences.

Role definition	As roles shift it becomes essential to organise temporary groups or to arrange for self-organisation. Besides the fact that roles are shifting, users, for example, can have more than one role: as customers and as important partners in the innovation practice. Innovation as a distributed practice involves, for the individual, shifting from ordinary tasks to innovation activities, which may create tension: both tension between colleagues, and internal stress for the individual.
Communication	Communication as part of an iterative practice, plenty of feedback loops and feedback on feedback challenges current metrics and cost control.
Latent needs	An element of subjective analysis in all development phases regarding innovation potentials and its further development. Challenges current metrics and voices of reason and domain expert knowledge. The input can, after having been through a systematic process, still provide different results depending on who is involved. This requires a higher order of analysing and reflecting to address latent needs suggestions.
Bias and trust	Critical issues ranging from

1. How to include users or other stakeholders and welcome external input about experience without adding filters for emergent issues or intimidating users
2. Demonstrating empathy when receiving new input and creating interactions involving reflective learning rather than judgement
3. Staying open to emergence during analysis and dialogues about both expressed needs and latent needs in order to explore new innovation potentials

Openness in innovation practice can be discussed in terms of degrees of relational preparedness, for the individual as well as organisational structures. One step could be to define and exemplify empathy in practice according to this. A relational innovation practice is systemic. It starts and continues with an iterative communication with users and other engaged stakeholders. Instead of originating from ideas, new ideas come second after analysing expressed and latent needs and identifying an innovation potential. This process enables emergent issues to appear. Expert knowledge is balanced by equally valuable contextual knowledge, as a result

of both direct and indirect interactions (technological platforms are often suggested). Multidisciplinary work can be organised in temporary working groups, through self-organisation rather than domain or silo organisation. An offering can be evaluated in dialogue; systemic evaluations can be based on value-in-use. Openness and a relational approach can be evaluated by the strength of new and stronger bonds with users and stakeholders. A stronger bond is not necessarily considered loyalty (as a customer), since users have more than one role in a relational practice.

The initiative or starting point for innovation can come both from employees within a company and other stakeholders involved in the situation or context. An innovation culture can either welcome or oppose external ideas. The not-invented-here syndrome is a phenomenon, but more than that, resistance or tensions regarding openness come from the preservation of an expert image or identity. External input and its effect on an innovation process depend on whether trust or suspicion rules. In these cases one difference concerns how to act when the locus of initiative is a defined idea or when the locus of initiative is an innovation potential, and how well these suggestions can be traced back to user needs, both latent and expressed. This defines the rest of the process. A culture not accepting emergent themes is not relational and will, most likely, not be able to benefit from user-involvement.

Funding or support to pursue an innovation initiative can differ depending on the level of openness and the character of openness. An initiative based on latent needs may lack a support system since there are uncertainties regarding ownership of ideas and whose responsibility it is to further develop the idea. Such an innovation potential may be lost in an organisation characterised by too much stability.

The general idea to listen to the market in order to understand customers' or users' needs is well accepted. The difference between understanding the market according to a traditional logic compared to a service logic can be described as either re-active or pro-active. When acting on a market survey, input is often given according to pre-defined domains. In a user-involved process, there is more room for emergence since input need not be restricted or filtered beforehand.

Mulej et al. (2006) present a dialectical system of preconditions for innovation. This system approach involves both internal and contextual qualities. In this description, entrepreneurial spirit is assumed to be part of the equation, but for a relational approach co-operation and interdependence are the basis of co-creation. In addition, this system approach lists a number of factors concerning openness and, as stated, in the previous discussion, co-operation and interdependence concern both internal and external contacts. From a more holistic approach there is no difference since all actors share this complex situation. Tension is not part of this model, but it is a challenge when there is a holistic ambition. Different perspectives are emphasised, but not problematised. This model does not problematise relational openness versus a

domain-specific innovation practice. Another element missing in the dialectical system of preconditions is the ethical perspective. Responsibilities increase when there is an urgent need for a holistic and relational approach.

5.4 Deeper relational perspective of co-creation of value

Co-creation of value that involves room for emergence is difficult to obtain with limiting factors such as pre-defined communication systems or an innovation practice that is defined by a schedule. It needs to be on-going and cross-departmental. In this work, it has become clear that this complex situation is not fully grasped by companies. To some extent, management has come to understand that with today's limiting barriers it is difficult to fully operate according to a service-oriented logic. From an academic perspective these studies show that a relational approach needs to be implemented. Such a learning process can be demanding and costly for companies. User-involvement can be practiced in a number of ways and a relational approach is not necessary for all methods. However, a relational and on-going innovation practice provides opportunities for emergent issues to evolve as innovation potentials. This may give companies the competitive edge for which they aspire, by identifying and acting on latent needs of the user.

6 Conclusions and research quality

This section presents the conclusions as well as key contributions and a critical review of the thesis. Future research is also mentioned in this final chapter.

6.1 Conclusions

This thesis was based upon the investigation of three research questions:

RQ1: How do users and other external stakeholders experience co-creation of value?

RQ2: How do middle and top management experience co-creation of value?

RQ3: Which are the enabling and limiting factors for organisations transforming into more open innovation practices?

The empirical data from two major cases and three confirming cases presented in this thesis describe how external and internal stakeholders experience their participation and their contribution to an open service innovation process. The purpose of studying the experiences of both customers and managers is to obtain a better understanding of, for example, reactions and attitudes in order to make the transformation from a closed innovation system into a more open innovation system easier to implement in innovation management. Some examples of interactions studied are recruitment of participants among users, the communication of user experiences back to the company, and the process of analysing input from users in multidisciplinary teams during meetings and workshops. Organisational structures, such as for example systems for communication and meetings, as well as interactions between actors during the process affect output. Interactions between actors can, for example, involve feedback loops and random information about users. The work is built on the work of Kristensson, Gustafsson, and Archer (2004) suggesting that ordinary users and/or customers are capable of developing ideas that are more innovative than ideas from professional service developers.

The empirical data presented in this thesis originate from introducing a method for user-involvement in companies who has not previously invited users to co-create in this manner. Earlier interactions with users and customers were primarily done through the means of customer satisfaction surveys and market research, such as focus groups. These data can be traced back to the early phases of service innovation, from attempts to understand customer experiences to activities aiming to identify service innovation potentials. This process begins in an open manner and in these cases gradually narrows down to internal processes.

6.2 Contributions

Alvesson and Sköldberg (2010) discuss empirical data in social settings and the possibility of a creative process when interpreting and analysing. They state that good research problematises and at least to some extent challenges existing knowledge, or it contains something new.

Practices, and especially managers, may benefit from this research since it offers a more complex understanding of how different actors experience co-creation of value. It provides some suggestions of enabling and limiting factors for moving into a more open practice, which may help with the implementation of methods for co-creation.

Scholars (Dahlander and Gann, 2010) (Gassmann, Enkel and Chesbrough, 2010) have already addressed the need to problematise openness in open innovation. This work contributes to this goal by describing a number of factors or situations in which the concept of openness is difficult to grasp due to different interpretations. It provides practical examples on bias. In addition, previous work done on methods for user-involvement has mostly been company-centric. This work adds new knowledge since it presents views from different perspectives and adds examples from practices to aid in visualising the complexity of the situation.

6.3 Critical review of research quality

In order to increase the accuracy of understanding, at least two different contact points were made with the participants in the study. Either they were interviewed twice with a reflection period in between, or they were interviewed and participated in workshops as well. Follow-up questions after participation in workshops were communicated by email. Trust is an essential factor when trying to understand a social setting and complex relations. In both cases the collaboration with representatives for the organisations were frequent, and informal contacts were often part of the research projects.

A common criticism against collaborative research or participatory research is that the researcher goes native and may have difficulties in separating his or her role as researcher from the relation; this could create a problem during the analysis of the results. Another way of addressing this issue is that relationships on a personal level create trust (Blake, 2007). The presence of trust may enable a research environment based on trust and honesty, and thus data generated will be trustworthy.

The external reliability concerns the ability to replicate research, and in this case it also needs to have a social role to fit into the research process. The internal reliability in this work was dependent on an on-going dialogue between two members of the research team: one of author' supervisors and the author herself.

The internal validity is strengthened by factors such as trust and the fact that the collaboration was extensive. However, the external validity can be discussed. Only two main cases were presented in this thesis, and that is not enough to generalise the findings. However, it is worth noting that, in spite of this fact, the cases were very different from each other and the findings consistent. Yin (2011) refers to John Maxwell (2009) and lists strategies that one can use to combat different threats to validity in qualitative research. The seven strategies are intensive long-term field involvement, rich data, respondent validation, a search for discrepant evidence and negative cases, triangulation, quasi-statistics instead of adjectives, and comparison. Regarding long-term field involvement, the collaboration with companies in the studies stretched over three to five years, and an on-going dialogue was maintained. Rich data come from having a broad and open data collection process. Rich data also build over time, and longer collaboration ensures opportunities to obtain rich data. Respondent validation is applied, either through reflective conversations about results, or by respondents being able to read raw transcripts of interview; but this is done without influence on analysis. In order to test for rival or competing explanations, more companies or cases need to be involved. This was not done in this thesis.

Triangulation is practiced by combining interviews (individual and group) with other means for data collection, such as for example observations and workshops. Quasi-statics as a description involve presenting the actual number of interviews, etc. Comparison in different settings is part of the original design of this study and additional opportunities for this are provided through interviews with practitioners working with the same methods; the confirmation cases.

6.4 Suggestions for future research

This study touched upon a systemic approach without penetrating the field, even though co-creation clearly involves attributes from systems theory. These kinds of research questions would benefit from a more thorough systemic approach, such as for example using rich picture sessions as suggested by Checkland (2006). More focus on a multi-perspective approach and aiming to increase the understanding of boundaries and opportunities for user-involved innovation could be useful, both for academia and in practice. Boundary critique in systems theory is also a relevant track to pursue in research about co-creation.

Two other interesting areas not covered in this thesis but with relevance for further improving this practice of openness and user-involvement. The first is about ethics and how the ethics related issues need to be addressed in co-creation of value. Within health and co-creation this is discussed to some extent. In co-creation and distributed innovation from other sectors, this is not as discussed. The second issue concerns immediate context versus peripheral context. Context during the innovation process

was discussed but in a limited way, often focusing on user context and not as often including openness in a wider and peripheral context. How does innovation benefit from combining identification of service innovation potentials gained from users with trends and tendencies in society as a whole?

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