Service development tools in action

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Service innovation is a key source of productivity gains and competitive advantage across the industries. This paper presents two management tools that assist businesses in developing more systematic and effective service development process. Both of these tools focus on making optimal use of customer and user inputs during the service innovation process. Latest research based knowledge provided the starting point for the development of these management tools. Their practical applications were developed together with the businesses in connection with their on-going service development projects. This provided an effective way to test and validate research-based concepts and reference processes.

1. Introduction

Service innovation is increasingly a key source of competitive advantage across the industries (Kuusisto, 2008). Many new rapidly emerging businesses such as Google, Netflix, Skype, Facebook, and many other alike are based on ICT and novel service concepts. The development of novel services is also a very potential way to renew businesses in traditional manufacturing industries (OECD, 2006).

At the same time, systematic management of service innovation is still at an early stage of its development and there clearly is significant scope for improvements. While effective service innovation management offers good opportunities for business development, it also involves many new challenges that management needs to tackle (den Hertog, 2010; European Commission, 2009a,b). Under these circumstances service innovation management tools can be highly useful and there is a good reason to focus efforts in their development.

In comparison to technological innovations, service innovations tend to be multi-dimensional entities. In typical cases service innovation is enabled by technologies, and ICT has a particularly important role as driver of novel services. However, technology development and applications as such are not enough. Successful service innovations also require skilled and motivated personnel, effective interaction with customers, suitable delivery channels and business process development. In many cases even the entire business model may need to be adapted to enable the delivery of novel services (den Hertog, 2000).

Service innovation is also highly context specific phenomena and management needs to recognize this essential feature. Service industries stand out as very heterogeneous group of activities ranging from healthcare to software services and infrastructure dominated railroad services. It is clear that such different set of activities require variety also in terms of innovation management (Tether, 2003; Howells,
For instance, there is great variety in the kind of service innovations that can boost productivity improvements in different types of services.

Distributed and informal nature of service innovation activities represents another challenge where service development tools can be applied. Typically many important service innovation activities take place in business units outside of strictly organized R&D functions (Sundbo and Gallouj, 2000; de Jong et al., 2003). It is also typical that new service development involves several actors outside of the firm, including customers (Alam and Perry, 2002; Magnusson, 2003; Kristensson et al., 2008; Kuusisto and Riepula, 2011). Such complex informal activities can be made more systematic and effective with the help of management tools.

Service innovation management tools can tackle many of the above-described challenges resulting from the very nature of services and related innovations. Hence, there is a very strong rationale to develop management tools in this area. User perspective is another core element in the developed service innovation management tools. The rationale for strong user perspective in service innovation management is also well documented in the research literature. Research literature has accumulated wealth of evidence on the fact that failure rates in new service/product introductions tend to be very high (Balachandra and Friar, 1997). Strong user involvement in the new service development can be seen as a one way to address this major problem. Customers and users role as such is becoming increasingly important. This development is driven by more knowledgeable, active and powerful users empowered by the Internet (Howe, 2008).

Innovation activities in themselves are also evolving. This can be seen in the emerging paradigm of open innovation (Chesbrough, 2006) that is clearly gaining momentum. The core argument is that increasingly, useful knowledge and innovations originate outside the (commercializing) company. Further on, research based evidence suggests that the single most important external knowledge source is the knowledge and ideas obtained from customers and users (Business Decisions Limited, 2003).

2. **Research approach**

The following sections will present two service innovation management tools. The first one is focusing on Integrating Customers into a New Service Development Project, and the second one is assisting management in Selecting the most suitable Customer- or User-driven New Service Development Method.

The development of these tools started with an extensive review of the latest research literature in their focus areas. The analysis focused on organizing the existing research and classifying it under thematic areas. Resulting reports can be characterized as standalone academic papers focusing on conceptual analysis. Once the key elements of recent research were identified these ideas were taken to empirical context in applied research projects. On both occasions theoretical concepts provided valuable ideas and analytical basis that could be utilized in addressing practical problems with the businesses that were partners in the research project. Researchers and business representatives hold several workshops where the practical problems, needs and context were presented and analyzed. First iterations of the service
development tools were iterated on the basis of the evolving joint understanding of the situation.

3. **Tool 1: Integrating Customers into a New Service Development Project**

3.1. **Purpose of the tool**

This tool will assist businesses in setting up joint service development projects with their customers or users. The tool is a 7-step model giving a structure to the process of integrating customers or users into a new service development project. The steps highlight key issues that managers of an innovating service provider should be aware and make conscious choices of.

Overall, several studies and practical examples show that customers are involved in and can provide important contributions to service innovation activities and innovation results (Alam and Perry, 2002; Magnusson, 2003; Matthing et al., 2006; Sandén et al., 2006; Heiskanen et al., 2007; Kristensson et al., 2008; Kuusisto and Riepula, 2011). To the knowledge of the authors, however, there is very little knowledge on the practical organization of co-innovation with customers or users: It is difficult to find guidelines for successful integration of customers or users in the service innovation process (one notable example is provided by, Toivonen et al., 2009). Below, we suggest a reference model, which serves this purpose: the idea is to present a descriptive ‘step-by-step’ process, which the service innovator can use as a guideline in establishing a joint-innovation process with the desired customers or users.

3.2. **The tool and its development**

This reference process has been developed, first, on the basis of existing research literature. In the second phase, the reference process was empirically further developed and tested: this empirical context was a project in which we (two authors of the paper) helped a publishing company in setting up a joint new service development project with one of its key advertising clients.

For the sake of readability, we will first introduce the tool, the reference model (Fig. 1). Each of its 7 steps is described in short. Thereafter, we will highlight key issues that emerged in the course of the actual customer integration case in the publishing firm, and which were consequential for the development of the tool.

1. **Define the focus of the service innovation project**

The first task is to determine the focus of the innovation project: in terms of the type of the customer group and the service category/service. To start with, the service provider should have a clear direction for the project in terms of general types of markets and new services that will be sought. However, it is important that the service is not specified in detail in order to leave space for the joint-development effort – so that the participants can truly explore new types of possibilities during the project.
2. **Determine goals for customer/user engagement in the project**

It is important to determine the objective(s) for engaging customers/users into the new service development project. In every case, customers are regarded as a valuable resource, and certain 'outputs' are sought from their engagement. The idea is to discuss what is expected from customer engagement within the service innovator organization. For example: Do we engage customers in order to create a better understanding of their views, circumstances, and working processes? Or, are customers seen as genuine development partners who provide resources to the project and also share some of its risks? The more specific roles and tasks of customers are ideally agreed on together with the participating actors later in the process (steps 5 and 7).

3. **Identify customer groups or individual customers who are able and willing to participate in the project**

The service organization should primarily look for customer capabilities that are important – given the purpose(s) of customer/user engagement in the project. Two types of capabilities should be considered: first, customers’ knowledge, skills, and resources; second, customers’ readiness to co-innovate (such as, ability to share information, sell the project internally in their organization, contribute to the project governance) (Bettencourt et al., 2002). One should also make an effort to find the right persons in the customer organization – often, they are those who benefit most from new value of the service and are prone to try out new things.

As to building an understanding of what will motivate customers to participate, the service innovator needs to adopt the customer’s perspective: How does the customer perceive benefits from their participation in new service development? In terms of higher certainty of a new service that fits their needs? Further, how is the customer likely to see the balance between the benefits for the service innovator and the benefits they themselves reap from collaborating in service development? These questions need to be discussed in this early stage so that the service innovator can develop appropriate incentives for customers to participate. Moreover, they need to be discussed with the participating customers (steps 5 and 7) to ensure fair sharing of project outcomes such as value and IP created in the project.
4. **Ensure resources and motivation to engage in a co-development project in your own organization**

Assessment of the service innovator’s own resources to manage and implement a co-innovation project is needed. Allocation of time, funding and other resources must be done. In particular, when customer/user co-operation in development is relatively new to the organization, strong management support is most important. A concrete way to show support is to allocate an adequate amount of the development staff’s work time to the project; time is needed both to establish a new kind of working process as well as to the actual service development task.

5. **Contact potential customers/users and arrange a session to discuss and set up the joint development project**

In step 2, the service innovator has outlined the desired customer or user contribution to the project. Now, the task is to delineate and co-create with the invited customers or users their roles; their work input, time, skills and other resources they possibly could bring into the project, working practices, and value (and risk) sharing in the project. It is often possible to start the process without a detailed contractual agreement (which, however, should be made as soon as active customer engagement will be ensured in the project) (Step 7).

6. **Co-develop a good understanding of the customer need(s) and preliminary new service concepts to address this need**

Very briefly, we here refer to some tools that can assist the service innovator, jointly with the customers/users, to identify and define the customer(s) need that will be addressed with the new service. For instance: Bettencourt and Ulwick (2008) suggest a set of questions that can help in identifying customer needs (based on a detailed understanding of the customer job). Toivonen and her colleagues (2009) introduce ‘a future oriented workshop’, in which the participants identify important phenomena (using the concepts of trends and weak signals) that are linked to the service in the present and in the future.

When the innovating team has agreed on the customer need(s) that will be addressed with a new service, the team can move on to the actual ideation and development task. For example: Generating preliminary concepts as suggested by the lead user workshop method (von Hippel, 2005; Churchill et al., 2009) may be applied even though the participants were not ‘lead users’.

7. **Make arrangements on the details of the joint development project**

Depending on the scope of the joint development project, the service innovator needs to take care of all the necessary contractual agreements. These will cover what is agreed on customers’ or users’ work input, timing of the project, compensation, confidentiality, value and risk sharing during and after the project. Usually, the sponsoring service innovator holds ownership of the concepts developed during the joint innovation project.
3.3. What did we learn from the empirical case?

The key challenges we encountered helped us further develop the reference process as it is presented in Fig. 1. The following will illustrate three major challenges that emerged during the project.

To begin with, the focus of the service innovation project was not clearly defined. The provider organization aimed to benefit from joint service development project with the customer that was very important for their business. The underlying reason for setting up the new service development project in this case was a concern of loosing this important customer. ‘Need to retain an important customer’ is not an ideal starting point for a joint new service development project. Instead, the business should have had a clear objective. For instance, to develop new services, or to enter new types of markets with their existing services.

Partly due to the above-described starting point, goals for customer/user engagement remained unclear. Subsequently, it was not carefully considered how to motivate the customer to participate in joint service development project. The customer organization was simply assumed to perceive benefits from their participation in service co-development. At this stage, there should have been a thorough discussion of the customer’s goals and motivation to participate in the project.

Resources and motivation of the provider organization were not completely ensured. Both parties’ strong expertise and position in their business areas provided promising starting point for the joint development project. However, partly due to the limited provider resources the project did not proceed as planned. Meetings with the customer were delayed several times, since the provider’s contact person did not have time enough to concentrate on thinking what should be the next development step in the course of the project.

The above challenges of the project clearly hampered cooperation between the two organizations. Towards the end of the project, two separate action plans were made: one that supported the provider’s goals and intentions, and the other that better suited the interests of the customer.

To sum up here, a key characteristic of the presented reference model (Fig. 1.) is the idea of engaging the customer perspective into the innovation effort from the very beginning. We suggest that customers and users can be engaged, not only to co-develop a new service, but also to co-establish a successful way of working together in the development project. This means discussing and jointly creating the ways of working together, and the roles and responsibilities of the actors involved. This should be an important way of creating commitment to the process, and also, to the results of the process (cf. Lundkvist and Yakhlef, 2004). However, the service developing firm needs to be sensitive to the fact that they may be suggesting a different type of project that the customers are used to. Thus, it is very important to openly share expectations with the invited customers form the very beginning.
4. Tool 2: Selecting the Best Customer- or User-Driven New Service Development Method for the Situation

4.1. Purpose of the tool

This tool focuses on different types of approaches that can provide insights into customer needs. Some of the approaches can also effectively engage customers into the service development process. Along with customers’ and users’ growing roles in the new product and service development, the variety of available methods and techniques has become plentiful. The key question any service provider faces in its attempt to better learn from, or work with its customers or users, is the suitability of different approaches and methods to a particular situation.

This tool, first, presents a three-way classification of customer- and user-driven innovation approaches. This characterization should be helpful for the service innovators, as it can quickly give an idea of the basic ways of harnessing customer and user potential. Second, the tool identifies three groups of factors that, we believe, should guide the choice of the most suitable approach for the situation.

4.2. The tool and its development

Our original objective was to review service innovation literature in order to get a good overall understanding of what can be called ‘customer- and user-driven service innovation approaches.’ Accordingly we identified and characterized three basic routes by which customers and users may have a role in companies’ innovation activities and innovation outcomes. In a nutshell: innovating businesses can learn from customers and users (in new ways) and make use of this knowledge in their development process; companies can directly engage customers and users in their development activities; and, companies can build upon and commercialize innovations that users have developed for themselves (see, the publication by The Ministry of Employment and the Economy in Finland, 2010).

While working with a financial company, we utilized this three-way characterization (as shown in Fig. 2) as a starting point for our discussions. Our task was to help the company’s new service development activities build ‘closer links’ to their customers and users. Discussing the different types of main approaches proved to be useful: in particular, it helped make visible important questions of the desired role of customers and users in new service development in the organization.

Encouraged by the discussions with several employees in the organization during the project, we concluded that rather than looking for any specific rule(s) that would direct the choice of the most suitable approach or method for a situation, it is crucial that the service innovator organization engages into a thorough discussion of key factors that influence this choice.

Below, we first very briefly outline the three basic approaches. These are: Building deep customer understanding, Involving customers as participants in new service development, and Making use of user-generated content and innovations (Fig. 2) (Kuusisto and Kuusisto, 2010). Thereafter, we discuss the key factors to be con-
sidered when a service innovator is looking for a successful approach to work with or learn from its customers or users in new service development.

**Building deep customer understanding.** The focus is on generating a better understanding of the customers’ needs and of how customers create value in their every-day activities, or when they use service provider’s offering. This category of methods essentially collects information from customers and users, and transfers this information into the service provider’s development process. Thus, customers and users remain an external source of information to the service provider. However, new types of methods are being used, which focus upon creating a deep contextual understanding of customer and user needs. The idea is that the value of services is very much ‘embedded’ in their context of use.

When gaining a deep contextual understanding of customers and users is the starting point in new service development, researchers or development personnel go to the customer’s natural environment or usage situation. Open-ended qualitative data gathering, in the form of observation and interviewing, is typical. To exemplify, business ethnography (Korkman, 2006), emphatic design (Leonard and Rayport, 1997), contextual inquiry (Holtzblatt and Beyer, 1993) and contextual interviewing (Ulwick, 2002) have been used.

**Involving customers as participants in new service development.** This approach, gathers together working methods in which customers or users directly participate in one or several stages of a company’s innovation process. Specific tasks of customers and users vary a lot. Customers and users may act in a highly active role such as actually co-designing a new solution with the sponsoring company’s employees. Of-
ten they participate in less active roles, such as observing a simulated service delivery process and suggesting improvements.

A key purpose in engaging customers and users in development activities is to ensure that new services will be relevant and valued in the market. However, there may be other important objectives, such as marketing the company and the new service to customers, building customer commitment to the new service, and cost-effectively harnessing new creative potential and expertise into the innovating company.

New levels of interaction allocate more power and responsibilities for customers and users in the new service development process. The innovating service organization needs to decide on the desired role of customers or users in the development task, including a plan for value and risk sharing. Further, a successful way of working together with customers or users needs to be established, along with a procedure that integrates customer or user activities into the existing development process.

To illustrate, Kristensson and his co-workers (2008) suggest a method in which users’ role in need identification and idea generation has a special emphasis. Lundkvist and Yaklef (2004) suggest a conversational approach in which dialogue between the service provider and the customers is the key process by and during which new ideas arise and are co-created.

**Making use of user-generated content and innovations.** This approach views customers and users as innovators on their own. The focus here is on what customers or users are primarily generating outside the interaction with the commercializing service provider (user innovations, by both companies and individuals) (von Hippel, 2005; von Hippel and Oliveira, 2009).

Today there exists a number of methods or techniques that are available for service providers seeking to build upon and commercialize user-developed innovations: Some companies systematically build relationships to user communities in order to obtain a flow of user innovations over time. Others provide ‘innovation toolkits’ to potential user-innovators to both support and learn from their innovation efforts. Companies can also provide users with product or service ‘components’ to make their own versions of the products or services. Still other companies are seeking out lead users and lead user innovations for specific development challenges (von Hippel, 2005; Nesta Research Report, 2008).

Apparently, there is no one superior customer- or user-driven innovation method. The approach, method or technique that best fits a particular situation needs to be “found” within the innovating organization. We suggest that the ‘best’ working method depends on the innovation task and the contributions that the participating actors are able and willing to make.

**Analysis of the nature of the innovation task** provides the basis for identifying a suitable customer- or user-centered service development practice. Dimensions of the innovation task may be characterized in several ways; below a few important considerations:

- What type of innovation is pursued? (For instance, a new type of customer interface? New functions or features of the service? A new way of producing the service?)
• What are the expectations of customers’ or users’ output in this development challenge?

• Where and by whom are customer needs best identified and new ideas and solutions best created? (For instance, by users themselves in the course of their everyday activities? In a dialogue between the service provider team and the customers/users?)

As regards to **service innovator’s capabilities**, at least two types of resources are important: knowledge, skills, and other resources that are required to solve the innovation challenge at hand. The second type of resource is innovation management related. It refers to the managerial capability in initiating, facilitating and establishing new working methods with customers and users as well as processes that integrate customer/user activities into the existing development process. Service innovator’s **motivation** to transform its (inward) development practices into more customer- and user-driven innovation practice relies on support from top management. The service innovator also needs to decide how much of the decision making power it is willing to grant to the co-operating customers or users in the development project.

As regards to **customers’ or users’ capability and motivation** to engage in service development at least the following factors become influential: The motivational aspect is impacted by the importance of the service and/or the service provider to the customer, perceived importance of customer participation (in terms of quality of results for the customer), and the existing customer-service provider relationship. The capability dimension, in turn, is influenced by a variety of customers’ innovation task relevant knowledge and skills, available people and time resources, and the customer organization’s readiness to ‘co-innovate’ (e.g., to share information, sell the project internally, contribute to project governance, in Bettencourt et al., 2002).

To summarize, the key idea is that a thorough identification, discussion, and evaluation of the three groups of factors, and the linkages between them, is needed within the service provider organization when it looks for the best innovation method for the situation.

5. **Concluding comments**

Presented service development tools have been constructed in connection with applied research project. This ensured the utilization of latest research knowledge in practical business context. In addition to researcher input, cooperation with business practitioners turned out to be an essential element of tools development. Inputs from the business could greatly improve the practical applicability of the tools. In other words, insights and feedback from the businesses were essential in translating research-based concepts into practical service development tools.

Overall the developed tools seem to be very useful for business practitioners. First of all, they can enhance well-focused and systematic service development efforts. This is a valuable contribution considering the complex and often abstract nature of service innovation projects. With the help of tools service process can be divided into manageable modules that focus the attention to key tasks and actors relevant in each stage of the development. Modular thinking is also useful for sharpening the
overall focus of the project as well as for allocating resources and timing for the services development tasks. Each module can be described as concrete work package that is easier work with. It is also much more effective to communicate the content and requirements of such modules across the organization and to the external development partners.

Another benefit of modular tool structure is related to users systematic involvement in the development work. With the help of modules it is easier to involve and motivate users at each stage of the new service development process. It is also possible to specify users needs, required contributions and skills requirements module by module. Hence, modularity enables much sharper focus on key issues and a positive way to structure the development process. Finally, modular structure enables effective monitoring of service development project. Progress can be evaluated module by module and any corrective actions can be taken swiftly. All this improves management control and provides a road map for new service development project.

Work with the practitioners demonstrated how tools can clarify the complex new service development situation and sharpen the management objectives. Tool that presents the options of user involvement proved to be an effective eye opener for the management. It demonstrated various ways to obtain information on user needs, and possibilities to involve them into service development projects. A critical issue was how much influence and power the business really is ready to distribute for the users? In many cases the nature of the service and innovation task set limits for customer involvement. In other words, more customer involvement is not always the best option. With the help of the tool businesses can assess various options and make better informed realistic choices.

This project demonstrated clearly that the need for service innovation management tools exists. Useful tools need to be flexible and sensitive for situational elements pending on the industry, service supplier, innovation task as well as customers capabilities and motivation. There clearly is a need for several different types of tools that cater the management needs in a variety of situations.

The presented tools are still evolving in many ways. They can be made more practitioner oriented so that their utilization requires less intensive facilitation. Further work with practitioners and new research inputs will also bring more specific contents into the tools. Finally, many elements of the presented tools can be further developed by formulating them into software-based instruments. Such software based tools can be much more effective in terms of their scalability and ability to utilize information that is accumulating while they are being applied in practical service development situations.

References


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