

# MANAGING CAPABILITIES FOR SERVICE INNOVATION

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## ABSTRACT

This conceptual paper presents a sketch of a model of managing service dominant innovations. It starts from the observation that service R&D and innovation is not a specialist activity. Service innovation is very often distributed within the firm. The latter makes it inherently hard to manage, requiring a diverse set of capabilities. After briefly discussing some key elements and characteristics of service business models, six dimensions of service innovation and seven capabilities for managing the process of service innovation are briefly introduced. Together these offer a framework for mapping individual service innovations and their interdependencies in a service business model. Furthermore the framework links service innovations with the dynamic capabilities needed to bring about or manage these service innovations in a sustained fashion.

## INTRODUCTION

Most existing approaches towards innovation management to date aim at assimilating the inherently manufacturing and technology biased R&D model to services. In our view the innovation capability in service-dominant firms is more like a loosely-coupled system (Sundbo & Gallouj, 2000) spread over the firm. Managing capabilities for service innovation requires a delicate balance between inducing a wider variety of service professionals to contribute to the innovativeness of the firm and effectively and efficiently managing the innovation efforts. An additional difficulty is making sure a sustained innovation capability (or meta-capability) is created. In our paper we first discuss some specificities of services and service businesses. We then continue by presenting six key dimensions for describing service innovations. Subsequently, we take up the challenge of defining some more dynamic capabilities for more consciously managing service innovation. Finally, these are combined in a matrix which we propose as a starting point for mapping, measuring and above all studying the required capabilities for managing service dominant innovations.

Although not all characteristics apply to all service innovations, the following apply to most of service innovations:

- What is on offer is a *shared process* that is co-produced between service provider and client rather than a discrete (service) product of which the ownership is transferred at a certain point in time. This may result in sometimes intense client interaction and indeed user-producer relationships over an extended period of time. The process character has important implications for both client interface and service activities (and skill needs) in the service delivery organizations. Many service innovations further illustrate the *experience* character of new services (stretching over longer periods of time and more precisely experienced as new by the client more than technologically new) aiming at bringing about transformations in the actual behaviour of users (Miles, 2008; Normann, 2000).
- Most service innovations are *highly combinatory or architectural* in nature (see Henderson and Clark, 1990). Service innovations are new configurations of elements that individually might not be new to the market, but are new when combined or applied in a new context. Some of the examples given show that service innovation can manifest itself as a complete new business model e.g. Cirque du Soleil (Kim & Mauborgne, 2005).
- Service innovations are to a high degree *intangible concepts*. The concepts are new value propositions in the market that are very often not easily to explain to customers. Technology is

an important enabler, but the total service offering is too a large extent conceptual. This explains the need for strong branding of concepts. Remarkably so these strong brands do not only allow clients to develop an emotional tie with the service on offer, but also allows for subsequent brand stretching and line extensions of the service on offer.

- Service innovations are to a high degree *functionally defined* i.e. provide solution for certain functionalities felt by clients - a mobility need, a need for unexpected encounters, a need for hassle free mobile payments or personal administration.
- What most of these service innovations also share is that they are not the result of a concentrated R&D effort in a specialist department managed as a classical R&D process. As far as they are intentional and planned they are the result of a different type of search process requiring a more distributed and diverse set of capabilities within the service organization (and also often crossing the firm boundary).

After these introductory observations we continue with the development of a new comprehensive framework for service innovations. The typical characteristics of a service business and of service innovation have important implications as to how service innovations can be understood and managed. We point at six dimensions that may be used to more systematically map and understand the nature of service innovations. In a final section these dimensions will be combined with a dynamic capabilities framework.

## DIMENSIONS OF A SERVICES BUSINESS AND SERVICE INNOVATIONS

The classical approach in defining the essence of service innovation is starting with a discussion on specific service characteristics – intangibility, simultaneity, customer involvement and perishability. This approach can lead to partial analysis of specific challenges and opportunities for innovation. In this paper we will take a more holistic approach in which we acknowledge also the system level in a service business. At this level we can take into account the interactions and interdependencies between various elements in a service business. Innovation does not only take place in one part of a service business such as a new service concept or a delivery system, but it happens also through the interrelatedness between the parts and a system level. This perspective can help us to understand the phenomenon of business model innovation and the link between business model and the strategy of a service firm.

There is an ongoing debate on the ‘newness’ of many service innovations. Services can be new to the providing firm; the regional, national or international market or the client. The level of novelty in service innovations differs; although a particular service may already be familiar in other markets, the key thing is that it is novel in its application to a particular market and in a specific competitive arena.

In the field of service management and service marketing a number of key publications and key authors introduce a generic integrated model of a service business or service firm. We selected four of these core publications. Two of them build on work in the seventies and eighties of the 20<sup>th</sup> century, but were updated until recently (Heskett et al, 1997; Normann, 2000). Two other key publications represent different research streams and are of more recent date (Zeithaml et al, 2006; Frei, 2008). Those four represent a large body of knowledge in the service management field. They also mirror the breadth and multidisciplinary character of the science of service management: general management, marketing management and operations management.

Table 1 Service Business Models

	<b><i>Service–profit chain</i></b> <i>(Heskett et al)</i>	<b><i>Service Management system</i></b> <i>(Normann)</i>	<b><i>Servqual model</i></b> <i>(Zeithaml et al)</i>	<b><i>Service model</i></b> <i>(Frei)</i>
<b><i>Customers</i></b>	Target market	Customers as market and as co-producers	Customers and expectations	Customer management system
<b><i>Service concept</i></b>	Service concept	Service concept	Service standards & design	Service offering
<b><i>Service delivery system</i></b> <i>People &amp; culture</i>	Service delivery system	Service delivery system: <i>Personnel, Culture</i>	Service delivery <i>People</i>	Employee management system
<b><i>Service delivery System</i></b> <i>Technology &amp; Processes</i>		Service delivery system: <i>Technology &amp; Physical support</i>	Service delivery <i>Technology &amp; Systems</i>	
<b><i>Revenue model</i></b>				Funding Mechanism
<b><i>Business model</i></b>	Interaction and dynamics of service-profit chain	System of Components, Business philosophy	Gaps model of service quality	Integrated service model

*Sources: Heskett, J.L., W.E. Sasser Jr & L.A. Schlesinger (1997); Normann (2000); Zeithaml, V.A., M.J. Bitner and D.D. Gremler (2006); Frei (2008)*

The comparison of these four models leads to a number of observations:

- All four models share a focus on three core elements : service customer, service concept and service delivery. The Servqual model uses a somewhat different terminology (Zeithaml et al). But we argue that the same logic (customers – concept – delivery system) is behind the first three gaps in the gaps-model.
- The service delivery system can be considered as a sub system in itself consisting of different components. Two authors underline the specific role and qualities of service personnel or service employees in the delivery (Heskett et al; Frei). In the service profit chain the interaction between customers and employees is one of the core processes leading to results in terms of turnover and loyalty of customers and employees. The employees can also be considered as the carriers of the service culture in an organization (in Normann's model culture is a separate dimension).
- In the four models technology and processes (information, logistics, etc) form another part of the delivery system. Compared to the key role of technology in the mainstream innovation literature the role here seems to be more limited to one of the factors. Frei does not even consider technology as one of the core elements in her model.
- Only one model (Frei) pays particular attention to the element of the revenue model. One explanation is that her publication is rather recent and that discussions on revenue models really came up in the literature after the rise of internet (see for example Amit & Zott, 2001; Chesbrough, 2006). The internet created a large number of new ways to generate a revenue with a service offering.
- The interrelatedness of the various core elements in a service business model is a key issue in all four models. The interconnectedness in a service model can be considered as a distinctive characteristic of service firms. According to Frei (2008) effective overall integration of the elements is crucial to a successful service model: "the whole business depends more on the interconnection of the four than on any one element".

From our analysis of those four models of a service business we conclude that every service business has six elements or dimensions that are essential: the service customers, the service concept, the employees and service culture in the service delivery system, the technology and processes as part of the service delivery system and the service business as an integrated system as final dimension.

When we want to describe and analyze service innovations we link to the six core dimensions of a service business as listed above. A service business can innovate on every single dimension in the system, or on a combination of several dimensions. Business model innovation is typically related to a system level. The innovation is then linked to every dimension. Service firms can have various business models in one portfolio.

Below we elaborate on those six dimensions and illustrate those with two cases studies. One case is the Groupe Accor – a large worldwide hotel organization, based in France with a portfolio of different hotel concepts ranging from one star to five star hotels. In our case we focus on one of the hotel concepts – Formula 1. The other case study is Randstad, an international business to business service provider in the field of temporary staffing and HRM services. In this case we focus on one particular successful and innovative service called Flex labour pool management.

Table 2 Dimensions of service innovation – two illustrations

	<b><i>Randstad</i></b>	<b><i>Accor</i></b>
<b><i>Business model - case</i></b>	<b><i>Flex Labour Pool Management</i></b>	<b><i>Hotel chain Formule 1</i></b>
Customers	Business customers in need for a integrated solution of temporary staffing (e.g. hospitals)	New customers that could not afford a room with reliable basic quality Customers have to perform various roles themselves – high level of self service
Service concept	Package of services for searching, selecting, hiring training and supervision of temporary staff or outplacement of workers.	Formula for simple rooms with basic features with high reliability, access, and all necessary elements
Service delivery System - People & Culture	Knowledge, experience, information on labour market, relationships with potential employees, coordination of scheduling	Front office personnel only during peak hours, limited staff involvement
Service delivery System - Technology & Processes	Information and planning systems and dedicated solutions to staffing problems and provide HRM services	High level of standardization and automation
Revenue model	High fee for taking over risk and management of labour force and providing flexibility – higher risk and higher coordination cost	Low cost, high capacity utilization, low prices
Business model	Pool management Multibusiness – various formulas in one firm (temporary staff, interim management, training, etc.)	Formula 1 Multibusiness - other formulas at various quality levels (from 1 star to 5 star hotels) in one organization

Sources: Aung, M.(2000); Kim, W. Chan and R. Mauborgne (1997); Hertog, P. den and G. de Jong (2007)

The first dimension is the customer in two connected ways. First of all the customer has expectations about the service functions to be delivered. Secondly, the customer is not only the market but shows also up as a co-producer in a service business (Normann, 2000). Customers are often part and parcel of the production of the (new) service. The interaction process between the provider and the client is an important source of innovation – the more so when the business service itself is offering support for innovation (which, for example, is the case in R&D or design services). In the two examples we observed opposite directions in the involvement of the customer. In the pool management concept of Randstad the client is relieved from a lot of work and risks and increases its flexibility in terms of staffing. Randstad takes over roles formerly played by the HRM department of the client.

The second dimension is the new service concept. The service concept or offering is the value that is created for the customer. New concepts offer value in a new way. Low-cost or 'no-frills' hotel rooms or integrated HRM solutions are examples of these 'conceptual innovations'. Service innovations may be embedded in a tangible product but the innovation itself is often a new idea or concept of how to organise a solution to a problem. Many new service concepts are combinatory i.e. they do combine elements of services that do exist individually or as part of other services into a new combination or configuration (van der Aa and Elfring, 2002).

The third and fourth dimension concern the service delivery system and organisation. Here we make the distinction between the human part of the delivery system (personnel, organization, culture) and the technological and process aspects involved in delivering the service.

The third dimension refers to the organisational structure of the service company; appropriate management and organisation is needed to allow service workers to perform their job properly, and to develop and offer innovative services. New services, for example, may require new organisational structures, (inter)personal capabilities or team skills. The large-scale introduction of home shopping services is an example of the 'delivery system and organisation dimension' of service innovation. To some extent also the customer can be considered as a part time human resource being a productive factor in the service delivery (Normann, 2000). The customer as co-producer and the design of the customer interface are important issues in this innovation dimension.

The technological aspects of the service delivery system have caused much debate in the service innovation literature. Service innovations are of course possible without technological innovations but they often go hand in hand. Predominantly, but not exclusively information technologies can facilitate service innovations. Tracking and tracing systems in traffic and transport are examples of 'technological innovations': they enable transport service providers to monitor the progress of their fleet and thus manage their transport service more efficiently, which might then provide the basis for offering new type of transport services.

The fifth dimension is related to new revenue models. To develop the right revenue model fitting a new service concept and service delivery system may require considerable ingenuity. Many service innovations in for example healthcare fail as the appropriate revenue model is missing. Numerous new service offerings in web-enabled new services (in areas as diverse as traffic and transport, gaming, publishing, retailing, entertainment and so on and so forth) require new revenue models. Currently, a rise in web 2.0 applications can be observed, where user communities are co-producing services often requiring new revenue models.

The sixth dimension is the integrated business model. This dimension combines the five separate ones and shows the newness at a system level. Service firms can create various new business models in one strategy. Both Randstad and Groupe Accor are excellent examples of firms that offer different

models to different categories of customers. Each model has a different service concept, different interface with the customer and different customer roles and also a specific delivery system and economic dimensions in terms of cost and revenue structures. A completely new service may require new channels to be developed as to accommodate new needs regarding the client interface, new working routines and new type of service encounters may require different set of skill needs of employees and existing ICT applications and business processes need to be adjusted accordingly. In quite a few cases cost and revenue structures may change considerably and new revenue models involving several actors along the value chain (including users) need to be designed as to make sure new service concepts can be realized in practice. Put differently these linkages are important as service innovations that are focusing predominantly onto one or two dimensions may result in sub-optimal unbalanced service configurations.

These six dimensions are instrumental in mapping the separate service innovations, in pointing at the multi-dimensionality of service innovation and the linkages between the dimensions. However, the weight of the dimensions, as well as the interactions between them, will vary across individual service innovations and firms.

The six dimensions just discussed can be used for describing and discussing service innovation at the firm level. However, they do not point immediately at key capabilities at the firm-level needed to systematically manage the service innovation process. In the next section we attempt to identify the capabilities needed to come up with service innovations that we characterized using the six dimensions. What matters after all is not being able to successfully launch a service innovation once, but to be able to make service innovation into a 'routine' activity that allows firms to adapt to their changing environment and stay competitive.

#### CAPABILITIES FOR MANAGING SERVICE-DOMINANT INNOVATION

Although service innovation has been labelled here as mostly a distributed activity, this does not mean it cannot and should not be managed more deliberately. On the contrary, as service innovations are perceived as key for future productivity growth and competition in service markets the need to understand what 'levers to pull' or what capabilities to nurture is key. Following Teece we differentiate between capabilities (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and when necessary, reconfiguring the business enterprise's intangible and tangible assets (see Teece, 2007; Teece et al., 1997; Eisenhardt and Martin, 2000). We have labelled these three categories for the time being as 'sensing, searching & shaping'; 'seizing, diffusing & implementing' and 'transforming & sustaining'. Teece (2007) signals that his dynamic capabilities approach is most suited to (technologically) dynamic industries. We do think his three categories can be used for describing the capabilities needed for service innovation as well.

Below we have further operationalized the basic capabilities for a service business context and we introduce seven key capabilities that are particularly relevant for managing service innovation. Of course this set of capabilities needs to be tested thoroughly and much more refinement is needed in order to be able to discriminate between various industries, market dynamics, sizes and types of firms.

The first category of *sensing, searching and shaping* is the creative stage in the service innovation process that possibly comes closest to the R in R&D. However, in services it is a much more distributed search process with a highly intangible or conceptual character. We see two key capabilities that most successful service innovators master:

- a) Capability to receive weak signals, think out of the box and think in terms of service functionality towards clients. This in fact is a combination of how the service intelligence function and the creativity process is organized in a firm. What signals are out there that point at an unmet service need? Can we read wider societal and economic trends and see how they impact our business? What are the sorts of functions on which future clients possibly search for new solutions to their problems?
- b) Capability to conceptualize, combine and reconfigure. Once signals and first ideas for new services have been collected a true creative process of reworking these in a service offer or service concepts starts. This is a next step in translating initial ideas and queues into distinctive concepts that are recognisable in the market and often involve the ability to smartly combine mostly existing service elements into a integrated (or series of) service configurations that are experienced as new to the market by (potential) clients. In fact a rough idea of how the associated business model looks like is required (a least an idea who has to bring what to the table to realise the new service offer). Combinatory qualities are needed here.

The second category of capabilities can possibly best be labelled as *organizational capabilities* i.e. the ability to turn the original idea for a new service or service configuration into practice and help realize it. We see three core capabilities here.

- c) Capability to organise and act in open service innovation systems i.e. capability to co-produce with clients (benefiting from client interactions and access to a set of clients) and other suppliers and stakeholders a new business concept. This means not only designing and configuring this service but realise it in practice, often so by gluing the constituting elements together and by very consciously co-innovate and co-produce it with trusted clients. Seldom, these elements are provided by one provider. Most likely these are provided by a number of actors. Managing across the boundaries of the individual firm and managing and engaging in networks is therefore a key capability for being able to put eventually a new service concept or configuration on the market in the first place.
- d) Capability to create an innovation culture through HRM and leadership practices. As service innovation is highly relational and a distributed activity where ideas for fine service innovation might pop up in diverse settings and parts of the organization, HRM, leadership and culture are key. The capability to nurture corporate entrepreneurship and create – to an important degree through HRM policies - a culture that values experimentation and thinking out of the box is essential when managing service innovation. At a basic level leadership should communicate that it values service innovation. At a more advanced level the way individual careers, team formation and coaching are shaped matter for managing service innovation.
- e) Capability to scale, stretch & appropriate service innovations. Apart from purely custom made services successful service firms have the capability to not only come up with a new service offering or configuration, but to scale it, describe (or codify) and diffuse the essential elements of the new service offering through the wider firm organization i.e. roll out the service innovation and at the same time making sure the new service configuration is not 'stolen' by the competition. Although appropriation and IPR are complex issues in services and service innovations are in practice tougher to replicate than quite often anticipated (exactly due the dynamic capabilities described here which are not spread over firms evenly). Part of the capability described here is the capability to brand a new service configuration and subsequently stretch the brand where possible or needed. The power of a well chosen brand name for new service concepts is underestimated and might in practice be a powerful strategy to appropriate the benefits of a new service configuration or new service business model.

The third category of capabilities labelled as *transforming and sustaining capabilities* can be said to be real meta-capabilities i.e. they are higher order capabilities needed for adapting the service operations repeatedly and being able to reflect on the whole process of managing service innovation,



derive lessons from and use them in new rounds of innovation. We differentiate here between two key capabilities.

- f) Capability to combine in one organization incremental and radical innovation. This is what has been labelled as ambidexterity or ambidextrous organizations (see Tushman and O'Reilly III) or the capability to combine exploration with exploitation (March, 2001). The capability of an organization to start in time cannibalising on what essentially is core business is inherently difficult. However, as some service innovations can be created with much shorter lead times (as compared to complex manufacturing innovations) the threat of an incumbent being overtaken by a new entrant is at least as real in service-dominant innovations.
- g) Capability to reflect, codify and adapt (innovation) management & practices. As the act (or should we say art) of managing service innovation is a complicated one and up until today there are not that many standard approaches and tools to be used, reflecting, learning and constantly adapting service innovation management practices is a key capability. As with the previous capability, this type of capability is needed in manufacturing innovation as well, but here the codified practices and learning from managing what in most cases is a more organizationally concentrated activity are much better codified. In fact we are proposing that a deliberate learning cycle in managing service innovation emerges and managing service innovation develops into an organizational routine (Damanpour et al, 2009).

#### TOWARDS A FRAMEWORK FOR MANAGING SERVICE DOMINANT INNOVATION

In this paper we developed a new framework for describing and analysing different types of service innovations. Building on previous research and case studies we created a framework with six dimensions for mapping service innovations and seven key capabilities for managing service innovations (see table 3 below). The next phase in our research will be the refining of the framework and testing it for a larger set of case studies. Key research issues include analysing individual capabilities in relation to innovation performance and differentiating and refining the mix of capabilities required according to firm size, industry and type of market.



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