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## Customer role in service production and innovation – looking for directions for future research

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## Preface

Intensive research on service innovation is a relatively recent phenomenon. Hence, it is natural that much effort has been devoted to identifying general characteristics of service innovation. A key feature has been argued to be the role of customers as an important resource in service development.

This document consists of two working papers that review and analyse customer – service provider interaction in service production, and in service innovation activities. The focus of the analysis is on business customers. As the number of studies in the field has been rapidly growing, knowledge of customer potential and limitations in service innovation is also increasing. However, literature in the field remains fragmented.

The purpose of the review is to organise existing research findings and point out key directions for future research efforts. In other words, to examine the current knowledge about customer roles in service innovation, and the existing knowledge gaps that would deserve more attention. The review identifies key themes and research findings, as well as provides a conceptual framework that integrates factors (and suggests interdependences) that seem to influence customer role in service innovation.

The first one of the papers is titled “Customer roles in service production – implications for involving the customer in service innovation” (Arja Kuusisto). It first delineates customer participation in service production. Three distinct customer roles are identified: consuming, co-performing, and co-creating a service. These customer roles are then analysed in terms of their implications for customer motivation and capabilities to become involved in service innovation. Overall, the analysis shows that there is a need to take into account the specific innovation context: customer motivation and capabilities to contribute to innovation activities depend on the specific innovation target and resources of the customer as well the service provider.

The second paper, “Customer interaction in service innovations – A review of literature” (Seliina Päällysaho), identifies key themes that can be used to structure discussion and findings in the field. These include, customer as a resource and as a co-producer in service development, collaboration patterns between customer and service provider, customer input in various types of innovations and at various stages of the innovation process, selecting and motivating customers, and, the pros and cons of customer input in service innovation activities. A key finding of the review is that despite the growing number of studies, research results yield only very few generalisations. This is due to the heterogeneity in questions asked, concepts used, and the nature of service activities examined which make it difficult to compare results of one study with another.

The review and analysis conducted in the two working papers suggest the following guidelines for future studies on customer role in service innovation:

*1. The type of the analysed service is important and it needs to be clearly identified.* It is not a new observation that service activities are heterogeneous. However, it seems that what we know about customer involvement in service innovation does not adequately reflect this heterogeneity, but is biased towards what we know about services produced in intensive, person-to-person interactions. Hence, more research is needed to examine the variety of services. Further, there should be more studies that examine different types of services in one study (or with the same conceptual framework and research questions) to enhance comparability of findings.

2. *There is a need to specify the target (or key dimension) of innovation.* The following dimensions of service innovation are often identified: new or significantly improved service, process of production or delivery, organisational method, and marketing practice. However, this specific target of innovation has not been systematically looked into in studies focusing on customer involvement in service innovation. It is highly plausible that customer roles and potential in service innovation are closely linked to the type of service innovation in question.

3. *There is a need for more studies on how to organise and motivate customer interaction in service development.* Research on the following types of questions should contribute to innovation management practices: When should customer interaction in a service development project be separately governed and organised? How can the firms – service providers and customers – make use of formal and informal protection methods in service co-development projects? As the service provider and the customer may have different motivations for service development, would it be possible to create new types of ‘win-win’ incentives for co-operation in innovation activities? What types of incentives are currently in use for internal employees and for the customer organisation’s employees, and how they are perceived?

4. *What is the role of customers when the service provider aims to proactively anticipate or even influence future customer needs?*

It is hoped that the following two research papers presented here can be valuable for readers in two ways: that they help organise current knowledge on customer role in service innovation and provide plentiful references in the field, as well as give rise to new relevant research questions.

# Customer roles in business service production - implications for involving the customer in service innovation

Arja Kuusisto

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# 1 Introduction

## 1.1 The need for studying business customers' role in service production

Interaction between customer and service provider is perhaps the most basic feature of service activities. In case of knowledge intensive services, such as management consultancy services, this is particularly evident: a service supplier and a customer may engage in a long process of working together, first, to gain a mutual understanding of the situation, and then, to produce a customized solution to the problem (e.g., Salter & Tether 2006, 16). In general, theorising in the service literature is largely based on the study of situations where person-to-person interaction is a key element in service delivery (Bowen 2000, 46; in Lovelock & Gummesson 2004, 21). This seems to hold for both consumer services as well as business services.

The present study is inspired by the variety of the ways in which customers can interact with the service provider. Not all services are produced and/or delivered during an intensive person-to-person encounter. Due to Internet based services in particular, the domain of services has rapidly expanded where the customer can obtain the service without interacting with a human service provider. Also many 'old' services (e.g., cleaning, repair and maintenance) do not involve the customer directly with a service employee (Lovelock & Gummesson 2004, 29, use the term 'separable services' to emphasise the fact that the production and consumption of the service need not be simultaneous).

This study focuses on business customers. The aim is to *delineate customer participation in the production of business services*. Accordingly, this paper identifies and thoroughly discusses distinct customer roles in service production. As such, the discussion should contribute to our understanding of the variety of service situations from the customer's perspective. The main motivation in the analysis, however, is related to the question of *whether and how to involve customers in service innovation*. It is argued that an understanding of customer participation in the production of a service is instrumental in assessing customer potential in service innovation. Let us now turn to elaborate this argument.

The importance of customer-based innovation in services (involving customers directly in service innovation) seems intuitively right: service organisations should take advantage of their core competence – that of interacting with their customers – also in service development. There is also empirical evidence that customers are indeed involved and provide important contributions to service innovation activities (e.g., Magnusson et al. 2003; Abramovici & Bacel-Charensol 2004). In case of services where person-to-person interaction between a customer and a service provider's employees is a constitutive element in the service, customer involvement in service development is natural. As Sundbo (2006, 128) argues: "...knowledge services are mostly in the form of provision of advice, which often requires an intense interaction between the service provider and the client when solving client's problems. ..The customers are always deeply involved in knowledge service production and thus also in the change of these services, which means innovation since innovations in knowledge services have traditionally been ad hoc ones."

The point here is that there is (may be) a misleading tendency to make generalisations about customer involvement in service innovation based on research on and practitioner experience with a particular type of service: this is knowledge intensive business service where core value of the

service is produced in personal interface between customer and service provider. There is a need to look into different types of customer roles in service production in order to more fully understand customer capabilities and motivation to be involved in service innovation. The way a customer interacts with the service provider in producing the service does necessarily impact (though not determine) the customer's understanding of the service, as well as motivation to put energy into developing this particular service. There is also some empirical evidence that when customer interaction with the service provider changes – an e-service is provided instead of a professional person-to-person service – the innovation process and user involvement in the process changes (Sundbo 2006, 127).

## 1.2 Framework of the study and purpose of the present paper

Figure 1 presents the overall framework of the study. **In this working paper, the focus is on customer roles in service production:** on identifying the different roles customers can have when they co-produce value of a service with the service provider. These co-production roles are analysed especially in terms of their implications for customer capabilities and motivation to be/become involved in service innovation. Also other factors influence customer motivation and capability to engage in service development (see upper part of Figure 1): The motivational aspect is impacted by factors such as, importance of the service and/or service provider to the customer (Wynstra et al. 2006; Chervonnaya 2003), perceived importance of customer participation in terms of quality of results for the customer (Martin et al. 1999), and customer – service provider relationship (Liljander & Strandvik 1995). The capability dimension, in turn, is influenced by a variety of customers' innovation task relevant knowledge and skills (e.g., 'technology readiness' in case of technology-based services, in Matthing et al. 2006), available people and time resources, as well as the customer organisation's readiness to 'co-innovate' (e.g., to share information, sell the project internally, contribute to project governance, in Bettencourt et al. 2002).

The relevant outcome variable that is being looked into is the question of whether and how customers can and should be involved in service innovation by the service provider organisation. As shown in Figure 1, input to the decision comes from both customer as well as service provider sides. Two central factors regarding the service provider's side are identified (lower part of Figure 1): First, what type of innovation the service provider pursues. Intuitively, the specific target of service innovation is necessarily linked to effective customer roles in innovation. However, such interdependences between the type of service innovation and customer roles in its development are not yet well-known. Second, the service provider's resources have an impact on customer roles in service innovation: At best customers provide a useful and inexpensive resource to service innovation. Customer involvement also demands resources to the integration of customer input into internal development efforts, and to solving questions of appropriation.

Figure 1. Framework of the study

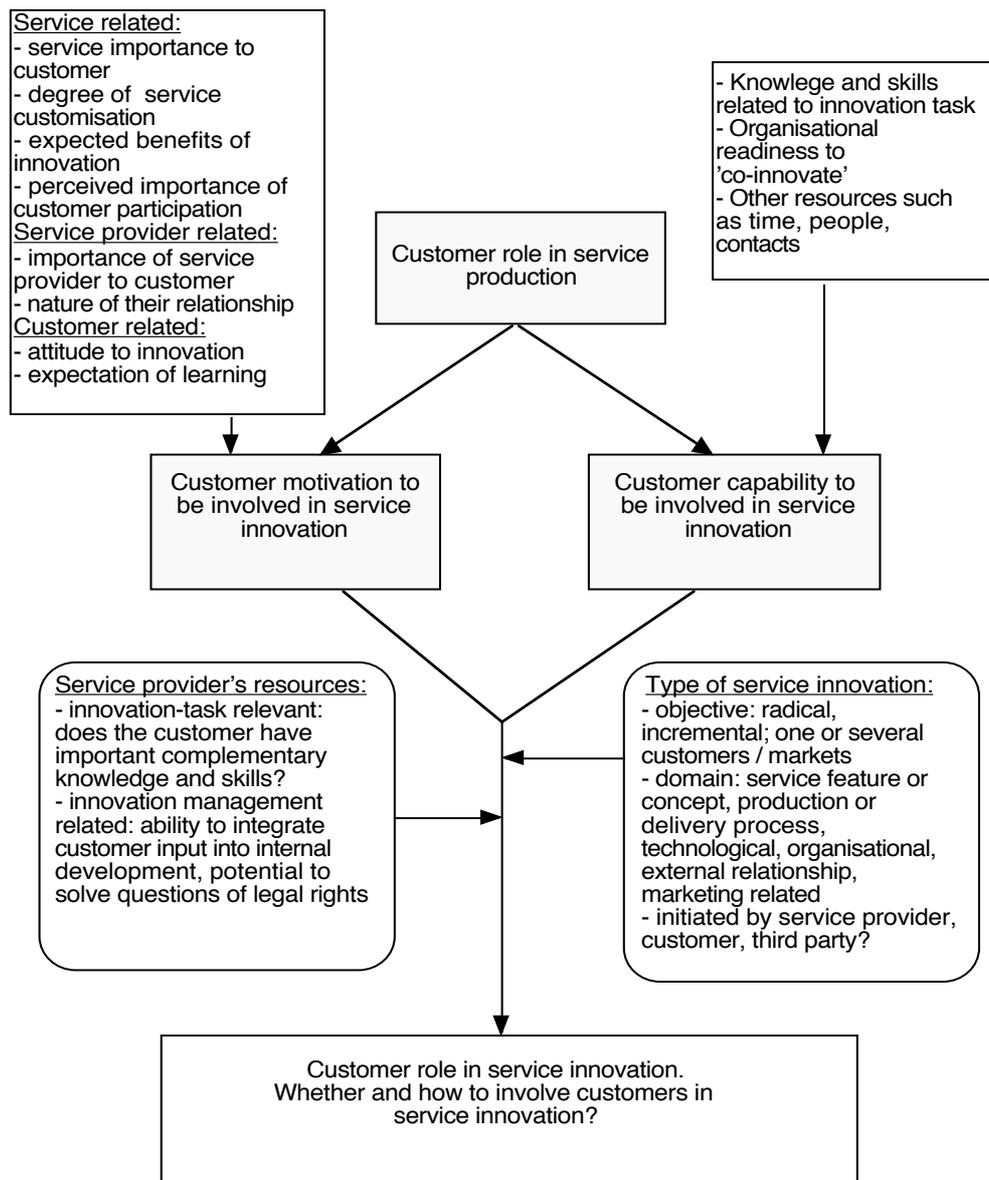


Figure 1 aims to provide an integrative framework of factors that should influence customer involvement in service innovation. The framework directs review of existing research results, but can also be used to suggest new questions. The key value of the framework is that it integrates factors that impact customer potential and limitations in service innovation. Further, it identifies the possible interdependences between individual elements – for instance, customer motivation/capability to be involved in service innovation and the type of service innovation, or, customer capability to be involved in service innovation and service provider's resources. Naturally, further empirical research is needed to draw specific managerial implications: whether and how to involve customers in innovation activities in case of specific types of customers, service providers and innovation targets.

The working paper at hand analyses customer roles in service production and aims to identify their implications for customer motivation and capabilities to be involved in innovation activities (grey boxes).

## 2 Co-production between service supplier and customer

### 2.1 Co-production of value – what is service value for a business customer

In order to have a closer look into what it is to consume and produce a service from a customer's point of view, let us first consider the closely related question of *value of the service* in some detail. As Woodruff and Flint (2006, 184) note, the marketing literature offers different conceptual definitions of *customer value*, many of which take a seller's perspective. In particular, the widely used value-added concept implies that value is contained in a product or service – it is something a service provider creates, owns, and offers for sale (Woodruff & Flint 2006, 184-5). Another noticeable conceptualisation of customer value taking a seller's perspective is that of the economic worth of a customer to the seller adopted in CRM literature (customer relationship management literature) (e.g., Payne 2006). From the customer's point of view, however, sellers' intentions and objectives are less important than the customer's own experiences and perceptions. The value-in-use concept advanced by Vargo and Lusch (2006) (based, for instance, on Grönroos 2000 and Gummesson 1998) focuses on the experience perceived by a customer interacting with products or services in use situations: As they argue, "The customer is always a co-creator of value. There is no value until an offering is used – experience and perception are essential to value determination." (p. 44)

The idea of customer value as a phenomenological experience by a customer is well established in consumer research (Hirschman and Holbrook 1982; Gutman 1982). In particular, Morris Holbrook (1996, 2006) has made important contribution in the field: He defines customer value as an *interactive relativistic preference experience*. Although Holbrook's work is mainly in the field of consumer research, his conceptualisation of customer value is relevant to any type of customer and interaction. First, in Holbrook's terms, *interaction* refers to a relationship between some subject (customer) and some object (e.g., product, service, event, social cause, innovative idea). In service context, a customer interacts with the outcome of the service, as well as with the service provider's employees or physical/technological resources during the service delivery process. Hence, a customer basically derives value from interacting with the service process and its outcome (Grönroos 2000).

Even more precisely, the value of a service for a customer resides in the *meaning* the customer attaches to interactions with the service process and its outcome (see Richins 1994; in Woodruff & Flint 2006). Simply put, value of the service is based on its meaning to the customer. In case of a business customer, future consequences of the service in terms of the customer organisation's goals are naturally key to any assessment of "what is received".<sup>1</sup>

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<sup>1</sup> However, making such an evaluation is difficult: 1) Many individuals in the customer organisation are involved in buying decisions and making use of the service. In addition to the shared understanding of the role of the service and experiences of its use, individuals also attach private meanings to functional benefits and to process/relationship value of the service (c.f., Richins 1994). 2) It may be difficult to separate out the impact of one thing (e.g., an advertising campaign) of all other things influencing the outcome (e.g., sales). 3) The service process can impact how the end result is evaluated. For example, Bendapudi and Leone (2003) show that "consumer control over the service production process decreases dissatisfaction with negative outcomes and increases satisfaction with positive service outcomes." (in, Arnould et al. 2006, 97).

Second, Holbrook argues that customer value is *relativistic* as it depends on other objects, on the situation, as well as on the person. The relativistic value of service is obvious in service quality research: it is widely held that service quality is perceived by customers through a comparison between service related expectations and experiences (Grönroos 2000, 67). Thus, experiences are always relative to that what the customer considers reasonable based on prior experiences, service provider's communications, and his own needs and aspirations in a particular situation.

Customer value is hence tied to a customer's meaning attached to and experience with a service (Holbrook 1996; Richins 1994; Grönroos 2000; Vargo and Lusch 2006). In a business context, meanings are tied to economic and other organisational consequences and goals. However, it is obvious that when a number of individuals are involved, alongside shared organisational meanings, other more individual meanings are being attached to both the service process and its outcome, and thus influence experienced value of services being used. Also, the fact that customers themselves are involved in the service process influences their assessment of service outcomes. Let us now turn to discuss the role of customers in producing this value.

## 2.2 Co-production through consumption and co-design

Several studies have examined customer roles in services (reviewed by Chervonnaya 2003, 350). Though there is variation in the studies, four typical roles can be identified: specification of the service, pure co-production, quality control, and marketing (selling of the service to others) (with these terms, in Martin et al. 1999). In addition, many studies pay attention to a 'competitor' role of a customer, which refers to a customer's potential to engage in self-service instead of buying from the service supplier. The present study has a more narrow focus: it analyses customer roles during the actual consumption and production of a service. Hence, those customer activities that are 'invisible' to the service supplier - such as early information search on potential service providers, or, recommending the service to other customers - are not examined.

The focus on the actual co-production stage of the service is motivated by an interest to learn more on customers' capability to produce their portion of the service value while interacting with the service provider. The discussion on the co-production of value between business customers and their supplier organisations presented by Flint and Mentzer (2006, 141) is highly relevant here. They suggest two basic ways in which organisational customers can become involved in co-production of value with their supplier organisations (their focus is on integrated supply chains). The first kind of co-production is co-production *through consumption*. All customers serve as co-producers as they interact with supplier personnel or other resources in the performance of supplier's services. This aspect of value directly refers to the customer value concept as determined above: there is no value in a service without someone consuming the service (Holbrook 2006, 212; Grönroos 2000, 25). The other way in which customers co-produce value is *through co-design*. In the work by Flint and Mentzer (2006, 141), co-design covers customer feedback (e.g., satisfaction surveys, direct comments to supplier personnel, cancelling or increasing orders) as well as their direct involvement in the development of products and services (e.g., co-location of suppliers' personnel within customers' premises to improve the effectiveness and efficiency of product/service design).

Basically, the dichotomy above suggests that while customers are always co-producers of value through consumption, they are not necessarily co-designers of services. In Flint and Mentzer (2006), the co-design aspect of value generation seems to refer to the modification and development

of *future* products and services, rather than to those aspects of ‘co-creation’ that take place between the customer and the service supplier to produce the ‘current’ service. The latter, however, is highly important: By his or her own actions the customer impacts what the contents of the ‘current’ service becomes, and thus creates part of the service value.

Though an analytical distinction can be made, it is often difficult to separate the development of future services from the actual service production. It is not uncommon that service innovation is intertwined with actual service production. The concept of ad hoc innovation, particularly relevant to professional services, makes the point: As Sundbo and Gallouj (2001, 55) write: “the steps of production, selling and innovation take place simultaneously or are merged. The client’s problem (in its concrete sense) is the starting point of the innovation process.” In the words by Coombs and Miles (2001, 95): “..much service innovation is intrinsically entangled with customisation of continually evolving product.” It suffices to conclude here that the ad hoc pattern of innovation is typical of situations in which the core service is constituted in person-to-person interaction (Sundbo and Gallouj 2001) and the innovation is an incremental improvement in nature (Gadrey and Gallouj 1998). When the dynamics of service production (customer role in service production) and the objectives of innovation activities are different, actual service production and service innovation may be more likely to be distinct activities. The rest of this paper looks into customer roles in service production in more detail, especially in order to reveal implications for customer’s motivation and capability to be/become involved in service innovation.

### **3 Customer roles in service production**

#### **3.1 Existing classifications of (business) services**

##### *Different types of services and service organisations*

There are many ways of classifying services. For instance, in terms of standard statistical categories (wholesale and retail, transport and communications, etc.), or in terms of markets they serve (e.g., business services, consumer services, community services) (Coombs and Miles 2001, 88). One of the most influential classifications in the academic service literature has been the one by Lovelock (1983): It goes beneath the obvious technical content of a service by capturing the nature of the service act (either physical or non-physical) and that what is processed to create the service (people, objects, information). The four categories are (a) physical actions to the person of the customer (people processing), (b) physical actions to an object belonging to the customer (possession processing), (c) non-physical actions directed at the customer’s mind (mental stimulus processing), and (d) non-physical actions directed at data or intangible assets (information processing) (Lovelock and Gummesson 2004, 30-31).

Naturally, one way of classifying services is not in itself better than some other way. Classifications are usually instrumental for some purpose(s); they are developed for stimulating thinking and increasing understanding in some field of interest. For example, when more research interest has been devoted to the study of innovation in service firms, classifications of service sectors and organisations are beginning to reflect innovation relevant aspects. Tether (2003), for example, distinguishes between three different service sectors: traditional services (e.g., small firms in construction and restaurants), systemic services (e.g., banking and insurance, supermarket retailing, and airlines), and knowledge based services (e.g., professional services) (in Salter and Tether 2006, 9). This characterisation is motivated by an interest in understanding innovation in services: as

firms in these three broad categories differ in terms of managerial, organisational, and technological competences, size, and type of customers, it is obvious that they have very different innovation incentives and patterns.

The present study focuses upon business services. In general, there is very little work on the variety of business services compared to the classification work done in the field of consumer services. As Wynstra, Axelsson, and van der Valk (2006, 477) note, those classifications of business services that do exist (e.g., Mills and Margulies 1980; West 1997) basically look into the characteristics of the service provider. Indeed, the study by Wynstra et al. (2006) provides a notable exception: they develop a classification comprising four different types of business services “based on how the buying company applies the service with respect to its own business process: component services, semi-manufactured services, instrumental services and consumption services.” (p. 479) As they focus on how services are applied in the buying organisation’s own processes, and as existing classifications of industrial goods are based on how the goods are applied, the authors mainly draw on literature in the area of industrial marketing and purchasing in developing their classification.

Likewise the application-based classification by Wynstra et al. (2006), the present study looks into the variety of business services from the customer’s perspective. Here the focus is on *customer participation in the production and delivery of the service*, that is, co-production of the service between the customer and the supplier. Hence, the existing studies that are most relevant are those that reveal aspects of customer–service supplier interaction during actual service production. Let us now have a look into a few important studies where interaction between service provider and customer has been the key criteria in classifying services.

#### *Classification of services and service organisations based on interaction between customer and service provider*

Mills and Margulies (1980) suggest a typology for service organisations based on the *personal interface* between the service employee and the customer. Essentially they examine the employee–customer relationship in terms of what is the focus of this interface. The authors distinguish between three basic types of service organisations: 1) *Maintenance-interactive* organisations focus on continuous but cosmetic interaction to build confidence and sustain the relationship. Service activities are typically routinized when possible. 2) *Task-interactive* organisations are characterised by concentrated interaction focusing on the tasks to be performed. The emphasis is on the varied techniques possible in problem solving – “not so much what the client/customer wants but how to accomplish these wants” (p. 563). 3) *Personal-interactive* type refers to service organisations in which personal, intimate interaction focuses on the improvement of the client’s well-being or situation – both on what will best serve customer interest and how to accomplish this.

For the present study, more important than the three service organisation categories suggested by Mills and Margulies (1980) are the underlying dimensions they use to describe the interface between service employees and customers. Of the seven dimensions (and their sub-dimensions) (p. 565), the following seem particularly relevant for characterising customer role in service production: the type of information that is provided by the customer, customer knowledge of the problem, customer feedback, and power relation between the customer and service employees. These aspects will provide insights for the present analysis.

The work by Silvestro, Fitzgerald, Johnston, and Voss (1992) draws together separate, but related, service classification schemes in operations and service management literatures. They propose an integrated service process model, where the number of customers ‘processed’ per day per service

outlet (a measure of service volume) is a key determinant influencing the nature of service operation. Six other service dimensions are used to characterise the service process: equipment/people focus, customer contact per transaction, degree of customization, degree of discretion, value added back office/front office, and product/process focus (p.67). Based on the clustering of these six dimensions and their correlation with the service volume measure, Silverstro et al. (1992, 72) suggests three basic types of service processes: professional services, service shop and mass services.

Whereas Mills and Margulies (1980) focused specifically on the personal interface between the service employee and the customer, Silvestro et al. (1992) looked into the variety of elements that together define the nature of customer interaction with the service provider. More recently, Berthon and John (2006, 197) introduced the concept of interaction intensity to describe “the degree to which the total value in an offering is uniquely determined by the interactions between the customer and firm.” They present interaction intensity as a continuum, where at the one end are standardized services (such as fast-food) which might fit the characterisation ‘interactions between customer and firm add minimal value’, and in the other end of the continuum offerings in which ‘customer interactions with the provider essentially constitute the core offering’ (such as services of a psychologist). Hence, for certain types of services, customer interaction with tangible/product elements of the service (e.g., fast-food) and final outcome of the service (e.g., clean office) may be more important than customer interaction with service employees and the service process. The value of the work by Berthon and John (2006) is here that it directs our attention to the variety of service situations: what the customer is interacting with, and what the value of interaction is for the customer in different types of service situations.

### 3.2 Customer roles in business service production – consuming, co-performing, co-creating, and co-designing

This research paper identifies four main customer roles in service production. They are based on literature examining customer-service provider interaction (Mills & Margulies 1980; Bitner et al. 1997; Martin et al. 1999; Chervonnaya 2003; Wynstra et al. 2006; Flint & Mentzer 2006; Berthon & John 2006; Jaworski & Kohli 2006). The four roles are described as follows: 1. A customer’s co-production role can be restricted to **consuming** the performance of a service provider. This refers to a situation in which value is created for the customer and by the customer as the customer interacts with the service provider’s performance (for instance, equipment rental service, an automated booking/ordering service, office cleaning). 2. In a **co-performer** role, the customer performs some tasks essential for the service mentally, physically, or with technological resources. The customer serves as a component in service production, in the sense that she carries out tasks in accordance to a plan or design of the service provider (e.g., foreign language training, development of an ICT application for a customer) 3. In a **co-creator** role, the service is essentially constituted in interaction between customer and service provider. Here, the customer is genuinely co-developing the solution to the problem/situation that needs to be solved (e.g., strategic R&D consultancy service). 4. Finally, in a **co-designer or partner** role, the customer and service provider jointly decide on the division of labour and the services each will produce.

The first of the customer roles, that of **consuming the performance of a service provider** has been identified elsewhere (for instance, by Chervonnaya 2003, 349). It is typical that ‘consuming of service benefits’ is viewed as a “passive”, “idle”, even “inert” behaviour (Chervonnaya refers to an example of treatment of the unconscious patient). Here, when a business customer consumes the

performance of a service provider, this does not (at least not necessarily) imply a passive, unmotivated role. When consuming a service provider's performance the customer interacts with and makes use of a service solution organised and supplied by the service provider. For instance, the customer makes use of cafeteria services in an office building, a transport business makes use of a weather forecast service, and a construction company makes use of machine/equipment/car rental services to build flexibility in its operations. An important point here is that the customer does not need to participate in the actual generation of the service solution, but the customer makes use of the service supplier's performance to meet its needs in the situation.<sup>2</sup>

The two roles of co-performing and co-creating refer to a situation in which the customer actually provides part of the core service. When the customer's role is that of a **co-performer**, the customer provides inputs into the service process that is basically organised and designed by the service provider. Two sub-cases can be discerned here: first, it is possible that the customer performs some functions that also could be provided by the service supplier (for instance, in order to save money, or to support in-house learning in the field); second, the nature of the service may necessitate active customer participation in service production for the service to become valuable to the specific customer (for instance, foreign language training, or when a maintenance solution is being customized). When the customer's role is that of a **co-creator**, the situation is different in that there is basically no solution without active customer participation in creating this solution together with the service provider. Also, specific customer roles in the creation of the service solution are more likely to develop and be found during the actual service production than be strictly pre-determined.

The fourth role of **co-designing** is somewhat different. It is a learning partnership whereby two (or more) businesses with common interests and complementary competences look for new opportunities in producing value through optimal division of labour. This role is based on discussion by Jaworski and Kohli (2006). It is here included to highlight new potential in customer-service provider relationships: co-design refers to the customer and service provider (or two firms) working together to identify common interests and an ideal division of labour: that is, products and services, that can be best developed (or performed) by the firm and those that are best developed (or performed) by the customer. In case of producing the actual service, the customer basically faces the options of consuming, co-performing, or co-creating as identified above. Hence, this role will not be further discussed here. Table 1 summarises the four customer roles in service production.

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<sup>2</sup> However, the customer can further transform the service: for instance, to transform information provided by a weather forecast service into specific driving schedules. The customer does not participate in producing the service provider's weather forecast service, but rather, consumes and acts on it.

Table 1. Four customer roles in service production.

	Customer <b>consumes</b> the service	Customer <b>co-performs</b> the service	Customer <b>co-creates</b> the service	Customer <b>co-designs</b> the division of labour
Description and typical examples	Customer makes use of service provider's performance.  E.g., office cleaning, equipment renting	Customer as a productive resource; performs some tasks essential for the service, mentally, physically, or with technological resources. The service solution is by the service provider.  E.g., foreign language training, many web-based services (related to marketing support, quality control, maintenance, administration security, etc.).	Customer generates the core service solution in interaction with the service provider.  E.g., many knowledge intensive services such as business consulting, R&D projects.	What the customer would like the firm to do is co-created. Customer and service provider engage in an open dialog to identify points of common interests and then decide on the services/products each will produce. The role of customer and service provider can vary.  E.g., a supply chain consultant, a systems integrator, and a specialised software company work together to create services / solutions to their markets.

This classification is an analytical tool to stimulate thinking on customer-service provider interaction in service production. The identified customer roles are not the 'right' ones, and is not possible to classify services in terms of their 'technical content' into one the suggested categories (even though examples do refer to service content for illustrative purposes). The classification of a service, say maintenance of production equipment, can vary with the way a particular customer participates in service production: The same service supplier may provide maintenance services to customers who basically make use of the services (consume), and to customers who choose to perform some of the service functions themselves (co-perform). A customer may even have a partner role in that it provides complementary expertise and resources to the service supplier, and the service supplier and the customer can establish a 'joint venture' to service also third parties (co-design).

In the following, these different customer roles are looked into in more detail. The analysis will direct our attention to aspects such as customer specification of the service; customer role taking; customer capabilities required and learned in the service process; customer feedback in service production. The aim is to analyse different customer roles in terms of their implications for customer potential to be/become involved in service development.

### 3.3 Dimensions describing the customer roles

#### 3.3.1 Customer specification of the service

Customer specification of the service refers to customer role in determining on the type and characteristics of the service, including when and how the service will be provided (Van Raaij & Pruyn 1998). Service specification can be dominated by the service provider, by the customer, or it may be the result of joint decision making between the two (Swan et al. 2002, 90). Further, service specification includes two closely related aspects: the creation of the specifications in the first place and the choosing from available specifications (Swan et al. 2002, 89).

Obviously, in some cases, customers know what they need and can specify this in terms of service characteristics. On other occasions, customers may look for outside help to first specify what they actually need to do and how to proceed in the situation (Mills & Margulies 1980; Swan et al. 2002). Let us now look into how different customer roles in service production are linked to customer specification of the service.

When the customer's co-production role is restricted to *consuming* the performance of a service provider, the customer typically knows what it needs in terms of this particular service performance (for instance, renting a room for a meeting with certain requirements: time, location and transport connections, size, technology, price, etc.). Customers have knowledge of their circumstances and needs, and they can communicate these to a potential service supplier. As in the 'renting a room for a meeting' –example above, customers often not only know their needs in terms of the desired service performance, but they can specify service characteristics and provide detailed information to the service provider to supply the right service. Of course, it may also be that customers do not have (adequate) knowledge of service characteristics, and they ask service suppliers, for instance, to make a presentation to illustrate new features. Or, customers may lack motivation to have (detailed) information on service characteristics, but they simply ask for a performance ("do whatever needs to be done to save the information in this computer's hard disc"). The point here is that in a consuming role, customers' know what they need in terms of service provider's performance and also control service specification in this respect. Specification of individual service characteristics may be customer or supplier dominated, but there is less need to jointly co-create service features.

In a *co-performer* role, the customer again typically knows what is needed. The customer can be quite specific of its own inputs into the service process in terms of skills, people and time resources. In many cases, customers are also interested in how the service is being provided as such considerations may be relevant to employee motivation when customers' employees are performing some tasks for the service, and they may also help the customer assess service outcomes. Typically, customers choose from a variety of alternatives presented by the service supplier based on shared understanding of customer's resources in the situation. In those areas where customers actually serve as a component in producing the service, they may co-create service specifications with the service provider.

When the customer essentially *co-creates* the service in interaction with the service provider, the customer does not usually know precisely what is needed. The customer faces a problem or a task, for instance, that of decreasing employee turnover. The customer knows what it wants to "make better", but it looks for professional help – sometimes a third opinion – to co-create both the exact direction where to go as well as the particular solution that will best serve customer interests. The

information that is needed from the customer is not well known in advance, and it may not be readily available. Hence, the parties need to carefully listen to each other to fully understand, first, what is needed, and then to start working together to find solutions to these challenges. Such ‘working together’ has been characterised as an interaction process in which both the customer’s as well as the service supplier’s knowledge bases change, and in which tacit forms of knowledge flows between the customer and the service provider are important in the co-creation of a high quality service (on KIBS-client interface in Hertog, 2002, 238-240). Co-creation and co-decision making on both ‘what’ and ‘how’ of the service is here typical.

To sum up, customers are always in control of determining on desired service outcomes. It is in the co-creator role that customers are most likely to engage in co-production and joint decision making on the ‘whats’ and ‘hows’ of the service with the service supplier. This specification process is an integral part of the service being produced. The implication for customer potential in service innovation, however, is not clear-cut. It is possible that customers in a consuming role – who have a detailed understanding of their circumstances and needs in the situation, but lack interest in or understanding of the service production process – are in a better position to produce innovative ideas of new service characteristics. This is because these customers solely focus on perceived user value and do not let the questions of implementation restrict their generation of new ideas (c.f., Magnusson et al. 2003). In general, customers may be best capable of specifying the ‘hows’ of the service when they have own experience of either co-performing or co-creating a service with the service provider. New ideas for service specification in terms of ‘whats’ of the service should be more directly linked to customers’ knowledge of their circumstances and needs, and to their understanding of how different types of services and service characteristics are related to these needs.

### **3.3.2 Customer role taking**

The dimension ‘customer role taking’ deals with two interrelated aspects: how the customer learns to perform his role in service production and how the service provider can facilitate the customer in role taking. Mills and Morris (1986) suggest two main routes that service organisations can use to ensure desired performance on the part of the clients: client selection and client socialization by providing teaching in a relevant field (for instance, providing free professional seminars). Goodwin (1988) and Kelley et al. (1990) apply organizational socialization literature to examine how service organisations can encourage their customers in their ‘partial’ employee role. Goodwin (1988) stresses the importance of consumer motivation: a key question is whether the consumer will be motivated to invest energy in learning service production skills and have time to develop those skills and adapt to organisational values. It is suggested that frequent interaction with the same people and expectation of a long lasting service relationship increase consumer motivation to put energy into role learning (the focus in on consumer services). Kelly et al. (1990), identify a number of methods service organisations can make use of in socializing their customers as partial employees: These include formal training programs, distribution of literature (e.g., annual reports), environmental cues (e.g., signs showing how to proceed at airports), reinforcement (e.g., accountants provide clients with forms to complete prior to meeting), and observation of other customers.

As services are always co-produced to an extent, for a high quality service, it is important how the customer performs his role. The question is usually asked from the point of view of the service provider: how the service provider can influence customers’ performance of production roles. However, the customer is also responsible for taking an effective role: It is not uncommon that

highly paid consultants cannot use their full potential and know-how because the customer is unwilling to reveal relevant knowledge in the service relationship. Let us now highlight some aspects of role taking in the different customer service production roles.

When the customer's role is that of *consuming* the service, it is in the interests of the customer as well as the service supplier that the customer quickly adopts a role in which it can effectively and efficiently make use of the supplier's performance. First of all, not only the service supplier may aim to select customers, but also the customer selects service supplier(s) whose performance appears to be readily accessible to customer way of doing things: for example, a small business with a need to get a piece of equipment fixed as soon as possible may avoid contacting suppliers who are likely to start advocating their maintenance solutions. During service delivery, service supplier can use tangible signs in service environment to influence on customer role taking. For example, in case of a catering service, physical organisation of the space, design of furniture and equipment play a key role in ensuring an efficient flow of activities, and in creating desired atmosphere. (The relevant concept here is that of *servicescape* introduced by Bitner 1992). In addition to tangible signs, a service supplier can influence customer roles more directly by instructions in various forms (e-mail messages, leaflets, manuals, etc.), by specifying customer roles in a contract (e.g., specifying periods of time when customers cannot use their systems due to service breaks), or by demonstrating to the customer how to best make use of a new service (e.g., illustrations on a TV screen).

When the customer has a *co-performer* role in service production, it is likely that what this customer role consists of will be made explicit in discussions with the service provider. The customer can be quite specific of its own functions and other inputs into the service process, and knowledge of customer expectations and resources is of key importance to the service provider in customising its own performance. Hence, it is typical that in the early stages, the parties discuss their division of labour in the service process. Later on, user training and "after delivery" support often form an integral part of the service, and are explicitly offered to help customers learn efficient roles in making use of the service.

When the customer and service supplier are *co-creating* the service, some role ambiguity is likely to arise. Especially in a new service relationship, time and effort is needed to build business as well as personal knowledge and trust between the partners (this naturally holds to all customer roles, but is pronounced when the customer and the service provider essentially co-create the core service). To describe the advantage of established customer-service provider relationships over new ones, Liljander and Strandvik (1995; in Grönroos 2000, 86) use a concept of 'bonds': bonds are "exist barriers that tie the customer to the service provider and maintain the relationship" (Liljander and Strandvik 1995, 153). Among such barriers are 'knowledge bonds' (the service provider already knows customer's business, and, the customer has gained experience about how to behave with the service provider) and 'social bonds' (when the partners know each other well, contact is easy and there is mutual trust). Now, especially in case of knowledge intensive services, what makes the role taking more demanding than in the two customer roles discussed above, is the fact that process-oriented, human embodied, and tacit forms of knowledge are central in the process of working together to find solutions to problems (Hertog 2002, 241-243). The implication is that the customer's co-creator role may not be a priori defined, as it develops and is partly found in the actual process of working together in face to face interaction. Customers need to have adequate motivation to put time and energy to learn efficient roles in interaction with the service provider. One pre-requirement for such customer motivation is trust in the service provider: Formal contractual documents, such as non-disclosure agreements, are often needed. With growing

experience, informally instituted practices and close personal links between the partners are likely to grow in importance (CRIC Project 2004).

To sum up here, when customer role is that of consuming the service performance or that of co-performing in service production, service provider typically aims to ensure desired role taking on the part of customers by signs in service environment, instructions or explicitly negotiating with the customer in the early stages of service production. In a co-creator role, effective and efficient customer roles (as well as supplier roles) are gradually formed by ‘learning-by-doing’ in the process of working together, and they are also less rigid –new roles can be found during the service process. Hence, from the customer’s point of view, role taking may be more or less demanding in terms of time and other resources. In every case, customers’ experiences of learning to perform their role provide important feedback to the service provider in developing interaction with the customer. Further, when role learning is demanding and requires ‘learning-by-doing’ over time (co-creating role), this creates ample opportunities to build trust and confidentiality in customer-service provider relationship. Such trust is essential for free/adequate information flows between the parties needed for effectively involving customers in service innovation (Alam 2002; Sundbo 2006).

### 3.3.3 Key customer capabilities required in the service process

Many important customer capabilities required in service production are specific to the content of the service in question. Here, the aim is to look into those more general capabilities that can be related to the identified customer roles in service production. The terminology in the field is mixed. In the following, the terms ‘knowledge’, ‘skills’, and ‘competence’ are used in line with Chervonnaya (2003, 354): “For Senker (1995), ..knowledge implies “understanding”, whereas skill means “knowing how to make something happen”. Competence, in turn, differs from skill in that it requires “the use of situation-specific information”, whereas skills do not (Kirschner et al., 1997, 155).”

When the customer’s role is that of *consuming* the service, perhaps the most important customer knowledge is related to understanding the role, or touch-points of the service to the customer’s own processes (or even to the needs and processes of the customer’s customer). (Naturally, this is important for all customer roles.) This includes understanding how the service fits with the customer’s primary processes, instrumental processes, needs of internal users, and the needs of the final customer (when relevant) (c.f. Wynstra et al. 2006, 483-4). Hence, defining the right specifications for the service becomes a key competence. Good communication skills to communicate customer needs in terms of service performance and follow-up on service performance are important.

In a *co-performer* role, some specific requirements for customer skills arise from the fact that customers are ‘a productive resource’ in service production. Good communication skills include customer ability to provide clear and full representation of information that is relevant to the service provider in customising the service and making use of the customer’s resources in the service process. Teamwork skills and the capacity to help service provider implement the service within the customer organisation may be important. In a co-performer role the customer may also face the need to learn new service specific skills – for instance, self-service roles in case of e-services.

When the customer and the service supplier *co-create* the service solution, effective dialogue between the parties is a prerequisite for successful cooperation. A productive dialogue is marked by factors such as careful listening, responsiveness to what the other party says, attempts to make

assumptions explicit, and eagerness to learn from the other (Jaworski and Kohli 2006, 112-3). Development of appropriate knowledge transfer practices is highly important: not only the service provider, but also the customer needs to assess which parts of their technological and organisational knowledge should be disclosed in the service process (Chervonnaya 2003, 356; Gibbert et al. 2002). In addition, the customers should be able to assess their own as well as the service provider's depth of knowledge in relevant domains: complementary skills and perspectives combined with depth of knowledge increases the odds of co-creating optimal solutions (Jaworski and Kohli 2006, 114).

Perhaps the main implication of the discussion above is that customers learn in the service production process skills that make them potentially effective participants in service innovation. Good communication skills and understanding of the service role in the customer's own processes are relevant to all customers. In the co-performer and co-creator roles, teamwork capabilities, appropriate knowledge transfer practices, an understanding of the nature and depth of expertise of the own and of the service provider organisation, as well as trustful relations are likely to develop in the course of actually co-producing the service with the service provider. These capacities are also needed in service innovation projects. It is also notable that customers often need to have adequate experience with 'technical' aspects of the service and time to evaluate the outcomes of the service in order to contribute to service development (Heiskanen et al. 2005).

### 3.3.4 Customer feedback

Customer feedback to the service provider can be direct (comments to supplier personnel, satisfaction surveys) or indirect (cancelling, increasing orders). It is in the interests of both the customer as well as the service provider that direct feedback is systematically collected and made use of to develop the current and/or future service.

In case the customer is basically *consuming* the performance of a service provider, there is certain dissociation between service production and consumption (making use of the service). For the service provider organisation, it is important to ensure that customer feedback arising in customer contact situations is systematically forwarded to those in service production, in 'backoffice'. Also, the role of separately conducted customer surveys, interviews, and/or focus groups to obtain feedback is usually important for the service provider to get information on how the customer makes use of the service in its operations. Indirect feedback in terms of reducing or increasing the use of service is not usually valuable information without data answering to the 'why' – questions of such changes in customer behaviour.

For the *co-performer* and *co-creator* roles in service production, much customer feedback emerges (spontaneously) in the course of working together with the service provider. Even here, systematically distributing customer feedback to all relevant actors in the provider organisation is a challenge. Also, collecting customer experiences separate from, or after the service production process should be considered as customers are often capable of assessing service outcomes only when they have a longer time perspective to the use of the service in their organisation. Important customer feedback may also be tacit in nature – it is not openly expressed, but can be interpreted from customer's attitudes (or changes in their attitudes) toward exchange of information, allocation of their (best) resources to the challenges at hand, or changes in customer personnel interacting with the service provider. Understanding and making use of such feedback during the service process demands sensitivity and good interaction skills from the service provider. In some instances, very close customer relations in service production may become counterproductive if they affect the parties' ability to give and receive negative feedback.

What then are the implications of the nature of customer feedback to service innovation? A key benefit of feedback emerging during the actual service process is that such feedback should be important to the customer. It is not uncommon that feedback that is collected, for instance, by customer satisfaction surveys, provides answers to questions that the customer would not have been considered without having been asked to. It is possible that answers to such questions are not 'valid' in the sense that they would describe future customer behaviour. A potential weakness related to customer feedback emerging in the service process is that it remains customer specific: with regard to service development with this particular customer it is critical, but it may not be as relevant for the purposes of creating service innovations the firm can capitalise on in a large scale (c.f., Gadrey & Gallouj 1998). A relevant issue is also when feedback is given: It can be argued that customer motivation to give feedback is highest during the actual service process, but they are fully capable of assessing service value only when they have experiences of the use of the service in their organisation. Naturally, in a long-term relationship, customer motivation to give feedback is impacted by their perception of how their feedback is taken into account by the service provider.

Table 2 presented in the Appendix summarises the dimensions that have been used to describe customer roles in service production (sub-chapters 3.3.1-3.3.4).

## 4 Conclusion

### 4.1 Contribution of the paper

The present analysis has been carried out to provide input into the question of ‘Whether and how to involve customers in service innovation?’ Framework of the study (Figure 1) is a preliminary attempt to present and integrate key factors that have an impact on customer role(s) in service innovation: it is customer capabilities and motivation with respect to the specific target of service innovation and the service provider’s resources that constitute most relevant input factors. As such, the framework provides a conceptually founded way to review literature in the field and helps suggest new research questions. Perhaps the most valuable aspect of the framework is that it makes explicit the importance of the nature of service innovation: without specifying what type of service innovation is being pursued it is not possible to specify (whether and) how customers could be valuable in generating this innovation.

The present paper delineates customer participation in service production. Three basic customer roles in service production have been discussed and analysed: consuming, co-performing, and co-creating (Table 1 in Section 3.2). The aim has been to analyse these different co-production roles in terms of their implications for customer motivation and capabilities to be/become involved in service innovation:

Customer *motivation* to be involved in service innovation basically stems from customer perception that their participation is needed to develop high quality services. When customers co-perform or co-create the service with the service supplier, they have a visible role in generating value of the service, and they can easily perceive how improvements in the service process impact service productivity/value. Hence, customer participation in further development of the service is easily motivated. It could be speculated that with increasing area of co-production, the customer also becomes more active in taking initiative in service innovation. Also, because customers have already invested considerable energy in a service relationship, they should be more inclined to co-operate with this service provider in innovation activities.

The above does not suggest that customers who basically consume the performance of a service provider would not be motivated to engage in service innovation. In a similar way, they may perceive that their participation is needed to develop high quality services. However, when customers are not co-producing the service with the service supplier, their involvement in service development needs to be organised separately from the service production process. Obviously, customers are willing to put energy into innovation activities that are relevant in terms of service outcomes for the customer rather than any “backoffice” aspects of the service process.

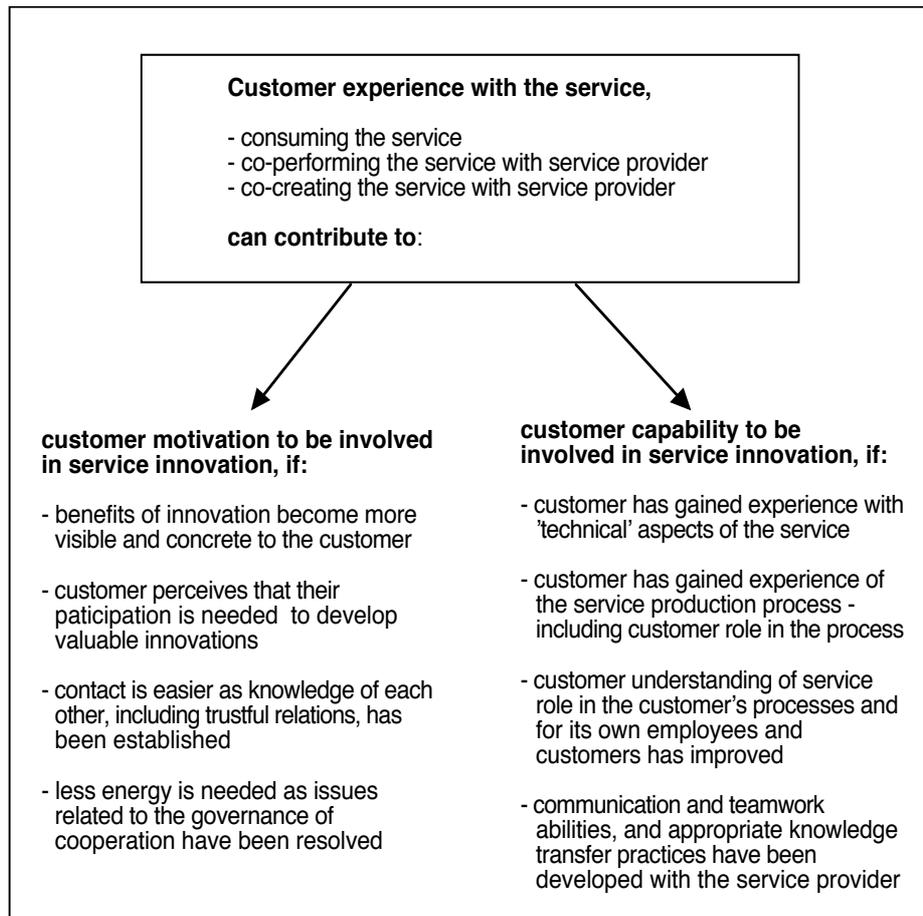
Customer *capability* to participate in service innovation is to an extent based on customer experience with the service. By engaging in the service process the customer acquires knowledge and skills that are important for future service development with the service provider. Such abilities include: 1. communication skills (communication of needs, expectations, own resources), 2. understanding of the service role in customer’s own processes, 3. ability to perform an effective customer role in the service process, 4. experience with ‘technical’ aspects of the service. Particularly in a co-performer or co-creator role in service production, the following customer abilities are also likely to develop: 5. teamwork capabilities, 6. appropriate knowledge transfer practices, 7. trustful relations with the service provider. All these factors should facilitate customer

participation in, and enhance customer potential in future service development with the service provider.

The above identified customer capabilities are most clearly related to the *process* of co-producing, and hence, to the *process* of co-developing the service with the service provider. It is less clear whether customer experience in the service process is as useful in terms of increasing customer potential in coming up of innovative ideas for new services (that can be introduced outside this customer relationship), or in developing aspects of the service the customers have not direct experience with. However, when customers – in the course of consuming or co-producing the service – gain a deeper understanding of the ways in which the service is related to their own processes and customers, they may become better equipped to contribute to service innovation. Indeed, it has been recently argued that academic discussion in service innovation has gone too far in emphasising the client intensive co-production and co-innovation of services (Howells 2006; Sundbo 2006; Gadrey and Gallouj 1998).

Figure 3 below summarises how customer experience with the service can help customers contribute to service innovation. The potential impacts on customer motivation and capability to participate in innovation activities remain at a rather general level: Overall, the analysis conducted in the present paper clearly shows that in order to draw more specific conclusions of customer potential and limitations in service innovation, *the objectives and domain of innovation activity need to be known*. Simply, customer motivation and capability to contribute, as well as their specific role in service innovation is hardly independent of that what is being developed. However, there is very limited empirical data on this issue. The next step in the present research project will examine customer roles in service innovation in case of different types of service activities, different types of service innovations, and company contexts. The assumption is that in terms of academic as well as managerial implications it is now more useful to deepen our knowledge about customer roles in service innovation in different service innovation contexts than to attempt at broad generalisations.

Figure 3. Customer motivation and capability to be involved in service innovation as impacted by service production experience.



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## Appendix

Table 2. Summary of dimensions used to describe customer roles in service production.

	Customer <b>consumes</b> the service	Customer <b>co-performs</b> the service	Customer <b>co-creates</b> the service
Service specification	<p>Customer knows what is needed and can specify that.</p> <p>Customer has vital information the provider needs to supply the right service.</p>	<p>Customer knows what is needed. The customer can specify its own inputs into the service process and the tasks to be performed by the service supplier.</p>	<p>Customer does not know precisely what is needed – though it knows what it is it wants to “make better”.</p> <p>The customer needs service supplier’s help in specifying the questions to be asked as well as the solutions to the problems.</p>
Role taking	<p>The service supplier can</p> <ul style="list-style-type: none"> <li>- use tangible signs in service environment to shape customer behaviour</li> <li>- deliver direct instructions</li> <li>- demonstrate use of a new service</li> <li>- customer responsibilities may be specified in a contract</li> </ul>	<p>Early on, customer and service supplier explicitly discuss the roles and inputs of the customer in the service process.</p> <p>Later on, user training and after sales support help customers learn efficient roles in making use of the service.</p>	<p>Some role ambiguity typical in the early stages of interaction. Customer’s role is formed and partly found during actual working together to produce the service.</p> <p>Effective customer role taking takes time and requires customer motivation to put energy into the service relationship and trust in the service provider.</p>
Key customer capabilities required	<ul style="list-style-type: none"> <li>- Good communication of customer needs in terms of service performance.</li> <li>- Follow up on service performance.</li> </ul>	<ul style="list-style-type: none"> <li>- Good communication of customer’s resources in the service process.</li> <li>- Teamwork skills, capacity to help service provider implement the service.</li> </ul>	<ul style="list-style-type: none"> <li>- Capacity to engage in a productive dialogue.</li> <li>- Appropriate knowledge transfer practices.</li> <li>- Assessment of the service provider’s expertise in terms of depth of knowledge and complementarity to the customer organisation.</li> </ul>
Customer feedback	<p>Feedback arising in customer contacts is important for the service provider, but also separately collected feedback in order to get information on how the customer makes use of the service in its operations.</p>	<p>Important customer feedback emerges in the course of the service process.</p> <p>Collecting customer experiences after the service process essential to get information on service value to the customer.</p>	<p>Important customer feedback emerges in the course of the service process.</p> <p>Collecting customer experiences after the service process essential to get information on service value to the customer.</p> <p>Feedback may not be expressed openly, but be tacit in nature.</p>

# Customer interaction in service innovations - a review of literature

Seliina Päällysaho

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## References

# **1 Introduction**

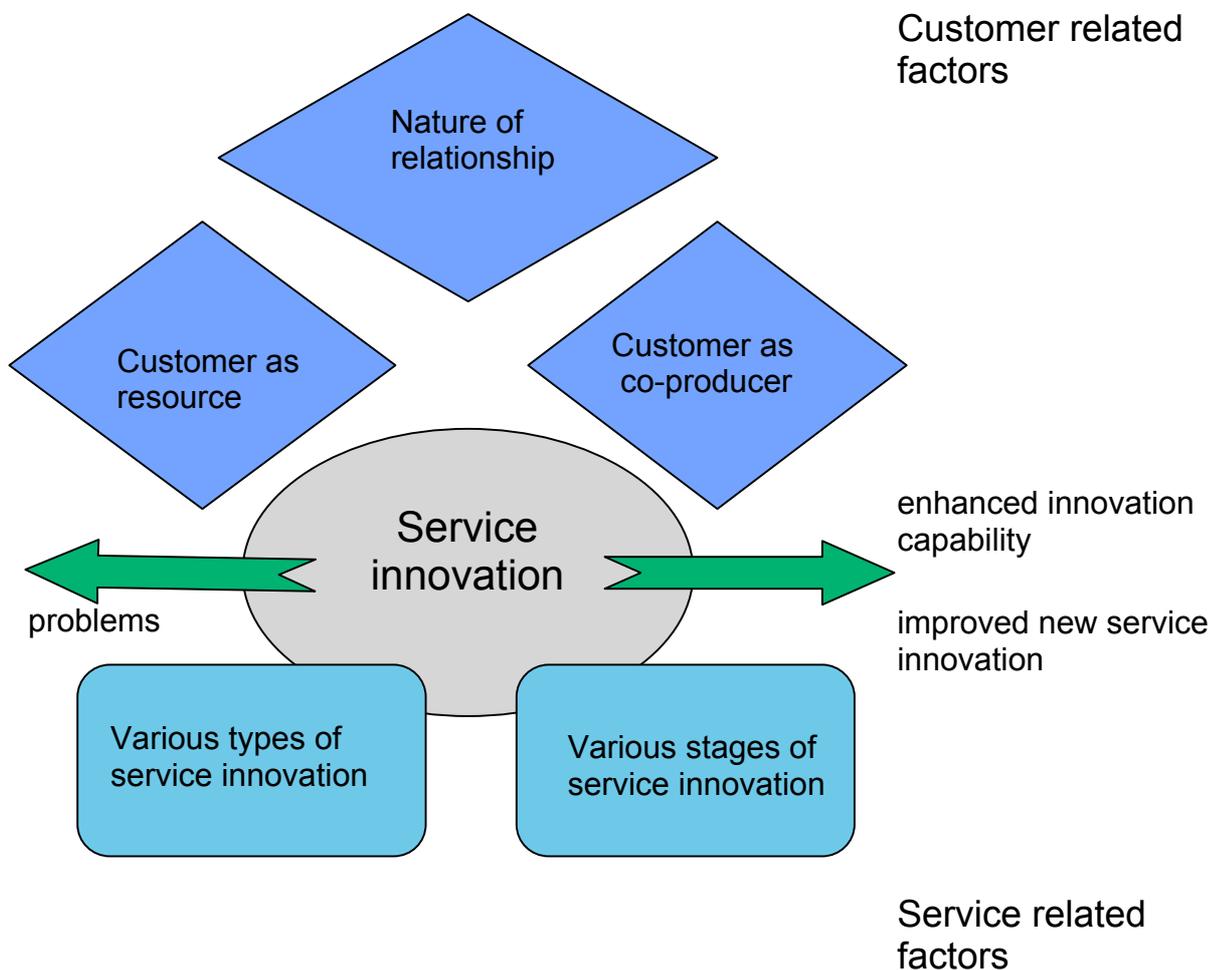
## **1.1 Objectives and structure of the report**

It has been indicated that the customer is one of key external sources of information in new service development. Kandampully (2002) argues that service innovation results only when a firm is able to focus its entire energies to think on behalf of the customer. Overall, the ability of a service firm to interact with its customer, and the ability to maintain an ongoing relationship with that customer have become increasingly important strategies. One of the many benefits of these strategies is the potential to gain timely information on the changing needs, expectations and spending patterns of customers.

Customers have many important roles in the service process. For example, Bitner et al. (1997) identified three major customer roles in the service process: 1) the customer as productive resource, 2) the customer as contributor to quality, satisfaction and value, and 3) the customer as competitor to the service organisation. The role of customers has also been extensively examined in relation to service innovation. Overall, the literature suggests that customers provide a highly important resource for service development. Indeed, customer involvement in service innovation is a key theme in a number of recent studies (e.g., von Hippel 2001; Alam and Perry 2002; Magnusson 2003; Dahlsten 2004; Lundkvist and Yakhlef 2004; Flint et al., 2005; Matthing et al. 2006; Heiskanen et al. 2006; Sundbo 2006).

The purpose of this review paper is to locate and draw together knowledge on customer-provider interaction in service innovation. Despite extensive research in the field, knowledge remains fragmented. The services marketing and management, and service innovation literatures are particularly strong in this domain. They suggest a number of strongly allied concepts of customer involvement in service innovation. This paper seeks to review existing research so that it becomes easier to perceive and understand what is actually known to date, and what aspects of customer involvement in service innovation deserve more attention in future studies.

Though the focus is on customer – service provider interaction in service innovation, the literature review also provides insights into the nature of service innovation in general, value creation in service operations, as well as related human resources and organisational issues. Figure 1 provides a framework for the review work; it identifies key themes that can be used to structure discussion on customer –service provider interaction in service innovation.



**Figure 1.** Framework of the study: Customer interaction in service innovation process.

The paper is structured as follows: The rest of Chapter 1 is a brief introduction to theoretical work on service innovation. Chapter 2 presents an overview of special features of collaboration between customer and provider. The chapter highlights various dimensions of customer-provider relationship. Chapter 3 summarises and synthesises customer involvement in service innovation and discusses the phenomenon of innovative users. The chapter also looks into different ways to establish the interface between the client and the provider. Customer input in various types of innovation and at various stages of the development process is discussed in Chapter 4. Finally, Chapter 5 considers some wider implications of the customer-provider relationship in the service innovation literature. Here, the impact of user involvement on the degree of innovativeness, and on the new service performance are discussed.

## 1.2 Service innovation

Traditionally service firms have not been considered as innovative as manufacturing firms but during the last decade analysis on services and service innovations has gradually expanded. It is

quite common argument that service firms innovate in different ways than manufacturing firms. Still, some studies imply that the supposed differences in innovation activities between manufacturing and business service sectors may have been exaggerated (e.g. Hughes and Wood, 1999). Unlike the technological innovations, which typically are based on tangible products and processes that utilize complex technologies, many service innovations are mainly based on intangible elements like interaction, practical experiences and gradual improvements of existing processes (see e.g. Boden and Miles, 1999; Metcalfe and Miles, 2000; Gallouj, 2002; van Ark et al., 2003).

Service innovations may involve new ideas or concepts of how to organize a solution to a problem. They may coincide with new ways of distributing the product, new ways of interacting with the client, new ways of making sure that the product is produced according to a certain standard, etc. In services, innovations are more employee and customer based. Unquestionably, sometimes service innovations may be highly visible, especially where delivery of the product is involved. Moreover, a number of service innovations are technological in nature. Still, in practice most innovations are mixtures of major and minor changes and adaptations, which together form the innovation (Bilderbeek et al., 1998; den Hertog, 2000). At the conceptual level, Evangelista and Sirilli (1998) have suggested that the literature identifies four main features specific to production and innovation in services:

- a close interaction between production and consumption (co-terminality)
- a high information-intangible content of services products and processes
- an increasing role played by human resources as a key competitive factor
- a critical role played by organisational factors for firms' performance

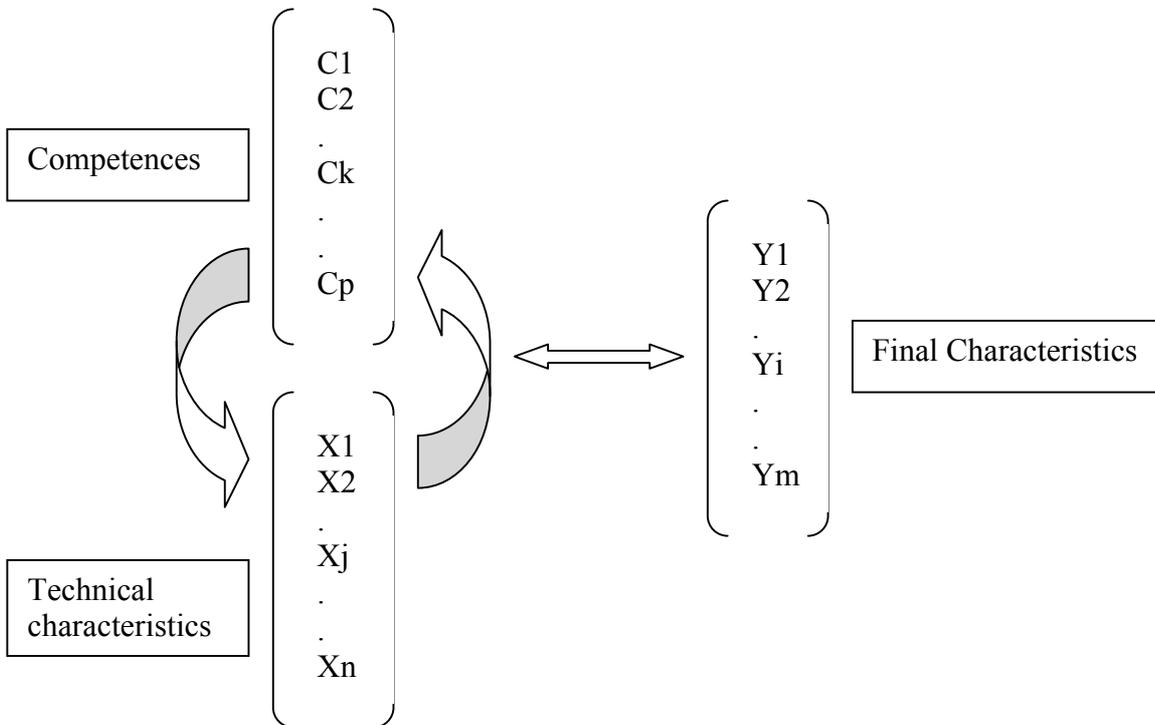
These characteristics are thought to have direct implications for the conceptualisation and definition of service innovation. It is perhaps the co-terminality that is the most specific and distinctive characteristic of production and innovation in services. There are also other factors that differentiate innovation in services from that in manufacturing. In many cases, service innovations are not carefully planned in advance, but rather they result from processes based on clients needs. Therefore, they often are recognised as an innovation only after the service provision. The common classification into product, process and organisational innovations is also difficult to apply in services, because typically services are simultaneously both products and processes. Finally, due to the fuzzy nature of the output of services it is more difficult to detect a change or improvement in a service than in an industrial product.

### **1.2.1 Theories on service innovation**

Studies on service innovation are relatively new. The different approaches to defining and studying innovation in services can be categorized into three groups: (1) an assimilation approach, which treats services as similar to manufacturing, (2) a demarcation approach, which argues service innovations distinctively different from manufacturing, and (3) a synthesis approach, which argues that service innovation brings to the forefront hitherto neglected elements of innovation that are of relevance for manufacturing as well as services (see Coombs and Miles, 2000; Drejer, 2004).

Gallouj and Weistein (1997) were one of the firsts to take a synthesis approach and presented a model, which encompasses goods and services. This model describes services as vectors of characteristics and competencies: a vector of final characteristics, a vector of technical characteristics and a vector of competence characteristics (Figure 2). In the model of Gallouj and Weistein (1997), a service is described as a set of the characteristics and an innovation is defined

as any change affecting one or more of the characteristics. Based on this formalisation six models or types of innovation are distinguished: (1) radical, (2) improvement, (3) incremental, (4) ad hoc, (5) recombinative, and (6) formalisation innovation. Gallouj and Weinstein (1997) focus on the content and characteristics of innovation rather than on its effects to understand what the notion of innovation encompasses and which basic forms it might take.



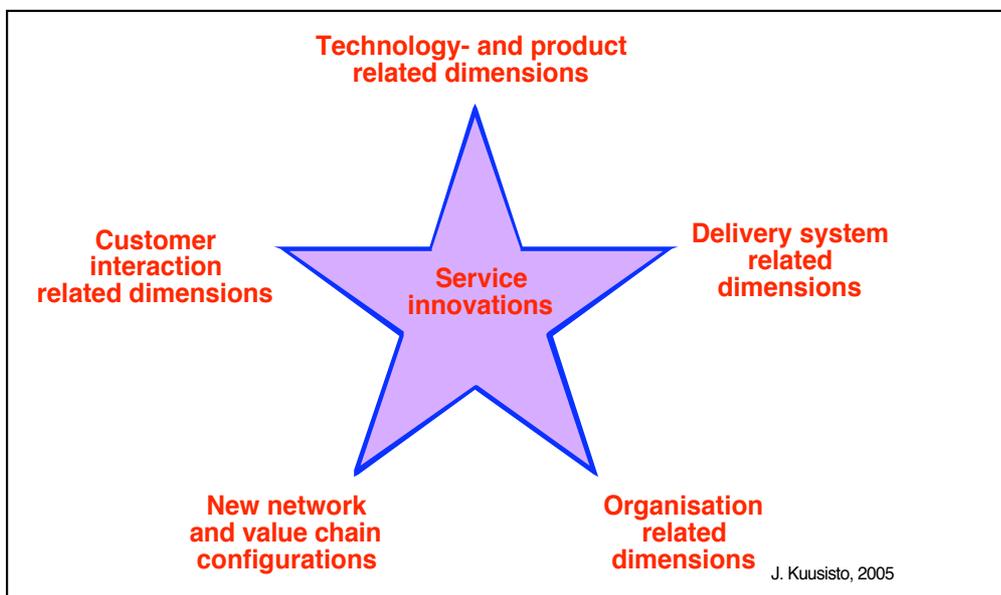
**Figure 2.** A representation of a product or service as a system of characteristics and competences (according to Gallouj and Weinstein, 1997).

The model of Gallouj and Weinstein (1997) is later revised by de Vries (2006). de Vries (2006) enhances the theory of Gallouj and Weinstein (1997) in two ways. First, he takes into account the possibility of interaction between competence and technology vectors of different providers in a network of organisations. Secondly, he incorporates into the representation the possibility that customers interact with providers through their own technology. In conformity with the representation of Gallouj and Weinstein, de Vries (2006) restricts the innovation types from six to four: (1) radical, (2) incremental, (3) ad hoc, and (4) recombinative/architectural innovation. He makes no distinction between improvement and incremental innovation and thus uses the term incremental for both types of innovation.

As mentioned above, a typical service innovation is a mixture of major and minor changes and adaptations of existing elements. In order to discuss, map and analyse the diversity of innovations in a structured way, den Hertog (2000) presented a four-dimensional model of service innovation. This model involves four elements: (1) service concept, (2) client interface, (3) service delivery system, and (4) technological options. The first element of service innovations is the service concept. Although the concept may already be familiar in other markets, the central idea is that it is novel in its application within a particular market. The second element of service innovations is the interface

between the service provider and its client. For example, delivery, and more generally the communication between service provider and its client, may form a major area for service innovations. The third dimension of service innovations is closely related with the previous dimension and involves service delivery system and organisation. However, at this time the dimension rather refers to the internal organisational arrangements, which enable workers to perform their job properly. The fourth element of service innovations is the technological options. This last dimension has come in for fierce debate, because clearly, service innovation does not always stipulate any technological options.

Kuusisto (2005) and Päälysaaho and Kuusisto (2007) have introduced a similar model (Figure 3). This model illustrates service innovation by a dominant feature related to one of the six dimensions: (1) concept of service innovation, (2) interface between service provider and its client, (3) service delivery system, (4) technological options, (5) new network and value chain, and (6) internal organisational arrangements. A particular feature of innovation will often require a set of changes in other dimensions, in order to bring about a successful innovation.



**Figure 3.** The multidimensional nature of service innovation (according to Kuusisto, 2005).

### 1.3 Development of new products and services

There has been going on lots of discussion on the differences of the product and service offerings. Essentially a product offering can exist without a customer and it can be placed in inventory or on the store self. On the contrary, in general a service offering is not produced until the client makes the purchase. Furthermore, customers do not only receive and consume the service offering, but also serve as participants in its production, delivery and innovation. To support the statement above, Martin et al. (1999) propose that customer involvement is a key construct in differentiating a service innovation from that for products.

The research on new product development (NPD) has made a substantial contribution to understanding of the innovation process. However, the NPD literature makes the assumption that the development process for both tangible products and services are the same. Still, there are four factors commonly viewed as distinguishing services from physical products: services tend to be

intangible, variable, simultaneously produced and consumed, and perishable (Zeithaml et al., 1985; de Brentani, 1990).

One of the aspects of the intangibility is that new services are usually developed much easier and faster than physical products. Launching a new or improved service does not necessarily need any major investments in materials or equipments. Furthermore, literature on innovative activities has stressed the unsystematic nature and organisation of service innovation process. It means that even highly innovative service firms rarely have R&D departments (Sundbo, 1997). However, Leiponen (2000) demonstrates that innovating service firms' investments in training and R&D, and their collaboration with R&D partners are relatively similar to those of manufacturing firms. Still, technological innovations and scientifically based R&D departments, which are central in manufacturing and in the technology-economic paradigm of innovation theory, are of less importance in service firms. However, services share of R&D is growing (Salter and Tether, 2006).

Variability factor means that the service outcome and the customer's experience when consuming the service can vary at each purchase occasion. In some occasions this might be a benefit; business clients are often demanding customised services and the potential for variability offers opportunities for responding effectively on customers specific needs. On the other hand, services providing a different outcome or experience each time they are purchased are likely to be perceived as unreliable.

One important feature distinguishing services from physical products is the concept of simultaneous production and consumption. Often services are produced and delivered in the presence of customers or they require substantial interaction with the client. This simultaneity has certain implications for the development of new services. A fourth factor usually considered distinguishing services from physical products is perishability. It means that services cannot be produced in advance and placed in a stock like physical product offerings. These above mentioned factors tend to create unique problems that call for different kinds of development models. As a consequence, many service researches argue that NPD theories are difficult to generalise across industry sectors.

Cardellino and Finch (2006) have examined the nature of service innovation in the facilities management context. Their results review recent thinking on service innovation as distinct from product innovation. Even though Cardellino and Finch (2006) were able to indentify a number of common characteristics associated with the service innovation process in case of the 11 cases they examined in UK facilities management context, it appeared, that the process of innovation rarely followed a common formalized path. Generally, the innovations were one-shot commitments at the early stage. This supports the viewpoint of polymorphic nature of service innovation.

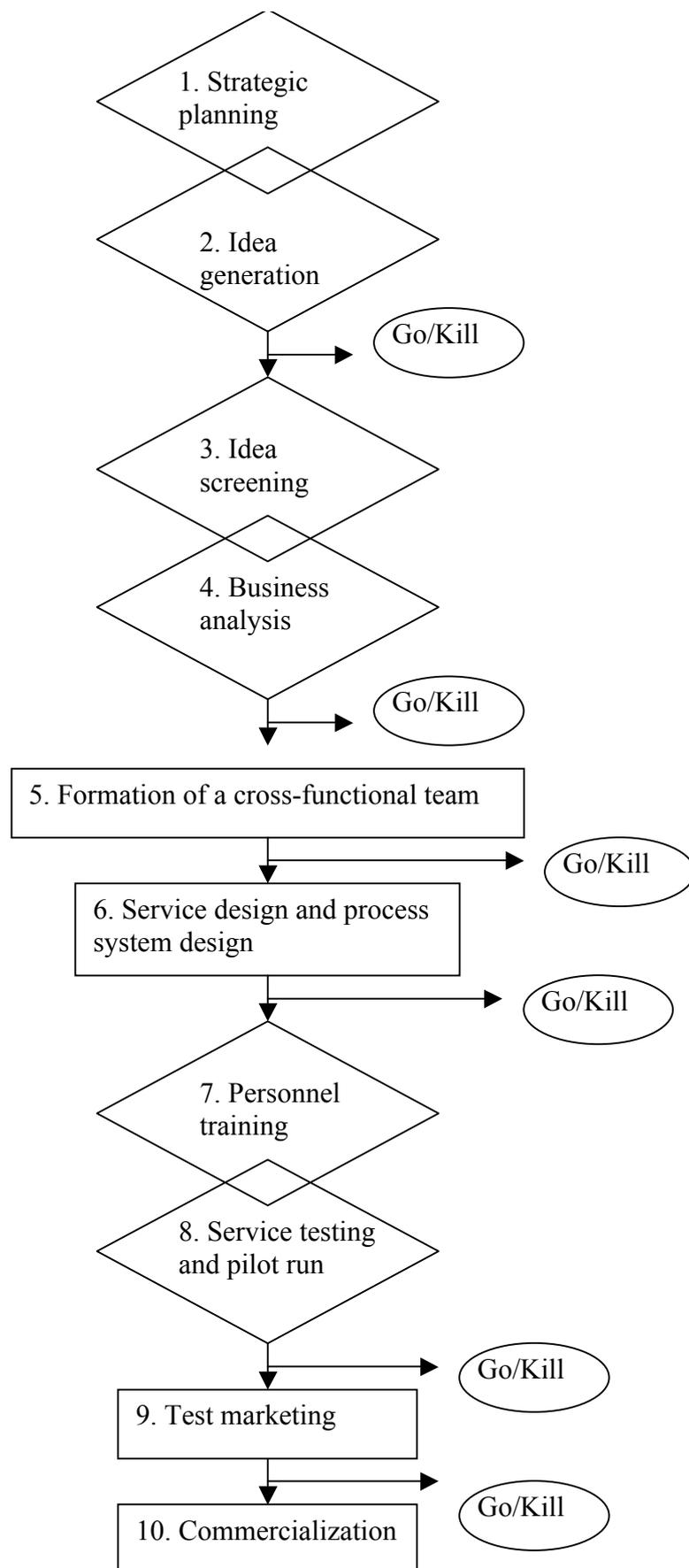
#### **1.4 New service development (NSD) models**

So far only a few formal new service development (NSD) models have been proposed. Normally these models consider all stages in the process involving the activities carried out from the moment an idea is generated up to its launch in the market. One of the first models included eight linear and sequential stages to describe the development of new services in financial, health services and hospital sectors (Bowers, 1989). A bit later Scheuing and Eugene (1989) used a survey of 66 US financial service firms to develop an expanded model of 15 stages. Even though this model does not address several important stages highlighted in various NPD models, it might better recognise the uniqueness of services.

Recently, based on several case studies on Australian service firms, Alam and Perry (2002) proposed a simplified and improved model containing ten development stages: (1) strategic planning, (2) idea generation, (3) idea screening, (4) business analysis, (5) formation of cross-functional team, (6) service design, (7) personnel training, (8) service testing, (9) test marketing, and (10) commercialisation. One of the biggest improvements of this model is that it incorporates fewer development stages and the model facilitates parallel processing of some of the stages to fast track the overall development process (Figure 4).

The model of Alam and Perry (2002) is highly similar with the stage-gate model of new product development model proposed by Cooper (see, e.g., Cooper et al., 2002). The stage-gate system divides the innovation process into several key stages and gates. Each gate works as quality control checkpoint that requires certain criteria to be met before the project is allowed to proceed further on to the next stage.

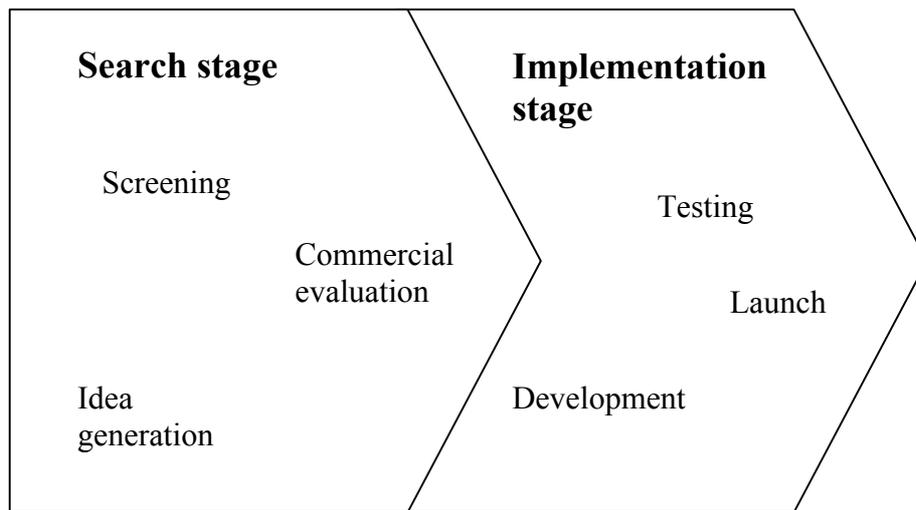
Whether the new service development model should be linear or parallel still remains open for the debate. Some of the researchers consider the linear sequential model inadequate for NSD. On the other hand, others consider the linear model to be one of the success factors for new services. The model of Alam and Perry (2002) tries to settle this debate and proposes that ideally the managers should establish a linear system that contains a formal process for conducting development activities from idea generation to commercialization. However, some of the stages might be completed concurrently to fast track the overall development process. In particular, three pairs of stages could be conducted simultaneously: ‘strategic planning and idea generation’, ‘idea screening and business analysis’, and ‘personnel training and service testing’.



**Figure 4.** Parallel model of service development process (*Rectangle box*: sequential stages; *Diamond box*: overlapping/parallel stages) (according to Alam and Perry, 2002).

de Jong et al. (2003) have presented a two-stage model to describe innovation in services (Figure 5). This model tries to account for the characteristic features of services but does not completely

discard the insights from innovation in manufacturing. The model is particularly beneficial to describe how incremental innovations are developed. However, the model is adequate to describe more formally managed types of innovation process as well. Especially, the model of de Jong et al. (2003) has value for service firms as a reminder of the activities that should be performed. When managers are aware of the steps and activities in the NSD process and their relationships, they should be able to recognize opportunities for innovation more easily and to manage NSD more effectively and efficiently.



**Figure 5.** A two-stage model for new service development (adopted from de Jong et al., 2003).

In their model, de Jong et al. (2003) have divided the NSD process in two separate stages: a search stage and implementation stage. In search stage the organisation generates and gathers ideas, and determines the objectives for further development. These ideas can be initiated by various actors, such as clients, suppliers, competitors or by the service firm itself. Important is that the ideas should be regarded as promising and as an opportunity to improve results. The most promising ideas are thoroughly analysed in terms of marketing, competitors and costs. In the implementation stage, the firm develops, test and launches the new service, i.e. the ideas are transformed into concrete results.

As discussed, especially in a rapidly changing environments (such as many service sectors) linear development models might be less useful. Indeed, in the model of de Jong et al. (2003), NSD activities are allowed to occur in parallel. In the search stage, the activities of idea generation, screening and evaluation are likely to overlap in time. It is a more or less continuous process of gathering ideas and assessing their suitability and economic potential. In the implementation stage, the activities of development, testing and commercialisation can coincide as well. It is a recurring process of designing a service offering, selling/offering it to customers, gathering feedback from customers and front-line co-workers, making adjustments in the service offering, etc.

## 1.5 Organisation of successful new service development process

The development of successful new services is critical for many companies. The studies examining the success and failure of the new products in the service sector have discovered a number of traits that contribute toward successful development activities. The development activities are found to be more rigorous and comprehensive for successful new services than for failures (Edgett, 1994).

Furthermore, institutions using systematic processes of well-defined development stages tend to have higher chances of successful outcome.

de Brentani (1995) and de Brentani and Ragot (1996) have studied what factors are leading to new product success or failure in the development and marketing of new professional services. They discovered that the new product success in industrial professional service firms depends largely on seven, possibly eight, key factors. Their results show that both external and internal factors play a role. However, it is clear that the firms having an outward-looking, market oriented approach when developing new services are achieving a high degree of success.

Brentani and Ragot (1996) go on by suggesting that customer participation is one of the factors significantly and substantially impacting new service success. But, when this result is compared with outcomes of previous success/failure studies in industrial services, this factor seems to be unique in its association with the professional service sector. The implications of the central role of this factor are clear: service companies must have a good understanding of their client's problems and operations, and they must conceive approaches that lead to substantially better solutions than what their competitors offer. Therefore, for professional service firms the customer consideration becomes a key element in the new product success equation. Furthermore, being first to handle problems in a novel way, to apply new technologies, or to incorporate innovative processes is the key to achieving a competitive advantage.

## **2 Collaboration between customer and provider**

### **2.1 Customer participation in product and service innovations**

According to the literature, there are few key factors leading to effective co-production between customer and provider: the clarity of the task, the ability to do the work, and motivation to do the work (e.g., Bowen, 1986). The interaction of the customer with the organisation's business processes may occur in many different ways and levels.

Gained information on customer needs and user experiences can be viewed as resources of the company. Indeed, customer related information is only possible to obtain from customers themselves. Thus, cooperation with customers can be viewed like a bridging strategy to secure the access to the critical resource of information on customers needs (Gruner and Homburg, 2000). In the study of Dahlsten (2004), customer involvement in product development process increased market orientation, i.e. created customer understanding that can be utilised within the project to create improved value for the target customer. Consumers can contribute to the product development by trying new items and providing qualitative feedback. This allows companies to refine products and marketing plans faster and at a fractional part of the current testing costs (Sawhney, 2002). The customer groups do not necessarily give directions or create a wealth of ideas, but instead may affect the project management team by their presence. Therefore, customer involvement is as much about organisational innovation as it is about product innovation (Dahlsten, 2004).

In cases where the customer is used in the production system as a resource, firm must be capable of training and guiding the customer's participation. Usually a customer participates in the production process either because he is himself subject to transformations stemming from the production system (customer as a target), or because he participates in the execution of certain tasks (customer used as production system resource) (Abramovici and Bancel-Charensol, 2004). Customer

disposition to participate may also be driven by customer motivation, which mainly stems from two sources: customers find doing it for them intrinsically attractive or customers may feel that their active involvement is necessary to guarantee quality (Martin et al., 1999). Still, it should be noted that as the intensity of customer interest goes down, it is likely that rates of user innovation drop too (von Hippel, 2005:20).

On the other hand, customer disposition to participate in the innovation process and the diversity of customer demand may create a certain uncertainty. The input uncertainty that the customer poses for service operations can be expected to vary with the diversity of customer demand and with the tendency of customers to participate in the performance of the service (Larsson and Bowen, 1989). Moreover, customer input uncertainty has the potential to interfere with the success of reciprocal business-to-business service innovation. Indeed, Martin et al. (1999) suggest that service firms can attempt to mitigate the risks associated with input uncertainty by client training and education in the techniques to be used. This may also improve client productivity in the process.

## **2.2 Collaboration patterns between customer and provider**

### **2.2.1 The nature of customer-provider relationship**

In service sector, the businesses' most common partners in cooperation are typically clients or customers (see, e.g., Leiponen, 2001; Päällysaho and Kuusisto, 2006). In recent years, businesses have begun to realise the importance of knowing their customers better, and the positive customer relationships for business success is well recognised. Moreover, customers, together with suppliers and competitors, often are the most important sources of external information for innovations (Macdonald and Lefang, 1998). Indeed, the collaboration with external partners is common in the service sector.

Companies seem to put lots of effort on developing confidential relationships with their customers, employees and other business partners (Dickson, 1996). Often the nature of the relationship between customer and service provider appears to be a social relationship that can be distinguished by the same characteristics that distinguish between friendships in everyday social life (Butcher et al., 2002). Confidential relationships allow free discussions and information flow between different parties. This supports innovativeness, because especially in service sector, new innovations often arise from the cooperation between provider and its client (e.g. Muller and Zenker, 2001). Indeed, Anderson and Crocca (1993) argue that without personal relationship no co-development is possible. According to Sundbo (2006) customers' involvement in the service innovation process requires medium-termed, but formalised, trust to be successful. Also long-term trust can be a condition; still more important might be the loyalty from the future customers. Therefore, the relationship management with clients should be underlined.

Customer relationship management (CMR) refers to an approach to managing customer related knowledge of increasing strategic significance. Although CMR has become widely recognised as an important business approach, there is no universally accepted definition of CRM (see the review of Ngai, 2005). However, it can be argued that CMR encompasses the management of all possible ways that the business interacts with its customers. CMR is regarded as a source for competitive advantage because it enables organisations to explore and use knowledge of their customers and to foster profitable and long lasting one-to-one relationships. Karakostas et al. (2005) suggested in their study conducted in the UK financial services sector that customers should be considered an integral part of business processes; for instance, the analysis of customer profiles provide valuable input for new services.

### 2.2.2 Customer involvement in development processes

Basically the term ‘customer involvement in product or service development’ denotes interaction between customers and the design process. In the strategic management and quality management literatures researchers have identified different main roles that customer can play in businesses’ value creation process (see. e.g., Nambisan, 2002):

- resource
- co-producer
- buyer
- user
- product

The two first mentioned roles are at the input side of value creation process, where as the three last ones take place at the output end of the system. In relation to new service or product development, the following three roles are relevant: customer as resource, customer as co-creator and customer as user. The other two roles – namely the customer as buyer and product – are less relevant since in those roles the emphasis is on customers as objects rather than agents of value creation.

In product development processes the customer involvement has been described with two various dimensions: the longitudinal and the lateral (Kaulio, 1998; these concepts originate from the study of Lefton and Rosengren, 1962). The longitudinal dimension refers to the points of interaction between customers and the design process. In order to describe this dimension, the different phases of a product development project (i.e. specification, conceptual development, detailed design, prototyping and final product) are used. The lateral dimension, in contrast, captures how deeply customers are engaged in the design process. This dimension is related to what role the customers have when they interact with the design process, and to what degree customers partake in design work.

The concepts of longitudinal and lateral dimensions of customer involvement are especially useful in comparing and characterizing different approaches to customer involvement. To further discuss the lateral dimension, three different levels of customer involvement can be presented (Kaulio, 1998; these categories originate from the study of Eason, 1992):

- *Design for*: means a product development approach where products are designed on behalf of the customers. Data on users, general theories and models on the customer behaviour are used as a knowledge base for design.
- *Design with*: denotes a product development approach, which focuses on the customer. It uses data on customer preferences, needs and requirements. In addition, customers are allowed to select or reject and react to different proposed solutions.
- *Design by*: means a product development approach where customers are involved and actively participating in the process.

### 2.2.3 The intensity of customer involvement

The involvement or more intensive co-operation of the customer in the innovation process is a particularly important issue. As discussed earlier, in the service firms the direct involvement of customers in the innovation process has been demonstrated to be obvious, but very difficult to explore. Also, some literature suggests that whether or not users are involved is not the crucial issue, but rather how they are involved (Alam, 2002; Magnusson, 2003). It seems that if firms are seeking to involve their customers in innovation processes, the customers have to be regarded as

fully legitimate actors and active participants in defining the meaning of service and products and suggesting new changes (Lundkvist and Yakhlef, 2004). Nambisan (2002) confirms this argument by stressing that firms have to bring their customers inside the organisation and transform them into 'employees' or part of the extended product development team. Indeed, sometimes the bond between the customers and the organisation is so tight that for outsiders it is not easy to conclude who actually is a regular worker of the company and who is not (Saarivirta et al., 2006).

The study of Lagrosen (2005) suggests that in product development processes customers should ideally be involved in cross-functional teams. This requires close relation between supplier and customers. Such relations, however, can only be developed with few essential customers. The levels to which the customers are involved in the development processes may also vary between the companies and according to company size and industry sector. While it is obvious that the larger companies involve their customers in a much more formalised manner, this does not necessarily mean that customers are more deeply involved. Moreover, the formal methods for customer involvement are often limited (Lagrosen, 2005).

It can be assumed that a very beneficial customer involvement in the innovation process only is possible when the new service is developed as an equal co-operation between the service provider and the client. However, Sundbo (2006) demonstrates in his study of e-services that customers are involved in the innovation process to a varied degree. He concludes that customer involvement and co-operation is not practised as much as one might expect. Indeed, according to his sample, a certain interaction and equal co-operation between the company and the client is not a clear fact at all.

Alam (2002) has mentioned four various stages of user involvement in service development:

- *Passive acquisition of input*: this means that the users take the initiative to provide input into the development process. For instance, a customer approaches the service producer with a new service idea. The management acquire input passively, and the intensity of user involvement is considerably low.
- *Information and feedback on specific issues*: At this level, the services developers may approach major service users to obtain information and feedback on specific issues at various stages of the development process. Thus, the intensity of involvement is fairly high.
- *Extensive consultation with users*: Here, the service producers take the initiative and invite user input by means of a planned process governed by predetermined objectives. The intensity of involvement is relatively high.
- *Representation*: this denotes to the level where the users are invited to join a new service development team, where they contribute to the specific stages of the development process in their capacity as a team member. Therefore, the intensity of involvement is considered to be extremely high.

The study of Alam (2002) suggests that the two most preferred levels of involvement are extensive consultation and information, and feedback. It seems that the service firms are proactive in user involvement and regularly consult users for the purpose of new service development. Moreover, the involvement of users is reported to be more intense during the initial and later stages of the development process. This might result from the fact that the crucial stages of development process are considered to be in the beginning and at the end.

### 3 Involving customers to innovation process

It has been suggested that customer involvement in service development results in important benefits such as reduced cycle times, superior services, and user education, even though how companies achieve these benefits is less well known (Alam, 2002). Interactions with close customers enhance the changes of developing successful novel services. This has been exploited, for instance, in retail banking sector, where businesses are found to develop close relationships only with important customers to gain deeper insight into those customers' desires (Timewell, 1994).

While it has been recognized that users may sometimes innovate, little is known about what commercial firms can do to motivate and capture such innovations and their related benefits. It should be noted that the presence of certain types of consumers is a prerequisite for consumer innovation because far from all consumers are interested in taking part in the development process. Jeppesen and Molin (2003) studied the consumer community associated with computer games and were able to distinguish between three types of consumers:

- *Consumer 1.* He uses the product and develops innovative applications. He has relatively in-depth and specific knowledge of certain aspects of the product. At best consumers in this group are characterized as lead-users.
- *Consumer 2.* He is basically a product user who participates actively in interactions with other product users in their discussions but shows no innovative efforts.
- *Consumer 3.* He is essentially a passive consumer who uses the product alone and does not communicate with others concerning the product.

Here, Consumer 1 is the innovator; he generates new know-how through interaction with other consumers in the community. However, the above mentioned consume types are distinguished on the basis of their (alterable) relation to the computer game, and there is a possibility of movement between these groups. Still, the presence of certain consumer types plays a vital role, in particular, the interactive consumer learning can lead to the creation of new product content. These kinds of innovative activities have implications for commercial concerns since they extend the life of products and breed new ideas for future product versions (Jeppesen and Molin, 2003).

If the customers are involved, the success of innovation process may depend on, besides the traditional factors, the way the customers deal with the innovation. Indeed, the conditions for implementing an innovation project appear to be particularly fragile in cases where the customer is used as a resource in the production system (Bancel-Charensol, 1999). Abramovici and Bancel-Charensol (2004) have studied how to take customers into consideration in service innovation project. Based on a research focused on industrialised services activities, they have identified four important and distinct elements that are necessary for the customer's adoption of the innovation:

- recognition of an added value by the customers
- desire and ability to participate
- training methods
- external communication

Moreover, the work of Abramovici and Bancel-Charensol (2004) has shown that taking into consideration these above-mentioned elements contributing to adoption by customers is a success factor in service innovations. In other words, the success of the innovation may also depend on qualification and ability of the customer.

de Vries (2006) calls attention to the fact that the co-production role of clients in innovation does not have to be restricted to interaction with one provider. Instead, the client might interact with a network of providers. This co-operation may both be sequential as well as reciprocal between several providers. Sundbo et al. (2007) provide another example on tourism sector. They suggest that networks are of relevance for the innovativeness of tourism firms. Still, not surprisingly, larger firms, i.e. corporations and enterprises, possess larger networks than the smaller shops and have a more professional approach to utilising and benefiting from the networks.

The roles of trading partner relationships and innovation management practices in innovation performance have been studied by Prajogo et al. (2004). Their data analysis indicates that supplier relationships and customer relationships have less impact on product and process innovation performance than do knowledge and creativity management. Trading partner relationships have a strong and positive association with innovation management practices, meaning that organisations commonly implement both in synchronous manner. However, just being involved in closer relationships with partners do not automatically lead to higher levels of innovation. Still, it opens channels for better management of knowledge and for more creative idea generation.

### **3.1 Different methods for collecting information on user needs**

Service value is a very subjective phenomenon and the customer, not the provider, determines it. Traditionally firms collect information to generate new product ideas from current or potential users. Thus, in order to satisfy customer needs and wants, and to provide value to customers, prior to new service development the provider must be able to get sufficient information to understand the customer's perspective. Collecting knowledge on user needs can be done by means of many various methods (see, e.g., Alam, 2002; Gordon et al., 1993; Leonard and Rayport, 1997; Nijssen and Lieshout, 1995; Rosted, 2006; Sundbo, 2006):

- customer questionnaires and surveys
- e-mail reactions
- face-to-face interviews, in-depth interviews, focus group interviews
- purchasing information on market trends
- customer satisfaction measurements
- user observation and feedback, usability laboratories
- brainstorming
- user visits and meetings

Alam (2002) suggested that in-depth interviews and user visits to the service development sites are important modes of user involvement. These methods are inexpensive and pretty easy to carry on. Further, frequent customer contacts by salespeople, other marketing personnel and engineers can be used to acquire customer knowledge. Opportunities for knowledge acquisition also result from participation in industry tradeshows, conferences, and association meetings. In addition, providers can formally set up activities whereby customer interaction is secured, such as roundtable discussions, service trials, test markets, etc. (Gordon et al., 1993). There also are special instruments to provide information on customer requirements as they develop and change over time. For instance, Servqual technique enables the measurements of customer expectations and perceptions (see, e.g., Curry, 1999). This model identifies ten various criteria to be used for analysing and evaluating the service quality.

Gordon et al. (1993) have explored the activities and knowledge needed to ascertain, develop, and market services that create customer value, from the point of view of business-to-business service innovation. It appeared that through the use of frequent and varied information gathering activities, the businesses can become quite knowledgeable regarding their present and future (potential) customers. Thus, the findings of the study of Gordon et al. (1993) strongly suggest that businesses must possess in-depth knowledge of their customers prior to attempting to ascertain specific means by which potential services can contribute to customer value creation. On the other hand, sometimes businesses report not using any additional tools for customer involvement. The main reason for that is often the cost factor. Both direct costs and indirect costs have been pointed out (Lagrosen, 2005). However, it has turned out that generic knowledge of a class of customers, which can be gained through indirect means, is not sufficient (Gordon et al., 1993). Instead, successful companies seem to acquire and use specific knowledge of specific customers. This type of knowledge serves as a critical input to the service innovation process. Thus, a strong relationship does exist between service provider knowledge and successful innovation efforts.

### **3.2 Selecting the innovative users**

The involvement of customers may provide a deeper understanding of the customer needs which for one increases the likelihood that the new service ideas will meet customers' needs. Matthing et al. (2006) have explored the identification of innovative customers (i.e. end-users and consumers) and the effectiveness of employing such customers to generate new service ideas in technology-based services. They suggested that people's technology readiness (TR) is a good predictor of their propensity to adopt new technology-based services. They further go on arguing that the technology readiness seems to be positively correlated with the ability to actively seek new technologies and solve problems related to them. Finally, technology readiness also is positively correlated with willingness to participate in new technology-based service development. Thus the technology readiness index (TRI) appears to be a robust tool that is appropriate for identifying users who are likely to be most effective and helpful in the process of developing new technology-based services.

However, are the businesses willing to carry closer co-operation with all of their customers? In this regard, Alam (2006) reported that, for instance, financial firms are, indeed, carefully selecting customers to participate in their service development processes. In most cases customers are selected based on a close relationship because confidentiality is a major issue. Thus, it is important to select customers whom already are known and can be trusted. The customers can be selected also based on other factors. Lee et al. (2003) found out that firms offering computer banking services, initially offer their new technology-based service innovations to younger consumers who are more highly educated and have higher income and are more likely to have access to computer banking than their older, less affluent counterparts. This may help in reducing risks and maximising the returns of the investments in the new technology.

### **3.3 Lead users**

As discussed, business typically use focus groups and customer surveys to enhance their understanding of customer wants and perceptions of current product and services; thereafter, techniques such as concept testing and conjoint analysis can be used to guide the development of new products and services (e.g., Leonard and Rayport, 1997; Sundbo, 2006). The "lead user" (LU) process takes different approach, collecting information about both needs and solutions from the leading edges of the target market and from markets facing similar problems in a more extreme form (Lilien et al., 2002).

The theory that led to defining the term “lead user” has originally derived from the work of von Hippel. He defines lead users as members of a user population, which are ahead on an important market trend (von Hippel, 2005:22). Consequently, lead users currently are experiencing needs that will later be experienced by many other users in that market. They also anticipate relatively high benefits from obtaining a solution to their needs, and so may innovate.

Findings from recent empirical research about companies’ intensified interaction with customers state that involving customers will improve the effectiveness of new service development. Being customer-led may be successful in relatively predictable environments where it is most important to take care of a stable served market. Furthermore, it also may be attractive to some managers in dynamic environments because of the uncertainty and risk associated with attempting to lead the customer (Slater and Narver, 1998). The paper of Lilien et al. (2002) reports that the annual sales of lead user product ideas clearly are superior – they appeared to be more than eight times higher than forecast sales for the average contemporaneously conducted in traditional project. In addition, lead user projects were found to generate ideas for new product lines, while traditional market-research methods were mainly found to produce ideas for incremental improvements to existing product lines.

### **3.4 Problems in involving customers to innovation process**

Literature is, however, pointing out several problems associated with customer involvement in service innovation. The study of Matthing et al. (2004) provides an example in mobile phone services sector. Their experiment reveals that the consumer’s service ideas are more innovative, in terms of originality and user value, than those of professional service developers but the business do not implement this way of working. One reason for such behaviour could be that the company’s current structures, processes, and culture prevented them from continuing with customer involvement in its current form.

The study of Lagrosen (2005) indicates the value of customer involvement in new product development. Still sometimes, even presumably rather rarely, the businesses argue that customer involvement complicates the innovation process. Especially, it might be reasonable to exclude customers from the processes developing fundamentally new products. Sometimes ordinary customers may contribute meaningfully to the development of new product concepts, but they need help, experience and time. Customers need assignments that are meaningful and motivating, and which allow them to learn about possibilities and potentials of the new technology. It is only when consumers have experience with the product that they can evaluate and reflect it in any degree of realism (Heiskanen et al., 2006).

Developing an accurate understanding of user needs is not simple or fast or cheap. As a result, the traditional approach is coming under considerably strain as user needs change more and more rapidly, and as firms increasingly seek to serve markets of one. von Hippel (2001), and von Hippel and Katz (2002) provide a complementary example by shifting innovation to users via toolkits. Toolkit for user innovation is an emerging alternative approach in which manufactures actually abandon the attempt to understand user needs in detail in favour of transferring need-related aspects of product and service development to users.

Toolkits for user innovation improve the ability of users to innovate for themselves, allowing them to develop their customer product via iterative trial-and-error. That is, users can create a preliminary design, simulate or prototype it, evaluate its functioning in their own environment, and then iteratively improve it until satisfied. Users with sufficient incentive to do so can apply toolkits to

design products and services that fit their own needs precisely. Experiences in fields where the toolkit approach has been pioneered show custom products being developed much more quickly and at a lower cost. Thus, toolkits for innovation can be much more effective than traditional, manufacturer-based development methods (von Hippel, 2001).

## 4 Customer input

### 4.1 Customer input in various types of innovation

The role of customer in idea generation has mainly been recognised in connection with incremental, continuous innovation, but with regard to radical innovation, the value that customers can bring to the idea generation process is claimed to be limited (Christensen, 1997; O'Connor, 1998, cited in Lundkvist and Yakhlef, 2004). In all likelihood, customers will not be able to describe their requirements for a product that opens up entirely new markets and applications.

Gadrey and Gallouj (1998) have examined three categories of innovations (ad hoc, expertise-field, and formalisation) from the viewpoint of customer input. They argue that especially ad hoc innovation is often produced in close co-operation with the client. Furthermore, a sparring type of interface is the most favourable for the creation and success of this type of innovation, because it helps to assure a better understanding and acceptance for the innovation. Opposite to this, expertise-field innovation is hardly produced co-operatively, even if it only is materialised in an interaction with the client. Similarly, the degree of direct participation by the client in formalisation innovation is relatively weak. Still, the commercial success of this type of innovation depends upon the quality of the interface.

The collaboration pattern and the role of customers as a driver of innovation have been discussed in a study of Toivonen and Tuominen (2006), where they examined the emergence of service innovation in the real estate and construction cluster. Toivonen and Tuominen (2006) found out that the innovation process progressed in different ways reflecting the various key drivers. Majority of the innovations were initiated because the firm had an urgent need to renew its operations. However, in many cases, the most important reason leading to an innovation process was a demanding customer.

To go deeper into the issues of emergence of innovations with interaction together the customer, Toivonen and Tuominen (2006) focused on the different ways in which the innovation process in the services gets started. They divided the innovation processes in five categories on the basis of two key variables (the degree of formality and the collaboration pattern). These five process types illustrate the multiplicity of innovation practices in service firms. Toivonen and Tuominen (2006) pointed out that these categories are not fixed and during the life-cycle of the innovation, the process type may change from one to another. In the list the degree of the formality increases progressively.

1. *Internal processes without a specific project.* Innovations emerge unintentionally.
2. *Internal innovation projects.* Innovations are project-based carried out in house.
3. *Innovation projects with a pilot customer.* The idea has been developed within the company and the pilot customer is acting as a critical evaluator and informant during the process.
4. *Innovation projects tailored for a customer.* The customer who is seeking out a solution to a specific problem initiates innovation project.

5. *Externally funded innovation project.* Often these projects are research-oriented and aimed at developing new elements in the services that could benefit for the whole cluster. These projects often involve several firms that get new ideas from the co-operation.

## 4.2 Customer input at various stages of the development process

Gruner and Homburg (2000) have studied the user involvement on product development process (NPD) in machinery industry sector. They indicate that customer interaction during early and late stages of the new product development process has a positive impact on new product success, whereas interaction during the medium stages yields no performance impact. They also provide some evidence that the positive effect of the interaction is weaker in the idea generation stage compared to the product concept development stage, which is more concrete. According to Gruner and Homburg (2000), customer interaction in the prototype testing stage displays the most valuable effect of all stages.

Lagrosen (2005) argues that in few companies the involvement of customers is mainly confined to the initial stages of the development process. After the initial phase, the customer is usually not involved until the prototype stage and after that, the development again takes place without much customer involvement. On the other hand, Dahlsten (2004) shows that customer involvement in the product development process can continue through all the phases of the project, ranging from concept development via product marketing issues to the final launch phase - in real-time. The active customer involvement throughout all the project phases facilitates the solution of a common problem, i.e. keeping customer presence during a project.

There are only few examples of studies that have explored customer interaction at various stages of the new service development process (NSD). Alam (2002) shows that in financial services industry user input tends to be the most important in stages of idea generation and service design, but also in service testing and pilot run. Moreover, Alam (2002) argues, that a large number of powerful new service ideas need to be generated with user contacts and interaction. Similarly, user input and interaction in the service design process are important for designing distinguishable and unique services. Finally, an efficient service testing and pilot run could be conducted more effectively with user interaction and inputs.

Also in new service development processes the intensity of the user involvement can vary across different stages of development process. For instance, user involvement is often more intense at the initial stages of idea generation and screening and again at the later stages of test marketing and commercialization. More specifically, Alam (2002) suggests that the highest intensity of user involvement is at stages of idea generation and idea screening. He explains this fact by pointing out that managers seem to pay more attention to the idea generation and screening stages of the service development process. Indeed, in service sector new innovations are basically ideas or concepts rather than tangible products. Therefore, the more ideas a firm can generate, the greater is the probability of pursuing a successful one.

Sometimes it may happen that the innovation is not fully completed when it is launched on the market. Sundbo (2006) supports the idea of after innovation phase. It means that the service innovation is further developed after market introduction. This development is based on customer involvement and after-sales reactions. Sundbo goes on by stating, that innovation in e-services is a long process, which does not end with the first market launch. It is rather a continuous process about which it is difficult to say exactly where innovation process starts and ends, and when it is distinct or a part of other processes such as marketing. The after innovation process is based on

person-to-person interaction about the function and quality of the service. It appears that successful e-service innovation requires a certain element of person-to-person interaction as in the traditional service delivery situation (Fuglsang and Sundbo, 2006).

## **5 User-driven innovation**

### **5.1 Is user involvement enhancing innovativeness?**

Although user involvement is frequently practiced in organisations, research findings concerning its benefits for innovation are contradictory. It might happen that businesses listening too carefully to their customers are less likely to launch radically innovative new products (Christensen and Bower, 1996). This argument is based on fact that consumers' outspoken needs are often restricted to what is already familiar to them.

Sometimes customers might be so accustomed to current conditions that they do not think to ask for a new solution, even if they have real needs (Leonard and Rayport, 1997). Furthermore, consumers are always not perfectly informed about the latest market trends and do not know what is technologically possible. Thus, the businesses are most likely to launch new products that are similar to their existing product lines if they rest their innovation process heavily on customer input. In addition, listening too closely or too narrow group of customers might lead to over-customization or to development of services with limited appeal (Alam, 2006; Ulwick, 2002).

Ulwick (2002) states that involving customers into idea generation stage will only lead to imitative, unimaginative solutions. He goes on by arguing that asking customers for solutions just tends to undermine the innovation process. Lagrosen (2005) points out that sometimes companies do not involve customers in development processes because they are afraid that customers are just hampering their successful innovation activities. These companies claim that customers normally just compare the current products on offer from the different suppliers. Building the development on such information will only lead to incremental changes. Instead, the companies prefer being truly innovative with radical changes.

However, Magnusson et al. (2003) did not find support for the argument that user involvement will lead to a stalemate regarding innovativeness nor that ordinary users are unable to be innovative. Instead, they showed that user involvement results in ideas for new innovative and useful telecom services. Also the findings of Lukas and Ferrell (2000) run counter to the above-mentioned arguments. They showed that in US manufacturing companies, a greater emphasis on customer orientation increases the introduction of new-to-the-world products and reduces the number of me-too products launched. Lukas and Ferrell (2000) explain this difference by the fact that customer-oriented businesses are becoming more proficient in uncovering latent customer needs and stimulating customers to suggest new products beyond their usual frame of mind as well as what they believe to be technologically possible. Another explanation may be simply that more customers are well informed, have high expectations, and thus are less likely to be myopic and conventional than in the past. However, to be able to obtain valuable customer information that has positive effect on the firm's innovativeness, customer involvement needs to be properly managed (Matthing et al., 2004).

Panayides (2006) has analysed the antecedents and consequences of innovativeness or innovation capability of logistics service providers (LSPs) in Hong Kong. His empirical observations indicate that relationship orientation in the LSP-client relationship will lead to higher levels of innovativeness, improvement in the quality of logistics service and improved performance for the

LSP. An organisation oriented towards a client relationship can enhance its innovation capability as it will become more creative in its methods of operation, will seek new ways for doing things and trying out new ideas, and will be the first to market with new products and services. The findings of Panayides (2006) support the argument of Woodside (2005) that business performance is indirectly influenced by innovativeness, in this case through the improvement in the quality of the logistics service.

On the other hand, customers may also demand innovative alternatives by themselves. This leads into the situation where providers need to develop an understanding of market preferences prior to the addition of new services. Service innovation research suggests that service innovation, in general, may have a positive impact on customer's choice and can result in increased revenues for a firm. Victorino et al. (2005) demonstrate the beneficial impacts of including innovations within a hotel's service concept. They propose that across different customer segments, service innovation does matter when guests are selecting a hotel. However, different customer segments may have different preferences on innovative service offerings. Therefore, understanding the customers' choices can produce a better designing of service offerings and formulating corresponding operational strategies around customers needs.

## **5.2 Can user involvement improve new service performance?**

Studies about the success factors of new services indicate that the customer interaction has a positive effect on new service performance. Alam and Perry (2002) investigated the importance of the customer input in financial services industry in new service development processes. Among the business managers, they found a general unanimity that customer involvement is necessary for developing a superior and differentiated service with better value for customers. Indeed, the previous literature also provides evidence that customer interaction can promote more successful innovations in multiple service industries (e.g., Martin and Horne, 1995).

It has been shown, that user-driven innovation activities have implications for commercial concerns by extending the life of products and breeding new ideas for future product versions (Jeppesen and Molin, 2003). Actually, consumers co-develop commercial products 'for free'. Alam and Perry (2002) argue that customer involvement also can speed up the development process, which leads to another important benefit of customer input, such as reduced development cycle time. They also point out that since the main ideas come from customers themselves, there is no need to be bogged down at various market research exercises.

Bettencourt et al. (2002) have examined client co-production in knowledge-intensive business service (KIBS) providers. Because service delivery activities among KIBS businesses are complex, unstructured, and highly customized to meet particular client's unique needs, clients must effectively perform a variety of roles as they serve as co-creators or co-producers of the knowledge-based solutions along with the service provider. This can have a profound effect on both the quality of the service delivered as well as the client's ultimate satisfaction with the service solution. Based on research with IT consulting firm and other knowledge-intensive business service providers Bettencourt et al. (2002) conclude that by strategically managing client co-production, service providers can improve operational efficiency, develop more optimal solutions, and generate a sustainable competitive advantage.

Magnusson (2003) and Magnusson et al. (2003) provide a more cogent understanding of what contribution end users can make in the generation of new ideas for mobile telecom services. They analysed the contributions made by users in comparison with professional service developers and

examined how the implementation of user involvement affects the outcome. Interestingly, the ideas of the ordinary users were found to be more original and held a higher perceived user value. However, user generated ideas were, on average, harder to convert into commercial services. Hence, users' ideas can be used as a source of inspiration, a catalyst for professionals to think and reframe the current business, but the users should not be considered a substitute for professional service developers.

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