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▶ **To cite this version:**

Xavier Pavie, Eva Hsu, Hanns Justus Tillman Rödle, Raquel Orozco Tapia. How to Define and Analyze Business Model Innovation in Service. 2013. hal-00921420

HAL Id: hal-00921420

https://essec.hal.science/hal-00921420

Preprint submitted on 20 Dec 2013

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How to Define and Analyze Business Model Innovation in Service

Research Center
ESSEC Working Paper 1323

2013

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ESSEC
BUSINESS SCHOOL

HOW TO DEFINE AND ANALYZE BUSINESS MODEL INNOVATION IN SERVICE

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Abstract: This research deals with the process of business model innovation in services. Definitions and explanations of both general innovation terminologies as well as specific service related once will be given and discussed. Moreover, reasons and implementation strategies will be identified and discussed. Last but not least a case will be elaborated how innovative companies in products can become innovative in services.

Keywords:

business model, business model canvas, business model innovation, innovation management, radical innovation, incremental innovation, change management, innovation strategy, service management, service innovation

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1. Introduction

"Everyone knows that innovation is a core business necessity. Companies that don't innovate die. This is not news."- Chesbrough H. , 2006

In recent years, innovation and the management of innovations has been brought not only to society's attention, but also corporations. A couple years ago "business as usual" was been the maxim for most companies; today many senior managers admit, "business as usual is soon no business at all". Therefore, there is a rising interest of companies to innovate in order to remain competitive.

Beyond classical product innovation, firms are also beginning to recognize the power of business model innovation. Business model innovation can help firms generate or create value in their current business practices, enter a new market or capture value from needs unfulfilled by common products or services. For many firms, be they service or product oriented, business model innovation represents a key for success.

The following research paper will focus on business model innovations in services both in theory and practice. Moreover, it will provide an overview of definitions and explanation of innovation and types of innovation. It will elaborate on the reasons and goals corporations follow when using business model innovation. Also the paper will cover how corporations can implement business model innovation. Lastly, it will provide case studies about companies shifting from being innovative in products towards being innovative in services.

2. Scope of Research

The data for the study will be based on scientific literature, which aims to provide the support for the research questions. The following tablet describes inclusion and exclusion criteria for the research.q

Inclusion Criteria:	**Exclusion Criteria:**
1. Business Modell Innovation in Services 2. Innovation 3. Business Model 4. Innovation Process Management 5. Services	1. Manufacturing 2. Production 3. Product 4. Product innovation

3. Research Methods

The study of current definition, methods as well as processes for innovation management, innovation process management as well as business model innovation in services will be conducted through analyzing the already existing researches as relevant articles and case studies. The main goal of the theoretical research is to find and fill potential gaps in the already existing research and draw a conclusion for service oriented corporations.

4. Theoretical Research

4.1 Innovation Management and Types of Innovation

4.1.1 What is Innovation?

Innovation has often been associated with creativity and ingenuity. One of the Oxford English Dictionary's main definitions for innovation is "*the introduction of novelties*."[5] However, innovation in business is not so simple. The Oslo Manual defines innovation in business firms as "*the product, process, marketing method or organizational method must be new (or significantly improved) to the firm[s]*"[6], while Kline and Rosenberg claim that the "*process of innovation must be viewed as a series of changes in a complete system…"*[7]. Freeman and Soete distinguish innovation from invention by defining it as "*the creation of a new idea and its reduction to practice - and it includes all the activities required in the commercialization of new technologies"*.[8]Amongst these different definitions of innovation, the most important idea is that innovation must be *new* or a *novelty* to a firm to be considered innovative. Ideally, innovation should help firms stay competitive, or even pull ahead in their respective industries or markets.[9]

4.1.2 Incremental and Radical Innovation

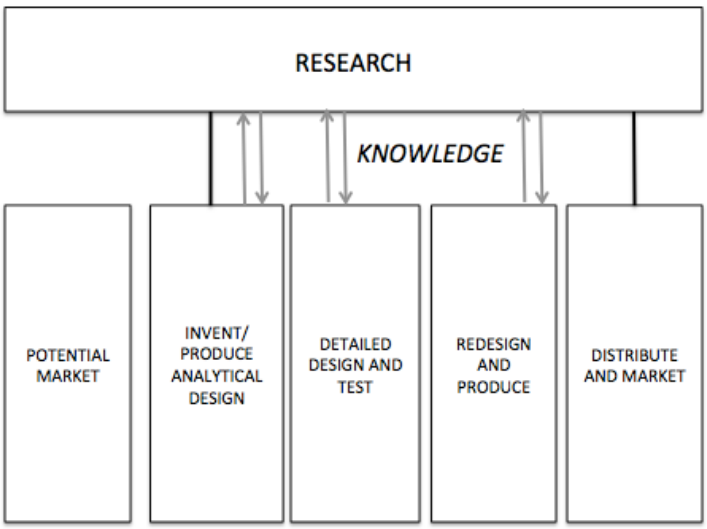
There are two categories of innovation: radical and incremental, which were originally created by Joseph Schumpeter (OECD/Statistical Office of the European Communities, 29). Radical innovation is an innovation that breaks entirely with the past. It is a brand new concept or product. It is an idea that has not been seen in the firm, market or elsewhere. It is generally considered to be higher risk and requires much more resources. Incremental (or ordinary) innovation is innovation that has evolved from previous innovations and does so much more slowly and naturally, such as generational changes to products or services. It is generally to be considered lower risk and requires fewer resources. Most types of innovation can be classified as radical or incremental.

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[5]OED Online: 2013
[6] OECD/Statistical Office of the European Communities, Luxembourg 2005: 46
[7] Kline and Rosenberg 1986: 275
[8]Dogson, Gann, & Salter, 2008
[9] OECD/Statistical Office of the European Communities, Luxembourg 2005: 29

4.1.3 Innovation Models

The original linear model regarding innovation process management was simple; it was seen as a step-by-step process, starting from research and development, and then moving onto product and then finally development. Kline and Rosenberg were disinclined towards the linear model since it does not take into the account the complexity of a firm or business; it also assumes that innovation is, as the name suggests, linear with an end goal rather than something constantly evolving.[10] As discussed earlier, the different types of innovation are sometimes linked and difficult to categorize and typify. Kline proposed a chain-linked model whereby market need drives research and design, redesign and production and finally distribution with complex links and between all the processes to ensure that knowledge is being fed throughout the process to fulfill the market need that was identified.



Note: Adapted from "An Overview of Innovation" by Stephen J. Kline and Nathan Rosenberg in *The positive sum strategy: Harnessing Technology for Economic Growth,* p. 249.

As we can see from the diagram, from invention to distribution, knowledge is fed between research and each step, feeding each section and driving innovation an "alongside development process."[11] The model, as we can see, is driven by an idea or a research, it is driven by a need. This need can then be fed into the following steps, which all require knowledge. Knowledge, from training sessions, skilled employees or best practices integrated into a firm, or even externally from partners, competition

[10] Kline and Rosenberg, 1986: 287-289
[11] Kline and Rosenberg, 1986: 291

and research, can feed into this model to create an innovative process that is "structured chaos." Kline and Rosenberg admit that this is mostly a top-level model (Kline and Rosenberg, P. 293), but it does point out a number of things, mostly that innovation is ever evolving and uncertain.

4.1.4 Business Models and Service Industry

Freeman and Soete's definition concentrates on bringing ideas into practice. Organizations can use and combine technological and market opportunities in order to create differentiated innovative products and services; however the focus of Freeman and Soete's definition clearly lies on technological innovation. This paper will elaborate on the importance and opportunities of business model innovation in services.

4.1.5 What is service innovation?

What is service innovation? To understand what it is and how it works in business models, we must first define what "service" is. According to relevant literature, service is an intangible commodity, such as accounting, banking, cleaning, consultancy, education, insurance, expertise, medical treatment, or transportation.[12] Since services mostly cover intangible goods, in terms of types of innovation, process innovation is most applicable.

4.1.6 What is a business model?

Second of all, business models need to be described and defined. It is important to understand the following: no matter what market a business organization is competing in , it will - either implicitly or explicitly - create and apply a business model. A business model can be defined as the architecture and mechanisms of the actual value creation created by an organization. "*The essence of a business model is in defining the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit*."[13]

Coles and Mitchell also identify a business model as a combination of "what", "who", "when", "where" "why", "how" and "how much" that can be used by an organization in order to provide services and products to its customers, and also to develop

[12]Business-Dictionary, 2013
[13]Teece, 2010

resources and capabilities.[14] According to Osterwalder, business models are *"the rationale of how an organization creates, delivers and captures value."*[15] In other words, it is the way by which an organization earns money and delivers value. Due to the complexity and limitation of this research an overview of different definition of "business model" is given in appendix 1.

Shafer et al. analyzed and compared 12 definitions in established publications between 1998 and 2002 regarding business models; they identified 42 different business model components which cover unique building blocks or elements.[16] An overview of these components may be found in appendix 2. By categorizing, identifying patterns and establishing related groups, Shafer et al. could identify four major categories, as seen in the illustration below: strategic choices, creating value, capturing value, and the value network.[17]

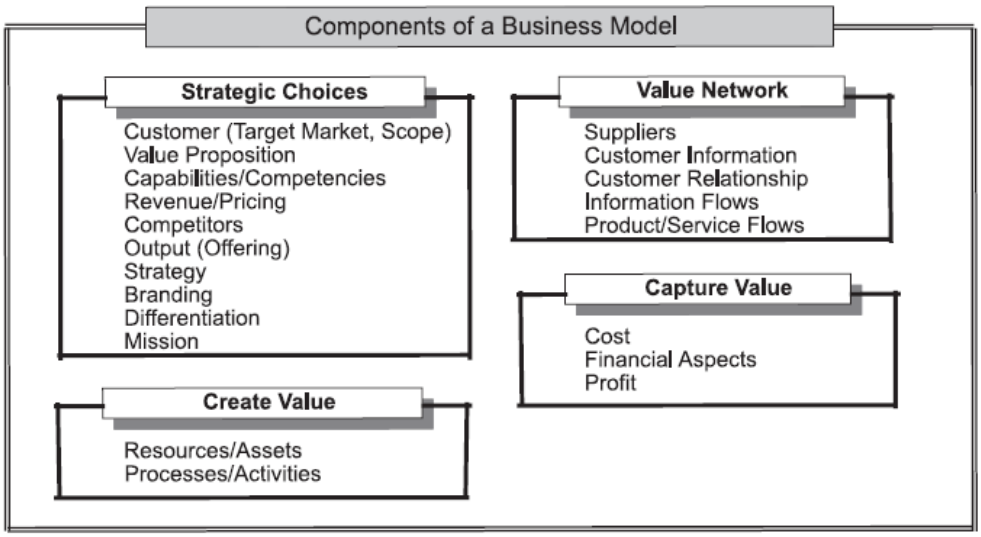


Illustration 2: Components of a Business Model (Shafer, Smith, & Linder, 2005)

[14]Mitchell & Coles, 2004: 3
[15]Osterwalder & Pigneur, 2010
[16]Shafer, Smith, & Linder, 2005
[17]Shafer, Smith, & Linder, 2005

4.1.7 Types of Innovation

Aside from service innovation, there are four main types of innovation within a firm: product, process, marketing and organizational. These four main types were defined in the Oslo Manual in Chapter 3.[18]

4.1.7.1 Product Innovation

Product innovation, like its name suggests, is the innovation of a product, whether it is new or a great improvement on a pre-existing one with respect to its intended use or design. Product could refer to an object or a service. A radical product innovation would be something like the iPod when it was first released, a stylish digital music player that did not require external input devices, such as a CD or a cassette tape. An incremental product innovation would be something like the iPhone 4, which was a generational change to a pre-existing product. It is important to note that service innovation is not product innovation, even though some organizations may offer a service as a product.

4.1.7.2 Process Innovation

Process innovation is the innovation within a firm in regards to their production or delivery methods. Ideally, process innovations should reduce costs per unit or increase quality of service, speed of delivery, or overall, increase efficiency within a firm. Unlike product innovation, process innovation is more concerned with how something is created rather than what it creates. For example, the shift to email was a radical process innovation since it was an improvement in communications and speed. As delineated before, service innovation is a subset of process innovation.

4.1.7.3 Marketing Innovation

Marketing innovation is the innovation of a method of marketing that the company has not used before and can include the product design, packaging, price and overall marketing scheme used to market a specific product or firm. By Marketing innovation can be divided into four further categories: product, placement, pricing and promotion.

Marketing product innovation, be it radical or incremental, can involve concepts. Rather than being concerned with the traditional idea of a "product" as defined by

[18] OECD/Statistical Office of the European Communities, Luxembourg 2005: 47-52

McCarthy, it is the idea that a product concept can be innovative. It can include design, packaging or form, but do not alter the products fundamental use or the product itself. This is an important distinction to make from product innovation.

Marketing mix refers to "placement" when identifying a sales channel. Marketing placement innovation is primarily about the introduction or change of a sales channel, such as an online store or product licensing.

Marketing pricing innovation is not about responding to the economy, seasonal changes or pricing wars, but rather, creating new strategies in pricing to promote a product or service. Marketing pricing innovation deals primarily with to do with how to attract and retain consumers by using innovative methods, be it a change in pricing methodology by using demand or a package deal offer that was not included previously.

Lastly, marketing promotion innovation is not about creating a concept, but innovating a concept that has not been used before. For instance, Old Spice used their spokesperson, Isaiah Mustafa, to respond to tweets and comments on YouTube while in character as "The Man Your Man Could Smell Like." It was a media campaign that outperformed the brand's television ads[19].

Marketing innovation is complex since it has many elements, some tied with traditional marketing and some tied with product and process innovation. What is clear, however, is that all four types of marketing innovation are inextricably linked to one another; you cannot change one of these marketing innovation categories without affecting the other three categories, to varying degrees. For instance, if a firm were to change the packaging of a product, they would also need to change in incremental or radical ways their strategies for placement, pricing and promotion to ensure that a marketing strategy, be it radical or incremental, is cohesive.

4.1.7.4 Organizational Innovation

Lastly, organizational innovation is a change in method in how the firm does business, be in internal or external. This can be a change in how a workplace learns

[19]Learmonth, 2010.

and relates with people internally and externally. For instance, a change in standard operating procedures, such as implementing an internal tracking system and training employees to use it, is an organizational innovation since it allows employees to communicate more effectively. Radical and incremental types of organizational innovation are hard to characterize as relationships and people, by nature, are changeable, and thus practices will change as well. It is probably easiest to say that radical organizational innovation is when there is a shift in business practices or relations that affects not just the company's employees, but also their way of thinking and expands their knowledge base quickly rather than gradually whereas incremental organizational innovation is when there is a shift that affects the organization, but on a more micro level rather than macro, such as the implementation of employee training workshops and activities.

Classifying innovation is not easy either and there are many innovations that stretch across more than one type, or types of innovation lead from one to another, such as the creation of a new sales channel, which may require new logistics as well as methods of marketing.[20] It is important to note that service innovation is not product innovation, but rather, a

4.1.7.5 Uncertainty in Innovation

As the categorization of innovation, as well as the various models have shown, innovation is not necessarily as easy as "creating," but rather, the process of creating novelty continuously in an organization and managing it so that each process creates novelty, be it in an incremental or radical fashion.

4.2 Business Model Innovation in Services

4.2.1 Goals and reasons of business model innovation in services

There is evidence for a large move throughout industry to the provision of services. Even traditional manufacturing organizations are adopting the trend of "servicizing" their businesses. There are a number of possible explanations for this: (1) increasingly stable and higher profits for companies that engage in "servicizing" their business or (2) more and more businesses are confronted with shrinking markets and an increase of commoditization of products. Old-fashioned businesses often consider

[20] OECD/Statistical Office of the European Communities, Luxembourg 2005 :53

"servcicizing" as a path towards profits, growth and increased market share.[21] This transformation from manufacturing to indubitably services-based industries can be witnessed mostly in the US but also in Western Europe.[22]Bretthauer illustrates this change even more dramatically*:"The number of U.S.workers employed in the service sector has gone from 3 out of 10 in the early 1900s, to 5 out of 10 in 1950, to approximately 8 out of 10 today."*[23]

We can see that there is a significant trend of companies shifting from traditional manufacturing products and goods business towards a service oriented businesses. Moreover, in light of the importance of how a business is done, the business model, gains more importance. But in order to stay competitive and profitable innovations within these trends are necessary.. It also is important to understand why firms are focusing on services and how business model innovation can help them to gain competitive advantages.

This shift can be attributed to a variety of reasons. One reason may be that organizations that concentrate on servicizing, while extending the efficiency and valuing of their simple products is goods, may become more profitable and sustainable. It also allows companies to focus on additional issues such as cost structures or their effect on the environment. In other words, todays organizations can benefit from "servicizing" business models.[24]

Shafer et al suggest another reason for this shift to servicizing, which is the prosperity and survival of organizations is directly linked to their ability to build and apply a suitable business model in order to capture and generate value. Moreover, *"[b]usiness models provide a powerful way for executives to analyze and communicate their strategic choices."*[25]

Consequently, a product or service by itself cannot create value for a corporation. In other words, unless a firm can apply a suitable business model, a product or service will not generate economic value. In most cases, a new product or service can be commercialized by a firm's current business model. However, firms sometimes need

[21]Rothenberg, 2007
[22]Gallouj & Windrum, 2009
[23]Bretthauer, 2004
[24]Rothenberg, 2007
[25]Shafer, Smith, & Linder, 2005

to innovate their business model due to changing markets or particularities of a certain product or service.[26]

This is in line with the recent increase of academic and professional interest in regards to business models, even though business models have always existed within organizations. Furthermore, business models and business model innovations become drivers of success, especially for companies that penetrate the market of services. For instance, companies like Dell, Amazon, and Apple I-tunes focus on their business model and how to create revenue and build the organization around it. Also, the findings of Sosna et al. suggest that business model changes are considered one of the most sustainable forms of innovations.[27]

Therefore, in most literature it is unquestioned that technological innovation is "*lionized in most advanced societies; that* [it] *is a natural and desirable reflection of the values of a technologically progressive society."*[28]

Teece also indicates, that the creation of new organizational forms or methods, such as business model innovation, is important for both society and organizations. Despite the fact that these innovation may seem less heroic, Teece even credits business models with "*if not greater importance to society, and to the business enterprise"* than technological innovation, since *"[t]he capacity of a firm […] to capture value will be deeply compromised unless the capacity exists to create new business models."*[29]

"So it makes good business sense for companies to develop the capability to innovate theirbusiness models."[30]

The importance of business models and business model innovation is due to the fact, that *"[c]ompanies commercialize new ideas and technologies through their business models."* Despite of many companies' large R&D funds, which lead to exploration of new technologies, such companies still spend little attention towards the innovation of

[26]Chesborough H, 2010.
[27]Sosna, Trevinyo-Rodríguez, & Velamuri, 2010
[28]Teece, 2010
[29]Teece, 2010
[30]Chesbrough H. , 2010

their business models. "*This matters - the same idea or technology taken to market through two different business models will yield two different economic outcomes."*[31]

Given the market shift towards services business models and business model, innovation gain importance and relevance for organization in order to capture or secure a competitive position within a market or to enter or establish new markets. Nevertheless, it is clear that business models and business model innovation is crucial in services in order to compete. In the following it will be described how to implement business model innovation in services.

4.2.2 Implementation

> *"As noted, even an inventor as celebrated as Thomas Edison had a questionable track record in terms of business model innovation, abandoning the recording business and also failing to get direct (rather than alternating) current adopted as the industry standard for electricity generation and transmission."*[32]

Unless organizations are able to successfully commercialize their innovation – as mentioned in the definition of innovation- they will fail to succeed with their inventions.

Chesbrough points out the importance and necessity of innovation in today's business. He proposes what whether a company is in (1) manufacturing industry, (2) fast moving consumer goods industry or (3) the service industry, business model innovation should be done by upper management across different departments (such as marketing, business development, general management, etc.) in order to succeed.[33] Therefore, the question that comes to mind is: how can businesses create and leverage business models and business model innovation?

In order to implement a new business model, as well as innovate or change an existing one, companies need accomplish many things.

Rothenberg (2007) suggests strategies that can be divided into six categories. They are as follows:

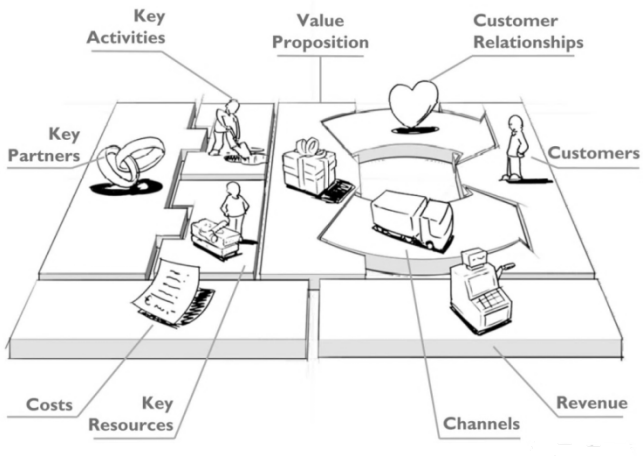
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[31]Chesbrough H. , 2010
[32]Teece, 2010
[33]Chesbrough H. , 2006

- Organizations should first of all build on existing strengths
- Organizations should redefine the basis for profit in contractual agreements
- Organizations should communicate the new business model
- Organizations should change incentive
- Organizations should acquire new skills and
- Organizations should highlight environmental advantages.[34]

Due to the scope and focus of this research, it is not possible to elaborate further on these strategies. However, in order to innovate their business models, organizations need tools to assess their current business model and create new ones.

One possible way of doing so is by using Osterwalder's "Business Model Canvas". It allows companies to actively create and assess new or already existing business models. The "canvas" is defined as nine building blocks upon which one can build a business model. These nine blocks are: customer segments, value proposition, channels, customer relationships, revenue streams, key resources, key activities, key partnerships and cost structure. As we can see, customer segments are essential to every organization, since customers are the reason for the existence of the organization. When analyzing customer segments it is essential to keep in mind that different customers may require different value proposals, channels and relationships.[35] This can decide if a business model is efficient and successful. The following will describe the different building blocks - the "Business Model Canvas".



Note: Taken from "Business Model Generation" by A. Osterwalder, & Y. Pigneur, (2010).

[34]Rothenberg, 2007
[35]Osterwalder & Pigneur, 2010

The value proposal is essential to every business model. The value proposal can be defined as the benefits created by services and products. The ability to provide exceptional value or benefits towards customers is crucial for the success of one organization over another. Core elements of value provided are: convenience, price, design, brand, costs, and risks.[36]

Another building block of any business model is the channels a company is employing. Most of the performed functions are: (1) the creation of awareness in regards to services or products, (2) helping potential customers evaluate products or services, (3) enabling customers to purchase, (4) delivering value to customers, and (5) ensuring post-purchase satisfaction through customer support.[37]

Customer relationships build an additional block of any business model; companies need to define the type of relationship customers prefer. Customer relationships can be automated or self-service, personal, and single transaction or subscription. In order to enhance customer relationships, these have to be applied to the service or product in a suitable way.[38]

The revenue block represents the approach of how the organization will actually earn money. Therefore, one has to distinguish between one–time customer payments and recurring payments for products, services and after-sale services. The latter is essentially for service organizations. Furthermore, there are outright sales, lease or rent, service or usage fees, subscription fees, licensing, brokerage fees.[39]

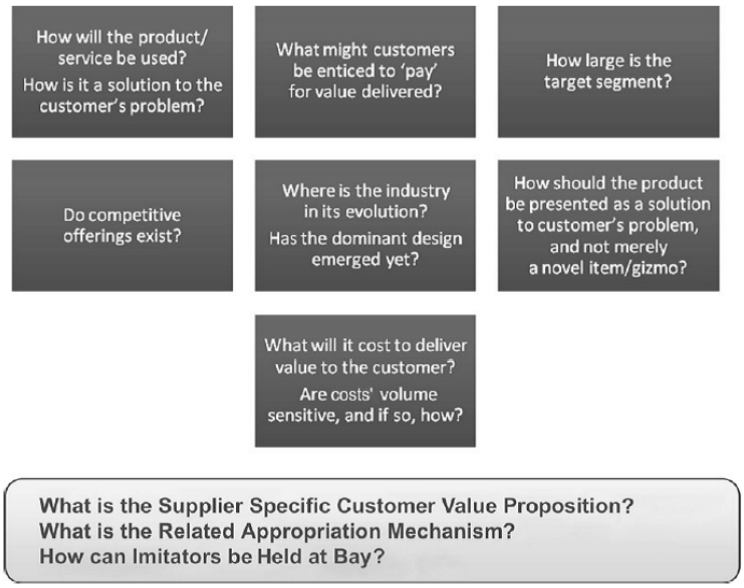
Key resources represent the most important asset to an organizations business model, which can be segmented in four different types: human, physical, intellectual, and financial. The key resources go along with the key activities a company has to focus on when implementing a business model. Key activities are: making, selling and supporting. Furthermore a company has to consolidate key partners. Key partners are the network that helps the organization making the business model effective and efficient.[40]

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[36]Clark & Osterwalder, 2012
[37]Clark & Osterwalder, 2012: 38
[38]Clark & Osterwalder, 2012: 39
[39]Clark & Osterwalder, 2012,: 40-41
[40]Clark & Osterwalder, 2012: 42-44

Last but not least, organizations need to control and access costs. The cost block represents things such as key resources that need to be acquired, costs of performing key activities and working with key partners all incur costs.[41]

Another way of assessing current business models is presented by Teece's framework on how to evaluate new or provisional business models. The goal is to assess the new business model "[…] *against the current state of the business ecosystem and also how it might evolve."*[42] The following illustration summarizes the questions managers should consider when evaluating business models.



Taken from "Business Models, Business Strategy and Innovation" by D.J. Teece (2010)

Despite acceptance, service companies are often still facing obstacles when introducing innovation. These obstacles include things like economic costs, long pay-back and risks. Moreover, internal factors of service firms have significant negative impact on the innovativeness of their services. In western cultures, external factors, such as regulatory policies and risk of imitation, also have an affect the innovation processes of service oriented organizations negatively. However, external factors are hard to influence since those factors are not under the firm's control. Thakur and Hale suggest that in order to overcome internal problems, organizations need to introduce training on innovation management for key staff alongside upper and middle management. Moreover, they also indicate that too many internal regulations, e.g.

[41]Clark & Osterwalder, 2012: 45
[42]Teece, 2010

rigid corporate culture, prevent the free development, limit access and exchange of knowledge, and therefore, negatively influence innovation of service processes.[43]

Consequently, business models in innovation are hard to implement, and yet critically important to service companies. In order to achieve business model innovations, companies have to identify and appoint internal leaders and champions of innovations. Those have to manage the outcomes of innovation processes and to who generate new and improved business models. In addition organizational culture must be shifted towards an open and innovative culture, where new ideas and approaches are welcome. More importantly, it needs to be possible to embrace new models while executing the current operational business models until the final transition towards the new business model is possible. When these components are fulfilled, business model innovations in general as well as in services can be implemented.[44]

Once companies understand their own business models, they are able to innovate und adjust their business for the challenges they face now and in the future. The following part will give an exemplary case of a business shifting from an innovative company in product to innovative company in service.

[43]Thakur & Hale, 2013
[44]Chesbrough H. , 2010

4.3 From innovative company in product to innovative company in service

As businesses evolve, innovation in companies is necessary so they become sustainable, and to innovate, they must also be one of the leaders in reinventing business models. Going from innovative company in product to innovative company in service means adding value to their products; the company must offer consumers something different from what competitors are offering while anticipating consumer and market needs.

> *"In this perspective the opening-up of business models and the rise of business services are flip-sides of the same coin. Their appetite for growth and the pressure of competition forces firms to direct their capital to the most promising business opportunities. This implies a continuous review of core-activities and a subsequent restructuring process".* [45]

James Brian Quinn explains that firms are transforming into "intelligent enterprises", which are companies that can rent almost every conceivable activity as a service; at the same time, these companies can focus on areas of under-served consumer needs or underused potential of resources[46].

4.3.1 A study of motor company Ford

In order to meet consumer needs that have not yet been fulfilled in the market, Ford decided to fully utilize their resources and opened a research and development lab in Palo Alto in 2012, whose focus was to create additional services that improved upon the ones that they were currently offering. In order to consider the product and market, Ford asked the R&D team to regard cars in the same way they would regard the iPhone-iPad eco-system. "With software updates, we keep vehicles fresh and relevant, which is compelling for consumers spending tens of thousands on a car they expect to keep for years," [47] said the Chief Technical Officer Paul Mascarenas. Mascarenas said the company decided about a year ago that it needed a bigger presence in Silicon Valley. "This is a very natural extension into one of the most innovative communities in the world,"[48] he said.

The lab is working on ways to better integrate phones and other personal communication devices into cars alongside upgrading safety systems where the car

[45]Quinn, 1992.

[46] Ibidem.

[47] Durbin, 2012.

[48]Ibidem.

would alert drivers about their proximity to another car. Examples of additional features added to a car that would fulfill consumer needs are:

- Identify deals at nearby restaurants and retailers based on driver's preferences
- Enable voice commands while using GPS maps, audio books or other similar applications
- Alerts drivers if it senses a lane change without a signal and nudges the car back into the lane if necessary

Mascarenas also revealed that there are two apps that Ford is currently studying: [1] an application that would find an open parking space and reserve it for the driver and [2] an application that would improve weather reporting by transmitting signals when a car's rain-sensing wipers are triggered. The lab will also study larger issues, including population growth in developing countries like China and India, and how best to handle traffic in those countries. The lab will work with Ford headquarters as well as its design studio in Southern California and its office at Microsoft Corporation in Washington. Microsoft and Ford jointly developed Ford's Sync voice-activated entertainment system and My Ford Touch touch-screen dashboard[49].

K. Venkatesh Prasad, a senior technical leader at Ford said that the company considered opening a Silicon Valley office in the past but the technology wasn't ready. Now, he said, the Sync platform makes it easier and faster to reprogram the car and update it with new applications. Ford introduced Sync four years ago. "*The car is finally a platform*," Prasad said. Customers seem to be responding favourably to this sentiment. Third-quarter pretax earnings in 2012 were a record $2.2 billion, and over half of Ford owners cite the connectivity system as a big reason for their purchase. So it makes sense that when Ford sends out USB drives with software updates, 80% of customers use them.[50]

4.3.2 The challenge of "servicizing":

The servicizing concept is based on the idea that what customers want from products is not necessarily ownership, but rather the function that the products provide or service they deliver. The underlying assumption is that the value of a product, in

[49] Ibidem.
[50] Ibidem.

many cases, lies in its utilization and its functional benefits to the customer. In this case, the very notion of economic value is changing from exchange value to utilization value.[51]Servicizing, then, could be consider as an operation which satisfies customers needs by selling the usability, functionality, "non tangible" side of the product rather than the artifact itself.

"*This new approach is part of the larger move throughout industry to the provision of services, which, evidence has shown, is linked to higher and more stable profits".*[52]Rothenberg believes that this is no small challenge to industrial societies; companies are often in the best position to help customers reduce consumption — even of their own products. Rothenberg further explains that by "servicizing," suppliers may change the focus of their business models from selling products to providing services, thereby turning demand for reduced material use into a strategic opportunity. A company that servicizes creates values, especially when they not only create in a radical method, but also incrementally in terms of enhancing current services.

"In addition, some argue that because services are more difficult to imitate than products, they are a source of competitive advantage".[53]

Service innovation is, not unlike process innovation or some forms of product innovation, the creation of something intangible. It may consist of methods, actions and movements of each individual involved. Services are, by definition, interactive, and they have tended almost naturally to organize their innovation activity around an interactive model, that is, one in which actors from different departments interact[54]. In accordance with Rothenberg, little has been documented about the process of executing this strategic change; however there are companies that have accepted this challenge and begun by shifting their business models with the understanding that the result could potentially be highly profitable.

4.3.3 The profits of servicizing

The change in the strategy from innovation in product to innovation in service not only improves client offerings, but also brings to the company other benefits. The

[51]Stahel, 1994: 188–190.
[52]Sawhney, Balasubramanian and Krishnan, 2004: 34-43.
[53] Oliva, R. and Kallenberg, R, 2003: 160-172.
[54] Kline and Rosenberg, 1986: 275-305.

company Hewlett Packard (HP) for example has defined "tomorrow's sustainable business" as one in which it shifts from selling disposable products to selling a range of services around fewer products[55]. Their aim is to achieve environmental benefits by encouraging innovative design and recycling technologies driven by producers. HP has been designing products for a number of years using the concept of extended producer responsibility. They are equally concerned about the design impacts on the recycling cost of a product at the end of its life in regards to energy consumption and hazardous material. HP therefore assumes that its products will be easier and cheaper to recycle than competitors´ products and that it will be able to pass on this cost advantage to its consumers[56]. The change in revenue after this innovation implementation is not only beneficial for the company, but it also proves how a company could have a responsible, positive impact on the environment while creating benefits for consumers and the company itself.

4.3.3.1 A study of Interface Inc., a manufacturer of modular carpets

Interface Inc. is a company that is committed to sustainability and doing business in ways that minimize the impact on the environment while enhancing shareholder value. The global modular carpet company has pioneered sustainable business practices since 1994, and just released data updating its metrics portfolio to include information on progress towards environmental and social goals[57]. *"We know our EcoMetrics data tells us how efficient we are, but our footprint tells us how effective we are,"*[58] explains Erin Meezan. Interface's project,"I Am Mission Zero," is proof that they are taking their environmental responsibility very seriously. The project captures the diverse ways in which the company's values are manifested in its local markets, and in which data upon which a social engagement baseline is being developed[59].

Meezan affirms:

> *"[O]ur mission is carried out every day in factories around the world and in local communities by people who are bringing Ray Anderson's sustainability vision to life, yet we didn't have a way to track or measure*

[55] Preston, 2001: 26-37.
[56] Donald, C. and Waters: 247.
[57] Interface, 2013
[58] Ibidem.
[59] Ibidem,

that impact," and *"Over the past two years we have been working to document and celebrate our unique culture and to find ways to continually improve employee engagement, specifically around the idea of accelerating innovation."*[60]

In their most recent report released by Interface Inc. includes the following data:

- The carbon footprint of the average Interface product is down 19% from 2008
- 49% of the total raw materials used by the company in 2012 were recycled or bio-based
- In 2012, Interface's ReEntry® 2.0 recycling program diverted 15 million pounds of carpet and carpet scraps ,bringing the 18-year total for ReEntry 2.0 to 268 million pounds of scraps diverted from the landfill
- Energy use per unit of production is down 39% from 1996. Renewable sources provide 36 %of the energy Interface uses
- Greenhouse gas emissions per unit of production from manufacturing facilities are down 41% from 1996. Direct use of green electricity in Europe, improved efficiency and process changes have contributed to this reduction
- Water intake per unit of production is down 81 percent since 1996.

Interface has made significant progress toward its pledge to provide EPDs (Environmental Product Declarations that detail the entire life cycle impact of a product) on all their standard products. Currently there are 48 registered EPDs for their products made in Europe, US, Australia and Thailand. Interface's sustainability journey is marked by measureable achievements. They publish progress reports quarterly. *Our commitment to sustainability has generated considerable results across three key areas: Footprint Reduction, Product Innovation and Culture Change*.[61]

4.3.4 A unit of business

McGrath has said that servicizing is "*finding a new unit of business*" and that it's something a lot of companies are looking to do. *"The most successful companies capture the absolute greatest amount of customer spending, or create far lower costs for themselves by altering what they sell".*[62] Likewise, Rothenberg thinks that businesses are more focused than probably the average consumer on economics.

[60]Author unknown, April 2013.
[61] Interface, Inc., 2013. Op. Cit.
[62]Gunther McGrath and MacMillan, 2005.

They're willing to change behavior to save costs. As society places more of an emphasis on innovation and the environment, products and technology are evolving more quickly than ever before. "Software as service" companies are the mainstream frontrunner of the servicizing trend in the tech sector. When products do not sell as well as companies foresee, software companies are left with services-oriented and maintenance revenues. If times are sufficiently bad, or if their markets are sufficiently saturated with products, then the products companies may become services companies[63]. Servicizing allows companies to gain more consumers for each product, and allows customers to keep up with the pace of innovation. Companies that view time as a commodity and opportunity to provide a service that maximizes free time for consumers could be on to something[64].

Increasingly, companies are learning the benefits of servicizing hardware, as well as software. IBM, Dell and HP all offer programs that allow companies to lease PCs. Companies eager to stay on top of the technology curve while avoiding tying up funds with large capital costs, it is a positive solution. As manufacturers roll out newer technology, they trade out newer models and either recycle or refurbish and resell the previous models, resulting in cost savings for consumers and waste-reduction benefits for all[65].

[63]Cusumano,.2003: 10.
[64] Rothenberg, 2003: 40.
[65] Rothenberg, S. Op. Cit.

5. Conclusion

Change is inevitable, and with the current pace of technology and development, it is becoming increasingly difficult for companies and businesses to continually innovate and continually change their processes. However, as studies have shown, business model innovation can be a key driver of success in ensuring competitiveness and sustainability. It is also important for companies to create not just new business models for innovation and management, but also to do so responsibly. Ultimately, as we can see from Interface, HP and other technology based businesses, service firms looking to innovate their business models should look towards not just fulfilling a consumer need, but also creating a sustainable service model that reduces material use while not decreasing consumer demand or the ability to fulfill it. Innovation, which is the creation of value, should not only create value for businesses, but also for society; businesses that innovate should also ask themselves, "*What am I doing for society*?" In turn, this inquiry *changes shape according to the form of innovation*.[66] This is because *innovation is not only economic.*[67]

Perhaps it may be more prudent to say that innovation must happen, but we must also consider its cost.

> *"The responsibility of innovation lies in the consideration of situation within a value system shared by all the actors impacted by that process"* [68]

In other words, how can we do things differently while doing them? Businesses should choose to innovate and create models that will, in effect, have a positive effect on the environment and take into consideration its future.

"The innovator is more particularly concerned by his responsibility for the world that does not yet exist but which will be impacted on and shaped from the innovations launched on the market. It is by its novelties, its launches of products and services that the face of the world is outlined".[69]

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[66] Pavie, X. 2013.
[67] Ibidem.
[68] Neuberg, M.1997.
[69] Ibidem.

Service innovation, which sells functionality and convenience to consumers rather than a product, is a step in this direction, as it reduces product waste and provides consumers with more value. However, how should companies move forward to, not just innovate, but do so responsibly? Companies who have servicized their business models have taken a step in the right direction in becoming more responsible in their practice and innovation. However managers who manage the knowledge feed in companies who innovate must be the ones who become "deliverers" of care. *"Innovation must come firstand then care must come first for organizations, leaders, and innovators."*[70]

[70] Ibidem.

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IV. Appendix

Appendix 1: Different Definition of Business Model by (Baden-Fuller & Morgan, 2010)

Table 1. What is a business model?

Authors	Definition	Focus of analysis includes	Notion of Model	Examples include
Teece	*How a firm delivers value to customers and converts payment into profits*	Situates the business model concept. Relates business model innovation to technical innovation.	Kinds and Types; Role Models	Swift meat packers, Sea Land containers, Netflix online DVD rental
Zott & Amit	*… a system of interdependent activities that transcends the focal firm and spans its boundaries.*	Emphasizes interdependencies beyond firm boundaries. Good design requires: Content (what), Structure (links) and Governance (who does what).	Kinds and Types	Ebay, Inditex (Zara), First Data corp, FriCSo (start up in lubrication)
Williamson	*… cost innovation business model offers advantages in radically new ways meaning more for less.*	How low cost business models from China (and India) work.	Role Models to follow	Shanghai Zhenhua Port Machinery, Haier refrigeration, Nano car- Tata
Gambardella & McGahan	*Business model is a mechanism for turning ideas into revenue at reasonable cost*	Business model innovation in high technology sectors that allows small firms to capitalise on their ideas.	Scale Models or short-hand descriptions	Many references including Google, Apple, Ideo, Yogitech + biotech start-ups
Itami & Noshino	*… business model is a profit model, a business delivery system and a learning system*	Puts learning centre stage, classification by firm systems	Role Models and Model Organisms	Toyota and Google
Yunus, Moingeon & Lehmann-Ortega	*A value system plus a value constellation*	A social business model that lies between for profit and charity	Role Models	Grameen Bank + Telenor, Veoila and Danone collaborations
Casadesus & Ricart	*The logic of the firm, the way it operates and how it creates value for its stakeholder*	Interfaces between business model, strategy and tactics	Models capable of manipulation	Ryan Air Telmore/TDC
Demil & Lecoq	*The way activities and resources are used to ensure sustainability and growth*	Dynamics of business model change over time	Model Organisms	Arsenal FC
Sabatier, Rousselle & Mangematin	*Cross roads of competence and consumer needs*	Portfolios of business models	Recipes	French biotech firms

Appendix 2: Components of business model definitions by (Shafer, Smith, & Linder, 2005)

	Timmers (1998)	Hamel (2000)	Afuah and Tucci (2001)	Amit and Zott (2001)	Weill and Vitale (2001)	Dubosson-Torbay et al. (2002)	Magretta (2002)	Rayport and Jaworski (2002)	Van Der Vorst et al., 2002	Hoque (2002)	Chesbrough (2003)	Hedman and Kalling (2003)
Context	E-Business	Strategy	E-Business	E-Business	E-Business	E-business	Strategy	E-Business	E-business/SCM[a]	Technology	Strategy	IS[b] and strategy
Components												
Value network (suppliers)	X	X			X	X			X	X	X	X
Customer (target market, scope)		X	X			X	X	X		X	X	
Resources/assets		X		X		X		X		X		X
Value proposition			X			X	X	X	X		X	
Capabilities/competencies		X	X	X		X						X
Processes/activities		X	X			X			X			X
Revenue/pricing	X	X	X			X					X	
Competitors								X		X		X
Cost						X	X				X	
Information flows	X			X	X							
Output (offering)				X				X				X
Product/service flows	X			X	X							
Strategy		X								X	X	
Branding						X				X		
Customer information		X				X						
Customer relationship		X				X						
Differentiation		X								X		
Financial aspects						X		X				
Mission		X								X		
Profit						X	X					
Business opportunities				X								
Cash flows					X							
Create value				X								
Culture										X		
Customer benefits								X				
Customer interface		X										
Economic logic							X					
Environment										X		
Firm identity										X		
Firm reputation										X		
Fulfillment and support		X										
Functionalities									X			
Implementation			X									
Infrastructure—applications									X			
Infrastructure—management						X						
Management												X
Product innovation						X						
Specific characteristics									X			
Sustainability			X									
Transaction content				X								
Transaction governance				X								
Transaction structure				X								

[a] Supply chain management.
[b] Information systems.

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ISSN 1291-9616

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