



Faculty of Economic Sciences, Communication and IT  
Service Research Center

---

Bo Edvardsson, Patrik Edvardsson, Per Kristensson,  
Peter Magnusson and Erik Sundström

# Customer integration in service development and innovation - methods and a new framework

Bo Edvardsson, Patrik Edvardsson, Per Kristensson,  
Peter Magnusson and Erik Sundström

# Customer integration in service development and innovation - methods and a new framework

Bo Edvardsson, Patrik Edvardsson, Per Kristensson, Peter Magnusson,  
Erik Sundström. *Customer integration in service development and innovation - methods and a new framework*

Research report

Karlstad University Studies 2010:35

ISSN 1403-8099

ISBN 978-91-7063-327-0

© Authors

Distribution:

Karlstad university

Faculty of Economic Sciences, Communication and IT

Service Research Center

S-651 88 Karlstad

+46 54 700 10 00

[www.kau.se](http://www.kau.se)

Print: Universitetsstryckeriet, Karlstad 2010

# Table of Content

<b>1 EXECUTIVE SUMMARY</b> .....	<b>1</b>
<b>2 CUSTOMER INTEGRATION – AN INTRODUCTION</b> .....	<b>3</b>
<b>3 RELATING CUSTOMER INTEGRATION TO SERVICE INNOVATION</b> .....	<b>7</b>
3.1 THEORETICAL BACKGROUND AND FRAMING .....	7
3.2 A FRAMEWORK FOR ANALYSING METHODS FOR CUSTOMER INTEGRATION .....	10
<b>4 REVIEW OF METHODS FOR CUSTOMER INVOLVEMENT</b> .....	<b>15</b>
4.1 METHODS CAPTURING ‘CORRESPONDENTS’ .....	16
<i>Empathic design</i> .....	17
<i>The lead-user method</i> .....	18
<i>The CUDIT experiments</i> .....	19
4.2 METHODS CAPTURING ‘REFLECTIVE PRACTITIONERS’ .....	20
<i>Participatory Design</i> .....	23
<i>Toolkit for User Innovation</i> .....	23
<i>Living Labs</i> .....	24
<i>Customer Group Involvement</i> .....	24
<i>Conversational Approach</i> .....	25
4.3 METHODS CAPTURING ‘TESTERS’ .....	26
<i>Information Acceleration</i> .....	27
4.4 METHODS CAPTURING ‘DREAMERS’ .....	27
<i>TRIZ method</i> .....	29
<i>Free Elicitation</i> .....	29
<i>GAP-based QFD</i> .....	30
4.5 ASSORTED METHODS.....	31
<i>10 stage NSD Model</i> .....	31
<i>Zaltman Metaphor</i> .....	32
<i>Outcome based interview method</i> .....	33
<i>Partner/ cooperative innovation</i> .....	34
<i>Prototyping model</i> .....	35
<i>A new model of customer collaboration</i> .....	36
<i>A Staged Service Innovation Model</i> .....	37
<b>5 DISCUSSION</b> .....	<b>39</b>
5.1 CONTRIBUTIONS FROM THE EXPLORATION OF SITU AND CONTEXT .....	39
5.2 CONTRIBUTIONS FROM THE REVIEW .....	44
<b>6 ACADEMIC, PRACTICAL AND POLITICAL RELEVANCE</b> .....	<b>47</b>
6.1 CONCLUSIONS AND FUTURE RESEARCH .....	47
6.2 MANAGERIAL IMPLICATION.....	48
6.3 IMPLICATIONS FOR POLICY .....	50
<b>LIST OF REFERENCES</b> .....	<b>52</b>



## **1 Executive summary**

In the industrial era, physical goods were produced far away from the customer. One sought efficiency, standardisation and economics of scale. Raw material, and therefore also products, were scarce resources, and the customers' options were limited. Today, we pay more and more attention to how products as well as immaterial resources collaborate in the co-creation process of service. Time and customers have become the scarce resources. Customers demand unique solutions to unique needs. Being able to adapt to various customer requirements is the key, and companies need to know and understand their customers if want to accomplish this. In order to co-create value together with customers, their preferences and positions are important. Customers are integrated in the co-creation of value, but also needs to be integrated in the development of services.

In order to facilitate learning about customers, their needs, habit and intentions for service, this report presents various methods for how to capture customer information that is relevant for service development. The methods are diverse and focus on different kind of information that is close, or generated by, the customer.

The methods are sorted based on two dimensions, situation and context. The two dimensions create four modes which the methods are grouped according to. In the 'situation' dimension customer information can be generated when the customer is in the value creating service situation, in other words when the customer is co-creating value, as well as outside this context. In the first example customer information is generated insitu and in the other example exsitu. When the customer is insitu she has a greater ability to generate information about activities and processes, the dynamic aspect of services. The 'context' dimension refers to the physical resources that make the service possible. Experience from resources that makes services possible creates possibilities for customer information that is different from that where the customer does not have the same experience. In this report we call this incontext and excontext respectively.

An important conclusion of the study is that different methods for customer integration are suitable to collect different kinds of customer information. For example, a small number of methods are constructed in order to collect customer information that is generated and reported in the service situation, when the customer has direct access to enabling resources. Other methods aims to provide customers with the possibility to simulate a service situation and in this way extract valuable information.

This report creates a more nuanced picture of the methods for customer integration. The overview creates possibilities for companies to combine different methods in order to create a more coherent picture of the customers' needs, and motives.

## **2 Customer integration – an introduction**

Developing and offering new services that create value for existing customers, and attract new customers, are fundamental to increase the competitiveness of successful modern organizations. However, Stevens and Burley (2003) found that new services have a failure rate of between 40 and 75 percent. We claim that the likelihood for higher market success depends on how well the new or improved service can create value for customers, and this, in turn, depends on how well the innovating company can explore and integrate adequate customer information into a resource constellation that enables the service to be co-created in the intended way.

Customers are a potential goldmine of information for service development. Many existing approaches have aimed to interplay with potential users in order to co-opt user competence and experience. Such approaches include user contribution systems (e.g., NASA), open source techniques (e.g., Microsoft, Cisco), social media (e.g., Facebook, YouTube), simulations (e.g., IKEA's kitchen planner), independent customer websites (e.g., [airlinequality.com](http://airlinequality.com)), and company websites that include certified users and super users (e.g., Lego). These are all examples of customers playing important roles in developing services. Nevertheless, the understanding of how to methodically integrate users in service development remains limited. In the academic community and among service researchers in particular, the argument that the value of a service is co-created with the customers has been argued in an influential paper by Vargo and Lusch (2004). They hold that the concept of service is undergoing a paradigm shift: from defining services as a category of market offering to a perspective of value creation. While the old school of thought focused on the differences between goods and services, the 'new school' focuses on what goods and services do for the customer. This renders the old dichotomy between goods and service obsolete. The new school is most often referred to as service-dominant logic (SDL), a term coined by Vargo and Lusch (2004a). The concept emphasizes the need to include the customers in the development process, and that use situations

are critical for understanding value creation. While the old school of thought focused on the differences between goods and services, the ‘new school’ focuses on what goods and services do for the customer. This renders the old dichotomy between goods and service obsolete.

The idea that it is the value creation that is key in this service dominant logic reality spurred several interesting questions, one of them being: if the value is created together with the customers, is it not possible to also create the service together with the customer, involving them in the new service development (NSD) process? From a service perspective the answer to this question is naturally yes. The development of physical products, including the eventual production of the product, has most often been treated as an activity that is separated from the customers that will use them. From a SDL-perspective the service is co-created, meaning that the production cannot be separated from the customer as the customer is one of the foundations of a service. We argue that customers that are so essential and integrated in a service should also be integrated in the development process. This is true both for radically new services as well as in the development and improvement of already existing services. As we outlined above companies and researchers have already been working in line with this logic but there is still a notable gap regarding how to actually do this in the most effective way. An Industrial company that is embracing and implementing the practical consequences of service logic will need different methods than a service company would. How to integrate customers depends on their experiences, the type of value creative relation with customers, customer structure, what type of innovation that are sought after and other related factors. Thus, there is clearly a need for an overview of methods that can assist and guide companies in their attempts to understand customer needs. The overview should both provide a smorgasbord of existing methods, but also show what kind of customer related information the methods can generate.

Previous research has shown various ways of understanding and using customers in the service development process. Prahalad and Ramaswamy (2000) showed how customer competencies can be obtained and how customers can be integrated within service and quality development by

using open source platforms. They argue that customers should be involved in developing new services and be a source of competence for an organization. But, they fail to provide an actual method in their paper, finding it sufficient to outline some key aspects that can encourage this process. Von Hippel (1994) argued that use-related information is often 'sticky', which means that the information is difficult and costly to acquire, transfer and use in a new situation, such as in the service development process. Tax and Stuart (1997) developed a model of how to integrate a new service within an existing service system. User information and experiences – from both customers and employees – play a key role in the success of service development.

In his research that focused on Australian financial institutions, Alam (2002) outlined four levels of user involvement: Passive acquisition of input (where the user normally makes the contact, for instance with the aim of suggesting a new service), Information and feedback on specific issues (the service provider initiate contact to receive feedback on a certain area or stage in a service delivery), Extensive consultation with users (the service provider interviews customers, or sets up a focus group for a specific purpose) and Representation (the user joins the development team to assist in the development of a service).

This report argues that issues relating to the nature of service (activities, collaboration and value co-creation) are important when selecting and using methods that aim to better understand customers' perceptions of a service. The main argument is that it is important to capture both information on use experiences and resources that are available in the use context in order to understand customers and the aspects of value co-creation that are critical for them. This report provides a framework to better understand how to integrate customers in service development by assessing and presenting different methods for obtaining user information. Hence, the report aims to provide a basis for a better understanding of how to integrate customers in service development by assessing different methods of obtaining user information, and by suggesting a new framework that includes four modes of customer integration. The report sets off by describing the theoretical framing of

the key concepts of this paper. Here we define customer integration in service development and what it entails. We continue with an overview and analysis of methods for service development and innovation reported in scholarly journals. Based on this critical review we suggest a new framework with four modes of customer integration in service development, based on customers' use situations and resource contexts. Finally, we discuss our research contributions and the managerial implications it has.

Service innovation has developed into an important activity both among private and public sector organizations as well as in other institutions. Innovation means development in its most broad definition. In turn, an equally broad definition of service is the need to find action to a problem and to create value. Thus, service innovation is a development of the ability to reach an improved need solution and through this create value for involved actors. A more general aim with the report is to strengthen the Swedish private and public sector by developing and spreading knowledge of how to integrate their customers. We are confident that this will yield more strong innovative services.

### **3 Relating customer integration to service innovation**

#### **3.1 Theoretical background and framing**

The current debate regarding what has been termed service-dominant logic (SDL) (Vargo & Lusch 2004a; Lusch et al. 2007) or service logic (for example Grönroos 2000; Grönroos 2006; Norman 2001), raises the question of how service development can best contribute to create value, both for customers and service providers. Vargo and Lusch (2004a) define service as "... the application of specialized competences (knowledge and skills), through deeds, processes, and performances for the benefit of another entity or the entity itself" (p. 2). In a similar vein, Edvardsson (2006) define the 'service concept' as "... linked activities and interactions provided as solutions to customers' problems". Both definitions consider the notion of a positive outcome ('benefits' or 'solutions'), in the eye of the beholder, to be an essential element in terms of the purpose of a service. In other words, a service should have a clear positive benefit in order to create value.

When a new service is developed it creates a values proposition that the customer or user needs to interact with. Without the customer agreeing that value is being provided there is no value at all: a service has no value on its own. The co-creation of value is a customer oriented process where the skills and knowledge of each customer create different values that cater to different needs. But importantly, since service is a relational phenomena, customer value is also dependent on the company's skills and knowledge and how the two parties' resources are integrated with another.

A service business that is based on SDL is essentially customer-oriented and relational (Vargo & Lusch 2004a, 2008). This means that the approach to satisfying needs is focused on an interactive process that occurs together with the user/consumer instead of being output focused. It also represents a shift from static resources (such as plant and equipment) to dynamic resources (such as employees, competences, value-creation partners, and customers). In its ideal form, SDL envisages

the co-creation of value through resource integration (Vargo & Lusch 2008), and consequently the ability for value co-creation is influenced by the ability to integrate physical resources but also skills and knowledge during the development process.

According to Vargo et al. (2008) there are two important categories of resources when arguing for SDL: operand and operant. Operand resources are typically physical (e.g., raw material, physical products, information) while operant resources are typically customers and employees (e.g., their knowledge, skills and motivation). Knowledge and skills are used when the operand resources are activated. So when is the value co-created? According to Vargo et al. (2008) it occurs when the customer is experiencing the service within the user context. Market offerings (physical products and services) are understood as being resources that produce effects. It is when customers combine their knowledge and skills with resources provided by a company (or several companies) that value is co-created and assessed – for example, when using a mobile phone in order to communicate.

Vargo et al. (2008) stated that value is uniquely and phenomenological determined by actors on the basis of value experienced in a certain use context. Value-in-context implies not only that value is co-created but also that it is dependent on the integration of other resources and is therefore defined contextually. Consider the purchase of a cell phone. The benefits of using the cell phone represent value-in-use, but the total value – the effect that the user is seeking and willing to pay for – is dependent on the integration of other resources from the user (e.g., operating skills, maintenance), resources from other companies (e.g., subscriptions to other related service offerings, functions made available by the cell phone) and on the use context, when integrating the cell phone and its services with daily activities such as communicating at work or with family members.

Companies often struggle with resources that lie outside the service-providing firm. For example, a provider of cell phone services do not produce the actual cell phones or services, such as paying for the public

transport commute to work, that are often handled by cell phones today. Thus, it becomes natural to involve the users in the service development in order to learn with and about them. This means that customers need to be integrated by involving them in the various stages of the development process, and that the customers use situation and how they interact and co-create value becomes increasingly important for any service provider. It is essential the service developers learn from and with users in their own environment or use situation in order to be able to develop attractive services.

Although SDL brings a fresh perspective to service and co-creation, little attention has been paid to developing and assessing methods for involving customers in the co-creative development process. Some of the common reasons why service does not create value-in-context as intended include the service not fitting customers' needs, being too complicated for users or not allowing the user to interact with other resources. Part of the reason for this lack of accurate, complete and action-oriented customer information is that the research methods used have mainly focused on the expressed needs of customers, which is far too narrow a focus (Matthing et al. 2004). Other reasons are that the companies don't know what kind of customer related use-information that they want, or which method is best suited to capture a specific type of use-information.

Therefore, the challenge in service development is to develop competitive value propositions and the resource constellation that is necessary for value co-creation. The potential success of a value proposition depends on its ability to understand customers' value creation. Consequently, since customers are a resource in value networks (Lusch et al. 2010) and the value creation process, this paper advocates that customers should be integrated within service development in order to achieve attractive use value. The implication for service development and innovation is that customers should be involved in various stages of the service development process, and customers' use situations and value co-creation activities and interactions are critical. When developing a new and attractive service, it is essential to learn from and with users in their own habitat or use situations. While customer integration has always been an

issue in service development, previous research has shown that the particular way in which customers are integrated has a major impact on the quality of use information gained, and therefore on service development. Service development from an SDL perspective requires methods that can grasp not only resources (operant and operant) but also the activities and interactions during co-creation of value-in-context.

### **3.2 A framework for analysing methods for customer integration**

The methods reviewed in this paper provide information on how to understand value creation for customers. Although the term ‘customer integration’ is used, it should be understood that the value creation is accomplished at an individual level – the user level. From this paper’s standpoint, value emerges in different use situations. The term ‘use situation’ refers to activities and interactions at a specific moment. The customer could provide information either inside (*insitu*) or outside (*exsitu*) a use situation. *Insitu* therefore refers to information from customers/users that originate from a real-life situation. One important distinction to make is that the information is created and documented in the use situation, in other words just after it occurs. Accordingly, *exsitu* refers to methods that capture use information outside the actual use situations, that is, in retrospect or in anticipation. In practice it can be difficult to determine whether the information is gathered *insitu* or *exsitu*; consider the case of an informant who takes the train one day and experiences some problems but does not document or report this incident when it occurs. The next day, the informant recalls the incident, writes it down and submits a report to the train operator concerning the problem. The informant also suggests what could be done to solve or avoid the problem in the future. Should this information be regarded as *exsitu*, simply because it was not reported when the incident first occurred? The answer depends on whether the person is considered as still being in the service process or not. Such uncertainty requires the definition of yet another dimension – the resource *context*.

All situations occur in some 'context', referred to here as a resource constellation that is available to customers in use situations. The user, in a specific context, co-creates value in different ways depending on their intention (what the user wishes to achieve) and capability (user's skill and knowledge regarding the use of available resources). A variation of values is created when different users operate upon the same resource configuration. However, with regards to the context dimension, information can also be obtained from persons who either have, or have not had, a direct experience from the actual context. This allows methods to be divided along the context dimension in either incontext or excontext. Put together, the two dimensions' use-situation and context form four types of customer-related use information and, consequently, four groups for classifying methods that enable customer integration within service development (see Figure 1).

At least two different types of knowledge are essential for developing a service, or any innovation: *use knowledge* and *technology knowledge* (Lüthje 2004; von Hippel 1994; Magnusson 2009). Use knowledge refers to the actual use; that is, knowledge regarding what the service should do to create value for the user. Technology knowledge refers to an understanding of the underlying resources used to realise the actual service. This includes technical systems but also, for example, equipment, organisational routines and instructions (in other words, all service-enabling resources). Users are mainly utilised for the collection of use knowledge. In order to analyse the appropriateness of the methods, it is necessary to take into account how they capture these static (contextual) and dynamic (activities) aspects. Users are involved in providing information that can help a firm gain necessary knowledge when developing a service. Use knowledge can be gained in different forms that concern, for example, (1) problems and difficulties, (2) ideas and opportunities of interest, (3) behaviours and emotions that are important or sought-after and (4) solutions or prototypes. All of these forms of information are tightly linked to use knowledge, for which users have a clear advantage over a company in terms of identifying and communicating them to another party. Users may report discovered

problems in their use context that need to be solved, they can also express information regarding opportunities that are of interest to them, or even an idea for a service they demand. Users may also report emotions that stem from certain actions they have performed that did or did not result in the creation of desired value. Solutions are understood as information pertaining to how users would like a service to be executed or performed; that is, the actual design or configuration of a certain resource constellation. Figure 1 illustrates users' positions in relation to situation and context, the two dimensions that form the basis for the four use information modes.

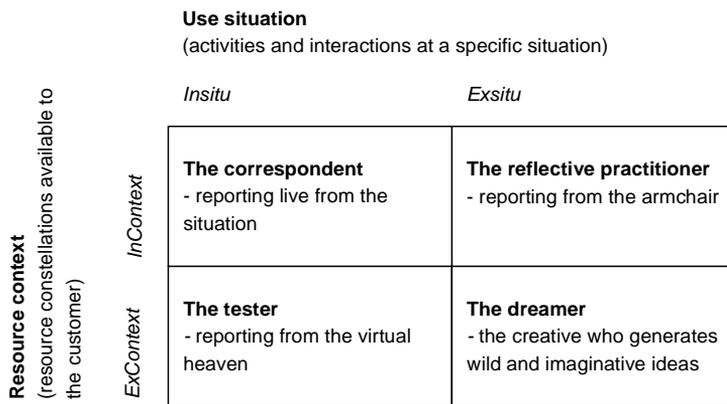


Figure 1: Framework for relating use information to methods for service development.

Figure 1 shows potential customer information as four modes from the categorization of the situational and contextual variables. In the framework the four modes are presented as stereotypes that represent different typical users, and should therefore be understood as ideal types. The modes are explained and illustrated below with perhaps the most common technique used to capture use information: ordinary surveys with questionnaires. This also illustrates that some methods, or rather information capturing techniques, can be used to capture the different

modes use information by altering the questions or by catching the proper customer.

*The correspondent.* A customer who is in or has experience from a real service context, and who is in or is just about to enter a real-life value-creating situation. The correspondent provides information from the actual service context, and from a use situation, when value is created. If an investigator asks respondents to fill out a survey, or to generate customer reports and information by other means, in the actual situation, e.g. at a restaurant when respondents are eating, then the customer reports insitu and incontext, known as ‘the correspondent’.

*The reflective practitioner.* A customer who is in or has experience from the service context, and who is not connected to a real-life value-creating situation. The information made possible by the position is derived from the actual service context, and is not connected with a real-life value-creating situation. Quite often customers fill out questionnaires with questions referring to situations in which service resource context they are aware of and familiar with. Because the customer is outside the real situation is referred to exsitu, but experience from the actual or equivalent resources makes it incontext. Thus, the resulting information is based on resources that capture the use-situation to a various degree.

*The tester.* A customer who has learned about the service context from outside, and who simulates or tests a real-life value-creating situation. Information made possible by this position is also detached from the actual service context experience and is based on a simulated or imagined use situation. For example, if using the questionnaire example, one can ask hypothetical questions that force the client to imagine a situation and resource context, e.g. “imagine that you drive a xxx, how would you react if...”. The information is a report from a virtual world which also gives a hint about what is waiting around the corner with ICT-based methods that can simulate customers into both a service situation and resource context.

*The dreamer.* A customer who has learned about a service context from outside, and who is not connected to a real-life value-creating situation.

Information made possible by the position is decoupled both from the actual service context experience and from a real-life value-creating situation. Quite often, customers or potential customers that have no experience of the service situation, or the resource context, are asked for information. Even if the validity of the information could be questioned, it can result in use information with high potential to radical innovation since the customer have no previous knowledge that can limit their thinking.

Informants who have experienced the context by actually being within it and interacting with it can both gain and provide a type of knowledge that is different from those informants who have learnt about the context indirectly from the outside. It is difficult to imagine every kind of resources that could be in play for a user in a use context. It is possible to obtain information that has been derived from outside the context from, for example, advertisements, information on the Internet, discussions with friends or inspiration from observing competitors' products or services. Information that originates from an informant who has been or is currently inside the resource context is referred to here as incontext; the opposite is excontext. Yet another way of experiencing context is by simulation, but whether simulated contexts should be classified as incontext or excontext can be problematic. Should the incontext be reserved only for true 'real' experiences, or could it also be used for simulated envisioned experiences? This report argues that all simulations are simplifications of the real world and, on this basis, the term incontext is reserved for experiences made in the real context.

The two proposed dimensions, 'situ' (insitu and exsitu) and 'context' (incontext and excontext), are linked to the established SDL concepts of 'co-creation' and 'value-in-context'. SDL highlights the fact that various resources form the necessary prerequisites for a value-creating experience, which is the implication of the 'value-in-context' concept. Similarly, the user integrates these resources in the act of co-creation. The situation in which value occurs is difficult to comprehend or foresee, and this poses a challenge when involving the customer in the development of a service.

## 4 Review of methods for customer involvement

The reviewed methods have generally been empirically tested, related to service and reported in scholarly journals.<sup>1</sup> In many cases, the reviewed methods consist of several data acquisition techniques, such as interviews or observing. The review shows that methods and techniques are both used in different ways and for different purposes. For example, while interviews and focus groups are usually used to capture exsitu- and excontext-based use information, they are also used to capture use incontext information. These methods are also used for insitu- and excontext-based use information if the questions are hypothetical and aim to allow informants to imagine that they are in a particular situation and/or context. In essence, however, methods have an overriding field of use and are grouped on this basis. This section deepens the four use information modes by relating methods that are suitable in each of the modes. It also briefly discusses the contribution made by each method and presents, in table form, the four core qualities for customer integration for each method. The first quality deals with the form of the information that each method generates: problems, opportunities, emotions or solutions, or perhaps a combination of outputs. Secondly, the methods are, to varying degrees, able to provide use information regarding situational and contextual factors related to potential value and to use- and technology knowledge. This innovation knowledge is to be encapsulated in the service concept during the service development process, mirroring the 'what' and 'how' for service provision (Meyer Goldstein et al. 2002). Thirdly, methods differ in terms of the degree of interactivity between customers and the investigating party. Interaction is essential for learning, which is fundamental for methods relating to customer integration. The fourth quality that distinguishes methods is who identifies the use-related needs and reports information. For most methods within the mode, it is customers themselves who both identify and report their own needs, problems and solutions. For other methods,

---

<sup>1</sup> The review is based on searches in peer-reviewed journals derived from databases such as Business Source Premier, Academic Search Elite, Science Direct and Emerald.

especially those based on observation, it is the observing party that identifies and reports user needs.

#### **4.1 Methods capturing ‘correspondents’**

This mode is characterised by customers who are either in a service use situation or intending to co-create value in order to fulfil a need. The dynamic of the services either has been or could be realised; in other words, it includes activities and interactions within a service process. This means that users in this position have the opportunity to generate information related to problems and solutions based on real customer needs in relation to service use. The customer is also in the current or desired service’s real context, which means that the service’s static resource structure is available. Hence, the position has the potential to generate use-related information on the most important value drivers, based on both dynamic and static prerequisites of the service. Both use and technology knowledge can be generated to various degrees, depending on the method. This means that customers have all resources at hand when generating information for service innovation. This is both an advantage and a disadvantage. Just as experience and information allow ideation, it can also act as blinders for service innovation related ideas and other information.

Table 1 illustrates the use information mode through three methods that capture information originating from ‘correspondents’ who have entered, or are just about to enter, a value-creating situation.

	<b>Type of information generated</b>	<b>Innovation knowledge</b>	<b>Degree of interactivity</b>	<b>Reporting and need identification</b>
<b>Empathic design</b>	Ideas to solutions for new and existing service. User behaviour descriptions.	How and with what resources users interact.	Interaction is low; users are passive, a resource for observations.	The observing party normally does the reporting and need identification.
<b>The lead-user method</b>	User trends, novel service solutions.	Solutions containing value propositions, and generally information on resources for realizing service.	User is active in the process; interaction is fairly high from early stage throughout the process.	User identifies need and solutions, reports in and/or to development team.
<b>The CUDIT experiments</b>	Novel service solutions	Solutions containing value propositions, and occasionally information on resources for realizing service.	Interaction is low during idea generation and capturing.	User identifies need and solutions.

Table 1: Qualities for methods related to the mode 'correspondents'.

### ***Empathic design***

*Empathic design method* is based on observation of user behaviour (for example, watching someone trying to use a photocopier) and interacting with their context (Leonard 1995). This set of techniques investigates customers use in order to find a suitable solution to service or product issues (Leonard & Rayport 1997). Users are involved in the situation and the context. Leonard and Rayport (1997) used the method in the new service development (NSD) process at Xerox and showed five steps that they found all had a positive impact on NSD. The first stage is *observation*, which was explained above. The second phase is *capturing data*, for example by videotaping users interacting with a product or service. The following step is *reflection and analysis* which leads to the *brainstorming for solutions* part where ideas for solutions to the problems are outlined in a

brainstorming session. The final step is *developing prototypes of possible solutions*, which can include anything from a new product to beta versions of new on-line services. This is a process in which the development team is in control of the development process, but where the team has a clear customer focus. The observations enhance the knowledge regarding problems, and show behaviour that can be addressed. The visual records can be combined with interviews with the observed people to also understand the reasons behind their actions (Van Kleef et. al. 2005).

In this method the customers are introduced late in the process, reacting to an already existing service or product. Both ordinary users and lead users can be observed. The user is passive in this process since there is no dialogue between the company and the customer unless interviews are made. It's an introspective process and the output is either a product or a service.

### ***The lead-user method***

*The lead-user method* focuses on pursuing trends from lead users (LU), that most users will experience at a later stage (Urban & von Hippel 1988; von Hippel 1986). The user identifies the need and solution in a natural context, and the method's aim is to spur novel ideas that will lead to a new service output. The data collection is done by involving the lead user in a development team which means that the lead user becomes an active participant in the development of a new service. The user is involved in the service situation to a higher degree than in methods such as participatory design. The impact of using lead-users in the development process has been shown to be very positive. Olson and Bakke (2001) conducted research in a Norwegian technology company and concluded that the LU sessions produced many novel ideas. In the two various field of the company where lead-users were used the groups with lead-users developed 78% and 73% of the product improvement ideas. The method was found to be *"very practical and cost effective to implement into the next generation products."* according to the engineers involved in the process. However, when Olson and Bakke returned to the company a few years later they saw that the method had been scrapped. The people with the

knowledge of how to work with the method had moved on, and because the quest to identify lead users is a difficult process, the company had simply stopped using it. It was also found that engineers inside the company rather worked with other engineers in the development process instead of interacting with the customers. Lilien et al. (2002) underscored the effectiveness of the LU-method. In their study of 3M they found that the forecasted sales of lead user developed products in year 5 were \$146 million in annual sales, compared to \$18 million for contemporaneously developed projects by 3M. Furthermore, lead user generated products were more novel to the market and had a considerably higher forecasted market share (Lilien et al. 2002).

The purpose of the lead-user method is to come up with “new to the world” ideas. The customer is involved at the very beginning of the process where the actual service or product idea is formed. The method relies on very active lead users as they take a leading role in the R&D team. It is a demanding method to work with since it requires time and effort to implement it successfully.

### ***The CUDIT experiments***

*The CUDIT experiments* started as experimental trials that were carried out in collaboration between the Service Research Center at Karlstad University and major Swedish phone companies during several years in the early millennium. The method contrasted various development groups and compared users and their idea creation with those of professional service developers. In these trials participants were given an assignment to generate new ideas for SMS-based services. Three groups were formed, one with professional service developers, and two with ordinary users (students at Karlstad University). One of the groups with ordinary users had one professional service developer included. It was found that the group with ordinary users excelled when focusing on the number of inventive ideas while the group with a service developer came up with less novel ideas, but more ideas that were actually possible to produce at the time for the study (Magnusson et al. 2003; Kristensson et al. 2004).

The purpose with this method is to create new ideas. Customers are involved in the very beginning of the process, only using the platform (in the example a phone) that the service should be carried out on. The users are very active in the process and the method is introspective as the research is conducted in action. It is a labour intense process compared to some other examples and puts strong demand on the company carrying it out as it involves continuous interaction with the users. The methods used to collect use information were task-based within a specified time frame, and involved ordinary user-generated service ideas that captured problems and solutions. Users created ideas in the normal use context and took diary notes on these ideas. The method generated ideas on what the service should provide, as well as ‘how’ and from ‘what’ the service should be realised.

#### **4.2 Methods capturing ‘reflective practitioners’**

Much of the information used in service innovation originates from users who are not in the service situation or do not really have an actual need for service, but instead have experience from the service’s resource context. The mode is characterised by users who are in, or have experience in the actual service context but are exsitu; in other words they are not in a real-life service situation that creates or intends to create value. The information generated is based on static resources rather than on dynamic resources related to actual use. The risk of obtaining information from this position is that it generates use information that is too heavily based on static resources rather than on interactions and interactivity, which are core elements of value creation through service. Further, if trying to stimulate a simulated service situation by providing resources, by for instance letting potential customers act on supplied resources, one doesn’t know how “real” the simulated situation is for the customers.

A large part of professional development occurs with use information from this mode. Professional developers often have experience in the service context and its resource structure, but are usually not in a position

to use or need to use a service. The timeline from the point at which they experience the service context until active development, can also mean that the resources on which a service is to be realised are not up-to-date. The existence of these distances presents a risk that the developed service could be unable to create potential value.

Customers in this mode are usually ordinary users who are questioned spontaneously in polls and Internet-based surveys. In some methods, ordinary and potential users become physically involved in the development process and, in so doing, become familiar with the static resources. In some methods, the resources are modelled; that is, the provider brings or creates a resource context upon which the customer can act. In this way, the information is evoked and then captured, but these customers are not in real situations, generating real-life needs, problems and solutions. Nonetheless, it is often possible to provoke an adequate service situation. The five following methods were mainly based on use information from this mode or evoked information related to the mode.

Table 2 illustrates the use information mode through the five methods that capture information originating from ‘reflective practitioners’.

	<b>Type of information generated</b>	<b>Innovation knowledge</b>	<b>Degree of interactivity</b>	<b>Reporting and need identification</b>
<b>Participatory design</b>	Use problems, ideas for solutions and opportunities, also behavioural aspects.	Design, contextual factors and usage. Understanding of needs, capabilities and limitations of concept and users.	First passive, during concept testing very interactive and participatory.	Basic needs by developers, value concept tested and improved in interaction with user and developers.
<b>Toolkit for user innovation</b>	Service idea customized to the heterogeneous needs of customer.	Input of user problems, needs and preferences, generating a solution coupled to context.	Quite low interaction. Users integrated in a semi-prepared context.	User mainly identifies needs and solutions related to customized solution.
<b>Living labs</b>	Mainly ideas for service.	Information and understanding of what customers actually do, and how.	Ranging from low to high.	Normally user, but sometimes an observing party when behaviour is studied.
<b>Customer group involvement</b>	Reflections on concepts.	Ideas, capabilities and limitations of users in relation to service context. Input on user as co-creator.	Quite high.	User and developer mainly identify needs in interaction.
<b>Conversational approach</b>	Ideas for new and improved service.	Ideas from, and capabilities and limitations of, users.	Quite high.	User and developer mainly identify needs in interaction.

Table 2: Qualities for methods related to the mode 'the reflective practitioner'.

### ***Participatory Design***

*Participatory Design* method is based on collaboration with intended users through parts of the development process, mainly during concept testing. It is based on three premises; to improve quality of life rather than demonstrate technological capabilities, to collaborate and cooperate and in interact and integrate feedback from users and thus promote design iteration. Ellis and Kurniawan (2000) used it while developing a website for elderly people. A development team with elderly people was created and the participants were given some training before the actual process began. The group was eventually introduced to five different prototype sites which the participants got the chance to react to. The results of the study was ambiguous but it did lead to minimizing usability problems by using a font better liked by the elderly people and a light background so that the content is easier to view for them. Consequently, developers can derive users' reactions to various concepts that have already been developed. The users interact with resources that are intended to be used later in service provision, although they are not in the actual service situation.

### ***Toolkit for User Innovation***

This method enables customers to customize service offerings from existing contextual prerequisites (Von Hippel & Katz 2002; Von Hippel 2001). In other words, customers can tailor a service or product to fit their individual needs. The method is constructed in such a way that ordinary users can work with it and it does not demand any special knowledge from the customers. Franke and Piller (2004) studied the toolkit 'Idtown' where users could design their own watches using an on-line tool. The research showed that 165 users produced 159 versions when selecting their own preferences. Furthermore, the users did not only create a wide variety of designs based on the toolkit, they also valued their own designs higher (on average 48.5 Euros more, over twice the price for the standard model) than a similar watch where they had not been given the choice to adapt it. The product value is created independently within the boundaries of the toolkit. This method demands a lot of involvement

in the set up stages, but when the toolkit is finished the demand of competence is not very high as the structure is in place. From a service context, represented by the toolkit, users are encouraged to fabricate a service situation and to suggest a solution that could ultimately result in a service concept with the potential to generate value for other users.

### ***Living Labs***

*Living Labs* is a ‘family of methods’ that contains many different tools. The underlying idea is that people’s ideas, experiences, and knowledge, as well as their daily needs of support from products, services, or applications, should be the starting point in innovation’ (Bergvall-Kåreborn et al. 2009). Living labs are collaborative environments where a company or organisation can interact with its surrounding. They have developed from being home-like artificial environment to be situated in real world contexts. It usually involves constructing a virtual spatial context, either with physical material or with computer software. Instead of ‘tools for user innovation’, Living Labs can be seen as a ‘context for user innovation’. Within the context, situations are simulated to create conditions to generate customer-driven information. Bergvall-Kåreborn et al. (2009) argue that the Living Labs only should be used when users are driving the innovation and having a leading role in the development process.

### ***Customer Group Involvement***

This method aims to customise a service by holding regular meetings with special customer groups in order to understand needs and habits. Volvo Cars used this approach during the development of their car model XC90. The first step taken was to identify a suitable target group. Volvo cars targeted affluent and independent career women in an attempt to try and understand what their new target group expects from a car. Seven meetings were held with the group during the development process, which lasted for three years. The Volvo management had difficulty pin pointing the exact value from using this method, there were few concrete new to the world ideas. However, the group meetings did give the

developers a stronger hand when communicating with the company management. Potential customers act as a test sample during the process; this method can be regarded as a longitudinal focus group that tests ideas, concepts, models, sets of the service context, and ready-to-release services. The purpose of the Customer Group involvement approach is to customize the product to the customer needs and to understand what part the product plays in the everyday life of the customer. The customers are involved early in the development process, although what the product will be (in the example an SUV) is already decided. The method includes ordinary users and the output of the method is a product, or service, that fits the need expressed in the interaction with the group. The method requires active involvement with the customers over a long period of time, but it also gives the company a deep understanding of the role of the product in their lives (Dahlsten 2004).

### ***Conversational Approach***

In this method the service provider uses conversation to achieve customer integration. The method is based on a conversational framework for understanding the dynamics of customer integration. Lundkvist and Yakhlef (2004) outline the Swedish Post Office experiences with the method. They presented new service ideas, such as new transport services, to customers. However, instead of showing excitement and appreciation for the new ideas the customers surprised the company by voicing several concerns with these ideas, such as the possible increase of traffic in the vicinity of schools. The interaction created a relationship of mutual trust that was made possible by the routines of how to converse with customers in a productive way. Therefore, its focus is similar to that of the Customer Group Involvement method. The need identification is made by the producer and users together, outside the users' actual use situations.

### 4.3 Methods capturing ‘testers’

Because the tester has no real-life experience regarding the resource context, they will only have limited knowledge about what makes a service possible. Conversely, the customers are insitu, which means that they have a real need and they want a service solution to a real-life problem. Therefore, the customers are in a position where they know what service will fulfil their needs, but they do not know the resources that could realise the potential service. The resource context can be simulated by ICT creating a virtual environment. The simulated resource context distinguishes the mode from the reflective practitioner in that the tester has no real-life physical experience in the resource context. At the same time, the dynamic aspects in service are simulated and tested. One potential way that a company could harvest this type of customer information would be to try out different service concepts on them. Both the ‘what’ and the ‘how’ aspects on service are feasible (Meyer Goldstein et al. 2002). The most common way to envisage a situation is through ordinary interview questions that begin with “Suppose that you are in situation X; what would you do if ...” This represents a trial-and-error situation – an assumption about reality.

Apart from ordinary interviews, in which the respondents are asked to imagine a situation, few methods are able to capture user information from a virtual value position. One common denominator is that the methods build on a virtual, or imaginative, aspect. The respondent must either imagine himself or herself in a situation or context or be placed in a virtual physical world. Alternatively, he or she can act in a constructed, virtual ICT-based world. On the basis of the perception from the virtual position, the user generates information that the company needs. This paper argues that such methods will be subject to increased interest in the future, as the situation and the technology that creates virtual context develop further.

Table 3 illustrates the use information mode through one method that captures information originating from ‘testers’.

	<b>Type of information generated</b>	<b>Innovation knowledge</b>	<b>Degree of interactivity</b>	<b>Reporting and need identification</b>
<b>Information Acceleration</b>	Behavioural aspects; mainly purchase decision, prospective selling positions.	User preferences and buying behaviour, ideas for concepts.	Quite low, mainly observation.	The need identification is made by the user in a simulated context of use.

Table 3: Qualities for methods related to the mode 'the tester'.

### ***Information Acceleration***

Researchers using the *Information Acceleration* method (Urban et al. 1996) construct a virtual buying environment that simulates the information that is available to consumers at the time that they make a purchase decision. The user can actively use a modelled service in this setting, making it possible for the developer to observe how it will be used and whether there are any problematic aspects that need to be addressed before a market launch. This method focuses on the prospective selling position of the product or service. The customer is involved late in the development process, when the product concept is ready. It is tried on ordinary users, Urban et al. (1996) uses the method on both B2B customers and ordinary customers. The user is active in using the product in the virtual world, but passive in the actual development process. It's an introspective method and the output can be either a product or service.

#### **4.4 Methods capturing 'dreamers'**

Much of today's user information that is put into service development originates from users who have no past real-life experience in the service context and are not in an actual service situation and have only limited knowledge about the dynamic aspects of service. Rather than real users, the customers are prospective users who dream about what the future might hold for them.

The most common way to capture customer-oriented information from this position is through methods in which the user and the party asking for the information do not face each other, such as a survey or similar approach. Prospective users are encouraged to indicate their priorities, Customer information is sought after even if a customer has limited experience and knowledge of the service and its resource context and little understanding about what value the service can provide. The information that originates from this position is of questionable validity in terms of service development. The main advantage of ordinary surveys is that they are cheaper to execute than many other methods.

Some methods are more elaborate than ordinary surveys. This report identifies three methods that, to various degrees, are based on, or try to capture, use information that is not rich in either real-life experience from a service resource context or in the interactive dynamic side of service. Table 4 illustrates the use information mode through three methods that capture information originating from ‘dreamers’.

	<b>Type of information generated</b>	<b>Innovation knowledge</b>	<b>Degree of interactivity</b>	<b>Reporting and need identification</b>
<b>TRIZ method</b>	For ideation and solution for concepts.	Builds mainly on predefined principles than on user input.	Interactive in the beginning, then quite low in interaction.	Made by the investigating party.
<b>Free elicitation</b>	Ideas on existing services, or service during implementation.	Associations in relation to past experiences and values.	User is passive, just responding to cues. Interaction is quite low.	Made by the investigating party.
<b>GAP-based QFD</b>	Idea generation and concept testing.	Use knowledge, in relation to quality gaps.	Somewhat unclear, it stresses collaboration.	Made by the investigating party.

Table 4: Qualities for methods related to the mode ‘the dreamer’.

### ***TRIZ method***

The *TRIZ method* is based on the assumption that there exist universal principles of invention that form the basis for creative innovation. TRIZ is highly versatile and can be used for ideation, customisation and problem-solving. Instead of including customers or users, the example from Chai et al. (2005) uses contents based on customer needs. The final output is a list of possible innovative conceptual solutions to service design. The method has been used at a leisure resort island in Singapore: Singapore Sentosa Island. It was deemed necessary to make the island more accessible to its visitors and an initial plan included starting a bike rental service, or let people bring their own bikes to the island. The method was used to illustrate the inherent contradiction in the travel design on the island and the fact that some people do not want to bike. With the help of the model a supplementary program was developed that could cater to the needs of the people that did not want to bike. The disadvantages are the inherent complexity of such a method and the absence of empirical support as a customer innovation model.

### ***Free Elicitation***

*Free Elicitation method* (Bech-Larsen & Nielsen 1999) is a personal interviewing technique where users express the attributes they considers relevant for a specific product. The researcher presents stimulus probes or cues (usually words) to the participant. The participant is then asked to explain what concepts that comes to mind and that he/she considers relevant in the perception of the stimulus. 'For example, when the stimulus is a product name, the objective is to activate all nodes associated with this product name in respondent's memory. It is assumed that first mentioned statements are most important.' (Van Kleef et al. 2005, p. 189). The interview is generally recorded and transcribed before analysis. Results can be analyzed in a variety of ways, depending on the goal of the research, for example by displaying associative knowledge networks or classifying statements in meaningful categories (Van Kleef et al. 2005)

Free Elicitation is a suitable for implementing gradually developed products, such as upgrades, or for repositioning existing products, as it

provides companies with knowledge about the associations that customers have regarding a product or service. However, the method is not ideal for revealing latent needs or as a tool for generating innovative ideas. Bech-Larsen and Nielsen (1999) came to a similar conclusion arguing that Free Elicitation led to a focus on individual basic attributes and less on more underlying product or service differences.

### ***GAP-based QFD***

Li et al. (2009) argued that *Service Quality Function Development* (SQFD) is a useful approach in new service development. The model is based on the notion that there are five gaps in the service development process. In the initial stage, companies collect information about customers through interviews, questionnaires and complaint analysis. This input is then translated to service quality demands that can be measured. In the second phase the requirements identified are transformed into detailed specifications which will identify more clearly how the service will be delivered. In the third stage the identified specifications are performed, in this stage the employees need to perform the service enthusiastically. The fourth stage deal with the perceived quality of the new service offering and how this is viewed by the customers. In the fifth and final stage, the customers evaluate the service offering and compare it against their expectations. If the discrepancy between the service and the expectation is too wide, a gap will be revealed.

Li et al. (2009) used the model in the development of new tariff services in a Chinese mobile communications company. However, It is not clearly explained during the different stages how user involvement occurs, this is also true for the adaptation to various development processes that the model is argued to leave room for. The researchers claim that close collaboration with customers is important to understand changes in their new requirement. However, how this collaboration will look like, and when in the NSD process it will occur is not clearly explained in each stage. In the original theoretical model the customer interaction is focused on the first (GAP 1) and final (GAP 5) stage of the development process.

#### **4.5 Assorted methods**

The presented methods have a quite clear field of use. It is not difficult to understand what kind of use information they are designed to capture, which makes the task of relating them to the report's four modes quite easy. But there exist methods that aren't that easy to position. The reasons are that some methods are very comprehensive and more or less constructs of many methods. They thus are able to capture use information from many different modes. Other methods are close to being 'data capturing techniques' that is techniques aimed for capturing data which with small adjustments could capture use information from many modes. Examples of such techniques are interviews, surveys with questionnaires, 'think loud' data capturing technique, diaries, Zaltman Metaphor, Free Elicitation and more. In this chapter, a selection of these techniques and methods are presented with emphasis on the more elaborated methods.

##### ***10 stage NSD Model***

The purpose of the *10 stage NSD-model* proposed by Alam and Perry (2002) is to provide a model that can identify stages where customer involvement can be facilitated in the NSD process. Alam and Perry (2002) present two models for how to do this based on interviews with respondents in twelve financial service firms in Australia. The first model follows a linear structure which is most commonly used in large organizations that need a more structured approach to the NSD process. The second version follows sequential or parallel stages, a model more used by smaller organizations that have a less formal process. The ease in which many service innovations are copied makes the time aspect in NSD a crucial factor and the respondents generally agreed that the most important phase to include customers in is the idea generation is this is where novel ideas are developed.

Alam and Perry (2002) argue that customer integration should be carried out in all phases of the development process and according to the respondents the steps with most intense user involvement were: idea

generation, service design, service testing and pilot run. The most common way for managers to obtain customer input was through periodic meetings, customer observations and occasionally in-depth interviews. The customers are involved in each stage of the ten stage process and they are quite active with their input in meetings and in depth interviews. The output of the model is a new service offering. The model identifies clear steps to follow where customer input can be used. But, Alam and Perry (2002) conclude that it is unclear if a staged or sequential process is to prefer and the methods to involve customer in the various stages are not very elaborate or novel.

### ***Zaltman Metaphor***

According to Christensen and Olson (2002) *the Zaltman Metaphor* is developed to understand more deeply how the consumers' mental structure (of both thoughts and feelings) surrounding the object of inquiry; e.g. a service is formed. They conducted in interviews with 15 highly involved mountain bikers using this approach. Initially the participants choose 8-10 pictures that represented the thoughts and feelings they had about mountain biking. In depth interviews were held in order to enable the interviewers to flesh out the meaning from the explanations they gave to each picture. The interviews were then coded and entered in a software program before being presented in what Christensen and Olson (2002) calls a 'mental model'. The researchers identified four themes relating to the collective orientation of what they enjoyed with mountain biking: A: Riding for challenge, thrill, and a sense of accomplishment, B: Sharing experiences and connecting with a group, C: Seeking transformation experience in their emotional and/or cognitive state and D: escaping to nature.

The method helps to illustrate how users see a product/service and what it means to them. It need necessarily be connected to a development process, but could be useful in initial stages since it can help to pinpoint what underlying values the users see in the topic discussed. In the example from Christensen and Olson (2002) it is used with very involved mountain bikers, and one could argue that the method is best suited for

quite involved actors since they most likely connect more strongly to certain values attached to the topic.

Van Kleef et al. (2005) outline each stage in the approach: In the first stage participants are given instructions about research topic (can be a brand name, a corporate identity, a product design and so forth) and asked to take photographs and/or collect pictures (for instance from magazines/books) that illustrate what the topic means to them. In the second stage, usually seven to ten days later, a personal interview is planned where participants bring their pictures and photographs and tell their stories about the topic. During these interviews participants are asked to make distinctions between products or services. Each mentioned distinction leads to a series of 'why'-probes by the researcher, to determine sets of linkages between attributes, consequences and values. In the fourth stage participants are asked to indicate a picture that most represents their feelings, and might describe the opposite of the task that they were given. In addition, respondents are asked to use other senses to convey what does and does not represent the topic being explored. In the fifth stage the interviewer reviews all the constructs discussed and the participant creates a mental map to illustrate connections among important constructs. The sixth stage involves a summary image or montage that is constructed by the participant or a graphic technician to express important issues. In the seventh and final step a consensus map is created by analyzing the number of constructs and frequency of related constructs. The constructs are often interrelated and connector's constructs serve as linkages between constructs.

### ***Outcome based interview method***

*Outcome based interview method* is based on the idea that it is pointless to ask customers what they want when developing new services. The focus should instead be on asking them what outcome they want a new service to have. Thus, this method use customer input as a driver for the R&D team to create innovative ideas. Ulwick (2002) analysed the use of the outcome based interview method at Cordis Corporation, an American medical device manufacturer that wanted to develop its angioplasty

balloons, a tool that opens blocked arteries among cardiac patients. The method was used during interviews with cardiologists, nurses and other laboratory personnel. The interviews enabled Cordis to see a natural order of segmentation in the market, finding that one group of surgeons valued precision and accuracy in balloon placement while another group valued the speed which they could complete the procedure (p. 96). This knowledge enabled Cordis Corporation to create a new market segments which its competitors did not know existed.

This process is initiated by deconstructing the meaning that a customer attaches to an existing product or service. A narrow group of people that are crucial for the service should be interviewed as too wide a sample will complicate the research. A moderator is used to capture the essential statements and anecdotes during the interviews. When a customer comes up with something that could be a solution the moderator redirects the question in order to get the interviewee to think about the underlying process. The moderator makes sense of statements made in the interview and translates them to desired outcomes. When the interviews are completed the outcomes are sorted into groups relating to different parts of the service offering. In the fourth step a quantitative survey is carried out in order to find out how different customers react to the desired outcomes. An algorithm is used in order to understand how important the innovative solutions to problems are and if it makes sense to focus on development in that particular area. In the fifth and final stage, the data is used to uncover areas where innovation is needed and in order to evaluate potential concepts.

### ***Partner/cooperative innovation***

This approach, *Partner/cooperative innovation*, focuses on how organizations and customers can collaborate in service innovation. It is found that innovations that are built on this relationship create new service offerings that none of the actors would be able to produce on their own. Successful implementation of this method relies on Co-destiny, which means that the objectives, values and strategies are aligned among the different actors. According to Walters and Rainbird (2007) “*Partnership/cooperative*

*innovation* combines elements of process innovation management and product innovation management within a network structure that neither partner can create using its own resources to meet customer/market determined expectations for product and/or service performance at an economic (viable) cost. Third party involvement is typical.” (p. 599)

It is crucial that the end users values and needs are identified and understood in this approach. Walters and Rainbird (2007) use Australian AWA as an example of a company using this process. AWA was previously a radio agent for Telefunken and Marconi but had since developed into an IT service provider. Throughout this shift the relationship between AWA and its customers changed, from set maintenance work into a dynamic relationship where the customers’ received access to AWA’s electronic interface. The key word was transparency as customers was given equal visibility concerning the service delivery process as AWA itself had. The relationship is built on long term interests. Walters and Rainbird (2007) outline three approaches to cooperative innovation. The first one is a combination of upstream and downstream cooperative innovation. Here, IKEA is used as an example as they have an upstream partnership with their partners to deliver the IKEA value proposition, and with the customers who partake in the value creation by transporting and assembling the furniture. The second approach is that of pharmaceutical and or computer manufacturing where the R&D is outsourced while the third approach uses the example of Caterpillar which add value downstream through the expertise of their distributor network.

### ***Prototyping model***

*The prototyping model* focuses on the new services creation by simulation of services that could potentially be provided to customers if actually implemented. Such a model was described by Abramovici and Bancel-Charensol (2004) explaining multiple case studies where prototypes were created and put into experimentation with actual users. Results based on observation and feedback was used as inputs for decision making on issues such as feasibility. Edvardsson, Enquist and Johnston (2005)

designed a similar model which they termed as hyperreality, which refers to the the simulating activity that might take place or to the placing of customers in a simulated environment setting. This model was intended to let customers ‘test-drive’ services in a way similar to tangible products and requires a suitable environmental setting for a optimal simulation of the service activity.

### ***A new model of customer collaboration***

Based on a review of current NSD methods Derrick (2009) presents *a new model of customer collaboration* in NSD. The model divides the process into three stages: *idea generation, screening* and *service testing/evaluation*. The model is based on the ten stage NSD-model outlined by Alam (2002) and focus on the main two stages where customer involvement had shown to be high, namely during the ideation stage and the service testing/evaluating stage. The ideation stage is important as this lays the framework for any service development and is therefore critical for finding novel ideas. Previous research has shown that it is difficult for customers to realize their ideas in the following stages and Derrick argues that it is more beneficial if the customers or users are kept outside the development process until the testing/evaluating stage. Here customers are once again more involved by trying the service and giving feedback. However, the customers are not active participants in the development team.

The different stages of the model in turn demands different methods. Derrick (2009) suggests that experiential, prototyping and observation models can be used when developing new services for technological platforms. These prototypes can be developed by the R&D team and then tested on trained customers who can try them in a real life setting while recording their ideas concerning the service. This can be combined with videography

Derrick (2009) argues that it is important that the customers feel involved in the service design phase. Even though they are not directly involved in the process the design team can be assisted when trying to make the ideas easily reproducible by providing updates on the development process

through blogs and other forums so that customers that were involved in the initiation process feel that they are still in the loop. In the service testing/evaluation stage the customers once more become active as their feedback is used to evaluate the service. In this stage prototypes can be introduced so that customers can use the service. This stage should involve the same people who were involved in the ideation stage.

The community model is the only model that Derrick (2009) recommends in all three stages. In the initial stage this means that the customers and development team form a strategic community which is the core group working on the NSD process. In the second stage the customers in this group can have a moderating role between the development team and new customers who are interested in becoming involved in the community. In the final process the community is used to evaluate and give feedback on the service through testing.

#### ***A Staged Service Innovation Model***

Song and Di Benedetto (2009) tested *A Staged Service Innovation Model* by using empirical data from 329 firms across five industries. They concluded that “integrating prelaunch service quality training into new service development process leads to successful service innovation.” (p. 571). In their article new product development and service quality development is combined to a single study, deriving the result of four qualitative case studies by focusing on service development teams in well-known companies. The companies, anonymous in the study, all belong to the top 10 best service companies in their sector. Song and Di Benedetto (2009) found that service delivery training prior to the service introduction is crucial as it is too late to begin that process when the service is already launched.

Most results from their empirical research were as expected. However, the study did not support the idea that idea screening, service design and service testing has a positive impact on business proficiency and market opportunity analysis. Instead the study supports the idea that the service development process is staged. Furthermore, their empirical findings

indicate that service performance is enhanced when using a staged process and prelaunch SERVQUAL training. The unexpected lack of correlation between proficiency of business and market opportunity analysis and idea screening, service design and service testing is something which cannot be explained in this study. However, the authors suggest that service decision makers might lack skills or funds to perform concept testing, market potential evaluation and customer preference assessment. Interaction with lead users was not found to have a positive impact. Most stages in the model do have an element of customer interaction and there is a focus on trying to understanding customer but they fail to outline how this interaction looks like.

## **5 Discussion**

The argument upon which this report has elaborated is the importance of developing the capabilities, prerequisites and enablers that will result in attractive service. As Vargo and Lusch (2004a, 2008) argued, value is experienced in a context during or after usage and it becomes evident that in order to develop such capabilities it is necessary to integrate the user in the service development process as well as other stakeholders in the wider value creation network (Lusch et al. 2010). This knowledge, which is developed in collaboration with customers, suppliers, partners and companies, must be integrated into the service development in order to accomplish value-creation through service. Integrating a new service in an existing service system is a major management challenge (Tax & Stuart 1997). The overview and a new framework for the classification of methods for customer integration within service development have formed the basis for a discussion on the contribution of this paper.

The report makes two main contributions. Firstly, it offers a new framework with four modes of customer integration, based on information related to the use situation and resource contexts that are available to the customer. Secondly, it contributes an overview, critical review and categorisation of the methods for customer integration within service development.

### **5.1 Contributions from the exploration of situ and context**

Menor and Roth (2007) focused on new service development (NSD) competence and operationally defined the competence construct as the service firm's internal expertise (or capacity) to deploy resources and routines, usually in combination, to effect a desired innovation-related or new service end. This report complements the way in which NSD competence can be developed by discussing different methods of integrating customers.

The new framework and the suggested modes – the correspondent, the reflective practitioner, the tester and the dreamer – provide a basis for

understanding what should be focused on and how the challenges during the service development process can be managed in an SDL-informed way. The modes imply that there is not just one way to integrate customers; depending on the mode, different types of information can be provided. However, the method or combination of methods that is used must have the potential to capture the essential desired information.

Furthermore, depending on the aim of customer integration – primarily where and when in the service development process the information is intended to be used – the potential of the four different modes to contribute with input for value in service will differ.

*Mode 1* – the correspondent contributes with information that often takes the form of ideas and solutions. Methods within this mode are primarily beneficial when development is in its early stages. Ideas and solutions for service are sought after, as is input for new service concepts. The information is anchored in real-life situations and is based on actual customer needs. As a result, methods are used to capture information where customers are experiencing value-creation. This will probably be more suitable for capturing problems in existing situations than for coming up with well thought-out solutions. Mode 2 methods are probably best suited for the latter.

*Mode 2* – the reflective practitioner contributes with information that is anchored in experience from the actual resource context. Methods within this mode are primarily beneficial when the final service performance is highly dependent on the interplay of other resources when it is used. The information generated by methods that lie within the mode provides valid information from customers who are familiar with the resource context. Therefore, methods are used at locations where other resources are present. Because the information is gathered after the actual situation occurred, informants have the opportunity to reflect on what actually happened and, in so doing, come up with more elaborate ideas. However, the time gap can cause details of the situation to be forgotten or wrongly reconstructed.

*Mode 3* – the tester contributes with information that is difficult to capture in any other way than by creating a test of a situation and the resource context. The mode contributes to service development in areas in which the concept is capable of being simulated, such as home decorating or creating a 3-D environment in which customers can experience various service alternatives. Naturally, the development of ICT-based techniques to create virtual realities has made methods within the mode more important. These methods are used during the back end of the service development process. Flexibility and reduced costs are the major advantages of this mode. However, the lack of a direct link to any real service and use context is a problem.

*Mode 4* – the dreamer contributes with information about service that is based on little or no experience, either in a real resource context or in the real dynamic aspects in service. An example is when companies need to create radically new service ideas that break from existing patterns and, in so doing, apply various creativity techniques. The captured information is inexpensive but it may not always be valid. Although the mode suffers from the informants' lack of actual situational experience, the generated information could be of high inspirational value, partly because of the customers' potential to think outside the box.

The characterisation of methods into four different modes (see Figure 1) should not be interpreted as normative. Depending on the purpose of the research, different modes of methods can be used. For example, 'Correspondent' type methods (insitu and incontext) are excellent for capturing live data regarding use value experience and service failure. However, this mode is probably inferior to the 'Reflective Practitioner' (exsitu and incontext) method in relation to the ability to generate creative solutions. Creativity research has shown that there is normally an incubation period between encountering the problem and creating the solution creation (Dodds et al. 2002), which suggests a preference for the 'Reflective Practitioner' method type for creative problem solving. Methods in 'Dreamer' category can be justified on the basis of both low cost and convenience. Here, a simulated reality is created that enables respondents and can, in turn, enable an interactive testing of different

scenarios and/or environments. The mode that is hardest to justify is the 'Correspondent' mode. More research is needed in order to reach a more definitive conclusion about the advantages and disadvantages of each of the modes.

Even though the use-information framework presented in Figure 1 gives a static picture, it hides a dynamic side. The information provided within these four modes is dependent on the informant's experience, which adds yet another dimension. A person who has often been in a specific use situation and/or resource context is able to provide detailed and valid information for the intended service. One of this paper's suggestions is that informants could be divided into three groups depending on their experience: very experienced, ordinary, and greenhorns. The very experienced informants could potentially be lead user innovators (von Hippel 1986). From a knowledge perspective the lead users are in the possession of a great amount of use knowledge as well as technology knowledge. Although it is necessary to be high in both use and technology knowledge, this is not sufficient to become a lead user. Nevertheless, the experience could have an influence on the performance of the informants. Technology knowledge has a flip side, as shown by Magnusson et al. (2003); too much knowledge regarding the underlying technology can hamper creativity. In other words, with experience comes also a conformance in suggesting ideas that are more feasible regarding present technological limitations (Magnusson 2009). The 'ordinary' experienced person can therefore be expected to not 'suffer' from having too much technology knowledge.

Experience is a type of priming that, in some ways, affects the ideas that people come up with (Marsh et al. 1999). In other words, the things that a fresh correspondent reports will probably be different from those that an experienced one would. With experience comes increased knowledge, both concerning use and technology. Veteran users usually become institutionalised over time and do not reflect on or react to things that a greenhorn might perceive as anomalies. All three categories contribute to our understanding in different but complementary ways.

Essentially, there are two ways to discuss and categorise the methods used for customer integration. Firstly, one can take as a starting point the procedural similarities in the implementation of methods. This is the most common breakdown and results in categories like observation methods, questionnaire-based methods and ethnographic methods, among others. These studies have mainly focused on how companies will integrate customers. Alam (2002) and Matthing et al. (2004) argued that customer integration contributes positively to the development of services. However, they discussed methods that were isolated from the information they rendered to service innovation, which meant that the researchers' focus was on techniques. Therefore, the second way to categorise and discuss methods for customer integration is to start with the results; that is, the effects that the methods have on service innovation. The effects are the information that the methods render, the general value they have for service innovation and, by way of extension, the value they have for customers.

This report has categorised methods for customer involvement from different customer positions that have the potential to generate customer related use-information. In addition to previous studies' focus on how customer involvement is carried out, this study highlights why and, partly, when companies should integrate customers in service innovation. Customer information is developed on the basis of the customer situation in the innovation process. Methods that have been tested in the development of services are related to these categories, or modes of customer-related use-information. The categorisation used herein is based on Situ and Context, knowledge of the dynamic aspects of service related to operant resources and knowledge of the static aspects of service related to operand resources. This means that the categorisation of methods for customer integration also maps how different methods can help companies develop services while emphasising different resources for value creation.

As to which type of method, or combination of methods, is most useful and appropriate, this report argues that any method is better than no method at all. However, methods that permit users to identify their own

needs and solution/ideas, and which are also elicited in the natural use context, could have a higher likelihood of providing important information that result in better prerequisites for value creation in service.

## **5.2 Contributions from the review**

De Jong and Vermeulen (2003) reviewed the organisation of the service development and concluded that it can be divided into two evolutionary stages. The first phase deals with the management of key activities and focuses on individual projects. The second phase is about developing a culture of innovation that creates a driving force for continuous development. Surprisingly, de Jong and Vermeulen (ibid) could not determine that customer integration has been a prominent practice in terms of managing existing key activities. Instead, it is frontline employees that are held up as important actors to involve in service development. However, this study also shows that customers are an important party when it comes to creating an innovation culture. Having said that, de Jong and Vermeulen (ibid) did not integrate customers; instead they argued in terms of the importance of maintaining links with external customers for opportunity exploration and idea generation. The review and discussion in this report shows that customers can contribute useful and important information and knowledge to companies if they are integrated properly and under the right conditions.

The review has shown that most of the methods are simplex methods, which mean that they merely collect data, and provide little or no feedback to the respondents. The respondents are asked questions or are observed. If the methods were to include a feedback loop, they could encourage a learning process. If the information could move in both directions rather than to just one receiver, it would probably enable learning that would be beneficial from a value-in-use point-of-view. The methods upon which this review has focused are mostly static, which means that information is mainly devoted to the company. Such methods could improve the validity of a company's output by becoming more dynamic, for example by facilitating a feedback loop.

Many methods have been categorised as incontext, either by trying to capture use information directly or by setting up an artificial physical context to evoke use information. One method is not usually able to provide the best information at every stage of the service development process, and the same method may be used in various ways and modes. Some methods, such as those when customers are in a use situation, and are describing, analysing or interpreting, serve to activate the customers, while other methods do not do so to the same degree. This paper advocates the use of a dialogue approach, in which data is fed back to the respondents. As a result, respondents are also involved in the interpretation of information, the prioritisation and actions to be taken. Learning from and with customers suggests that customers can become more than just passive informants (Matthing et al. 2004). Lusch et al. (2010) emphasised the importance of “learning to serve in a value network” (p.21) and both customers and other actors in the network can provide a basis for learning how to serve. Furthermore, the same methods used for customer integration could probably be used to learn from and with other actors.

Furthermore, the report makes a distinction between static and dynamic/interactive methods. Most methods, as well as previous empirical studies, provide ‘static’ information, such as attributes, quality factors, and important customer need dimensions, and are based on a goods-dominant logic understanding of service. A service-dominant logic-informed understanding of service development requires not only ‘static’ information but also information that is related to mechanisms in value co-creation and service exchange. Some methods are more suitable than others in terms of grasping customer activities and the interactive nature of value co-creation. This report shows that customer integration should provide information related to resource contexts (mainly static information) as well as mechanisms (dynamic) in use situations. Identifying and understanding key mechanisms in value co-creation is fundamental for success in service development.

Finally, the paper has argued that there are certain key elements to service development within SDL: (1) designing value propositions, and (2)

resource configurations that enable and support the realisation of the value proposition. This requires information and understanding of resource contexts and how to (re)configure and mobilise both operand and operant resources to enable customers to co-create value in different – and, for them, relevant – use situations. Furthermore, (3) aligning the value proposition and the service resource configuration forms the basis for service exchange, intended value co-creation and value in context.

## **6 Academic, practical and political relevance**

The previous chapter highlighted the report's conclusions. These findings are of different relevance, creating different effects and make various actions possible for the academy, industry and the political sphere. For the Academy, the report's value is mainly a new framework for use information, but also the collection of methods. We will discuss its contribution for research and look forward into further research propelled by the report. The relevance of the business community and the public sector is that the report can provide insights that can help organizations become better, particular in the customer and citizen relationship. Finally, we stress the value of the report for the political sphere for policy-making.

### **6.1 Conclusions and future research**

Customer integration is becoming increasingly important for the development of effective service that addresses customer needs. It is no longer enough to simply follow customers; companies must lead them, which require deep and valid customer-close information. This report has presented a more nuanced picture of customer integration than other literature. Customer integration is based on learning from and with customers and integrating the resulting information for service innovation. The situation and context dimensions contribute to the understanding that certain customers can help with certain types of use information. Moreover, the report shows that various methods are suited for and able to generate and capture various types of use information. It is important for managers who are planning to integrate customers to understand this concept.

Although the use-information framework in Figure 1 provides a static picture, there is an underdeveloped dynamic side that has not yet been explored. This paper argues that customers, now presented as static 'ideal types', represent a dynamic aspect in that customers change over time according to their evolving experiences. There are many reasons why these experiences can be more or less valid for a service development project; one reason is the time frame from the point at which an

experience occurred. A ‘correspondent’ who generates use-information that is both insitu and incontext, can, if they are not constantly updated about the ever-evolving resource context, change their user position over time, perhaps becoming a ‘tester’ with an innovation knowledge that is far from what is required. Of course, this is especially delicate when it comes to professional developers who dissociate themselves over time from valid use-information and thus required innovation knowledge. The dynamic side of the framework calls for future research.

Another area that should be developed in order to improve customer integration is the implementation of feedback loops in the methods. Too many of the reviewed methods have low interactivity, referred to here as ‘simplex’ methods, which means that information moves in only one direction. With methods that use dialogue as a guiding principal, customers could learn more about the technology, which would improve their ability to combine generated use knowledge with enabling resources. This would probably lead to methods that could generate innovation knowledge that is suitable for a service development project.

## **6.2 Managerial implication**

One of the report's conclusions is that businesses, governments and other organizations should not only integrate customers for better value creation in the services. Rather, one of the main conclusions is to describe different methods with which organizations can integrate customers, and the main information that organizations can be expected to be retrieved by using the different methods.

The report is based on a fundamental assumption, which is that customers are actively involved in the creation of value. We have called the participation for ‘co-creation’ of value. The customer is not a passive recipient of a solution and its value, but is rather active and integrates resources and co-creates value in different ways for different types of services provided. On the surface a quite passive radio listener is active in integrating resources, by for example preparing a chair and a cup of tea. The customer co-creates the service by listening, integrating resources

(chair, tea etc) and for example shutting out disturbing elements. A very active customer could be exemplified with a management team buying a management consultancy service. During the service, the management team is very active in interacting with the consultants by answering questions, carry out operations and other activities that will help and create value for both the consultants and the company. The examples show that a customer has an effect on its own value creation. This is also true for an organization that can be said to be responsible for its own value creation, and largely determines the value to be realized by being differently active in various customer relationships.

To be able to interact and affect it's own and others' value creation, organizations must know themselves, their own processes and the desired value, customer needs and requirements and how the customer wants to interact and create value. In order to learn from and with customers, organizations must integrate customers. Customer Integration will be a key to competitiveness and the report contributes to this undertaking with compiling a number of methods that could be used as tools for customer integration.

Using the report's framework of use information in Figure 1 increases the understanding of what type of information that is desirable or perhaps even possible for a given organization. Different types of services' co-creating processes create different conditions and opportunities for use-information methods. For example, the service processes between normal consultancies service where the organization's and consultancy's employees interact and co-create the service, differs compared with a road trip where a car-company delivers a car with which the customer interacts and co-creates the service. The first service makes it possible for the organisation to generate customer information through direct observation and reflection from interaction in practical business tasks. The second service process, the transport service, has other prerequisites and one has to work differently, for example by installing a computer that records the customer's car-related behaviours. Another type of methods could be customer who may 'think loud' and recorded with a Dictaphone during the use of the car. With the latter technique, the automobile customers

become 'correspondents' reporting live from the service co-creating process.

With knowledge of what creates value for customers, increases the organisation's chance to create the right prerequisites for service and co-creation in order to meet customers' needs. We believe that methods that allow organizations to capture customer information when the customer is in the correct resource context and use situation increases the possibility to acquire customer information that enhances the possibilities for developing adequate conditions for value. This information can be found in mode 'correspondent'. But it can be both difficult, time consuming and costly to work with such methods to capture this type of information. Contrary, the situation as well as resource context is often simulated in order to capture almost the same kind of information as if the customer would be in the real-life situation and resource context. For example, it is difficult to directly study the LEGO 'correspondents' in real-life situations, instead LEGO gives customers LEGO's physical resource (LEGO pieces) to capture information that is as similar to real-life information as possible. LEGO pieces then become a 'toolkit for user innovation'.

### **6.3 Implications for policy**

Sweden is a large country. Many services are both innovated and operated with customers located far from the service organization. Sweden is also an exporting country. Many companies' customers are located in other countries and on other continents. The distance complicates interaction and limits the possibility of customer integration, i.e. to learn with the customers. When customers and suppliers in an industrial network through decades, often centuries, have succeeded in interacting and integration, it has led to geographic clusters. Clusters are both a result of interaction and integration, but also a mean for further interaction and integration. From a policy perspective, clusters, or innovation systems, should therefore be strengthened and supported through various means in order to enhance communication, interaction and integration.

Present report has a practical focus in that it has collected a number of practical methods for customer integration. But the report also has a strategic focus and aim, when examining the type of customer information that is possible to generate and capture depending on the customer's position and proximity to both the situational use of service and to a resource context. The type of customer information that we believe contribute to better conditions for value in service, i.e. information by 'correspondents', is made possible by the closeness to other parties and interaction. In other words, the report proposes investments in industrial networks, innovation systems, clusters and related and partially overlapping concepts that contribute to proximity and interaction, communication and learning. The positive consequence becomes customer integration, value in service and in the long run competitiveness.

We also believe in investing in research that is focused to find, document and disseminate best practice. The industries' own resources for its own business-related research is often scarce. Time is short and organizations are and slim and focused on carrying out core activities. However, the industry is always interested to learn about best practices, other companies that succeed and the underlying causes. A type of research that we would suggest worthwhile investing in is finding, documenting and disseminating of good examples on customer integration. It is obvious that the information in this report are both important and interesting for the industry, but its interest on customer integration would increase substantially if it could be contextualized in the form of good practice. Here the political realm can help by both create legitimacy for such studies and with direct investments. Naturally, such knowledge can also be implemented into teaching in the country's universities.

## List of references

- Abramovici, M. & Bancel-Charensol, L. (2004). How to Take Customers into Consideration in Service Innovation Projects. *The Service Industries Journal*, 24 (1), 56-78.
- Alam, I. (2002). An Exploratory Investigation of User Involvement in New Service Development. *Journal of the Academy of Marketing Science*, 30 (3), 250-261.
- Alam, I. & Perry, C. (2002). A customer-oriented new service development process. *Journal of Services Marketing*, 16 (6), 515-534.
- Bech-Larsen, T. & Nielsen, N.A. (1999). A comparison of five elicitation techniques for elicitation of attributes of low involvement products. *Journal of Economic Psychology*, 20, 315-341.
- Bergvall-Kåreborn, B., Ihlström Eriksson, C., Ståhlbröst, A. & Svensson, J. (2009). A milieu for innovation: defining living labs. *In: ISPIM Innovation Symposium*, 6-9 December, New York City, USA.
- Chai, K., Zhang, J. & Tan, K. (2005). A TRIZ-Based Method for New Service Design. *Journal of Service Research*, 8, 48-66.
- Christensen, G.L. & Olson, J.C. (2002). Mapping Consumers' Mental Models with ZMET. *Psychology & Marketing*, 19 (6), 477-501.
- Dahlsten, F. (2004). Hollywood wives revisited: a study of customer involvement in the XC90 project at Volvo Cars. *European Journal of Innovation Management*, 7, 141-149.
- De Jong, J.P.J. & Vermeulen, P.A.M. (2003). Organizing successful new service development: a literature review. *Management Decision*, 41 (9), 844-858.
- Derrick, C.T.M. (2009). Customer collaboration in service innovation. *Unpublished working paper*. National University of Singapore.

- Dodds, R.A., Smith, S.M. & Ward, T.B. (2002). The Use of Environmental Clues during Incubation. *Creativity Research Journal*, 14, 287-304.
- Edvardsson, B., Enquist, B. & Johnston, R. (2005). Co-creating customer value through hyperreality in the pre-purchase service experience. *Journal of Service Research*, 8 (2), 149-161.
- Edvardsson, B. (2006). The service perspective. *Unpublished working paper*.
- Edvardsson, B., Gustafsson, A., Kristensson, P., Magnusson, P. & Matthing, J. (2006). *Involving Customers in New Service Development*, London, Imperial College Press.
- Ellis, R.D. & Kurniawan, S.H. (2000). Increasing the Usability of Online Information for Older Users: A Case Study in Participatory Design. *International Journal of Human-Computer Interaction*, 12 (2), 263-276.
- Franke, N. & Piller, F. (2004). Value Creation by Toolkits for User Innovation and Design: The Case of the Watch Market. *Journal of Product Innovation Management*, 21 (6), 401-415.
- Grönroos, C. (2000). I Did It My Way. In: Fisk, R.P., Grove S.J. & Joby, J. (eds.) *Services Marketing Self-Portraits: Introspections, Reflections, and Glimpses from the Experts*. Chicago, IL: American Marketing Association. 71-108.
- Grönroos, C. (2006). Adopting a Service Logic for Marketing. *Marketing Theory*, 6 (3), 317-333.
- Kristensson, P., Gustafsson, A. & Archer, T. (2004). Harnessing the Creative Potential among Users. *Journal of Product Innovation Management*, 21 (1), 4-14.
- Leonard, D. (1995). *Wellsprings of Knowledge: Building and Sustaining the Sources of Innovation*, Boston, MA, Harvard Business School Press.
- Leonard, D. & Rayport, J.F. (1997). Spark innovation through Empatic design. *Harvard Business Review*, 75 (6), 102-113.

- Li, J.-H., Xu, L. & Wu, X.-L. (2009). New service development using GAP-based QFD: a mobile telecommunication case. *International Journal of Services Technology and Management*, 12, 146-174.
- Lilien, G.I., Morrison, P.D., Searls, K., Sonnack, M. & Von Hippel, E. (2002). Performance Assessment of the Lead User Idea-Generation Process for New Product Development. *Management Science*, 48 (8), 1042-1059.
- Lundkvist, A. & Yakhlef, A. (2004). Customer involvement in new service development: a conversational approach. *Managing Service Quality*, 14 (2/3), 249-257.
- Lusch, R., Vargo, S. & O'Brien, M. (2007). Competing through service: Insights from service-dominant logic. *Journal of Retailing*, 83 (1), 5-18.
- Lusch, R.F., Vargo, S.L. & Tanniru, M. (2010). Service, value networks and learning. *Journal of the Academy of Marketing Science*, 38 (1), 19-31.
- Lüthje, C. (2004). Characteristics of innovating users in a consumer goods field: An empirical study of sport-related product consumers. *Technovation*, 24 (9), 683-695.
- Magnusson, P.R., Matthing, J. & Kristensson, P. (2003). Managing User Involvement in Service Innovation. *Journal of Service Research*, 6 (2), 111-124.
- Magnusson, P.R. (2009). Exploring the Contributions of Involving Ordinary Users in Ideation of Technology-Based Services. *Journal of Product Innovation Management*, 26 (5), 578-593.
- Marsh, R.L., Bink, M.L. & Hicks, J.L. (1999). Conceptual priming in a generative problem-solving task. *Memory and Cognition*, 27 (2), 355-363.
- Matthing, J., Sandén, B. & Edvardsson, B. (2004). New service development: learning from and with customers. *International Journal of Service Industry Management*, 15 (5), 479-498.

- Menor, L.J. & Roth, A.V. (2007). New service development competence in retail banking: Construct development and measurement validation. *Journal of Operations Management*, 25 (4), 825-846.
- Meyer Goldstein, S., Johnston, R., Duffy, J. & Rao, J. (2002). The service concept: the missing link in service design research? *Journal of Operations Management*, 20 (2), 121-134.
- Normann, R. (2001). *Reframing Business: When the Map Changes the Landscape*, Chichester, Wiley.
- Olson, E.L. & Bakke, G. (2001). Implementing the lead user method in a high technology firm: A longitudinal study of intentions versus actions. *Journal of Product Innovation Management*, 18 (6), 388-395.
- Prahalad, C.K. & Ramaswamy, V. (2000). Co-opting Customer Competence. *Harvard Business Review*, January-February.
- Song, M. & Di Benedetto, C.A. (2009). A Staged Service Innovation Model. *Decision Science*, 40 (3), 571-599.
- Stevens, G.A. & Burley, J. (2003). Piloting the rocket of radical innovation. *Research Technology Management*, 46 (2), 16-25.
- Tax, S.S. & Stuart, I. (1997). Designing and Implementing New Services: The Challenges of Integrating Service Systems. *Journal of Retailing*, 73 (1), 105-134.
- Ulwick, A.W. (2002). Turn Customer Input into Innovation. *Harvard Business Review*, 80 (1), 91-97.
- Urban, G.L. & Von Hippel, E. (1988). Lead user analyses for the development of new industrial products. *Management Science*, 34 (5), 569-582.
- Urban, G.L., Weinberg, B.D. & Hauser, J.R. (1996). Premarket forecasting of really-new products. *Journal of Marketing*, 60 (1), 47-60.
- Van Kleef, E., van Trijp, H.C.M. and Luning, P. (2005). Consumer research in the early stages of new product development: a critical

- review of methods and techniques. *Food Quality and Preference*, 16 (3), 181-201.
- Vargo, S.L. & Lusch, R.F. (2004a). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, 68 (1), 1–17.
- Vargo, S.L. & Lusch, R.F. (2004b). The Four Service Marketing Myths. *Journal of Service Research*, 6 (4), 324–335.
- Vargo, S.L. & Lusch, R.F. (2008). From goods to service(s): Divergences and convergences of logics. *Industrial Marketing Management*, 37 (3), 254-259.
- Vargo, S.L., Maglio, P.P. & Archpru Akaka, M. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal*, 26, 145-152.
- Von Hippel, E. (1986). Lead Users: A Source of Novel Product Concepts. *Management Science*, 32 (7), 791-805.
- Von Hippel, E. (1994). "Sticky Information" and the locus of problem solving: Implications for innovation. *Management Science*, 40 (4), 429-439.
- Von Hippel, E. (2001). Perspective: User toolkits for innovation. *Journal of Product Innovation Management*, 18 (4), 247-257.
- Von Hippel, E. & Katz, R. (2002). Shifting Innovation to Users via Toolkits. *Management Science*, 48 (7), 821-833.
- Walters, D. & Rainbird, M. (2007). Cooperative innovation: a value chain approach. *Journal of Enterprise Information Management*, 20 (5), 595-607.

# Customer integration in service development and innovation - methods and a new framework

---

Customer integration is becoming increasingly important for the development of effective service that addresses customer needs. It is no longer enough to simply follow customers; companies must lead them, which require deep and valid customer-close information. This report presents a more nuanced picture of customer integration than other literature. Customer integration is based on learning from and with customers and integrating the resulting information for service innovation.

The report aims to provide a basis for a better understanding of how to integrate customers in service development by assessing different methods of obtaining user information, and by suggesting a new framework that includes four modes of customer integration.

The new framework and the suggested modes – the correspondent, the reflective practitioner, the tester and the dreamer – provide a basis for understanding what should be focused on and how the challenges during the service development process can be managed in a Service Dominant Logic-informed way. The modes imply that there is not just one way to integrate customers; depending on the mode, different types of information can be provided. However, the method or combination of methods that is used must have the potential to capture the essential desired information.