

# Mapping Service Mindsets in Manufacturing Companies

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## **MAPPING SERVICE MINDSETS IN MANUFACTURING COMPANIES**

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## **ABSTRACT**

This study adds to business model innovation literature by exploring the adaptability of dominant logics of corporate mindsets. The purpose is to analyze how a company can rethink itself based on the premises of servitization: how the mindset of a manufacturer can be reconfigured when changing the business model from product to service innovation and adapting a service logic for its entire business. A field study was conducted in the form of two workshops and interviews with middle-level managers of Vestas Wind Systems, a global wind turbine manufacturer. The study indicates that it is cognitively possible to change the business model of a manufacturing company. Furthermore, the results showed that mindsets can be mapped, but they change depending on the framing. Interestingly, each mindset possesses a different business-logic, as the components of the business model framework interact differently in a product than a service situation.

**Key words:** business model innovation; service innovation; mindset.

## INTRODUCTION

Business model innovation allows companies to incorporate novel opportunities and reshape the way of creating and capturing value (Chesbrough and Rosenbloom, 2002; Weill et al., 2005; Chesbrough, 2006; Johnson, 2010; Osterwalder et al., 2010; Teece, 2010; Chesbrough, 2011).

Chesbrough (2011) discusses a new type of business model, namely the service business model, and in comparison with product business model, encourages manufacturing companies to adopt this new way of thinking: “think of your business as a service business” (Chesbrough, 2011, p. 96) as a manner to overcome commoditization of their products. He affirms that alternative business models can be mapped using different tools, and mapping is the activity of looking into the combination of processes that exit into a company.

A manufacturer’s strategy of going towards services was coined by Vandermerwe and Rada (1988, p. 316) as “servitization.” Servitization has been researched from several angles: *definition of servitization* (Vandermerwe and Rada, 1988; Howells, 2000; Neely, 2008); *join supplier-customer productivity* (Grönroos and Pakke, 2010); *service supporting products (SSP) and service supporting customers (SSC)* (Mathieu, 2001; Bryson, 2010; Gremyr et al., 2010; ) *new types of offers: solutions* (Howells, 2000; Miller et al., 2002; Galbraith, 2002; Windahl et al., 2004); *new customer interaction* (Oliva & Kallenberg, 2003; Gebauer & Friedli, 2005); *challenging to adopt servitization* (Gebauer, Fleisch and Friedli, 2005; Neely, 2008); *strategic decisions* (Wise and Baumgartner, 1999). Nevertheless, servitization lacks a business model perspective, which is the motivation for this paper.

When defining business models, Linder and Cantrell (2010) describe them as mindsets present in managers’ manner of conducting business. These authors suggest that change can be brought into an organization in a more effective way by working with mindsets instead of organizational change.

Thus, the purpose of this study is to analyze how – and if - a company can rethink itself based on the premises of servitization: how the mindset of a manufacturer can be reconfigured when changing the focus from product to service innovation. Based on a single case study of Vestas Wind Systems, a collective data gathering is conducted in the form of two workshops with middle-level managers. The results pointed that mindsets can be mapped, but these changed depending on the framing of the business model. Each mindset possesses a different business-logic, as the components of the business model framework interact differently in a product than a service situation. Furthermore, in a service situation, there is a link between the value creation and value consumption part of a business model.

This article begins with a review of the literature on service innovation and business models, with the focus on servitization. Then it defines research questions and explains the choice of methodology, including the data collection and analysis techniques. Next, the key results answering the research question are presented. Finally, the discussion section identifies the key insights, clarifies the limitations of the research, suggests areas for future research, and draws implications for managers.

## SERVICE INNOVATION

Considered the main source of growth in nowadays’ economy (OECD, 2005), service innovation has drawn the attention of researchers and practitioners from both service and manufacturing sector.

The research on service innovation is divided into three schools of thoughts: assimilation, demarcation and synthesis (Droege et al. 2009), depending on the level of differentiation made between product and service. The demarcation perspective taken in this paper accentuates the unique characteristics of services and believes that innovating a service requires different tools than product innovation (Den Hertog et al., 2010). Zeithaml, Parasuraman and Berry (1985, p.35) explain in their article the four characteristics of services in comparison with products. These are intangibility, heterogeneity, perishability, and inseparability, which means that production and consumption happens simultaneously. An important number of researchers subscribe to these four idiosyncrasies, and even more underline heterogeneity as being the core of service innovation (Miles, 1994; Gallouj & Weinstein, 1997; Sundbo, 1997; Den Hertog & Bilderbeek, 1999; Howelles, 2004; Tether, 2004; Djellal & Gallouj, 2005; Nijssen et al., 2006; Droege et al. 2009; Vence et al. 2009; Grönroos & Pakke, 2010; Rubalcaba, Gallego & Den Hertog, 2010; Goffin, 2010; Grönroos, 2011; Ettlie & Rosenthal, 2011; Chesbrough, 2011). Heterogeneity emphasizes the co-production side of service innovation, meaning that a service cannot be innovated in the absence of customers (Sundbo, 1997; von Hippel, 2005; Gallouj & Djellal 2010; Goffin, 2010; Chesbrough, 2011; Ettlie & Rosenthal, 2011). Goffin (2010, p.77) talks about service as being “multifaceted” because this is shaped by the “customer’s expectations and perceptions” at a given moment.

Service innovation is not important only for the service sector, but manufacturing companies have begun to show an increasing interest in this type of innovation. Vandermerwe & Rada (1988) named this strategy *servitization*, and explained that companies were redefining their value proposition, by incorporating services in their offers. Researchers such as Howelles (2004), Grönroos & Pakke (2010), and Gremyr et al. (2010) explain that the focus has changed in manufacturing companies, shifting from “offering value, to creating value” together with the customer, which is considered specific for the service sector. Howelles (2004, p.25) uses the term “encapsulation” when speaking about services and goods put together to form solutions. Through encapsulation, products are surrounded by services creating product–service systems (Neely, 2008, p. 107). Bryson (in Gallouj & Djellal, 2010) describes the same phenomenon, naming the result “hybrid” products, as “a product that blends manufacturing and service processes and functions together to create value and to enhance competitiveness”. Services are used to produce the product: production-related services - all the service operations needed for giving the shape of the product; and also to help the customer in using it: product-related services. An interesting demarcation is made between “basic hybrid products”- customization of goods, and “pure hybrid products” where a good is transformed into a service.

In conclusion, servitization, part of the service innovation literature, suggests manufacturers to change their perception and attitude towards customers by emphasizing the co-creation of value. This implies that firms have to ‘overcome’ the product mindset where value is something delivered to the customer. However, few researchers have attempted to explain how the attributes of service innovation have been incorporated in manufacturers’ mindsets, and how the latter transform themselves into service providers.

## **FROM PRODUCT TO SERVICE MINDSETS**

Vargo and Lusch (2008) introduced the dichotomy between two business logics, named mindsets: good-dominant logic and service-dominant logic. According to them, the good logic is focused on “units of output (products) that are embedded with

value during the manufacturing (or farming, or extraction) process,” while service logic considers the “collaborative process of co-creation between parties” (p. 256).

The source of this distinction lies into the “recognition that customers are not interested in their (company’s) output, but rather in service capabilities of that output (Vargo and Lusch, 2008, p. 256). The same argument is made by Chesbrough (2011, p. 32), in his book *Open Service Innovation*, where he affirms “the shift towards services requires companies now to think about the lifetime value of their customers across the many transactions.” The author suggests that services gain the power of taking companies out from the commodity trap; therefore companies should not only adopt services as adds-on for their products, but also reconsider their entire business as being a service business.

However, adopting service innovation can be challenging for a manufacturing company, given the strongly embedded product mindsets and its business model (Oliva and Kallenberg, 2003; Gebauer, Fleisch and Friedli, 2005; Neely, 2008; Gopalani, 2009). Shelton (2009) explains that the unbalanced way of distributing resources results in impossibility of embracing service innovation: “manufacturing companies are using 50 % on product technology, 20% process technology, 10% enabling technology, 10% value, 5% value networks, and 5% customers” (Shelton, 2009, p.43). Moreover, the traditional organization of a company where the roles are clearly divided between R&D, responsible for technology, and brand-management taking care of business model represents another important obstacle. Gopalani (2009, p. 5) emphasizes that the shift requires a new value proposition, different pricing strategies, and different sales skills, meaning that the company has to create a service-centric business model.

Chebrough (2011, p.14) explains that positioning a firm as a service business requires business model innovation. A business model (BM hereafter) is the mediator between technology and economic value, and expresses the modality of how value is created and captured by a company (Chebrough and Rosenbloom, 2002). In order for a new value propositions to be articulated in the same company, firms “have to understand the cognitive role of the BM” (Chebrough and Rosenbloom, 2002, p. 532). This is due to the antecedent of this concept, which is the dominant logic of a company, term introduced by Prahalad and Bettis in 1986. They explain that dominant logic is what shapes managers’ vision about firm’s purpose of existence and how the resources are divided in order to nourish that logic (Prahalad and Bettis, 1986, p. 490). Consequently, ideas and concepts that do not match the dominant logic are being left outside. Dominant logic is “a mind-set or a word view or conceptualization of the business and administrative tools to accomplish goals and make decisions in that business. It is stored as a shared cognitive map among the dominant coalition” created thorough reinforcement of “doing things right” along the time (Prahalad and Bettis, 1986, p.491).

In order to change or diversify a business, managers have to understand the source of these cognitive maps. Similarly, Linder & Cantrell (2002, p. 39) argue that a BM is a mindset, not “a simple theory,” and they define mindset as “a rich, tacit understanding about how all the pieces of the enterprise work together to create value.” The authors sustain that successful companies are able to induce change without changing their organizational structure, but by shaping their mindset according to the customers’ needs, and therefore, experimenting with new BMs.

Referring back to servitization, few researchers, such as Oliva and Kallenberg (2003), Weil et al. (2005), Gopalani (2009) Kindstrom (2010), Johnson (2010), Chesbrough (2011), have differentiated between service business models (SBM) and

product business models (PBM), based on the assumption that services cannot be innovated in the absence of customer involvement. Oliva and Kallenberg (2003, p. 161) accentuate that adopting servitization requires a transition period from products to services and from transaction-to-relationship-based business model. The transition is made in stages, and companies gain more service capabilities when moving from one stage to another. In order to make this transition, certain companies create a new service department separate from the rest of the company (Oliva and Kallenberg, 2003). However, this decision is criticized by Kindstrom (2010) and Chesbrough (2011), who consider that having a separate department influences negatively the intra-firm flow of information and resources, and makes the transition process considerably slower. Furthermore, Kindstrom (2010) affirms that moving towards a SBM requires a holistic change of the BM. This does not come as a surprise, since the theory on BM establishes that its elements are interdependent (Amit and Zott, 2001; Pateli and Giaglis, 2003; Osterwalder, Pigneur and Tucci 2005). Hence, Kindstrom (2010) underlines that the creation of a SBM requires from companies to build the business model from the characteristics of services, design their value proposition around the customer's business and needs and make the service, not the product, the center of value proposition. Teece (2010, p. 174) argues that: "equilibrium and perfect competition are a caricature of the real world, customers don't just want products; they want solutions to their perceived needs (...) and managers should be ready for designing BMs that could execute transactions which cannot yet be performed in the market." Hence, more understanding is required on what happens with a product when is taken to the market under a service business model, as also accentuated by Chesbrough (2011).

Parameters	Product Business Model	Product under a Service Business Model	References
<b>The focus of the business</b>	Product and R&D, sell of standardized products	Services and unique projects	Chesbrough (2011), Kindstrom (2010), Cusumano (2004)
<b>Value proposition</b>	Product is the center of value proposition	Offer solutions and experiences (experience points), value proposition is built around services	Chesbrough (2011), Kindstrom (2010), Neely (2010), Gopalani (2009), Cusumano (2004)
<b>Contract</b>	Short-term contracts for products	Long-term contracts for services	Chesbrough (2011), Cusumano (2004)
<b>Target segment</b>	Target segment: healthy companies  Customers	Target segment: companies with “problems” in need for solutions  Clients	Gopalani (2009)
<b>Level of customer integration</b>	Low customer integration: the interaction with the customer happens in the selling moment	Very high customer-centric companies: focus on co-creation and cooperation, through ongoing interactions with them. The purpose is having access to the tacit knowledge	Chesbrough (2011), Johnson (2010), Kindstrom (2010), Gopalani (2009), Bouwman et. al (2008), Grönroos & Pekka, 2010), (Edvardsson, Gustafsson & Roos, 2005), Oliva & Kallenberg (2003)
<b>Role of services in the company</b>	Service is the last part of the value chain, seen as an support function	Service is a critical element and the main source of revenue	Chesbrough (2011)
<b>Custom versus standard</b>	Standardization and economies of scale	Focus on customization and customer-facing front end units and economies of scope	Chesbrough (2011), Cusumano (2004)
<b>Operating Model</b>	First make then sell	First sell then make	Gopalani (2009)
<b>Distribution</b>	Delivery means ship and install	Delivery means months or years of working with client every day	Gopalani (2009)
<b>Resources and source of growth</b>	Focus on R&D	Focus on human resources, being labor-intensive. <i>Utilization differential</i>	Cusumano (2004) Chesbrough (2011),
<b>Metrics of Success</b>	Financial metrics for evaluation of success: inventory level, gross margins, failure rates, market shares	Customer-retention rates, customer satisfaction level, lifetime value of a customer	Chesbrough (2011), Gopalani (2009)
<b>Profitability</b>	Gross margins are higher, but vulnerable in time	Gross margins are lower, but stable and constant in time and able to double itself	Chesbrough (2011), Gopalani (2009), Cusumano (2004)

**Table 1: Products within a service business model context**

In conclusion, a business model can be a mind-set, a cognitive map that illustrates the dominant logic of a company. The literature makes the difference between SBM and PBM, but it does not answer the question if it is cognitively possible to map service business models into manufacturing companies and what is the impact of a new business on the dominant logic. Prahalad & Bettis (1986, p. 495) suggest: “in a firm with a single dominant logic, if the nature of the core business changes signifi-

cantly, then top managers have to revise the dominant logic.” Is the shift towards services a “significant change” which implies a new dominant logic? Furthermore, researchers have studied service-product systems, or hybrids, but not the possibility of putting a product on the market through total service business logic.

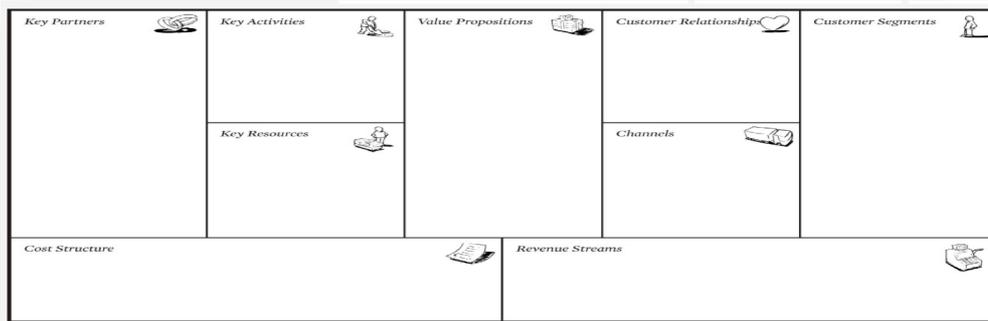
## **RESEARCH STRATEGY**

### **Case study**

The article seeks to explore how manufacturing companies change the manner in which they perceive themselves and their business model under servitization. The research question is to investigate whether product mindset can be changed cognitively, and if so, how? The paper is based on a case study conducted in a Danish company in wind industry, Vestas Wind Systems A/S. The study is structured as a retrospective, explanatory case study research due to the fact that it looks into “a real life context” (Yin, 2009:4). Yin (2009:4) explicates that “the more your questions seek to explain some present circumstances, such as *how* and *why* some social phenomenon works, the more that the case study will be relevant”. Case studies are used to analyze complex phenomena in a holistic way by giving the chance to the investigator to combine a large variety of sources such as interviews, documents, notes from participant observations, and artifacts (Yin, 2009). Moreover, a case study fits perfectly with the scope of researching an actual organization, as this research does. Our focus is to understand how the business model of Vestas Wind Systems is being reshaped by service innovation, and how can this be mapped. Limiting ourselves to a “specific and unique case” (Eriksson & Kovalainen, 2008:119) gives us the opportunity of a deeper and more detailed understanding of the subject. By conducting a case study, we had the opportunity to triangulate the sources used for the research. Thus, the study is a result of eight semi-structured interviews conducted in the company at a managerial level, combined with two workshops, Vestas internal analyses, and external reports from international institutions, such as Global Wind Energy Council, European Wind Energy Association, and Danish Wind Industry Association.

### **Business model envisioning in collective data gathering**

For the purpose of designing and envisioning alternatives to the company’s BM, Chesbrough (2011, p. 96) suggests mapping BM activities, therefore mapping mindsets: “one promising approach for developing alternatives is to construct maps of business model activities, which clarify their underlying process.” He proposes a mapping tool created by Alex Osterwalder (2010), named business model canvas. The *BM Canvas* is composed of nine elements named “building blocks”, as in the following figure:



**Fig. 1: Business Model Canvas** (Osterwalder et al, 2010)

Osterwalder et al. (2010) emphasize that it is essential to understand the environment where the company wants to add value, before designing the BM. Paying attention to external factors could guide the company to better depict different elements on the canvas; e.g. key partners, customer segment, and value proposition. Demil & Lecocq (2010) talk about transformational BM, which are capable of responding continuously to the impulses received from different environments. These have the power to both innovate themselves and the company, by changing the types of interaction between its elements.

An important part of the empirical research is constituted by the workshop, a highly interactive activity, conducted inside the company. The purpose of the workshop was to inspire the participants (managerial level) to depict the actual business model of the company, and to image another business model, an “if” situation (Osterwalder et al., 2010), where Vestas would be a service provider only. For this exercise we have modified the canvas on the bases of service innovation theory. The two resulting business models showed how the company perceived themselves as a product and a service provider. A content analysis was done to the resulted data, meaning that each element from the business model canvas was analyzed separately.

### **Designing the business model canvas for service innovation**

After analysing Osterwalder et al. (2010)’s business model canvas, using servitization lenses, it is claimed that the model is not “service friendly.” The model helps companies to illustrate their way of creating the value, and to present that value to the customer. However, service innovation implies that the value is created together with the customer; situation difficult to illustrate using the canvas. Taking into consideration the discussions on both business models and service innovation, we want to propose a new BM framework that emphasizes high interaction with customers. The starting point for this BM was the template proposed by Osterwalder et al. (2010), and changing the name of the elements according to the service innovation theory, the heterogeneity feature, and the distinctions found between SBMs and PBMs.

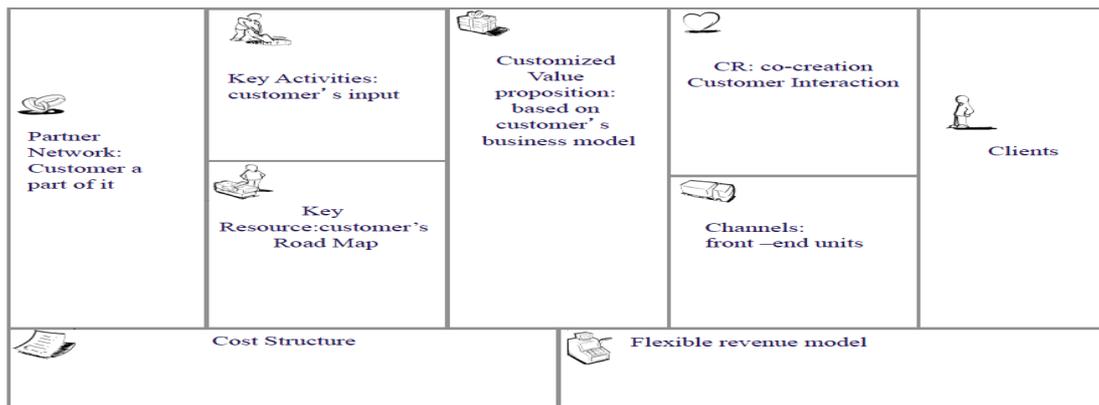


Fig. 2 Service Business Model (own creation)

The purpose of this relationship-based business model is to create space for long-term partnerships with customers. Therefore, each element of the framework has received a different label in comparison with the original, for the following reasons:

- Aiming for long-term partnerships, a company and its customers share with each other their business models (Chesbrough, 2011). In this scenario, we do not talk about a value proposition, but about a *customized value proposition* resulted from the close interaction of these two actors;
- Customer relationship became *customer interaction* in order to stress the idea that the customer can add value if let inside the company;
- For facilitating the collaboration, a firm needs to create *customer-facing front-end units* (Chesbrough, 2011);
- Having a *flexible revenue model*, a company is prepared to customize pricing mechanisms, shaped by the customer's needs;
- Furthermore, the core of the *key resources* is the customer's business road map (Chesbrough, 2011). This permits to follow closely the way the products are used, and the type of needs that are fulfilled for their customer's customers;
- The last element modified was the key partners named *partner network* where the company's purpose would be to enlarge its network, as service innovation requires new types of partnerships (Shelton, 2009, p. 44; Chesbrough, 2011).

### Vestas Wind Systems

The story of Vestas Wind Systems begins with more than 100 years ago, in 1898, when Smith Hansen opened a blacksmith shop at Lem, Denmark. The company has undergone several changes during the years and after the World War II, Peder Hansen, son of Smith Hansen, developed a new company called Vestjysk Stålteknik A/S, which, from 1945, began to be known as Vestas. Vestas produced a wide range of products from household appliances to hydraulic cranes for light lorries, but only after the second oil crisis, 1978, had Vestas moved its focus to renewable energy, being interested in producing wind turbines.

Today, Vestas is known as a Danish limited liability company, one of the largest manufacturer of wind turbines in the world based on installed turbines, with focus on the development, manufacture, sales, marketing and maintenance of wind power systems. Having the mission to put wind on the same scale with oil and gas, the company has installed about 44,495 turbines in more than 66 countries around the world for an estimation of 50 GW (gigawatts), out of 200.000 MW provided by clean energy sector, and it is proud to be a “pure-play spokesperson” in wind energy, an

industry heavily dependent on government support. Vestas produces a variety of turbines capable of generating from 850 kW up to 7 MW on different kind of technology platforms, and it produces both onshore and offshore turbines. Looking for differentiation on the market, the company offers service contracts. The main aim is “lower Cost of Energy (CoE)” this in return will deliver business case certainty to clients and long term revenues for the company (Vestas, 2011). There are five types of service contracts named *Active Output Management*, depending on the level of involvement that customer is willing to have in the maintenance of the turbine, respectively power plant. Other services offered by Vestas are: monitoring of the wind farms with SCADA systems, Supervisory Control and Data Acquisition, which give productions view and statistics in order to better control the power plant; trainings for using SCADA for customers at Vestas Business Academy (Vestas, 2012). Due to the fact that the revenue generated from services has increased significantly in the last three years, Vestas has created a separate EBIT on services in their financial reports, beginning with 2009.

## **ANALYSIS:**

### **FROM PRODUCT TO SERVICE – ELEMENTS OF THE BUSINESS MODEL**

This section analyses how the case company made sense of their business under both a product and a service mindset. The differences in perceptions are shown, as well as the causalities are illustrated between the elements of the business model in the two situations. Therefore, the middle-level managers involved in our studies have been challenged to look behind organizational change, and to map Vestas’ business model as if the company would adopt a service business logic for its entire business.

### **Value Proposition**

The recent so-called financial crisis has shown that services could be a precious source of a solid and continual income, while the hardware is commoditized (Chesbrough, 2011). The respondents were talking about Vestas before and after the financial crisis and how this affected the company. *“Everything is moving around this engineering art that these machines are, and they are truly art. So three or four years ago, before the financial crisis, we were basically picking up the phone and shipping.”* (Director Business Development). They explained that the crisis determined the company to create a new value proposition known as Business Case Certainty, through which they wanted to convey the message that the company was becoming a solution provider and a partner for a longer period of time: *“we are trying to indicate to the customer to buy the whole package including the service, so he buys Business Case Certainty and Cost of Energy; so he knows his business case not only for the two years, within the normal warranty, but also he knows the running cost of having that turbine.”* (Director, Technology Department). Furthermore, the managers agreed that the company’s vision on a long term was to be able to offer a range of solutions, from choosing the type of turbines matching a certain type of land, site and grid appliance to maintenance services for a certain number of years, depending on the service contract signed. Moreover, one of the most important offers delivered to their customers, according to one of its after-sales directors, was low lost production factor, through which they could measure the ability of capturing the available wind.

Grönroos and Pekka (2010) and Chesbrough (2011) agree that manufacturing companies shouldn’t offer services as add-ons only, but to adopt a service business logic for the entire business. Asked to envision their business as a service provider, the business development director affirmed that Vestas would keep the same value

proposition: *“I think that the company’s business model right now is fitting a service-oriented company very well. But the company itself still needs a lot of changes in order to comply with the communicated business model, the value proposition.”* This affirmation raised intensive discussions among the interviews as they tried to determine what changes were needed in order to fit a service oriented value proposition.

Therefore, the interviews suggested that the company’s attitude towards its customers should adjust: *“we need to listen and understand our customer, to invest in long term relationship”* (Director, Technology Department). They agreed that as a service provider, Vestas should develop its capacity of integrating customer in its innovation processes. Even more than that, the business developer from the marketing group suggested that Vestas had to learn how to reach customers even before they knock at its doors. Hence, the link between value proposition and customer relationship was lacking and it should have been actually stronger, agreed our interviews. Then the managers pointed out that the link between value proposition and revenue model was not coherent: *“the bases of a service business model will be the commercialization of our knowledge. We have produced a lot of knowledge in the last years, and our customers are used to get it for free”* (Senior specialist, Service Excellence). They suggested that a reevaluation of this link would help the company in its transition of becoming a service provider.

Connecting the price of services with the actual services provided, the respondents agreed with the affirmation made by the director of technology department: *“our customers do not know what services they can get from us. We could easily construct a service catalogue, ranging from legal, technical, trading, consulting, financial services; we could partner up with one of the biggest banks in the world, for example.”* From here, they advanced the idea that Vestas had to make efforts toward a better communication of the value proposition to their customer: *“we believe that we are selling turbines, while the customer thinks he is buying cost of energy. So we are not at the same page anymore”* (Director, Business Development).

Summarizing, the managers could see a challenge with their present business model, which was not a perfect mirror of the message conveyed via the company’s value proposition. Amit and Zott (2001) emphasize the fact that the elements of a business model are interconnected. Service Excellent expert affirmed *“Vestas is developing new products, as a solution provider, and it has as a challenge how to put those on the market. As a service provider it requires a different mentality of the people and how our relationship is to the customers, how we service the customer; I think that it is the challenge in the company”*. The interviewees could foresee that as a service provider, the customer would play a noticeably different role in the company, and their answers suggested that becoming proactive towards customers was the main pillar of a service business.

### **Revenue Model**

The revenue mechanism of a company is built differently when selling a service in comparison with a product. With a service business model, a firm is moving away from based on unit sales (Neely, 2008), and the value proposition changes focus from the product efficacy towards product efficiency along the years, requiring a strong company-customer partnership (Oliva & Kallenberg, 2003).

The respondents did not take time to discuss Vestas’ revenue model, as it was considered very *“strait forward; the turbine is a one time sales, it is where the attention and the dollars are”*(Project manager, After-Sales). Vestas was trying to get renewals on their services contracts, but it was competing against third parties who

were capable of servicing at a lower price. On the other hand, when changing into a service mindset, the managers implied that the structure of a revenue could look very different: *“the revenue will be very dynamic, having more flexibility, controlled flexibility I would say, towards different ways of creating our revenue streams”* (Director, Business Development). With the idea of selling knowledge, different types of revenue models were mentioned, such as licenses, subscriptions, allowing customers to switch between fixed and flexible costs. Moreover, it was suggested that by different types of revenue could open the gates towards long-term partnership. Finally, managers drew attention on the importance of having the executive level seeing the potential of service innovation for the company.

### **Customer Segments**

Often happens that managers working in the same organization, but different departments, have unlike visions about essential parts of the firm (Chesbrough, 2011). Similar situation was met in Vestas, as the interviewees, coming from both technology and service side of the company, disagreed regarding the existing customer segmentation strategy in the organization: *“we have just one target customer, big utilities companies”* (Director, Technology Department) versus *“I would say that we have six segments that are named in our service strategy”* (After-sales project manager). The managers pointed out that the product was dictating the segmentation strategy and the new six segments created by the service strategy were still in a development phase. Furthermore, it was mentioned that these segments were not reached via different distribution channels (Osterwalder et al, 2010): *“real segmentation only kicks in when you start to treat them differently; and we have that split today, but we haven’t done anything with that yet, we just treat them as one. Our business model and the way we do things today is not split up in those categories, we do not have specific roads to take with each type of customer; that is a local set up, from time to time, when we define the contract”* (Director, Business Development). This separate road, as specified by the business developer, was more carefully designed for a service business model. In that scenario, the interviewees suggested that new potential customers could emerge for the organization, when its main product would be knowledge, and not turbines. Managers discussed about green conscious companies and companies that serve competitors as being potential clients.

### **Customer Relationship**

Analysis the company revealed the custom of having little focus on customer relationship. Managers were telling the story of the implications of having world monopoly for a considerable amount of time: *“we were selecting our customers and never got feedback from them. We knew best, and that was an arrogant way of doing business; only five years ago Ditliv announced the creation of Group Marketing and Customer Insights”* (Director, Business Development). Once the company began focusing on becoming a solution provider, things have slightly changed and customers were to receive support in relation with their purchase from the one out of the six service business units opened around the world. However, managers suggested that customer relationship was a weak point in the company’s business model. *“What we do in our service business units today is targeting the deals, so even though we say we have a list of 200 customers, the list is not a list of 200 priority customers, but 200 priority deals, turbine sales deals”* (Director, Business Development). But in the scenario of being a service provider, customer relationship was awarded with a pivotal role for the entire organization: *“we need to be in front of our customers and to know the*

*needs of the customer better than himself (...) and this is the key, we need to understand not just the business case, because that is just about how you do your stuff, you need to understand what drives customers' business, and this is individual, from customer to customer. The information gathered here is needed for the entire company"* (Vice-president after-sales).

Managers were pointing out that, as a service provider, Vestas would try to build trust, which would determine their customers to share their own business model with the firm. This step could open up the interaction and collaboration with its customers. However, Vestas does not believe in the value resulted from sharing its own business model with its customers, as Chesbrough (2011) argues. The company believes in the existence of a particular value chain sequence of whom providing to whom.

### **Distribution Channels**

This building block of a business model 'describes how a company communicates with and reaches its customer segments to deliver a value proposition' (Osterwalder et al, 2010). Interestingly, managers made no distinction from this point of view for a product and a service business model. They emphasized again the importance of strong customer relationship department, which would excel in creating awareness and facilitating the emergence of co-creation processes.

### **Key Resources**

A business models need resources to concretize, and these can vary from physical to intellectual resources (Osterwalder et al, 2010). Managers of Vestas were proud of their product, and they mentioned that factories, together with the intellectual capital own, were playing an important role for the organization: "*we are quick at educating people*" (After sales manager). In spite of this, managers pointed out the challenge for being a service provider in "lack of man power" dedicated to marketing and sales. The vast majority of the employees were handling production related tasks.

In a service mindset, the almost reverse of the situation could apply, and managers of Vestas affirmed that they would allocate resources for a twofolded purpose: creating more key account positions, and having sales personal specialized in selling services. They saw a challenge in not having sale staff specialized in services. This is a common concern under servitiation, as the new business model is conflicting with the financial interests (Rotherberg, 2007).

### **Key Activities**

Strongly related to key resources, key activities illustrate where the resources are utilized (Osterwalder et al, 2010). "*Production, sales and some logistics; it is a one-way street*" affirmed Vestas' business developer, when describing the company (the organization expanded in 2011 with a service department, named Technology and Service Solutions, which was called later Service Excellence).

Managers considered the silos thinking in the company, one of the biggest issues for maintaining competition. Therefore, when modeling a service business, the focus shifted towards partnership, a new incentive structure for selling department, a new product marketing strategy, knowledge management, and again a strong customer relationship. "*The input we would get in Customer Relationship would be applied in the Key Activities, and actually it should be used in all the areas of the business models; that is more than the voice of the customer*" (After sales vice project manager). Service innovation is dependent on co-creation (Chesbrough, 2011) and this par-

ticular aspect was underlined by the managers to be achieved, developed and practiced if the company should shift towards a service business model.

### **Partners**

Studying Vestas, revealed an insourced company with a high dependency of their suppliers. The managers emphasized that Vestas began facing a larger number of competitors in comparison with previous years, and they suggested that by opening up towards more partnerships they could mitigate risk in a better way. Therefore, when discussing the service scenario, customers and even competitors, and agencies such as banks, were named as potential partners for the company. In this manner, companies can mitigate risks, keep the focus on their core competences, and delegate or collaborate for other task in the organization (Mathieu, 2001). Managers accentuated the increased number of resources the firm would be able to benefit from, and nevertheless, the inspiration for creating new services.

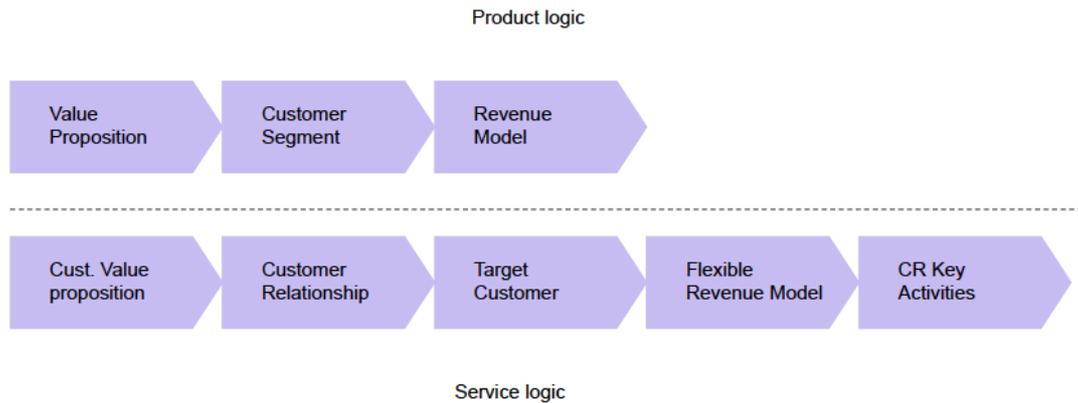
### **Cost structure**

As described by the interviews, Vestas' cost structure was centered on factories and people. The main focus was to reach an economy of scale. However, in a service setting, additional costs were mentioned, such as marketing and sales, new incentive bonus, an integrative system that would facilitate a better communication with the partners in general, and customers in particular.

The results of the discussions were that each element of the business model would need to be subject to certain changes in order to fit to a service logic. Interestingly, the manner in which these elements connected was reformed as well from product to service scenario.

## **ANALYSIS: DIFFERENCES IN CORE-LOGIC**

Linder and Cantrell (2002) suggest that business models are the managers' manner of seeing the world, and they are different, depending on how "the pieces of the enterprise work together to create value." When comparing the two resulted scenarios, product versus service business mindset in Vestas, two types of causalities emerged. The service business model was mapped as being much more dynamic, with intensified connections and causalities among the constituent elements. The focus was shifted from Key Activities - the production/cost side of the canvas (Osterwalder et al, 2010) to Customer Relationship - the value side; the latter gaining a central role, with a strong influence over Solution-Generating Activities, Key Resources, and Value Network. Managers suggested that the voice of the customer should play an extremely important function in the cost side of the business model. Thus, this new perspective facilitated the creation of a bridge between the value and cost side of the business model through customer relationship.



**Fig. 3 Service versus product business logic**

When comparing the two scenarios, managers identified as strong points in their actual business model two aspects: technology and the organization's value proposition. On the other hand, weak points were pointed out as well, and these were customer relationship, sales and after-sales, revenue model, key partnerships and customer segmentation.

Interestingly enough, all those weak points became strong points in a service context, which resulted in following-up questions with the purpose of understanding Vestas' doubts for focusing on service innovation. Two important challenges to be overcome for a successful transition were mentioned: costs and mindset. Vestas had a tradition of more than thirty years of being a product provider, and an impressive number of engineers were part of the company. Regarding cost incurred by the processes of becoming a service provider and the actual capability gap that the company suffers from (Mathieu, 2001; Oliva and Kallenberg, 2003), it was a general consensus that taking the same path as IBM, GE and Rolls Royce, would involve a significant financial investment, as *“you build a totally different relationship with your customer, you have to build a whole different contact mechanism, customer relationship mechanism, you have to respond on totally different timescales. So the customer relationship changes, you end up with a different pricing revenue models. Then it changes the whole way in which you have to engage with the company, because it's a different procurement process, different funding process, different accounting process; you're managing risks for the customer in a different way”* (Vice-president after sales). Furthermore, having an attitude as in Rolls Royce where selling equipment was actually about securing a service deal, as the same vice-president affirmed, would require from the company to admit the commoditization of their product (Chesbrough, 2011).

Vestas categorized itself as a hybrid company with the main focus of selling turbines, and having services as add-on. Interestingly, a unanimous consensus was on the fact that the company was feeling pushed by its competitive environment to adopt a service mindset, and if they were to choose, they would keep the same logic of doing business. Nevertheless, the managers predicted that Vestas could be a total solution provider in twenty years of time. They admitted what Rappaport and Halevi (1991) affirmed when saying that the future belongs to *“computerless computer company”* as the computers are marginal to the value creation.

## DISCUSSIONS

Chesbrough (2011) propose to map business models in order to find alternatives for the current business models. He is concerned with the inertia of business models and that companies have to overcome this in order to innovate. When defining business

models, the present study has applied mindsets based on Linder & Cantrell (2002), and is here combined with the mapping process as also proposed by Chesbrough (2011).

This enabled an analysis of the conversations in the inherent business logic. The findings indicate that there is no cognitive inertia as the respondents could change into service innovation thinking when subjected to a model of service innovation. Furthermore, the findings suggest that a difference exists between a product and service business logic, as each mindset holds a different belief about business-causation. Among the differences are a focus on customers and a co-creation value. Co-creation is different from the value perception inherent in the product-orientation as customers and Vestas need to be integrated.

The different mindset also proposed different opportunities for the business. Interestingly, the 'weak points' identified in the product based business model were converted into strong points under the service mindset. What is considered strong and weak points of the company as identified by the respondents changed depending on the mindset employed.

## **CONCLUSION**

This study bridges the servitization literature and the business model domain by showing that mindsets contains various business logics and hence that a product based logic can be changed into a service-based logic.

This study adds to Chesbrough (2011) when claiming that managers can overcome cognitive inertia and thereby rethink their business model in a service logic. Chesbrough (2011) and others are concerned with the fact that organizations tend to be trapped into one way of doing business developed during the years. However, Linder and Cantrell (2002) show the managers can manage multiple mindsets at one time. This was also confirmed in the study here, where managers of Vestas could easily overcome the inertia and think in both product and service logic. Nevertheless, this study indicates that business causalities are different from one logic to another, and that a number of opportunities could arise when moving toward services, such as an increase in the number of target segments, profit resulting from a long relation with customers, larger networks, and development of new value propositions.

Moreover, the study also shows that mindsets can be mapped, but these changed depending on the framing of the business model. Each mindset possesses a different business-logic, as the components of the business model framework interact differently in a product than a service situation. Furthermore, in a service situation, there is a link between the value creation and value consumption part of a business model.

## **MANAGERIAL IMPLICATIONS**

The findings of this study show once again the importance of working actively with the company's business model. This can bring significant competitive advantages, helping the organization to continuously reinvent itself without applying organizational change, as Linder and Cantrell (2002) affirm. Furthermore, the practice has illustrated along the years that products are becoming commodities, and transforming manufacturing companies into service providers is a must take step (Chesbrough, 2011). In consensus with Chesbrough (2011)'s recommendation, our study brings to light couple of important aspects not to be forgotten when going towards service innovation.

First, communicating the intention of changing the business models both internally and externally. Employees need to understand the reasons and the amplitude of

the change, and the suppliers and partners need to know if their role is reshaped, and how. In connection with this aspect, managers need to understand the necessity of investing in human resources and implicit in new incentives systems. Employees will need to develop, on top of their technical skills, “value selling” skills (Rothenberg, 2007). Thirdly, the company needs to allocate resources for innovating services together with their customers, meaning resources for co-innovation and continuous interactions with these ones.

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