Servitization of Manufacturing Companies - Framework for Analyzing Servitization Capabilities

Aalto University
School of Economics

Servitization of Manufacturing Companies

Framework for Analyzing Servitization Capabilities

Master's Thesis
Reetta-Elina Kinnunen
19.01.2011
Logistics and Service Management

Approved in the Department of Business Technology ___/___/2011 and awarded the grade

_____

Markku Tinnilä   Anu Bask

1st inspector   2nd inspector

Servitization of Manufacturing Companies
Framework for Analyzing Servitization Capabilities

Abstract

This thesis examines servitization of manufacturing companies and offers a framework for analyzing servitization capabilities both at the business unit and company level.

The objective of this paper is two-fold. Firstly, the paper aims to contribute to the research on servitization of manufacturing companies by offering a theoretical framework depicting servitization capabilities that concentrate on organizational culture and organizational configuration of a manufacturing company's strategic business units (SBUs). Secondly, the paper aims to offer a tool for managers in manufacturing companies to analyze the current position of their business unit portfolio. In the beginning of the servitization process the framework can be used to distinguish gaps between the current and the preferred state, in order to understand the required scope of change.

Based on the literature review, a theoretical framework is built by the researcher that depicts the position of SBUs in relation to organizational culture and organizational configuration. These two dimensions were found to have a large impact on the successfulness of servitization and thus seen as representing the business units' capability to servitize. A case study is presented to employ the theoretical model built. This thesis represents a multiple embedded case study, as both the case company's company and business unit levels are analyzed. Empirical data was gathered through interviews in a Finnish manufacturing company in spring 2010.

The findings of this thesis suggest that four types of SBUs can be recognized based on the organizational culture's orientation and configuration. SBUs that are service-oriented and have a customer-focused structure, labeled by the researcher as *Value-Adding Service Champs*, are seen most able to servitize successfully. *Introvert Bulk Producers* include business units that are product-oriented and have a manufacturing-centric configuration thus representing the stereotype manufacturer concentrating solely on internal manufacturing operations without much interest in customers or service. The business units in the third group, labeled as *Satisfying Product Providers,* are product-oriented and customer-centric, thus they aim to serve customers mainly through the sale of goods, while offering the required amount of product-related services in order to increase the level of product sales. *Indecisive Focus Seekers* consist of service-oriented and manufacturing-centric business units. These units may encounter internal conflicts as their unit culture promotes the importance of services and customer-relationships, while the configuration is suited for producing standardized products and does not contain many customer contact points.

Keywords: Services, servitization, manufacturing, organizational culture, organizational configuration

Total number of pages: 105

Teollisuusyritysten palvelullistuminen
Viitekehys palvelullistumisen edellytyksien analysoimiseksi

Tiivistelmä

Tämä pro-gradu tutkielma tarkastelee teollisuusyritysten palvelullistumista ja tarjoaa viitekehyksen palvelullistumisen edellytyksien kuvaamiseksi.

Tutkielman tavoitteena on edistää olemassa olevaa palvelullistumistutkimusta tarjoamalla teoreettinen viitekehys, joka kuvaa yrityskulttuurin ja yrityksen rakenteen kautta palvelullistumisen edellytyksiä. Toinen päätavoitteista on tarjota teollisuusyritysten liikkeenjohdolle käytännön työkalu liiketoimintayksiköiden muodostaman palvelullistumisportfolion kuvaamiseksi. Viitekehyksen kautta tutkielma pyrkii käsittelemään palvelullistumiseen liittyviä organisaation sisäisiä kysymyksiä sekä helpottamaan edessä olevien haasteiden tunnistamisessa, jotta palvelullistumiseen liittyvien muutosten laajuus ymmärretään.

Kirjallisuuskatsauksen perusteella organisaatiokulttuuri ja –rakenne havaittiin merkittävimmiksi sisäisiksi haasteiksi palvelullistumisen onnistumisessa. Nämä kaksi haastetta valittiin teoreettisen viitekehyksen ulottuvuuksiksi kuvaamaan liiketoimintayksiköiden edellytyksiä palvelullistua. Viitekehystä käytettiin tutkielman empiirisen osan tapaustutkimuksessa, jossa palvelullistumista tarkasteltiin case-yrityksessä sekä koko yrityksen että liiketoimintayksiköiden tasolla. Empiirinen aineisto kerättiin keväällä 2010 haastattelemalla case-yrityksen 20 työntekijää käyttäen puolistrukturoitua haastattelumenetelmää.

Tutkielman tuloksista havaitaan, että organisaatiokulttuurin ja -rakenteen perusteella liiketoimintayksiköt jakautuvat neljään ryhmään, jotka kuvaavat edellytyksiä palvelullistua. Liiketoimintayksiköt, joilla on palveluorientoitunut yrityskulttuuri ja asiakaskeskeinen toimintatapa ovat mallin mukaan parhaimmassa asemassa palvelullistaa toimintaansa. Tarkastelemalla liiketoimintayksiköistä muodostuvaa palvelullistumisportfoliota, yritys tulee enemmän tietoiseksi nykytilastaan ja pystyy paremmin laatimaan palvelustrategiansa sekä arvioimaan sen vaatimat resurssit.

Avainsanat: Palvelu, palvelullistuminen, teollisuusyritykset, organisaatiokulttuuri

Kokonaissivumäärä: 105

Contents

Figures:

Tables:

1. Introduction

1.1   Background

Many manufacturing companies, especially in the developed countries, are competing in a mature market in which the competitors from developing countries are able to produce the same goods for lower costs. Thus, it is not very surprising that it has been suggested that manufacturing in developed economies needs to move up the value chain and compete on the basis of value delivered rather than on the basis of cost, as higher competitive intensity makes product-based competitive advantage increasingly difficult to maintain (Bowen *et al.,* 1989; Grönroos, 1990; Mathieu, 2001a; Porter & Ketels, 2003). Consequently, the perceived importance of services and their role in the manufacturer's business has changed as many product manufacturers turn to services in the search for more attractive market opportunities in which a firm's resources can be used, for example if growth objectives cannot be met with the existing offering. This phenomenon of firms previously known as manufacturers adding services to their offering is referred to as *servitization* (Chase & Garvin 1989; Vandermerwe & Rada 1988).

Despite scholars' growing interest, research focusing on servitization at the strategic business level (SBU) has been scarce. Especially in studies that have examined the service-orientation of the servitizing companies, the investigations have concentrated on the extent to which the whole company is service-oriented. Furthermore, the notion of organizational structure in servitization has also gained a great deal of attention, but mainly relating to whether one of the SBUs, or all of them, should focus on services. Thus, current and previous literature does not offer much guidance to companies that are indecisive on which operations to servitize. In this thesis beginning to servitize is seen as a conscious decision by top management.

Here it is perceived that SBUs within a manufacturing company can pursue different strategies and operate in different markets. In addition, it is accepted the organizational culture may contain various subcultures and consequently a companywide change process may be difficult to implement. Thus, by evaluating service capability of each business unit through examining organizational culture and configuration, a more detailed view of a company's situation can be provided with regards to what servitization-related challenges remain ahead.

An interdisciplinary literature review combining elements from organizational behavior studies, operations management, service management and organizational strategy, are used to extend existing theories

relating to servitization. Based on the literature review, a theoretical framework is built to illustrate the different combinations of organizational cultures and configurations that can exist within a manufacturing firm aiming to servitize. In this thesis' empirical part, an in-depth case study examining both the case company and SBU level is presented to employ the theoretical model built (Yin, 2003).

The objective of this paper is two-fold. First, the paper's purpose is to contribute to the research on servitization by offering a theoretical framework that concentrates on organizational culture and configuration. Second, the paper aims to offer the framework into practical use for managers in manufacturing companies for analyzing the current positions of their different business units. In the beginning of the servitization process the framework can be used to identify gaps between the current and the preferred state, and understand the required scope of change.

1.2 Defining concepts

As briefly mentioned in the previous section, *servitization*, a term introduced by Vandermerwe and Rada (1988), refers to companies increasing the value of their offerings by adding services. In their article, Vandermerwe and Rada (1988) argue that servitization is a top management issue, but it is also recognized that services have to be integrated in the overall operations of the company.

As the emphasis of this thesis is on servitization, it is necessary to define what is meant by *services*. A traditional definition of service, namely comparing it to products and going through what it is not, is not considered as relevant here. As Gummesson (1995) has argued, the traditional division between goods and services is no longer necessary, as the focus should be on how value is created. Thus, here the definition of services is borrowed from Vargo and Lusch (2004, 2): *"Services is the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself".* However, to clarify the definition, here the term service is not used as a measure of performance.

In this thesis, the emphasis is on business-to-business services that are offered by an industrial company. Despite the growing body of literature on manufacturer's beginning to offer services and servitization, there exists a divergence in terminology. Here, a *product service* is used to describe a product related service, e.g. maintenance or spare parts service. With *service product* it is here referred to conceptualized service offerings, which mainly consist of services and which are charged for. *Integrated solutions* and *solutions* are used when referring to offerings that include both services and products, but are not

2

necessarily conceptualized and the service part may not be charged for. It is recognized here, that these concepts may be used in different context and with different meanings in other studies.

In this thesis, the definition for *organizational culture* is derived from Schein (2009): *"Culture is a pattern of shared tacit assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein, 2009, 27).*

In this study, with the use of the term 'organizational culture', it is referred to the dominant culture which represents the core values that are shared by most of the organization's or business unit's members, unless otherwise mentioned. The concept will be discussed in more detail in chapter 4.

1.3 Previous research

In this thesis, literature from multiple academic fields (e.g. organizational behavior studies, operations management, service management and organizational strategy) are used to form a balanced whole and to provide a thorough literature review. Thus, in determining the scope of this study, the focus has been on articles that are central and relevant to servitization and depict the internal managerial and strategic issues that relate to manufacturers transitioning to services.

Previous research on servitization of manufactures can be divided in various ways, but at least five "bundles" of researchers investigating the topic from different perspectives has been identified (Baines *et al.*, 2009b).

Servitization as a stream of research originates from the USA and its main arguments in support for the transition of manufacturers, as stated earlier, relate to increasing value added by adding services to the offering. The phenomenon is also seen as a move downstream in the value chain, towards the customer and consequently gaining more revenue from operations. (Quinn, 1990; Windahl & Lakemond, 2010; Wise & Baumgartner, 1999.) This stream of literature views the process to include benefits and challenges both inside and outside the company in question (e.g. Brax, 2005; Gebauer *et al.*, 2006; Oliva & Kallenberg, 2003; Sawhney *et al.*, 2004). In Pawar *et al.*'s (2009) identification of different streams of service literature, this stream is called *Integrated solutions*. However, the categorization by Pawar *et al.* (2009) does not as clearly state the internal requirements of beginning to offer services and mainly describes changes made in the offering.

Product service systems (PSS) is a research stream in which it is viewed that value-in-use is created by integrated product and services offerings (Baines et al, 2009b; Pawar *et al.*, 2009). The literature on PSS has tended to focus on sustainability issues and the reduction of environmental impact and seen as closely related to the concept of servitization (Pawar *et al.*, 2009). PSS solutions have emphasized asset use instead of ownership and thus have presented the potential for combining the goals of both environmental sustainability and economic growth (Tukker, 2004).

The research stream concentrating on *service marketing* (Baines *et al.*, 2009b), or *experiential service* as it is named in Pawar *et al.*'s (2009) article, is marketing-based and sees the objective of transitioning into services as gaining competitive advantage through co-creation of value together with the customer, and thus providing customers with a memorable experience (e.g. Vargo & Lusch, 2004; Grönroos, 1990). Thus, value is created in an ongoing relationship with the customer and products are seen as vehicles to deliver the services (Vargo& Lusch, 2004).

The fifth identified stream of literature is that of *service science*. Originating from the IT sector, and special efforts of IBM researchers, service science stresses the interdisciplinary character of services and views service as a system consisting of people, technology and business (Chesbrough & Spohrer, 2006).

In this study, the servitization process of manufacturers is seen as a strategic issue and a need for changes in the organization is emphasized. In addition, servitization is perceived to require reexamination of the competitive environment and the company's current position in the value chain. It is also argued here, that gaining competitive advantage requires a service-oriented organizational culture and a customer centric organizational configuration so that customer knowledge can be utilized to create innovative offerings of products and services (Bowen *et al.*, 1989; Windahl & Lakemond, 2010). Thus, servitization involves a change also in the mind-set that considers services somehow secondary to manufacturing, or as an unprofitable task run only by marketing.

1.4 Research problem

As it becomes evident from the previous section and the introduction, servitization has gained an increasing amount of attention in the past thirty years. Thus, it was decided that the emphasis of this thesis is on the literature review in order to gain a wide perspective on the topic. The research questions to guide, and to ensure a thorough and comprehensive review, are as follows:

- Why are manufacturing companies servitizing? What kind of benefits companies gain from it?

- What kind of servitization-related challenges has previous literature identified?

  – What are the major challenges and how are manufacturing companies prepared to face them?

- How can servitization capabilities of companies and business units be depicted in a framework by utilizing the challenges identified?

  – What kind of positions can be identified from the framework created?

While looking into the previous research on servitization, it became evident that not many frameworks or managerial tools are available for identifying the current position of a company with regards to servitization. Thus, the last question in the previous set was used to build a framework that would be employed also in the empirical section of the thesis.

For examining the case company, the following research questions were drawn with regards to determining the company's current position in servitization:

- What kind of position does the company hold with regards to servitization?

- How capable of servitization are the case company's business units? What challenges will they still face?

- What managerial implications can be derived from examining the framework presenting a business unit portfolio in terms of servitization?

1.5 Methodology

In this thesis an extensive amount of previous literature is examined in order to create a framework, which is then utilized in the analysis of the case company. Thus, this thesis presents a theory-initiated multiple embedded case study. A single case company is examined on two levels, namely those of the company and the business unit. Examining the case company on both levels is seen as important as previous research has

typically regarded servitization only as a company-wide phenomenon. However, here it is viewed important to study the business units as separate entities as they may have different business strategies and markets.

Data collection for this thesis was done by conducting 20 semi-structured interviews with company employees. Data triangulation was implemented by using data also from meetings and other material provided by the case company. Data was analyzed through grouping the interviews according to themes and business units.

This thesis is organized as follows: First, the literature review will concentrate on the reasons for servitization and the possible benefits gained from it. After this, challenges that earlier studies have discovered are examined. The following section will begin creating a theoretical framework based on the literature review. The sixth chapter discusses the methodology employed in the thesis. In the seventh chapter, the case company is introduced in more detailed and analyzed using the theoretical framework created previously. The last chapter in the thesis is to; offer conclusions, discuss this thesis' contribution, and present possible future research areas.

In the following chapter the reasons for manufacturing companies' transition are first discussed after which the potential benefits of the transition are examined.

2. Reasons and benefits in servitization

Scholars, even though having researched the topic, cannot easily make one general statement as to why companies are increasingly developing fuller, customer-focused offerings. Vandermerwe and Rada (1988) suggest that for some companies it is a natural next step, while for others this *servitization of business* is a new opportunity. In mature industries, they state that companies regard fuller market packages as a means to differentiate and to extend their products' life cycles. Scholars have also identified that to a growing extent, customers want to outsource non-core activities that relate to operating the capital goods (Gebauer *et al.,* 2010b). Thus, also from a customer point of view servitization of manufacturers renders benefits as it enables reducing the capital employed in production sites and concentrating on core competencies (Gebauer *et al.,* 2008a).

In addition, it has been stated that a generic offering of service is no longer enough for manufacturing firms to ensure a competitive advantage, and that they should extend their offering with services that take into consideration the customer's operations (Mathieu, 2001b). Gummesson (1994) denotes that manufacturers shifting focus towards services include a change in perspective and mind set towards the utilization of the offering and customer perspective.

The increasing global competition has given rise to attractive opportunities for services as value-adding components for the customer, as markets have become more complex with customers demanding more customized and broader scopes of services (Brax & Jonsson, 2009; Neu & Brown, 2008). According to Wise and Baumgartner (1999) the combination of slow product sales and the ever-growing installed base of products have made product-related services attractive for manufacturing companies. Thus, servitization increases manufacturers' flexibility and resilience in environmentally uncertain markets (Bowen *et al.,* 1989, 87).

However, this thesis' purpose is no way to imply that manufacturing companies should move away from offering or producing tangible goods. It is still important to develop the traditional manufacturing business as well, since it produces a core part of the offering and represents large amounts of invested capital. Here, the goal is to point out that academic literature has recognized quite significant opportunities in moving towards services (e.g. Grönroos, 1998; Mathe & Shapiro, 1993; Vandermerwe & Rada, 1988; Wise & Baumgartner, 1999).

Hence, the challenge lies in balancing the company's focus on both products and customers, as services and service-orientation are increasingly being considered a necessity for manufacturers. Consequently, managers should begin to develop service strategies and emphasize entrepreneurial orientation in order to achieve service revenue and profit growths (Matthyssens & Vandenbempt, 1998). Brax and Jonsson's (2009) study argues that manufacturers need to find a way to become excellent in offering both products and services.

Even though current literature has gained attention by presenting the notion of manufacturers entering the service business, the idea of services is not totally new to manufacturing companies. Vandermerwe and Rada (1988) regard manufacturing companies consisting partly of services as they are already selling and exporting their know-how both inside and outside the company. In addition, according to Oliva and Kallenberg (2003) many manufacturing companies already provide services as they sell products and offer support for them. However, services supporting the product have traditionally been considered as an unprofitable necessity, and consequently their development has been fragmented as only little effort has been put into the structure of service operations.

Wise and Baumgartner (1999) point out that, manufacturing companies are well positioned to offer downstream activities, as they already possess intimate knowledge about their markets and products. Still, servitization requires that the company strategy is reviewed and a service strategy included. Also Brax and Jonsson (2009) expect that manufacturing companies are able to compete in complex and capital intensive solutions because they have already made the capital investments required to deliver the solution to the customer. In addition, manufacturers posses technical competences that are difficult to be gained by non-manufacturers (Brax & Jonsson, 2009). Furthermore, Mathieu (2001a) denotes that since manufacturers have linkages between goods and services that are non-accessible to their competitors, manufacturers get to capitalize on their experience, their expertise, and their image built through their goods offering.

The benefits derived from manufacturer's decision to servitize are seen to be divided in previous literature into three categories (e.g. Gebauer *et al.,* 2008b; Mathieu, 2001a): Marketing benefits, strategic benefits, and financial benefits (Table 1). These three categories are discussed in more detail in the sections that follow.

8

Table 1. Reasons and benefits to servitize

Author	Reasons and benefits to take on services		
	Marketing	**Strategic**	**Financial**
Brax (2005)	Facilitate the sale of goods Lengthen customer relationships Respond to demand	Create growth opportunities in matured markets	Balance effects of economic cycles
Brax & Jonsson (2008)	Close collaboration between supplier and customer Aim to optimize total cost to customer Strengthen customer relationship Gather customer knowledge Responding to demand	Further exploitation of technical expertise Customer information forms a feedback loop to product development	Higher margins with steadier revenue
Gebauer, Friedli, Fleisch (2006)	"Better services for selling more products"	Competitive strategy based on services More difficult to imitate Less time to develop Improve customer trust	Substantial potential revenue Higher margins More stable revenue
Gebauer, Krempl, Fleisch (2008b)	Selling more products Increasing general quality between buyer and seller Creating dependency Remain in contact with customer	Better differentiation and competitive strategy Enhance product differentiation When co-produced with customers, services serve as an entry barrier for competition	Potential service revenue Higher service margins More stable source of revenue
Gebauer (2009)		Differentiation Co-producing with customers Barriers to entry	Compensation for decreasing product margins Installed product based used to generate more revenue
Gebauer, Fischer, Fleisch (2010a)	To gain a quality reputation Increasing quality of interaction between buyer and seller		
Malleret (2006)	Building customer loyalty Corporate image	Differentiation	Increasing and stabilizing turnover
Martinez *et al.* (2010)	Ability to tailor offerings	Competition based on delivered value instead of cost Enabled differentiation Sustainable competitive advantage	
Mathieu (2001a)	Improve customer satisfaction Improve new product adoption Strengthen customer's confidence and the supplier's credibility Increases both first-time and repeat sales Enhances market share A good way to maintain ongoing relationships	Barriers to entry	Raise revenues
Oliva & Kallenberg (2003)	Responding to customer demands	Difficult to imitate by competitors Sustainable source of competitive advantage	Revenue gained form installed product base Higher margins More stable source of revenue
Penttinen & Palmer (2007)	Improving market offering Improving customer relationship Better information sharing and interactions		Increased margins and revenues through utilization of customer knowledge and improvement of customer satisfaction
Vandermerwe & Rada (1988)	Establishing and maintaining a relationship between the corporation and customer base through broader offerings. Moving down the value chain, getting to know end users' problems Delivering customers customized products	Setting up barriers to competitors, third-parties, and to customers Creating dependency Differentiating the market offering Diffusing new innovations R&D and market research	
Windahl & Lakemond (2006)	Value creation Combination of products, services and knowledge to fulfill customers' needs	Distinguishing from competitors	
Wise & Baumgartner (1999)	Building customer allegiance Delivering a combinations of services and products that minimize customer costs	Manufacturers well positioned to offer services Intimate customer knowledge	Servicing the installed base More stable demand Higher margins Require less assets

2.1 Marketing benefits

Services have traditionally been perceived as a means to facilitate the sale of goods, as suppliers can become a one-stop-shop by offering everything from the same place and thus deliver convenience for the customer. In addition, services are seen to mitigate the risk related to complicated or expensive products, which would have been left unsold without a service proposition (Brax, 2005; Gebauer *et al.*, 2006; Matthyssens & Vandenbempt, 1998; Vandermerwe & Rada, 1988.) Customer-focus has become core in offering services, because in order to increase value delivered through services and products, suppliers have focused more on minimizing the cost of ownership and calculating lifecycle costs (Brax & Jonsson, 2008; Wise & Baumgartner, 1999). Mathe and Shapiro (1993) additionally argue that sophisticated customers compare rival offerings increasingly based on cost of ownership criteria rather than simply on the basis of acquisition costs.

A growing number of academic scholars have begun to see the expansion towards services not as an additional task, but more as a necessity in order to create and manage long-term relationships in today's business-to-business markets (Mathieu 2001a). As services are commonly offered as long-term contracts, they provide manufacturers with opportunities also to strengthen customer relationships, build customer loyalty, and to gather customer knowledge (Gebauer *et al.,* 2008b; Malleret, 2006; Vandermerwe & Rada, 1988). Also Homburg *et al.* (2003) argue that a service-oriented strategy may generate higher profits through improved quality of customer relationships. By utilizing the customer knowledge gained, manufacturers are able to improve customer satisfaction and also new product adoption, thus increasing repeat sales (Mathieu, 2001a). Thus, services can be seen as a form of feedback to product development and means to allow further exploitation of technological expertise in new businesses (Brax & Jonsson, 2009).

Previous literature has also recognized that one reason for companies to reposition their offering and include more services is to better respond to customer demand (Brax, 2005; Oliva & Kallenberg, 2003; Penttinen & Palmer, 2007; Vandermerwe & Rada, 1988; Windahl & Lakemond, 2006). Thus, servitization of manufacturing companies has been viewed partly as customer driven, as customers have begun to ask for more services and outsource operations that are not considered as core.

2.2   Strategic benefits

Adding services to the traditional portfolio of a manufacturing company is also seen to deliver strategic benefits. In studies by Brax (2005) and Brax and Jonsson (2009), including services in a manufacturing firm's offerings was seen as beneficial especially in the matured markets in order to create new growth opportunities. In addition to providing means to respond to customers demand, services are also viewed as a method to differentiate the manufactured offering from the competitors', thus retaining old customers and gaining new ones (Gebauer *et al.*, 2008b; Martinez *et al.*, 2010; Vandermerwe & Rada, 1988).

Competing with the differentiation strategy is sometimes the only option for matured markets as achieving the price leader's position in the global competition is extremely difficult (Brax, 2005). Gebauer *et al.* (2008) note that companies are able to decrease direct competition on price and increase their profitability by combining products and services as it makes comparison of different suppliers' offerings more difficult. In addition, some researchers have found that competitive advantage can be achieved through building a service culture, as it can function as a resource that is difficult to imitate (Homburg *et al.,* 2003; Matthyssens & Vandenbempt, 1998). Neu and Brown (2005, 2008) recognize that a customer-centric organization and service culture can also enhance company performance.

In Vandermerwe and Rada's (1988) study consisting of executive interviews, services were viewed as offering strategic benefits through enabling setting up barriers to competitors, third-parties, or customers offering the same product, creating customer dependency, differentiating the market offering, and diffusing new innovations. In addition to the reasons mentioned above, Mathieu (2001a) denotes that in order for a company to build a competitive advantage, it can attempt to weaken the drivers of its potential competitors. An example of such a competitive advantage could be in servicing also other brands in addition to the company' s owns.

Scholars denote that sustainable competitive advantage could be gained by offering services that are co-produced together with the customer (Gebauer, 2009; Gebauer *et al.,* 2008b; Vargo & Lusch, 2004). These services could include services that support the client's actions (Mathieu 2001a, 2001b), thus affecting the customer both on a strategic and cultural level. Wise and Baumgartner (1999) agree by noting that in today's world, the strongest barrier to competition is customer allegiance. In their study it is stated that to gain customer allegiance the supplier has to deliver a combination of services that minimizes the overall costs associated with owning and using the product. Thus gaining customer knowledge and utilizing that

knowledge to design and deliver offerings that create value for the customer can in fact lead to competitive advantage, or at least high switching costs.

2.3   Financial benefits

Concerning the potential financial benefits that manufacturing companies can gain by servitizing, many studies denote that services generally have a higher sales margin and serve as a means to sell more products (e.g. Gebauer et al, 2006; Gebauer *et al.,* 2008b; Oliva & Kallenberg, 2003). In addition, services are seen as a more stable source of revenue especially during economic decline, and thus companies are able to rationalize costs by adding services to their portfolios (de Brentani, 1990). Also Brax (2005) and Brax and Jonsson (2009) have recognized the financial benefits of offering services; services present a possibility to balance the effects of economic cycles because their demand is often inelastic, or counter-cyclical in comparison to products' sales cycles. In Penttinen and Palmer's (2007) study case companies were prompted to reposition in response to customer request and by the desire to increase revenue and margins. In their study, gaining steadier revenue streams was the underlying motivation for all companies to begin offering services (Penttinen & Palmer, 2007).

Although the benefits of adding services to a manufacturer's traditional portfolio have been acknowledged by previous literature, in their study Gebauer *et al.* (2005) introduced the concept of *service paradox* in manufacturing companies. The service paradox is a situation in which companies invest heavily in extending their service business, increase their service offering and incur higher costs, without getting correspondingly higher revenues as expected. Manufacturing companies thus fail to exploit the financial benefits that an extended service business can offer. Increasing service awareness, accepting the risk of extending the service business, and believing in the economic potential of services, in addition to changing the organizational structure, are suggested as remedies to overcome the service paradox and to implement the service business successfully. (Gebauer *et al.,* 2005; Neely, 2008)

However, it has to be acknowledged that in practice companies might have difficulties in recognizing the financial benefits gained, as they may not know their own cost of offering services or how to price them. Mathieu (2001a) also denotes in her study that the financial benefits gained from the development of service offerings by manufacturers are still far from being systematic. Thus, organized reporting and follow-ups of the costs incurred by offering services would be beneficial in order for companies to be aware of the costs related and to begin to provide services profitably.

3. Challenges in servitization

Although the servitization of manufacturing companies can be most clearly seen by outsiders as a change in offering, here the change in offering is seen as an end result of much bigger changes implemented inside the organization. One has to recognize the internal changes required both at the strategic and at the operational level in order for the manufacturer to adopt appropriate organizational arrangements and resource allocation.

Hence, in order to combine services and products into one offering, integration within the organization between internal functions, in addition to close cooperation with customers and suppliers, is required (Martinez *et al.,* 2010). As manufacturers begin to sell more services, they may have to reconstruct their organizations and create more service-oriented models for operating. The transition from products to services can be difficult for manufacturers, since it affects aspects of corporate strategy, organizational culture, organizational structures, customer relationships, as well as there may be resistance both from inside the company and re-education of customers (e.g. Bowen *et al.,* 1989; Brax, 2005; Gebauer *et al.,* 2006; Martinez *et al.,* 2010; Neu & Brown 2005; Oliva & Kallenberg, 2003; Vandermerwe & Rada, 1988). Challenges relating to manufacturing companies transitioning to services presented by previous literature are numerous and it becomes clear that all company functions are somehow affected when a company decides to extend into service business.

This thesis views servitization as a conscious strategic decision by the management, and is based on the assumption that organizational culture and structure follow strategy, although the causality of the relationships is not under examination. Hence a successful implementation of a service-oriented strategy requires changes in the organization. The following sections discuss the challenges in transitioning to service business (Figure 1) in a top-down order. First the issues relating to changes in company strategy and culture are examined as these are seen to have the widest impact on company operations. Next, challenges relating to organizational structure and business unit configuration are investigated. Overcoming these three challenges is seen as important in order to successfully tackle the other challenges, which are; creating a market-oriented service development, managing the service offering, knowledge management and communication, and defining the transition stages.

Service strategy

- Supporting the product offering in the changing competitive market

- Helping and motivating in organizational arrangements and resource allocations

- Re-evaluating position in the value chain and emphasizing customer relationship

Service-oriented organizational culture

- Emphasizing service quality, problem-solving and flexibility

- Permeating all levels of the organization

- Mediating the impact of service strategy

- Centering operations around employee, customers and services

Organizational structure/configuration

- Integrating or separating service SBUs

- Defining the role of services within SBUs

- Reorganizing decision making

- Building a global service network

Market-oriented service development

- Creating a well-defined service development program

- Including co-production with customers

Service offering

- Classifying services, building a service portfolio

Knowledge management and communication

- Fostering intrafirm collaboration

- Implementing internal and external marketing

Transition stages

- Deciding how to proceed, defining the steps

Figure 1. Challenges in servitization

3.1 Service strategy

As manufacturers move towards services and attempt to become more service-oriented, the competitive dynamics of the market are changing. Traditional manufacturers and service companies will have partly overlapping offerings, and thus companies are competing with new and unusual rivals (Vandermerwe & Rada, 1988). This leads to manufacturing companies having to consider their service strategy carefully so that it supports and complements the product offering, in order to provide the customers with more value, and to secure the company's competitive position.

Gebauer *et al.* (2006) define service strategy as a company's means to differentiate itself from the competitors with the service offering. As product superiority and/or low prices are increasingly more

difficult to maintain by manufacturing companies, a service strategy lays the foundation for a competitive position in services (Bowen *et al.,* 1989; Mathieu, 2001a; Vandermerwe & Rada, 1988). The service strategy is viewed fundamental by Gebauer *et al.* (2006), whose study suggests that it helps and motivates companies in making the appropriate organizational arrangements and resource allocations. Thus, service strategy should be considered as bedrock for companies beginning operations in the service business.

Implementation of a service strategy can be done in many ways e.g. through value networks or partners, but in this thesis, due to the case study presented in chapter 7; the focus in this thesis is on the beginning of the transformation, and building internal service capabilities and moving downstream (Hyötyläinen & Nuutinen, 2010). Forming a service strategy implies a transition downstream in the value chain, towards the customer and giving increasing attention to the end user to know them better (Vandermerwe & Rada, 1988).

It has been argued that the selection of an appropriate service strategy depends on the competitive intensity of the markets and the conditions in the business environment, the complexity of customer needs, and the value chain position of the company in question (Gebauer *et al.,* 2010c). Thus, when moving from a traditional product offering towards services, also changes in the market environment have to be taken into consideration. The service field might reveal unexpected competitors, such as the service provider, the distributor, and the customer. In order to perform well in the unknown markets some manufacturing companies realize that they have to acquire more information about competitors in order to be able to offer a more comprehensive portfolio of services (Vandermerwe & Rada, 1988). Neu and Brown (2005) also argue that the formation of service strategies relies on acquiring internal and external information, sharing of inter- and intra-firm information, and utilization of that information to benefit the company.

Scholars have presented sets of different possible service strategies (Davies, 2004; Gebauer, 2008; Mathieu, 2001a). The strategies vary in their type of customer-relationship and the weight of services in the offering, which are seen as the most important design elements of service strategy. Gebauer (2008) divides service strategies into four; after-sales service strategy, customer-support service strategy, outsourcing partner, and development partner, with the latter ones being more connected to the customers' activities instead of products and include a closer relationship with the customer. An outsourcing partners' goal is to assume all risk and full responsibility of the customer's operations, while a development partner's services offer process performance for the customer (Gebauer, 2008). In a later study Gebauer *et al.* (2010a) argue that service strategies are dynamic and should change with time and in order to gain competitive

advantage, manufacturing firms must move further towards the strategic position of customer-support service provider, development partner or outsourcing partner. Also Mathieu (2001a) argues that the most profitable, and consequently the most risky, strategies are the most ambitious ones aiming at high organizational intensity and service specificity. Thus, creation of a service strategy, as strategy work in general, has to be continuous.

Servitization is not only a question of adding services to the customer's package, as the most difficult challenges concern implementation of internal changes within the company in question. Some of the latest research has concentrated on "fit of strategy" and alignment of the organization with strategy. It is argued that the organizational performance depends on the proper alignment among three sets of variables: environment, strategy, and organization design (e.g. Neu & Brown 2005; Neu & Brown 2008; Gebauer *et al.,* 2010a; Gebauer *et al.,* 2010c). According to Gebauer *et al.* (2005) many companies that have failed in their service strategies have kept their set of internal organizational factors associated with after-sales service providers although trying to change their offering.

Vandermerwe & Rada (1988) argue that servitization requires top management to find ways to include services in the overall competitive analysis and strategy design of the company, as they have been so far seen only as a part of marketing and an unprofitable necessity. Also Gebauer *et al.*'s (2006a) study claims that in many cases services have first been considered as add-ons in manufacturing companies and only when the intention is to increase the total value creation, services have functioned as a deliberate strategy. In addition to adding services in the strategy, the implementation of the strategy has to be overseen. Gremyr *et al.* (2010) denote in their study that manufacturing companies that implement service development as a secondary business, but whose strategy focuses on service, experience an internal imbalance.

The implementation of a service strategy is a company-wide operation aimed at increasing the service-oriented aspects. Gebauer *et al.* (2010c) argue that creating an ability to deliver services, training personnel to become service oriented, and to a certain extent developing a new organizational culture are required in order for the new organizational situation to match with the new strategy. In an earlier study Gebauer *et al.* (2006) recognized three fundamental requirements to implement a successful service strategy. These requirements include firstly gaining a comprehensive understanding of the market in respect of customer needs, market potential and future service trends. Secondly, all areas of the company affected by the service strategy must be involved in the development process. And, thirdly the entire procedure has to be systematic and transparent and incorporate multiple feedback loops. It is argued that strategy

implementation depends on having the necessary organizational design elements in place (Gebauer, 2008; Neu & Brown, 2005, 2008). In her study, Mathieu (2001a) categorizes manufacturing service maneuvers according to the strength and the scope of the impact they have on the firm, and three levels of organizational intensity are recognized: cultural, strategic and tactical. The deepest level of organizational change is the *culture maneuver,* in which the whole organization is concerned, as the goal is to change the belief system. Also the service management system will have to be implemented in the whole organization and consequently resistance to change is expected to be strong and widespread. As a result of this pervasive change process, the manufacturing company is seen to enter a new cultural and organizational environment. (Mathieu, 2001a.)

Gebauer *et al.* (2010a) argue that a service strategy is not a permanent state, as it has to be modified to suit the changing competitive environment. Thus, the first challenge manufacturing companies should overcome in the transition process is to develop a service strategy, which entails examining current organizational culture, human resource management, organizational structure, and service development operations (Gebauer *et al.*, 2010a).

The following section discusses building a service-oriented organizational culture as manufacturing companies extend into service business.

3.2   Service-oriented organizational culture

Schneider and Bowen (1995) broadly define service-oriented culture as an organizational culture in which service quality is the guiding value and philosophy passed on to customers through the actions of employees. Also Grönroos (1990) associates service-oriented culture with a strong organizational emphasis on service quality. Schneider and Bowen (1995, 243) denote that a service-oriented culture exists in an organization where "employees believe that customers deserve excellence" and in which various functions work together to deliver that excellence.

In Gebauer *et al.* (2010d) service-oriented culture in manufacturing companies is described consisting of four elements: service orientation of both management and employee values, and service orientation of both management and employee behavior. Thus it is seen as relating to both implicit and explicit levels of organizational culture. In addition, according to Matthyssens and Vandenbempt (1998) and Bowen *et al.* (1989) service-oriented culture in manufacturing companies contains the values and behaviors associated with an entrepreneurial orientation, real problem-solving eagerness, innovativeness and flexibility of

service employees. But to gain a service-oriented culture in a manufacturing company, it must be nurtured continuously and it grows over several years on the basis of appropriate service awareness, and the meaning of service should permeate all organizational subsystems, rather than being confined to only one department such as marketing (Gebauer *et al.,* 2006; Bowen, Siehl & Schneider, 1991). Homburg *et al.* (2003) state in their study on industrial marketing companies, that becoming more service-oriented requires changes especially in the firm's corporate culture and human resource management.

Building a service-oriented organizational culture or changing the current one is fundamentally a strategic change, which requires the whole company to re-focus its attention (Brax, 2005). Changing the organizational strategy towards service orientation in terms of offering and emphasizing services will stress the value of service in the corporate culture (Bowen *et al.,* 1989). Having a service-oriented culture in place is a necessity in order to create a profitable business from services (Bowen *et al.,* 1989). Also Homburg *et al.* (2003) argue that in order for the chosen strategy to be successfully implemented on the business processes, a positive service-oriented culture should be in place as it mediates the impact of corporate strategy's service orientation on service-related performance outcomes. Furthermore, service culture can function as a resource that is difficult to imitate, creates competitive advantages, and enhances the performance of manufacturing companies (Homburg *et al.,* 2003; Matthyssens & Vandenbempt, 1998). This is in line with Gebauer *et al.*'s (2010d) study according to which service orientation in the corporate culture is positively associated with overall performance.

Managing the transition phase in manufacturing companies can be quite difficult as the traditional product-oriented culture differs fundamentally from service-oriented culture. Martinez *et al.* (2010) observed in their study that a strongly embedded traditional manufacturing culture in the organization hinders the transition towards provision of an integrated offering. Homburg *et al.*'s study (2003) emphasizes the importance of adapting the company's "soft factors", namely those of organizational culture and human resource management, in a service-oriented manner. In order to enter the service business successfully, a manufacturer, whose strategic focus on products has led to a human resource management and organizational culture to become centered on products or brands, has to implement a shift in the strategic perspective as well as acquire new skills and people. These changes also require new ways to measure the company and employee performance, as well as new incentives and rewards to encourage employees to take on a service-oriented way of doing things. (Wise & Baumgartner, 1999.)

Various scholars have stressed that managers in a transitioning company must realize that people are the main force behind any organizational change. Neu and Brown's (2005) findings indicate that frontline

service employees are the key organizational resource underlying a goods-dominant firm's ability to develop high-performing business-to-business services. This shift in thinking is required in manufacturing companies for the transition from a product-oriented culture to a service-oriented culture, and consequently offering services targeted at the customer's processes, to be possible (Mathieu, 2001b). Gebauer *et al.* (2005) mention *employee pull,* defined as a commitment of service workers, as a requirement of a successful extension of the service business. In order to get the employees support, they must understand the benefits and experience the results from adding services so that they are ready to commit to achieve the goals set.

In order to successfully begin servitizing, a manufacturing company must view it as both a strategic and cultural change within the organization. Servitization is not only about adding services to an offering, but more about perceiving the offering as means to deliver value to customers. Hence, creating a service-oriented culture enables the organization to build a relationship with the customers and gain information that may open business opportunities that benefit both the supplier and the customer.

The next section discusses issues related to organizational structure that manufacturing companies face when they begin to servitize.

3.3   Organizational structure

In previous literature, the most discussed structural challenge in the servitization process of manufacturing companies is related to organizing the responsibilities of strategic business units (SBU), namely whether the product and service SBUs should be integrated or not (e.g. Brax& Jonsson, 2009; Gebauer *et al.,* 2009; Gebauer *et al.,* 2010d; Neu & Brown, 2008; Oliva & Kallenberg, 2003). Additionally, issues concerning the configuration of processes within SBUs have been identified in earlier studies, but not directly related to servitization. Furthermore, decentralized decision-making authority and building a service network have been distinguished as key structural concerns of servitizing companies (Bowen *et al.,* 1989; Mathieu, 2001b; Neu and Brown, 2005).

All these structural issues are necessary to be considered and decided on in order for the organizational structure to be aligned with the new strategy and promote the service-oriented culture. Furthermore, according to Neu and Brown (2008), the degree to which managers in manufacturing firms will realize the expected returns from service business depends on their ability to design a configuration of organizational elements that fits the external business environment. Hence, in order to reach the goals set in the service

and overall strategy of the company, the structure of the company must be aligned with both the internal and external factors. In line with this, Galbraith (2005) claims that companies have to begin organizing around customers and create customer facing organizational units.

Oliva and Kallenberg (2003) define the integration of the service business as the degree to which it is handled in a distinct business unit and it has a corresponding profit-and-loss responsibility. This definition is also used in this study. "Separating services from the product business means that firms create a distinct SBU for services that fully control the targeting of customers and the development, pricing, selling, and delivery of service offerings. As a distinctive SBU, the service organization takes over the financial responsibilities for profit-and-loss in the service business." (Gebauer *et al.,* 2010d, 241.)

Some scholars (e.g. Kotler, 2003; Oliva & Kallenberg, 2003) perceive integrated solutions as an extended offering to the installed base, and assume that integrated solutions are provided only after the product has been handed over to customers. As a result, they do not see a connection between manufacturing and services, and argue for separating service operations from the manufacturing and product placement operations (Windahl & Lakemond, 2010). For example Pawar *et al.* (2009) recommend an organizational structure consisting of a front- and a back-end, in which the new front-end is added to the manufacturing operations to handle all customized-solutions.

Separated service organizations have been found to be more successful than integrated service organizations, but due to research limitations it remains unclear whether this success is due to the additional managerial effort perceived by a separate service organization, or if cultural and managerial biases are responsible for holding back the service development efforts (Oliva & Kallenberg, 2003). Consistent with findings supporting the foundation of a separate business unit for services, Gebauer *et al.* (2006) observed that the firms that succeeded in increasing service revenues were those running decentralized service organizations with profit-and-loss responsibility. As discussed earlier regarding the financial benefits from transitioning to services, the same idea of the importance of monitoring costs applies. Malleret's (2006) study agrees by denoting that if services are organized as a profit center, the measurement of their profitability becomes easier.

Gebauer *et al.'s* (2010d) study on the impact of different organizational structures shows that an integrated service organization limits the creation of a service orientation in the company. As an integrated service unit would have to be created within manufacturing-centric and product-oriented values and behaviors, there might be clashes between the dominant product-oriented and the emerging service-oriented culture

which in turn would hinder the creation of a service-oriented culture. (Gebauer *et al.,* 2010d.) So by separating the service and product organizations, some clashes could be avoided and the service orientation of the organizational culture may become stronger at least in parts of the company. Thus, organizational structures are seen to have an impact on building a service-oriented culture.

In contrast to the studies supporting the separate service units, some scholars support integrating the service operations in manufacturing organizations. Neu and Brown (2005) suggest that companies positioned as service providers should have an integrated product and service division in order to fulfill complex customer needs. Also Brax's (2005) single-case study indicates that organizing work purely as projects is too transaction-focused for services, and an integrated service business unit would be necessary because customers need support on a continuing basis.

In this thesis, the above discussion related to integrated or separate service SBUs within a manufacturing company that is traditionally product-oriented offers some interesting insights, but is not directly applicable as here the servitization process is examined in addition to the company level, also per business unit. If a business unit wishes to servitize its operations, a customer-centric configuration has to be in place to enable the implementation of the service strategy and support the service-oriented culture. Literature has examined the configuration of business operations by looking at profit centers and segmentation within companies and business units (Galbraith, 2002b, Shah *et al.*, 2006). These are seen as partly impacted by the prevailing organizational strategy and culture, as they define whether operations are internally or externally oriented, namely whether units concentrate on manufacturing and selling or developing customer relationship and solving customers' problems (Shah *et al.*, 2006). These aspects will be discussed in more detail in chapter 5.2. For the organizational configuration to be customer-centric, generally it can be stated that customers have be in the focus of operations, which in turn requires segmentation per customer group and including customers in the operations (e.g. utilization of customer knowledge in service design).

Relating to taking on a more customer-centric configuration, manufacturing companies must recognize that the process of providing services cannot be completely controlled. As the offering consists of intangible value with or without products, the value gained will be realized at least partly in the customer's operations. Hence, Brax and Jonsson (2009) argue that since with integrated solutions the main parts of the process take place inside the client's business system, the idea of improving efficiency by organizing operations within the provider's business is simply inadequate and thus they call for more research on designing and managing the service processes.

The third structural challenge manufacturing companies have to consider relates to decision-making. This aspect is also affected by the changes in the organizational culture of the company. Traditional product-oriented cultures have emphasized hierarchical decision making, as the markets have not required a flexible organization. In their study on forming business-to-business services in good-dominant firms, Neu and Brown's (2005) findings indicate that senior level managers should allocate a high degree of decision-making authority for strategy formation (the value proposition and marketing strategies) to managers at lower levels of the organization. Vertically decentralized decision making is perceived as an appropriate way to become more customer- and service-oriented because managers at lower levels are closer to customers and seen to be better able to understand the complex service needs of the customers, in addition to better understand how to align operations with those needs and wants (Neu & Brown, 2005).

The fourth issue distinguished as a structural challenge by manufacturers transitioning to service business concerns the creation of a service network. In Mathieu's study (2001b) it was perceived that suppliers could, with the use of product services, use their knowhow to help customers gain global competitiveness. In addition, as services require a relationship between the provider and the customer, it has been argued (Gebauer *et al.,* 2008a) that global networks are required in order to serve customers that have operations in multiple countries. Neu & Brown's (2008) study showed that owning a global service organization presents a competitive advantage when customers may be geographically dispersed and still require local presence. However, building a service network requires substantial investments and should be considered carefully, even though the local service organizations could provide the company with important market information (Gebauer *et al.,* 2008a). In addition, Oliva and Kallenberg (2003) point out that a global service infrastructure requires the company to acquire new capabilities such as diffusion of knowledge across the network, managing dispersed international personnel, and building an international as well as standardized service offering.

To conclude, successful servitization requires a manufacturing company to review its structure and organizational configuration. Beginning to compete with an integrated offering consisting of products and services in addition to emphasizing value delivered consequently changes also the environment in which the company competes. The new strategy requires a more flexible organization, which is able to view the whole value delivery process that partly resides outside the factory walls and inside the customer's operations. Thus, the term 'configuration' is here viewed more appropriate, as in addition to adding the customer in the center of the company's operations, changing business unit structures, also the employees' mind-sets have to change and take the customer more into consideration.

The following chapter examines the challenge of developing market-oriented services, which entails co-creation together with the customers and creating a structured service development process.

3.4   Market-oriented service development

As a manufacturing company transitions to offering services, developing market-oriented services can be challenging, if the organization has traditionally been product-oriented and focused mainly on technology and internal processes. Martin and Horne (1992) observed that new service development is a strategic hurdle for manufacturing companies that are looking to increase their service orientation and extend their offering. The study suggests that new service development is seen as an obstacle for companies because the development process is often unstructured and it lags behind product development as companies consider service innovation as something that "just happens".

Current literature is fairly unanimous in suggesting that new service development is a controllable event and should not be regarded as something 'ad hoc' as most of the variables linked to success or failure are under the direct control of management (De Jong & Vermeulen, 2003; Edgett, 1994).Gebauer *et al.* (2010b) denote that to successfully develop services, a company should have formal and customer-oriented development processes, which include definitions of clear milestones. Also Edgett (1994) claims that a comprehensive development program is needed in order to successfully develop new services.

de Brentani (1995) argues that managers should establish a procedure for idea generation and that new services could be tested together with customers and frontline employees. In line with this, Alam and Perry (2002) call for more management attention to the idea generation stage of the service development process. Other identified key stages are idea screening, and the formation of a cross-functional team in new service development. Furthermore, Gebauer *et al.* (2006) recognized that companies successful in developing new services used a structured service development process consisting of identifying market needs, conceptualizing and piloting the idea, and carrying out a market introduction. If the new service development process is implemented successfully, it can serve as a means to differentiate the service offering when introducing it to the market (Edgett, 1994).

Many scholars agree on manufacturing companies having to be market-oriented in order to successfully develop services (e.g. Brax, 2005; Gebauer, 2007, de Brentani, 2001; Oliva & Kallenberg, 2003). de Brentani (1995) concurs by stating that, independent of the company in question, new service success is closely associated with offering products that respond to market needs and that are aligned with the firm's

reputation and resources. A market-orientation and understanding the customers' needs can be perceived as a prerequisite and key strategic factor for forming successful business-to-business services (De Brentani, 2001; Neu & Brown 2005).

Gebauer (2007) calls for a service-oriented approach from manufacturing companies that offer integrated, or more developed services, which aim to promote the customer's business. Utilizing the existing product and customer knowledge within the company can additionally serve as a barrier for competitors (Ojasalo & Ojasalo, 2008). According to Brax (2005) knowing customer's business contexts and operational conditions is fundamental, as services are designed to support the customers' business goals and practices. Alam and Perry (2002) argue that managers should put more emphasis on developing services that match customers' needs. Companies should adopt a customer-oriented approach to new service development and obtain customer input in their new service development programs by treating customers as partners in service development and designing service together with customers (Alam and Perry, 2002; Sawhney *et al.,* 2004). Furthermore, rethinking the role of the customer and developing ways to get the customer to participate in co-producing services together with the supplier is seen as necessary for companies moving towards service-orientation (Martin & Horne, 1992; Sawhney *et al.,* 2004; Vargo & Lusch, 2004).

In addition to a formal development process and market-orientation, successful new service development also depends on getting the necessary commitment and interaction from management and from the different functions within the company (de Brentani, 1990). This requires reconnecting the potential communication gaps for example between marketing and R&D in the manufacturing sector and getting personnel from different departments to combine their points of view and proficiencies. Gebauer *et al.* (2008b) denote that management support and frontline employees' involvement, in addition to market testing and research, are required for developing services. This is consistent with Edgett (1994), who states that interfunctional cooperation enhances new service development and that strong, visible support from top management is required in order to develop new services successfully.

Service development requires above all attention from management and resources in order for a process to be put in place. The following section continues on issues relating to management of the service offering.

3.5   Service offering

Manufacturing companies adding services to their offering is probably the most visible change an outsider can witness in a servitization process. Still, in this thesis it is seen as a result of much deeper internal

changes that have taken place in strategy, culture and the overall orientation of a company. Transitioning from one competitive position to another results from simultaneous changes in organizational structure and culture, core processes, and customer relationships, all of which are necessary in order to deal with new kinds of offerings (Gremyr *et al.,* 2010).

It is claimed that classifying industrial services helps the company to focus on their competitive strategy, to understand the markets also internationally, and to guide management practices (Boyt & Harvey, 1997; Ojasalo & Ojasalo, 2008). Johansson and Olhanger (2004) have presented a service profiling method called ISP Industrial Service Profiling, where the basic idea is to match a certain service offering with a specific service process. In addition, from a customer-point-of-view it is suggested that organizations should consider classifying their service offerings, as neither customer satisfaction nor competitive advantage are maximized by providing a generic, undifferentiated service to all segments (Boyt and Harvey, 1997; Mathieu, 2001b). As one manufacturing company can have multiple different services, they may require different leadership and development processes. This can be done through profiling services and building service portfolios. (Ojasalo & Ojasalo, 2008.)

Some service offering classifications are based on product attributes and purchase phases. In Mathieu's (2001a) study on service specificity, the content of the service is used as a classifying factor. Three types of services are recognized: customer service, product service, and service products. An example of customer service includes a toll free number for customer inquiries. Product services include repair and maintenance services, whereas service products are independent of the product offering and can be sold separately. Kotler (2003), on the other hand, distinguishes between two broad categories of industrial services: maintenance and repair services and business advisory services. The latter are perceived by Kotler (2003) as services that facilitate developing or managing the finished product. On the other hand, Homburg and Garbe (1999) divide business services into professional services and industrial services, the later consisting of pre-purchase, purchase, and after-sales services. Mathe and Shapiro (1993) separate between services that encourage or facilitate the sale of products, and those services that are intended to increase the benefits and value that customers gain when using the product.

In order to provide customers with services that offer more added value, the relationship between the buyer and the seller should be taken into consideration. Penttinen and Palmer's (2007) study categorizes services based on the nature of the buyer-seller relationship (transactional vs. relational) and the completeness of offering. Completeness of an offering is defined by the amount of bundling and extension in meeting customer needs. According to the study, companies that change their strategy from offering

basic components to offering integrated solutions, extend their offering to include services, rather than only products. Consequently they also move from an incomplete offering in a transaction-based customer relationship that is often product-focused, to a complete offering in a relation-based customer relationship.

Additionally, Oliva and Kallenberg (2003) suggest that one of the success factors in increasing service revenue is the extension of the service offering starting with product-related services and continuing with services directly supporting the customer. In the classification proposed by Mathieu (2001b), a distinction made between services supporting the supplier's product (SSP) and services supporting the client's action (SSC). Services that support the supplier's product are the services that are traditionally viewed as industrial services (Kotler, 2003). Their main purpose is to assure the proper functioning of the product sold. In contrast, services supporting the client's action are designed to advance the client's business, and help with maximizing the customer's processes. In order for a company to be able to provide these SSCs, it has to have intimate knowledge of the customer's business and the customer's market in general. SCCs require intensive relationship with the customer and a highly customized service offering (Mathieu, 2001b).

End-user's process-oriented services offered by manufacturers have the same purpose that is emphasized in Mathieu's (2001b, 40) services supporting client's actions: "To help the client to maximize all different processes, actions and strategies that are associated with a supplier's product". Consistent with this, Gebauer *et al.* (2006) see the expansion of the service offering as changing the customer value proposition from production efficiency and effectiveness to end-user, to the product's efficiency and effectiveness within the customer processes. Windahl and Lakemond (2010, 5) suggest that "the success of value creation is dependent of both the customer's and the supplier's ability to perceive and determine value". The supplier plays an important part in determining the meaning of value together with the customer, as they need to communicate, suggest, show and even educate the customers.

As can be seen from previous literature, scholars have offered numerous classifications of industrial services and a variety of terms have also been in use. It is important for manufacturers to distinguish between their different offerings and to align the service offering with the service strategy of the company, as a higher degree of service-orientation and market knowledge are required in order to supply services that support and add value to the customer's processes.

The following section first examines internal knowledge and communication issues, after which external communication with customers and stakeholders will be discussed.

3.6 Knowledge management and communication

Scholars have viewed internal and external communication to hold significant power in enabling a transition of manufacturing companies towards services (Windahl & Lakemond, 2006). According to Neu and Brown (2005), integration of business unit responsibilities and fostering intrafirm collaboration is important in pursuing a position in which the company strategy will be aligned with the market requirements. Companies that were seen to successfully implement a service strategy in Gebauer *et al.*'s (2006) study, linked goal achievement to an incentive system. The common goals were used to motivate employees. Gebauer *et al.* (2006) and Wise and Baumgartner (1999) also recognize that service organizations have to function and coordinate with different methods for measuring performance than traditional goods-oriented companies, as market share, cycle time, and quality level usually focus only on the product.

Knowledge management and communication have to be considered also when building a service-oriented culture, as employees must commit to the goals set, and in order to get them to do that, they must know the benefits and witness the results of adding services to the company portfolio. In order to change the employee mind-sets, a strong internal marketing strategy is required to encourage employees to get a better understanding of customer benefits of a service (Grönroos, 1998). Gebauer *et al.* (2006) distinguish internal marketing as being directly related to building an organizational culture that sees transitioning into services as a positive challenge.

Information sharing is also seen as important for creating the company's innovative climate that enables developing new services by supporting openness, creativeness and "stepping out" beyond the norm (De Brentani, 2001; De Jong *et al.,* 2005; Gebauer *et al.,* 2008b). de Brentani (1990) distinguishes that knowledge sharing and combining of information is necessary in developing new services as management commitment and interaction between organizational units is required. Furthermore, in Mathieu's (2001b) study the importance of sharing both information and knowledge within the company are recognized in creating a shared understanding of the integrated service offering, and a certainty that the company possesses the needed knowhow and resources to deliver it. Thus, communication strategies are essential to clearly describe the customer value proposition (Mathieu, 2001b).

As they transition to service providers, manufacturing companies have to begin to consider continuous communication between customers and service workers, and empowerment of the service personnel. These are referred to with the term *interactive marketing* in Grönroos's (1998) studies. It is argued that as

services are produced in interaction with the customer, poor interactive marketing can jeopardize the long-term success of service marketing (Grönroos, 1998). Furthermore, Brax & Jonsson (2009) claim that customers may value risk-reduction over cost-savings when buying industrial services. They recognize that manufacturers can improve their solutions business by managing their image in the eyes of the customers by improving trustworthiness, and by establishing a reputation that encourages interdependence. Therefore, communication is a vital tool in building relationships with customers, which is viewed as a foundation for servitization. It has to me remembered though that communication towards customers has to include measurable and well-defined promises. (Brax & Jonsson, 2009.)

A transition to offering services also poses challenges relating to external communication. "Manufacturing companies moving into service business need to understand that their production process are no longer encapsulated within the factory walls; integrated solutions are all about implanting production processes as parts of the customer's business systems." (Brax & Jonsson, 2009, 556.) Also Baines *et al.* (2009b) argue that traditional manufacturing-oriented frameworks generally dismiss the element of customer relationship. In their view, this is a reflection of the internal focus typical of manufacturing organizations where manufacturing and customer interactions are clearly separated. Communicating externally aims at conveying and maintaining a positive corporate image. Through external communication, manufacturing companies aim at changing customer perceptions, from selling high quality products to providing excellent services and fulfilling customer requirements (Gebauer *et al.,* 2006).

Grönroos (1998) denotes that the concept of *relationship marketing*, including both internal and external communication, is especially relevant for companies that offer their customers solutions consisting of both goods and services. Hence, manufacturing companies that begin to offer services in addition to products should reconfigure their marketing operations to match the current strategy. However, one of the key observations in relationship marketing is that regardless of whether the business is traditionally service-oriented or goods-oriented, a firm that adopts a relationship marketing approach has to define itself as a service business (Grönroos, 1998). Building a service-oriented culture is regarded as essential also in implementing successful relationship marketing.

Servitization presents new challenges and opportunities for manufacturing companies and therefore communication plays an important role in getting employees, partners, and customers to understand what is happening, and what are the implications for the stakeholders. Internal communication offers means to get employees on the same page about where the company stands in terms of services and build awareness of the potential benefits that lie in service business. Interactive communication (or marketing)

conveys the message from the inside out through maintaining customer relationships and simultaneously enables taking in customer feedback to improve current operations. External marketing can be used to build a positive corporate image and emphasize excellent services in addition to traditional product sales.

The next chapter examines the process and transition stages of servitization that companies wishing to servitize have to take into consideration and design according to their own needs and capabilities.

3.7   Transition stages

According to Vandermerwe and Rada (1988) the servitization of business has probably evolved in three overlapping stages. First, there was a clear distinction between companies being in goods or services. Then manufacturers began to offer services and service dominant sectors realized products could be used to deliver services, thus resulting in companies realizing that they need both goods and service. Currently, servitizing companies create bundles of goods, services, support, and knowledge, which together will bring value in use to customers.

Oliva & Kallenberg (2003) presented the product-service continuum (Figure 2) as their study's framework, after which it has been widely used in literature. The continuum depicts the service-orientation of the company and represents the strategic positioning of a company moving to the right as the relative importance of service grows and tangible good are being seen as "add-ons". In addition to Oliva and Kallenberg (2003) also other scholars view the expansion to services to begin from the product-related services and the installed-base and moving towards integrated solutions as a sequential process (e.g. Gebauer & Fleisch, 2007; Gebauer & Friedli, 2005; Mathieu, 2001a). As a limitation of the Oliva & Kallenberg's (2003) framework it has to be said that it includes a fallacy of viewing the increase in importance of service to be linear.
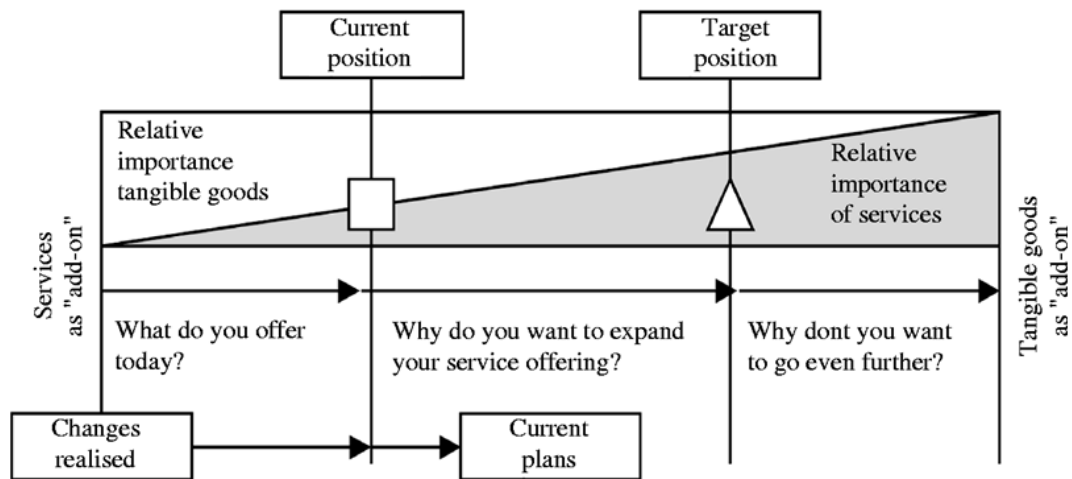
Figure 2. Product-service continuum (Oliva & Kallenberg, 2003)

Brax (2005, 147) denotes that previous literature has perceived the transition from manufacturer to a company with a service-dominant total offering as an incremental change, in which the main focus has been on the offering and the weight of services in the offering. However, research on servitization has neglected to examine how the shift depends on company traits and how the customer relationships change. Baines *et al.* (2009b) criticize a similar model by Tukker (2004) arguing that it delivers only limited value to companies configuring their operations, as it does not mention changes in the company values (e.g. cost, quality, time).

These frameworks of the servitization steps and phases are being challenged by an emerging practice of research arguing that the servitization process can be nonlinear and may actually be reversed (Finne, 2010; Turunen, 2010). Also Penttinen and Palmer's (2007) study reveals that many of their case companies were aware of the fact that they cannot move to providing integrated offerings on their own. Thus, they presented two main approaches and enablers for the transition to reposition their offering; the acquisition of new competencies through networking, and the use and implementation of innovative information technology.

Thus, it can be concluded that the transition phases of servitization are not self-evident for today's manufacturers. For one reason or another, implementing incremental changes may be a too slow a process for companies that need to develop their business quickly. In addition, beginning to offer services to an existing installed base is not an easy task if the required service knowledge is not available in the company. Hence, it is here argued that the implementation of servitization should be examined on a case-by-case

basis, as companies should not pressure themselves to taking on servitization goals that do not suit their business strategies. It should also be noted that research in this area also lacks study on *partial servitization* processes, as servitization is generally seen as to what extent the whole company is service-oriented.

4. Organizational culture

The fourth chapter of this thesis' uses academic literature to review organizational culture and issues relating to changing organizational culture.

Discussing the role of organizational culture in the transition process of manufacturing companies is considered relevant, as scholars have acknowledged organizational culture's importance when examining organizational management issues. Alvesson and Sveningsson (2008) argue that organizational culture should always be considered when planning an organizational change. Schein (2009) denotes that culture matters since it is a powerful force within the company that defines both individual and collective behavior, thought patterns, and values. In addition, culture is viewed as an extremely important determinant of strategy, goals, and modes of operating (Schein, 2009). As all these elements are interconnected, changing only some of them in the organizational culture is not possible. All parts of the culture have to be taken into consideration if the company's basic mission or strategy is to be changed, or if not the other parts will not respond in the assumed way (Schein, 2009).

Previous literature presents multiple approaches to researching organizational culture, including; comparative research (e.g. Hofstede, 1991), corporate research (e.g. Kilmann, 1985; Peters & Waterman, 1982), cognitive research (e.g. Schein, 2004; Martin & Siehl, 1983), symbolic research, and structural and psychodynamic organizational culture research (Silén, 1995). According to the cognitive research approach, members of the organization create the organizational culture partly through unconscious meaning of logic and norms. Thus, members of the organizational culture can be understood as independent thinkers that behave according to commonly approved cognitive norms. (Silén, 1995.) This research takes on a cognitive approach, even though others are also discussed in order to build a more comprehensive review of organizational culture literature.

4.1   What is organizational culture?

Beginning from the 1980's, organizational culture has interested many scholars and there have been various publications on managing organizational culture, the dimensions of organizational culture and how organizational culture manifests itself (e.g. Hofstede, 1990, 1998; Homburg *et al.*, 2003; Schein, 2004, 2009). This vast amount of literature however does not help in defining the concept, as there is a general agreement only on that it is a broad construct. Differences in opinion exist on many other aspects such as;

what constitutes organizational culture, can organizational culture be described and researched adequately, can organizational culture be managed, and to what extent (Willcoxson & Millett, 2000). In this thesis, the academic discussion on the complex nature and different types of typologies of the concept is noted, but cannot be included due to limited resources and a limited research area.

As was previously mentioned in the introduction, Schein's (2009) definition of organizational culture is used in this thesis as it is one of the most commonly used definition, and one that fits this study's perspective of viewing culture as something that "is".

> "*Culture is a pattern of shared tacit assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems*" (Schein, 2009, 27).

Organizational culture aims at creating simplifications, tools, and beliefs, in order for the organization to be able to maintain internal cohesion and respond to external demands. As in this thesis, organizational culture is not perceived as something that the organization "has", organizational culture and organizational strategy are viewed as inextricably linked and interdependent (Bate, 1994). Consequently, cultural issues are seen as important and should be taken into consideration when implementing a strategic change, such as the one manufacturing companies are executing when beginning to servitize.

In his studies Schein (2004, 2009) distinguishes between three levels of culture; artifacts, espoused values, and underlying assumptions (Figure 3). *Artifacts* present visible organizational structures and processes that can be seen, heard or felt when entering the company (e.g. language, technology, products, clothing, myths, stories, published values, rituals, ceremonies, organizational charts, charters). Schein (2004, 2009) argues that especially a common language is a mandatory element in order for people to function as a group and build on common understanding. This level of the organizational culture is easy to observe, but difficult to reconstruct, as the culture members can interpret it differently than an outside observer, and it relates to the underlying assumptions of the culture. *Espoused values, beliefs and norms* are part of the culture that members of the culture use as a way of depicting the culture themselves (e.g. "we care about stockholders/employees/customers", "we value high quality/low cost") (Schein, 2004). These values and beliefs have become non-discussible assumptions as they have undergone a social experience shared by the group and found to be effective. The espoused beliefs and values may function as a guide in dealing

with problematic or new situations. In observing the espoused values, one has to be aware that they may only reflect rationalizations or aspirations of the organization's members.

Artifacts	Visible organizational structures and processes (hard to decipher)
Espoused Values	Strategies, goals, philosophies (espoused justifications)
Basic Underlying Assumptions	Unconscious, taken-for-granted beliefs, perceptions, thoughts, and feelings (ultimate source of values and action)
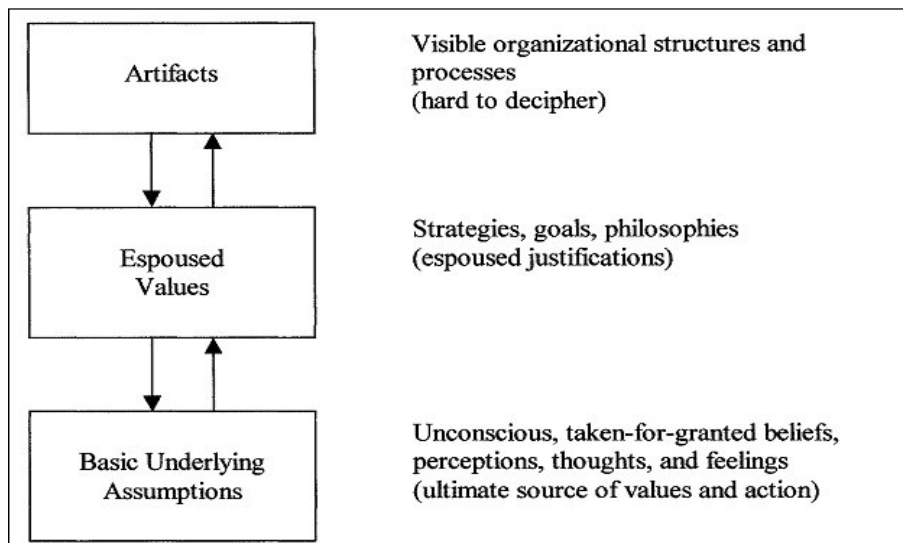
Figure 3. Three levels of culture (Schein, 2004)

According to Schein, the deepest level of culture consists of *basic underlying assumptions* that are unconscious and taken for granted by the members of the culture. These assumptions are manifested through the two other levels. As they are non-debatable, changing underlying assumptions is extremely difficult. The underlying assumptions of an organizational culture give members of that culture cognitive stability and a sense of safety, and they are powerful due their nature of being shared and mutually reinforced (Schein, 2004.) Consequently, organizational culture affects employees' view of the organization's mission and the appropriate ways of achieving it, and impacts the values and behaviors of the organization (Homburg *et al.,* 2003). The basic underlying assumptions are seen as relatively stable, and so even though employees would change, the organization's methods and assumptions would stay the same.

Another theory concerning organizational culture is by Hofstede, who has researched both national and organizational cultures. His model is presented here to provide both support and additional elements to that of Schein. Hofstede (1990) depicts the manifestations of culture as an onion (Figure 4), with layers from shallow to deep. *Symbols* represent similar issues as Schein's level of artifacts. These include words, gestures, pictures and other aspects of the culture that are visible to the outsider but that carry a particular meaning within the culture (e.g. language, jargon, dress, hairstyles, status symbols) (Hofstede, 1991).

Heroes of a certain culture embody the culture and are seen as models for behavior. These can be alive, dead, real or even imaginary. *Rituals*, that form the third layer, counting from the outside in, are collective activities embedded in the culture (e.g. greeting, ways of paying respect, social ceremonies). (Hofstede, 1991.) Similarly to Schein, in Hofstede's depiction, organizational culture's core is formed by *values* which are rarely discussable and taken for granted (e.g. evil vs. good, dirty vs. clean).
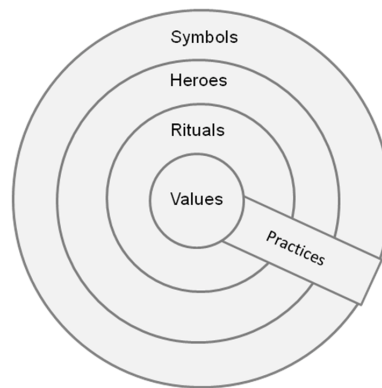
Figure 4. Manifestations of culture: From shallow to deep (Hofstede, 1990)

The main difference between Schein and Hofstede's depictions of organizational culture concerns the additional layer of *heroes* and the way organizational *practices* are involved. Hofstede's (1990) depiction of culture includes the role of practices, which is not explicitly stated in Schein's three levels of culture. In Hofstede's depiction, symbols, heroes and rituals are subsumed under practices, as they are visible to the outsider even though they still entail a specific meaning to the insiders of the culture. Still, both scholars recognize that through practices, some levels of culture can be manifested and observed, although Schein states that the espoused values may remain unclear to an observer (Schein, 2004).

Organizational culture has also been examined through its different functions. Organizational culture distinguishes one organization from another, provides a sense of identity for organizational members, generates a commitment to the larger team or organizational unit, and functions as "the social glue" that holds the organization together by providing information on how employees should behave. (Simpson & Cacioppe, 2001.) Although this represents the corporate research view of organizational culture, it is discussed here since the functions and impacts have been widely acknowledged even though criticized as too pragmatic.

Also Brown (1995) argues that culture has multiple functions, which include conflict reduction, co-ordination and control, reduction of uncertainty, source of motivation, and source of competitive advantage. This view is partly in line with Schein (2004, 2009) as organizational culture is viewed to operate as a consensus for helping the company to adapt to the external environment and to integrate internal processes, thus avoiding conflicts. In addition, as organizational culture includes values, beliefs, attitudes and underlying assumptions, it can also be seen as a means for control (Brown, 1995; Martin & Siehl, 1983). There are also scholars (e.g. Alvesson, 2002; Brown, 1995; Denison, 1990; Hofstede, 1990; Peters & Waterman, 1982) that suggest that organizational culture is associated with greater productivity and profitability, but these lack supportive evidence. However, it can be stated that with the organizational culture, the company is able to simplify the world in which it operates and thus neutralize uncertainties. With the use of rewards and punishments, the organizational culture is seen as a means to guide employee motivation.

4.2 Organizational culture, national cultures, and subcultures

Previous literature on organizational culture has in addition to other disagreements, also presented various views of the coherence of organizational culture (Table 2). The issues that are raised up for discussion and seen as important in organizational culture usually depend at least partly on how the character of organizational culture is viewed.

Table 2. Three paradigms of organizational culture research (Adapted from Martin, 2002, 95 and Siehl & Martin, 1990, 249)

Defining characteristics	Paradigm/Perspective		
	Integration	**Differentiation**	**Ambiguity**
Level of consistency	Only consistent elements mentioned	Some inconsistencies	Lack of clarity
Degree of consensus	Organization-wide consensus	Consensus within, not between, subcultures	Issue-specific consensus, dissension, and confusion
Orientation to ambiguity	Denial	Channeling	Acknowledgement

Some scholars use the *integration paradigm focus* of organizational culture, and assume that all organization members share a similar set of values and beliefs. This view emphasizes consistency of organizational culture and denies the existence of conflicts (Siehl & Martin, 1990; Silén, 1995). The *differentiation paradigm* assumes that the ways in which organizational culture is manifested may not be consistent and that there are subcultures depending on e.g. employee's function, department or years of service. The differentiation perspective however accepts and recognizes that there may exist common values and shared norms (Silén, 1995). Organizational culture can also be seen as *fragmented/ambiguous* (Siehl & Martin, 1990), in which organizational culture manifestations are seen to be controversial and contradictory, and members are not recognized as sharing a common culture or even subcultures, as they are perceived being connected only to few other members (Silén, 1995).

Of the scholars that acknowledge the existence of subcultures, some view them as a result of organizational differentiation, which has occurred in time as a company has been successful in its operations and has had to grow and hence differentiate itself into units based on function, markets, product etc. (Schein, 2004). Kotter and Heskett (1992) view organization's subcultures as associated with different functional grouping or geographical locations. Consequently, many normal operating procedures (e.g. selecting & socializing new employees) are implemented differently within different sub-units, and over time these practices may lead to different perceptions about the whole organization (Helms & Stern, 2001). Hence, people will probably not interpret everything in organizations similarly, partly because organizations consists of differentiated work tasks, divisions, departments and hierarchical levels that foster differences in values, meanings and symbols (Alvesson & Sveningsson, 2008). In Helms and Stern (2001) study, managers are reminded that even with highly persistent efforts, sub-organizational cultures are likely to exist within the organization. Schein (2004, 2009) argues that managers have a role in creating, managing and evolving the subcultures in their parts of the organization. Managers are left with a difficult task of finding ways to coordinate, align, or integrate the different subcultures, as even though difficult, managing them is viewed possible.

Furthermore, as companies operate in, and are connected to, their external environment, it can be sometimes difficult to separate between the manifestations of national culture and the organizational culture of employees. Hofstede *et al.* (1990) showed that perceptions of organization culture can be affected by nationality and demographic characteristics. According to his study, employee values differed more according to the demographic criteria of nationality, age, and education than according to membership in the organization per se. In accordance with Hofstede, Helms and Stern's (2001) study's

results show that the personal background and experiences influence employee perceptions of organizational culture and work environment more than work experience does. Issues relating to national culture are especially important for companies operating in multiple countries, as they have to consider the national culture before beginning operations abroad. In addition to employees relating to their own national cultures, they might also have a strong sense of occupational culture. This is common especially among for example doctors, IT-personnel whose values, beliefs and attitudes are fairly similar regardless of organization.

Figure 5 depicts Hofstede's results on cultural differences, and as can be seen, cultural differences reside mostly in practices, less in values. This is because organizational practices are learned through socialization at the workplace as adults when people usually have their main values in place.

Level

Nation

Occupation

Organization

Values

Practices

Place of socialization

Family

School

Workplace
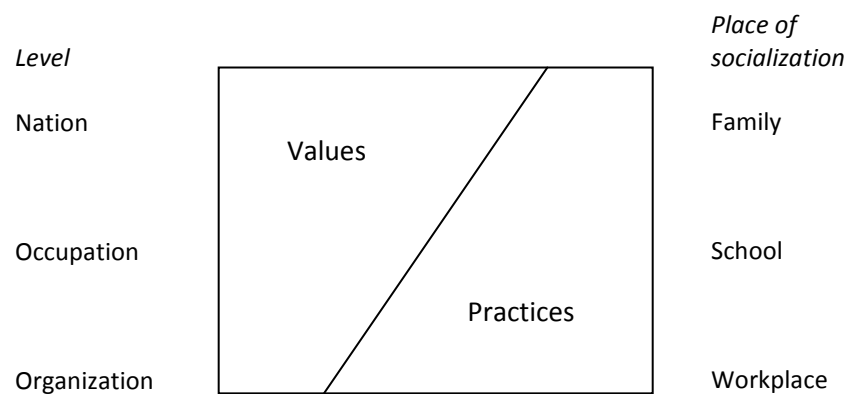
Figure 5. Nature of cultural differences: the national, occupational, and organizational levels (Hofstede, 1991, 182)

Viewing organizational culture in this manner questions whether employees' values can be aligned with the organization's values, or whether research should concentrate on shared practices. Martin (2002) also argues that artifacts and values are not necessarily superficial, as the way they convey meaning may reflect deeper assumptions. In addition she claims that artifacts, values, and assumptions do not necessarily depict separable, different levels of culture. Furthermore, as will be discussed in the following section relating to managing organizational culture, these issues should be taken into consideration when recruiting personnel.

Even though Schein's definition of organizational culture is used in this research, an approach less integrative is taken. In this thesis organizational culture is seen as a set of perceptions, beliefs and values

commonly shared by the whole organization, but simultaneously it is recognized that subcultures may exist and employees' actions and values may be influenced by their national culture. It is accepted that organizational culture contains contradictions, and hence a transition process in an organization is difficult to implement.

4.3   Managing organizational culture

Scholars have taken different positions around the possibilities of managing culture, being able to systematically affect or change it. One important aspect here is that, as discussed earlier, the term culture can be understood in multiple ways. Here, with the use of the term culture it is referred to "deep structures" and assumptions. Alvesson (2002) discusses the complex issue of managing organizational culture and distinguishes three perspectives that reflect different assumptions of management's possibilities of shaping organizational members' ideas, meanings, values, and norms according to the business goals. These three views range from easily manageable, to intertwined with management, and to too strong to manage.

Some scholars see organizational culture only as a subsystem and as manageable as any other part of the organization. Kilmann (1985) has presented five steps to managing culture and argues that every company has a distinct culture than can be changed quickly and must be managed and controlled, as otherwise it will become dysfunctional if left alone. Also Sather (1985) argues that culture is most easily controlled by norms and the strength of a culture can be measured by how manageable it is. In contrast, e.g. Pfeffer (1981, in Alvesson, 2002) considers organizational culture as only partly manageable. He suggests that while actions and activities in the organization are determined by other factors, managers still have an influence on employees' attitudes, values and perceptions. The third view to managing organizational culture, represented for example by Schein (2004, 2009), treats culture more as a diagnostic tool that helps in making the right decisions. Organizational culture's deep values and basic underlying assumptions are stressed by this view, and culture is regarded as fairly resistant to control and change and is only occasionally manageable. (Alvesson, 2002.)

As organizational culture is viewed in this thesis to be complex and multilayered, it is suggested that in order to make a real change possible, people's values and ideas must be affected. Even though difficult, this is seen as possible and it is believed that managers can in fact manage organizational culture as they are seen to have a chance to influence the development of the culture, and help to ensure that a company's

objectives are understood and implemented by employees. Still, such a process is believed to take years and to be implemented using different managerial activities, which will be presented next.

4.3.1   Recruitment and selection process

Organizational culture is seen as an issue that managers should consider when recruiting employees, since employees posses values and attitudes that cannot be changed easily and that will come to work with the employee. Hofstede *et al.* (1990), who have studied different organizational culture dimensions, argues that the way member's values enter the organization is through the hiring process. When hiring people of certain nationality, age, education, and sex, the organization also hires the member's values as according Hofstede they are interrelated with the person's demographics (Hofstede *et al.,* 1990). Additionally, Brown (1995) states that organizations should attempt to select individuals that are in addition to being competent for the position, also culturally compatible. On the contrary, employees that do not support the culture and are not willing to change their way of thinking should be removed and replaced, in order to promote the desired culture (Willcoxson & Millet, 2000).

4.3.2   Socialization and training

Hofstede *et al.* (1990) state in their study, that the socialization of new employees is a process in which they learn the organization's practices, symbols, heroes, and rituals. In addition, Brown (1995) claims that the socialization of new employees can be an important means of strengthening, re-orienting and even changing the organizational culture, if the training and development programs are designed to deliver a consistent message.

4.3.3   Leadership and modeling

Hofstede (1990) includes heroes in his model of organizational culture and emphasizes their importance of showing an example to other employees, as heroes embody the critical aspects of the organizational culture. Managers, supervisors etc. are seen to have a reinforcing or assisting role in overturning the existing behavior and values of employees in the organization (Willcoxson & Millet, 2000). Also Levin and Gottlieb (2009) argue that organizational leaders need to act as sponsors in culture realignment.

4.3.4   Appraisal and reward systems

If a company is applying a performance appraisal system, it must consider carefully what to appraise, what kind of time orientation is used, what appraisal methods are used and who conducts the appraisal (Brown,

1995). A company can decide to appraise employees' traits, behavior or results, all of which can be used to strengthen to desired organizational culture. Still, it has to be mentioned that through appraisals and rewards, only the most visible levels of organizational culture can be influenced, even though over time a permanent change in culture is possible. However, appraisals and rewards should be recognized as a way to increase employee commitment, and loyalty with their organization. (Brown, 1995.)

4.3.5 Participation and communication

All the members of the organization that are affected by a cultural change should be included in the cultural reconstruction and decision-making in order to gain long-term results from the change process (Willcoxson & Millet, 2000). In addition, Ojasalo & Ojasalo (2008) stress the importance of communicating throughout the change process in order to gain and maintain support from all stakeholders. Through communication, all parties involved are made aware of what is required from them. As already discussed regarding the new service development process, multifunctional engagement and participation is needed to implement a cultural change (Levin & Gottlieb, 2009).

4.3.6 Structures, policies, procedures, and allocation of resources

When going through transition-related challenges in manufacturing companies, all organizational elements have to be aligned with strategy. Regarding policies and procedures, the company should already beforehand think of ways to surpass challenges that are bound to rise during the change (Ojasalo & Ojasalo, 2008). Management's role is crucial in determining resource allocations to encourage the change by providing not only time and money, but also their support. In a change process, management may have to take on multiple approaches to affect change. Levin and Gottlieb (2009) claim that utilizing both instrumental levers, targeted at how the work is performed, and symbolic levers, that influence people's perceptions and attitudes, is needed to effect change.

The next chapter discusses different views on change in organizational culture that have been presented by previous literature.

4.4   Change in organizational culture

Many scholars have researched changing organizational culture, but there is still no unanimity in what it includes. On a general level it can be agreed on that organizational culture change is related with people's values and thus arouses strong opinions in everyone involved. However, it is recognized that due to

changes within the company or in its business environment, cultural change becomes necessary to implement the company's mission and gain a competitive position (Schein, 2004). Bate (1996) utilizes the term "culture-lag" of a situation where the organizational culture and the external environment do not match anymore and, as done with organizational strategy, culture has to be re-evaluated.

As the basic underlying assumptions of an organizational culture provide members of the organization with meaning, cognitive stability and security, changing organizational culture, and hence challenging and questioning these assumptions, will release anxiety and defensiveness (Schein, 2004). Displacing the deepest and unconscious level of organizational culture by new organizational values and beliefs is not an easy task for managers (Willcoxson & Millet, 2000). In changing organizational culture, the previously discussed methods of managing the development of organizational culture may be useful. However, it can take years until the culture has truly changed. One reason why changing organizational culture is viewed difficult relates to the fact that, as mentioned earlier, organizational culture is not something a company "has", but rather something that "is" within the organization. Bate (1994) develops this concept further and argues that when we are changing culture, we are simultaneously changing strategy, structure, and also the whole organization.

Literature relating to successful implementation of a culture change has emphasized the importance of the management's role. If a change in culture is viewed also as a change in strategy, or vice versa, it is not surprising that management participation is required. Schein (2004) distinguishes two keys to a successful culture change, which include managing the large amounts of anxiety that accompany any relearning process, and assessing of whether the genetic potential for the new learning is even present. Kotter and Heskett (1992) argue that major cultural changes that succeed are a result of competent leadership that ideally has the perspective of an outsider and the resources of an insider. Top management is viewed as vital as only they posses enough power to make the change happen, as due to the interdependences inside organizations, it may be difficult to change anything a great deal without changing everything.

Taking on the view that changing culture is changing structure (Bate, 1994); the notion of scope becomes a central issue. Levin and Gottlieb (2009) argue that understanding the required scope of change is important when beginning to realign organizational culture with operational strategy. They state it to be unlikely that the current culture will need to be replaced completely, as some parts can be used to contribute to future success. Also Alvesson (2002) discusses the scope of organizational culture change. He argues that most guidebooks directed at managers unilaterally examine only a company-wide, intentional transformation, referred to as *grand technocratic project* by Alvesson (2002). It is recognized that including the whole

company is not easy and the implementation process is slow. This view perceives the change as emerging and run by the top management. However, also other kinds of cultural changes are recognized, in which groups begin to follow new ideas, or managers slowly begin to influence the people they work with (Alvesson, 2002).

Schein (2004) argues that the maturity level of the company is to be considered when planning to change an organization's culture. According to Schein (2004) in the organizational midlife many subcultures have already been created as the culture has diversified and become embedded in time. "To embed new assumptions in a mature organization is much more difficult than in a young and growing organization because all of the organization structures and processes have to be rethought and, perhaps, rebuilt." (Schein, 2004, 315.) Schein (2004) claims that forces that may trigger a change program in a mid-life organization either relate to failing to achieve company goals due to changed environment, or power struggles between subcultures.

In a later study, Schein (2009) emphasizes the importance of an organizational assessment of the culture's strengths and weaknesses when planning a change in strategy or business processes. With the help of an assessment, it may be possible to find out how the present culture and subcultures will aid or hinder the proposed changes. In a mid-life organization, managers have to consider how to maintain elements of the culture that are adaptive and relate to the organization's success, how to deal with the various subcultures, and how to identify and change those cultural elements that are dysfunctional or hinder the change process. (Schein, 2009.) Levin and Gottlieb (2009) also argue that a culture realignment process has to begin with a situation overview, which includes assigning key roles for managers, benchmarking, and defining the preferred organizational culture. They suggest conducting a culture gap audit, to identify gaps between the current state and the preferred culture through interviews, surveys and observations (Levin & Gottlieb, 2009).

On a general level one could state that a change in organizational culture is a change in cultural manifestations, values, basic assumptions, social behavior, and language. Whether this change impacts the whole organization or only parts of it, is an issue that has to be decided and defined separately case-by-case. When deciding to change organizational culture, the characteristics of the organization in question have to be taken into consideration.

The next chapter utilizes the challenges presented in previous literature in order to create a framework that enables examination and evaluation of an organization's or its business units' servitization capabilities. The framework is built around two dimensions that are introduced and defined in the chapters to follow.

5. Building a theoretical framework

Baines' (2009a) study argues that the servitization of a company presents challenges that relate to establishing a service culture and changing the current organizational structure to become more customer-centric. Furthermore, as the previously presented literature review showed, after creating a service strategy and defining how the company wants to move forward in terms of the service business, the two biggest challenges following are building a service-oriented culture and organizing the company configuration so that it is in line with the service strategy.

The two issues, organizational culture and configuration, are seen here as the challenges that have the most impact on whether a business unit is able to implement the service strategy set or not. Because they have a large impact on the organization and act as requirements to overcome the other challenges (market-oriented service development, service offering, knowledge management and communication, and servitization phases) they have been consequently chosen here as the core dimension for the theoretical framework. This framework offers insight into what capabilities individual business units contain in terms of servitization, and what challenges still remain ahead.

However, it has to be mentioned that these dimensions, namely organizational culture and organizational configuration, are by no means to represent dichotomies, as there may be situations where elements of both ends of the dimensions are applicable to a business unit, or a company. As was discussed in the previous chapter on changing organizational culture, all the organizational elements are partly interrelated and thus, it is difficult to change one part of an organization without changing also other parts.

As mentioned in this thesis' introduction, there exists a wide array of terminology used in literature on organizational culture and servitization. Here, in order to avoid further confusion, it is decided that the dimension related to organizational culture is referred to as *orientation* and the organizational configuration dimension, depicting the structure, is referred to as *centricity*. The following sections will present these two dimensions used to define different cultural orientations and structural positions in more detail.

5.1 Organizational culture orientation

As discussed in chapter 4.1, organizational culture is seen to consist of layers, of which the deepest ones are nearly impossible to study (Hofstede, 1990; Schein, 2004). Schein (2004, 2009) argues that these deep

assumptions can be researched only by using long-term observation and in-depth, clinical interviewing techniques. Thus, because of methodological difficulty, attention is here restricted to artifacts and espoused values. These two levels of culture have also been viewed as relevant by Gebauer *et al.* (2010d) and Hofstede (1991) in describing the orientation of an organizational culture and socialization at the workplace.

The different manifestations of servitization at the artifacts level of organizational culture are presented in Table 3. These manifestations include the number of services created and offered to customers and how services are talked about and valued. In addition artifacts are perceived here to include also the role of customers and what kinds of customer relationships are created, as well as what metrics are used to measure performance.

The manifestations of servitization at the level of espoused values in organizational culture are shown in Table 4. As espoused values are a deeper level of culture, the manifestations include views of the organization's basic mission and philosophy. Furthermore, manifestations of values and appreciation, and views on competitiveness and strategy represent those belonging to espoused values.

A traditional manufacturing company is generally viewed as consisting of *a product-oriented culture* (Table 3 & 4) which focuses on efficiency, economies of scale, and beliefs that variety and flexibility are costly (Bowen *et al.,* 1989). In such a culture value is determined by the producer and the company's basic mission is to produce and sell products (Nuutinen & Lappalainen, 2010; Vargo & Lusch, 2004). Services are seen as "add-ons" or an unprofitable necessity to sell products (Nuutinen & Lappalainen, 2010; Olive & Kallenberg, 2003) and so the customer's role is only that of a receiver.

With the term *service-oriented culture* (Table 3 & 4), it is referred to the conception that services make up the core offering and the company's basic mission is to deliver value through service business (Baines *et al.,* 2009b; Nuutinen & Lappalainen, 2010). It also entails that value is derived from co-creating together with the customer (TEKES review 272/2010; Vargo & Lusch, 2004) and customer relationships are highly appreciated (Baines *et al.,* 2009b). In addition, both Grönroos (1990) and Schneider and Bowen (1995) relate a strong emphasis on service quality to service-oriented culture.

It is recognized that the servitization process of manufacturing companies may not be targeted at providing pure services, thus abandoning the manufacturing operations. *Product-service systems* (PSS), or in other words *integrated product and service offering*s (Baines *et al.,* 2009b) or *integrated solutions* (Davies, 2004) are seen as a combination of both product- and service-oriented organizational cultures as integrated

solutions aim at increasing the total value of the solutions for the customer and creating higher profits than would be gained from the individual parts (Davies, 2004). This stream of service thinking is here perceived as a middle ground between product-oriented organizational culture and service-oriented culture (Table 3 & 4).

Table 3. Organizational culture orientation: artifacts

Level of organizational culture	Manifestation	Product-oriented culture	PSS = Product-service systems/ Integrated solutions	Service-oriented culture
Artifacts	Number of services offered	No services or product-related	Product-related	Product-related and pure services
	Language	Service as add-ons, favors		Service as value-adding
	Role of goods	Goods seen as end-products (Vargo & Lusch, 2004) Goods only (Martin & Horne, 1992)	Good and service –good dominant offering & service and good –service dominant offering (Martin & Horne, 1992) Goods are used to increase performance/ cost savings. Supplier keeps ownership (Windahl & Lakemond, 2010)	Goods are "intermediate" products that are used as appliances in value-creation process (Vargo & Lusch, 2004) Products seen as "add-ons" (Oliva & Kallenberg, 2003) Service only (Martin & Horne, 1992)
	Role of services	Services seen "add-ons" (Oliva & Kallenberg, 2003) and an unprofitable necessity to sell products (Nuutinen & Lappalainen, 2010), Customer service (Mathieu, 2001a)	Product services (Mathieu, 2001a) Services are used to increase performance/cost savings. Services get an internal role at the suppliers. (Windahl & Lakemond, 2010)	Services viewed as core offering that delivers value to customer and profit to company (Nuutinen & Lappalainen, 2010) Service products (Mathieu, 2001a)
	Role of customer	Customer role as recipient of goods (Vargo & Lusch, 2004)	Customer outsources part(s) of their operations (Windahl & Lakemond, 2010)	Customer role as co-producer of service (Vargo & Lusch, 2004)
	Customer relationship	Business model transactional based: Focusing on producing and selling material artifacts (Baines *et al.,* 2009b) Limited interaction with customers choosing, instead, to invest energies internally to improve efficiencies (Baines *et al.,* 2009b) Customers are acted on to create transactions with resources (Vargo & Lusch, 2004)	Business model a blend of transactional and relationship: Focusing on providing an integrated product and service offering that delivers value in use. (Baines *et al.,* 2009b) Strong interaction with customers through relationships based on product availability and performance (Baines *et al.,* 2009b) Increased dependence, customers make the supplier part of their ongoing operations (Windahl & Lakemond, 2010)	Business model relationship based: Focusing on delivery of services. (Baines *et al.,* 2009b) Heavily invested in developing and maintaining relationships with customers (Baines *et al.,* 2009b) Customers are active participants in relational exchanges and coproduction (Vargo & Lusch, 2004)
	Performance measurement	Parameters such as "to specification", "to cost", "on time"(Baines *et al.,* 2009b) Performance metric: Number of new products, profitability per market, market share by product/sub brands (Shah *et al.,* 2006, 115)		Performance measurement by customer satisfaction metrics (Baines *et al.,* 2009b) Performance metric: Share of wallet of customer, customer satisfaction, customer lifetime value, customer equity (Shah *et al.,* 2006, 115)

Table 4. Organizational culture orientation: espoused values

Level of organizational culture	Manifestation	Product-oriented culture	PSS = Product-service systems/ Integrated solutions	Service-oriented culture
Espoused values	View of organization's basic mission	Basic mission includes product manufacturing, sales and support services (Nuutinen & Lappalainen, 2010)	Views on basic mission may be contradictory with both product and service mission competing (Nuutinen & Lappalainen, 2010)	The basic mission includes creating value for customers (Nuutinen & Lappalainen, 2010)
	Basic philosophy	Basic philosophy to sell products: we'll sell to whoever will buy (Shah *et al.,* 2006, 115)		Basic philosophy to serve customers; all decisions start with the customer and opportunities for advantage (Shah *et al.,* 2006, 115)
	Value delivered by/ Value proposition	Value delivered by selling to customers (TEKES review 272/2010) Value proposition: Ownership of an artifact (Baines *et al.,* 2009b) Value is determined by the producer (Vargo & Lusch, 2004)	Value proposition: Product availability, performance, along with risk and reward sharing (Baines *et al.,* 2009b)	Value delivery comes from collaborating and co-creating with customers (TEKES review 272/2010) Value proposition focuses on the delivery of functional result (Baines *et al.,* 2009b) Value is perceived and determined by the consumer on the basis of "value in use" (Vargo & Lusch, 2004)
	Appreciation	Technological products and innovations are highly appreciated (Nuutinen & Lappalainen, 2010)	Producing both product and services is appreciated, but confrontations exist (Nuutinen & Lappalainen, 2010)	Quality services and problem solving skills are appreciated (Nuutinen & Lappalainen, 2010)
	Views on competitiveness	Excellent quality products & high-level technology are viewed as securing competitiveness in the future (Nuutinen & Lappalainen, 2010)	Competitiveness based on technology-centered products also in the future (Nuutinen & Lappalainen, 2010)	Services and solving customers' problems as vital to secure competitiveness (Nuutinen & Lappalainen, 2010)
	Employee and management values	Company values often focus on efficiency, economies of scale, and beliefs that variety and flexibility are costly (Bowen *et al.,* 1989, 82)		Company values center on innovation, customization, and beliefs that flexibility and variety create profits (Bowen *et al.,* 1989, 82)
	Strategy/ Strategy focus	Manufacture technologically advanced products Wealth is obtained from surplus tangible resources and goods (Vargo & Lusch, 2004)		Offering best solutions (products + services) for customers Wealth is obtained through the application and exchange of specialized knowledge and skills (Vargo & Lusch, 2004)

5.2 Organizational configuration

Here, the term *configuration* is used in the same manner as in Bowen *et al.*'s, (1989, 85) article, which is to "*propose how to combine the strategic choices, organizational arrangements and customer service activity in ways that result in congruence and effectiveness.*" In other words, it represents what kind of focus and emphases define both people's work and the physical structure of the organization. Thus the term includes both mental and physical structures of the business unit.

In previous literature, *manufacturing[1]*- and *customer-centricity* have been used to define companies' structure and processes (Galbraith, 2002b; Shah *et al.,* 2006) and their internal or external focus (Shah *et al.,* 2006). Gebauer *et al.* (2009) tie the concept to interfirm collaboration between manufacturers and customers, whereas Bowen *et al.,* (1989) view it partly consisting of customer responsiveness. The characteristics depicting different organizational configurations are presented in Table 5.

The term customer-centric is originally derived from marketing literature and has a strong manufacturing background, as marketing was originally seen as relating to manufactured products (Shah *et al.,* 2006). In addition, in literature discussing the development of service business (e.g. Matthyssens & Vandenbempt, 1998; Neu & Brown, 2005, 2008), organizational structure and customer orientation's importance is emphasized in order to reach a fit with the market and, if necessary, to tailor the offering to suit the customers' needs. Practical examples of customer-centricity are here seen to include for example service-related job titles, operations organized around customers or services, and physical facilities that are close to the customers and markets (Table 5).

At the other end of the configuration dimension is manufacturing-centricity, which is generally depicted by an organization structured around product profit centers, product teams and a rigid and strong hierarchical control (Galbraith, 2002b; Martinez *et al.,* 2010; Shah *et al.,* 2006)(Table 5). The development of technology is seen to drive innovation, operations are characterized by automation, and gaining economies of scale are the main goal (Baines *et al.,* 2009b; TEKES review 272/2010). Service development and customer knowledge and contact are not seen as a priority in operations (Table 5).

---

1 In Galbraith (2002b) and Shah *et al.* (2006) it is referred to product- and customer-centric companies. Here, in order to avoid confusion with the cultural orientation of the organization, the term manufacturing-centric is used.

Table 5. Manufacturing- centric vs. customer-centric operations

	Manufacturing-centric	Hybrid structure	Customer-centric
Organizational configuration	Product profit center, product reviews, product teams (Galbraith, 2002b) Product profit centers, (Shah *et al.,* 2006,115) Rigid structure and strong hierarchical control (Martinez *et al.,* 2010, 462) Portfolio of products (Galbraith, 2002b)		Customer segments, customer teams, customer P&Ls (Galbraith, 2002b) Customer segments centers(Shah *et al.,* 2006,115) Portfolio of services and customer (Galbraith, 2002b)
Job titles	Job titles include: product managers, product sales teams (Shah *et al.,* 2006,115)		Job titles include: customer relationship managers, customer segment sales teams (Shah *et al.,* 2006,115)
Customer knowledge	Customer data seen as a control mechanism (Shah *et al.,* 2006,115)		Customer knowledge seen as valuable asset (Shah *et al.,* 2006,115)
Role of technology	Technology development drives innovation (TEKES review 272/2010)		Technology enables service and business model innovation (TEKES review 272/2010)
Process and technology	Automation exploited to deliver high levels of product conformance and volume with minimal worker intervention (Baines *et al.,* 2009b)	A range of technologies exploited throughout operations to achieve efficiency in production and effectiveness in service delivery (Baines *et al.,* 2009b)	Information technologies, such as databases and integrated communications, largely exploited to enhance customer interaction. (Baines *et al.,* 2009b)
Facilities	Facilities: large factories, arranged around similar product to exploit economies of scale, and often located to exploit resource availability. (Baines *et al.,* 2009b)	Facilities: combine both centralized manufacture, but mainly focusing on product final assembly and test, along with multiple field facilities for maintenance and repair located close to market (Baines *et al.,* 2009b)	Smaller, multiple facilities, that are client friendly, located close to market, and help to impress and reinforce relationships (Baines *et al.,* 2009b)
Customer responsiveness	Customer responsiveness emphasizes standardization and variables such as an internal orientation, cost leadership, and an inventory of readily available, undifferentiated products (Bowen *et al.,* 1989, 81)		Customer responsiveness emphasizes variables such as an external orientation, product uniqueness, and flexibility (Bowen *et al.,* 1989, 81)
Service development	Services seen as something that "just happens"		A market-oriented and clearly defined new service development process (Gebauer *et al.,* 2005, 25)
Organizational focus	Internal organizational focus; new product development, market share growth: customer relations are issue for the marketing department (Shah *et al.,* 2006)		External organizational focus; customer relationship development, profitability through customers loyalty: employees are customer advocated (Shah *et al.,* 2006)

Here also, in order not to over-simplify, it is recognized that a company's or business unit's configuration may be positioned somewhere in between manufacturing- and customer-centric. Galbraith (2002b) described a *hybrid structure* as consisting of centralized manufacturing, but also multiple field facilities close to the market to provide maintenance and repair services, thus business operations are partly guided by product segments and partly by customer segments.

The two previous sections described the two dimensions that form the theoretical framework (Figure 6). Organizational culture and configuration present the main challenges identified by previous literature that manufacturing companies have to overcome in order to servitize their operations. In order to be able to define a company's or a business unit's position with regards to these dimensions Table 3 and 4 presented different manifestations of both.

The following sections describe what it is required from companies or business units transitioning from one cultural, or structural, position to another.

5.3   From a product-oriented culture to a service-oriented culture

"Industrial marketing companies which want to switch from being totally product-focused firm to being service provider must face and master the challenge to adapt their soft factors in a service-oriented manner" (Homburg *et al.,* 2003, 43). Thus, Homburg *et al.* (2003) argue that in a servitization process, a company must take into consideration the organizational culture and human resource issues. Bowen *et al.* (1989) also argue that the expansion of a traditional industrial culture with a service culture should be seen as a part of the implementation of a service strategy. The service strategy has to validate the change of culture in order for it to be possible. A move towards a service-oriented culture would be depicted as a move to the right in the theoretical framework (Figure 6).

In a servitization process, building common ground through shared terminology and its usage is important, as for example the term service has multiple interpretations, of which all are correct, but can be misleading if not agreed upon by all parties involved (Hyötyläinen & Nuutinen, 2010; Schein, 2004, 2009). Martinez *et al.*'s (2010, 463) study showed that a "strategic alignment is eased when there is common language between provider and customer, or between different parts of the organization." It has also been argued, that arriving at a common understanding and changing the mind-sets of employees is, in addition to being paramount, also one of the most difficult challenges, as business units may interpret information in different ways (Davies at al., 2006; Neu & Brown, 2008).

Organizational culture

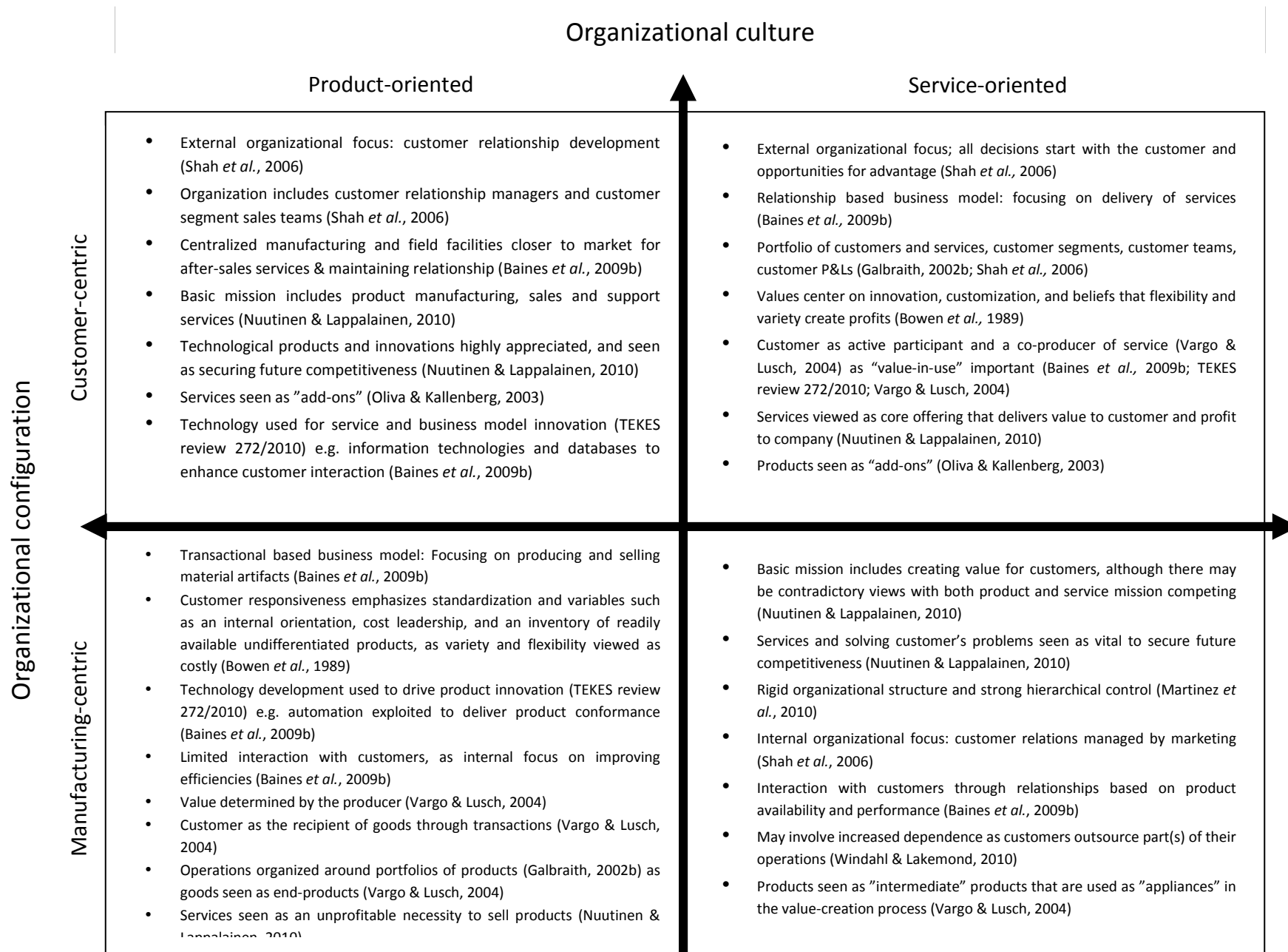|	Product-oriented	Service-oriented
Customer-centric	• External organizational focus: customer relationship development (Shah *et al.*, 2006) • Organization includes customer relationship managers and customer segment sales teams (Shah *et al.*, 2006) • Centralized manufacturing and field facilities closer to market for after-sales services & maintaining relationship (Baines *et al.*, 2009b) • Basic mission includes product manufacturing, sales and support services (Nuutinen & Lappalainen, 2010) • Technological products and innovations highly appreciated, and seen as securing future competitiveness (Nuutinen & Lappalainen, 2010) • Services seen as "add-ons" (Oliva & Kallenberg, 2003) • Technology used for service and business model innovation (TEKES review 272/2010) e.g. information technologies and databases to enhance customer interaction (Baines *et al.*, 2009b)	• External organizational focus; all decisions start with the customer and opportunities for advantage (Shah *et al.,* 2006) • Relationship based business model: focusing on delivery of services (Baines *et al.,* 2009b) • Portfolio of customers and services, customer segments, customer teams, customer P&Ls (Galbraith, 2002b; Shah *et al.,* 2006) • Values center on innovation, customization, and beliefs that flexibility and variety create profits (Bowen *et al.,* 1989) • Customer as active participant and a co-producer of service (Vargo & Lusch, 2004) as "value-in-use" important (Baines *et al.,* 2009b; TEKES review 272/2010; Vargo & Lusch, 2004) • Services viewed as core offering that delivers value to customer and profit to company (Nuutinen & Lappalainen, 2010) • Products seen as "add-ons" (Oliva & Kallenberg, 2003)
Manufacturing-centric	• Transactional based business model: Focusing on producing and selling material artifacts (Baines *et al.*, 2009b) • Customer responsiveness emphasizes standardization and variables such as an internal orientation, cost leadership, and an inventory of readily available undifferentiated products, as variety and flexibility viewed as costly (Bowen *et al.*, 1989) • Technology development used to drive product innovation (TEKES review 272/2010) e.g. automation exploited to deliver product conformance (Baines *et al.*, 2009b) • Limited interaction with customers, as internal focus on improving efficiencies (Baines *et al.*, 2009b) • Value determined by the producer (Vargo & Lusch, 2004) • Customer as the recipient of goods through transactions (Vargo & Lusch, 2004) • Operations organized around portfolios of products (Galbraith, 2002b) as goods seen as end-products (Vargo & Lusch, 2004) • Services seen as an unprofitable necessity to sell products (Nuutinen & Lappalainen, 2010)	• Basic mission includes creating value for customers, although there may be contradictory views with both product and service mission competing (Nuutinen & Lappalainen, 2010) • Services and solving customer's problems seen as vital to secure future competitiveness (Nuutinen & Lappalainen, 2010) • Rigid organizational structure and strong hierarchical control (Martinez *et al.*, 2010) • Internal organizational focus: customer relations managed by marketing (Shah *et al.*, 2006) • Interaction with customers through relationships based on product availability and performance (Baines *et al.*, 2009b) • May involve increased dependence as customers outsource part(s) of their operations (Windahl & Lakemond, 2010) • Products seen as "intermediate" products that are used as "appliances" in the value-creation process (Vargo & Lusch, 2004)

Organizational configuration

Figure 6. Theoretical framework for analyzing servitization capabilities

Even though manufacturing companies have been selling services for some time, the tendency has been for managers to view services as unnecessary and unprofitable (Gebauer & Friedli, 2005; Gebauer *et al.,* 2006; Wise & Baumgartner, 1999). Brax (2005) argues that in order for a manufacturing company to become truly service-oriented, services cannot be perceived as add-ons, because if they are perceived as secondary to tangibles, it can lead to failures and impede the creation of a service business.

Regarding the level of espoused values in the organizational culture, the transition from product- to service-orientation requires the view of the business unit's basic mission to shift from sales and manufacturing to creating value for customers and perceiving customers in the core of service operations (Nuutinen & Lappalainen, 2010). The basic philosophy for designing processes has to begin with the customer (Shah *et al.,* 2006). Also the role of customer and customer relationship has to be viewed differently by manufacturing companies who wish to become service-oriented, as customers become part of the value creation process and are no longer only recipients (Vargo & Lusch, 2004). In addition, also the purpose of the relationship changes, as services can be used to improve both the suppliers and the customer's operations through co-creating value by sharing information and utilizing the information in developing the daily practices (Grönroos, 2008). Grönroos (2008) argues that companies should not concentrate on whether they offer products or services, but rather on their customers, their processes and how they generate value with the use of the supplier's offering.

Manufacturing companies that have not previously included service-related values as their objectives, such as flexibility, may require cultural changes to support these goals. Such a contrast between efficiency and flexibility can be viewed as a clash between a dominant culture and a subculture (Martin & Siehl, 1983). Still, even after the transition has been made, there may continue to exist two cultures in the company that have to be balanced and partly also integrated in time. One could argue, that as along a company has capital tied to manufacturing operations (facilities, machinery, materials), it should maintain partly product-oriented, as it has to be able to get orders for the manufacturing operations.

Management is left with the challenge of maintaining the troublesome relationship that exists between the two cultures between business units, but also within business units. However, maintaining both value sets instead of replacing one for the other is also a way to manage possible resistance to change (Bowen *et al.,* 1991; Gebauer *et al.,* 2006). Homburg *et al.*'s study (2003) denotes that companies that have been traditionally strongly product-oriented, but want to become highly service-oriented, will recruit and reward employees who are capable of dealing with the new challenges that services imply. These challenges mainly

have to do with increased interaction with customers and getting to know their problems and issues in order to be able to sell services in addition to products.

In order for the change from product- to service-orientation to be successful, it is suggested that a customer focus should be embedded in the managerial actions so that the service strategy and service culture become integrated to the existing ones. Gebauer *et al.* (2010d, 254) emphasize the importance of managers' actions in impacting the employees' actions: "Without managers spending sufficient time and resources to put normative pressure on employees to understand the value of services and to overcome the complex interactions, service orientation will not be transferred to the employee level." Homburg and Pflesser (2000) claim that by providing services and products that respond more to customer needs, the financial performance will be influenced indirectly through market performance. Customer satisfaction ratings and customer loyalty figures are suitable performance metrics, as performance is improved with customer relationships (Homburg *et al.,* 2003).

5.4   From manufacturing-centric to customer-centric organizational configuration

It is likely, that a manufacturing company, or business unit, will have to implement some structural changes in order for its operations to be aligned with the service strategy. Usually these changes are required to move from a manufacturing-centric structure to a more customer-centric organization. In the theoretical framework (Figure 6) this change would be depicted as a move upward. In other words; "business unit strategy will reflect a customer-centricity[2] to the degree to which the firm chooses to emphasize goals of customer-responsiveness, more than standardization and high customer contact, rather than low customer contact" (Bowen *et al.,* 1989, 81). The organizational configurations of the business units have to support the organizational culture in implementing the service strategy decided by management.

In a customer-centric organizational configuration operations are organized according to customer segments that consists of customer sales teams and customer P&Ls (Galbraith, 2002b; Shah *et al.,* 2006). A manifestation of customer-centricity is also having customer relationship managers in addition to, or instead of, traditional product managers (Shah *et al.,* 2006). When beginning to offer services that aim to

---

2 Bowen *et al. (*1989) originally used the wording "customer service orientation". In order to maintain coherency in terminology in this thesis, customer-centricity is used as it is viewed to have the same purpose.

deliver value, the business units have to take customers' operations into consideration and adapt their own operational structure accordingly so that there are designed to suit customer needs.

The change towards customer-centricity requires traditional manufacturing companies to change their focus away from manufacturing related technical issues; automation, technology, innovation, and efficiencies, toward closer to the customer. Nuutinen and Lappalainen (2010) argue that the requirements to create a service-oriented culture can be examined through appreciations within the company. In a manufacturing-centric organization the customer can be appreciated highly, but gaining understanding of the customer's business is seen as more important in customer-centric operations. Galbraith (2002b, 3) claims "a company that offers solutions must become customer-centric, although customer-centric companies need not offer solutions". Thus, changing the way the customer is taken into consideration in the internal processes of the company or a business unit does matter. Also Brax and Jonsson's (2009) study suggests that higher-level integration between the solution subsystem and the customer's business system is needed and manufacturing companies should prepare for it. This kind of transition towards customer-centricity requires looking outside the factory walls, taking on the customer as a partner and building capabilities and willingness to offer customized solutions. Furthermore, Neu and Brown (2005) argue that whether manufacturers should move into services depends on their ability to fit the organizational elements with the chosen strategy. They claim that the alignment of strategy and organizational factors with the external market environment presents a major challenge for managers.

5.5   Framework for analyzing servitization capabilities

The framework presented above (Figure 6) contains the two dimensions discussed earlier, namely those of organizational culture orientation and organizational configuration. The framework enables considering servitization capabilities at the SBU level in addition to examining the portfolio formed by the business units from the company's point-of-view. The business unit level of examination is seen to provide a more detailed and less generalized view compared to a company level analysis which is usually employed in research pertaining to servitization, as in a company consisting of multiple SBUs the units can pursue different strategies and operate in various markets. Additionally, as was discussed in chapter 4.1, organizations do not consist of only one culture, but also national cultures, subcultures and possibly also professional cultures impact the organization. Thus, this framework offers a way to identify the position of a SBU in relation to organizational culture and configuration, which are seen as major challenges, and simultaneously as determinants, for the servitization process to be successful.

The four quarters of the framework, formed by the two dimensions, are derived from theory and thus they include some generalizations. Hence, a business unit does not have to include all the factors mentioned in order to belong to a certain quarter and it is possible to be situated between two quarters. Nuutinen and Lappalainen (2010) argue that it is typical for manufacturers that have done a strategic decision to develop their service business, but do not face a visible threat towards their product business, to live between two worlds. Also other scholars (e.g. Auguste *et al.,* 2006; Gebauer *et al.,* 2007; Oliva & Kallenberg, 2003) have recognized that managing manufacturing and service business within one company is challenging. Currently organizations declare their commitment to service business, but are not able to implement services as a separate business due to lack of theoretical guidelines (Galbraith, 2005).

In order to ease the referral to each of the quarters that consists of companies or business units of different organizational culture and configuration, the sections are labeled (Figure 7). Here it must be mentioned that the labeling is biased, as it is done based on how capable a certain section is to servitize. However, it should be mentioned that this is not to imply that the four sections would be ranked in importance or value, or that the framework suggest servitization for all companies or business units. On the contrary, it is here viewed important to use interviews or other interactive study methods in order to get to know the company's or business unit's current business situation, as their position in the framework cannot be defined by only utilizing external information.
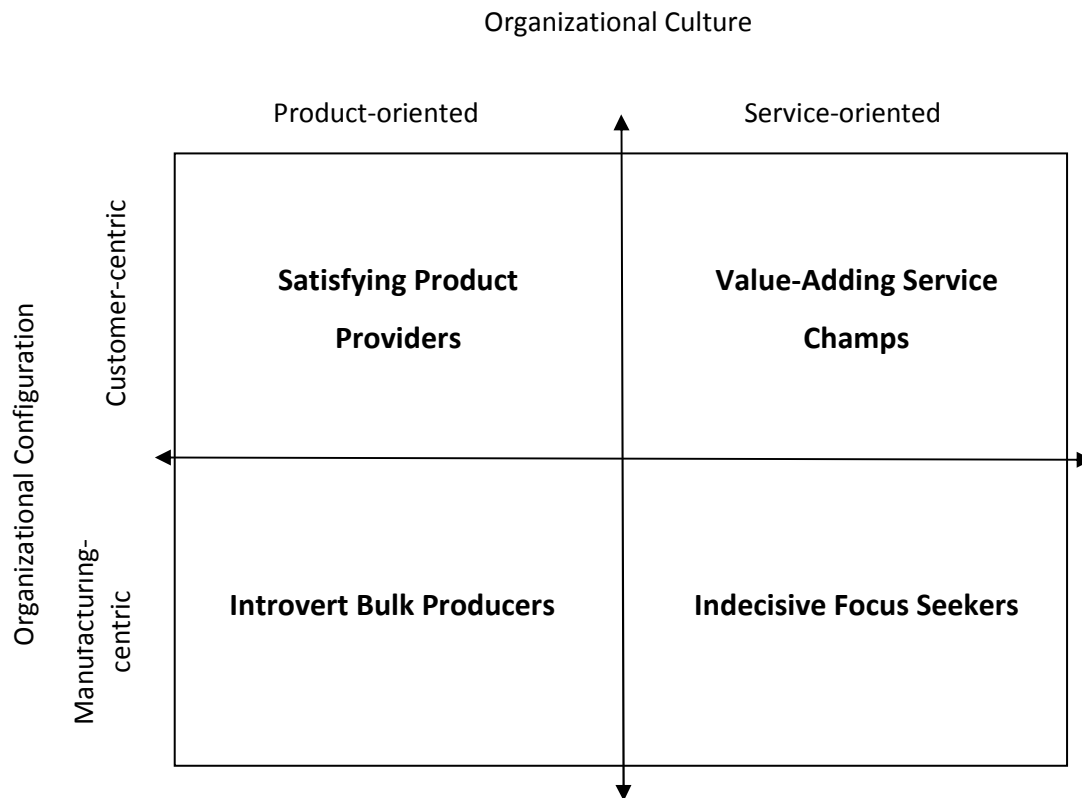
Organizational Culture

Product-oriented   Service-oriented

	Product-oriented	Service-oriented
Customer-centric	**Satisfying Product Providers**	**Value-Adding Service Champs**
Manufacturing-centric	**Introvert Bulk Producers**	**Indecisive Focus Seekers**

Figure 7. Four quarters of servitization capabilities

The upper, left-hand corner of figure 7 represents business units, which operate with a customer-centric model and are product-oriented. The units belonging to this quarter are externally oriented and take customer relationships into consideration in their business operations design, for example by appointing customer relationship managers (Shah *et al.*, 2006). Even though manufactured goods are viewed as the end product and services as "add-ons", it is recognized that providing product-related services is important to sell more products (Nuutinen & Lappalainen, 2010). As these units view their basic mission to be in manufacturing and sales, direct customer contact and building a customer relationship remains limited (Baines *et al.*, 2009b, Nuutinen & Lappalainen, 2010).

The business units belonging to this corner aim to optimize their offering in the sense that in order to satisfy their customers, services have to be offered while still maintaining the emphasis on products. Thus, units in the upper, left-hand corner will be labeled as *Satisfying Product Providers* (Figure 7). One could argue that Satisfying Product Providers aim to serve their customers, but by not acknowledging the business potential that lies in services, they may be gaining lower revenues than what could be achieved with a more service-oriented culture. In addition, if the culture is very product-oriented, service

development may not receive the needed amount of attention and resources to create services that would render customers with more value in use. Hence, it can be assumed that most customer relationships are transaction based, and even though operations are close to customers, true understanding of the customers' business still lacks.

The upper, right-hand corner consists of business units that are customer-centric and foster a service-oriented culture (Figure 7). The units have strong external focus and consideration for customers in designing business operations as they run a relationship based business model (Shah *et al.,* 2006; Baines *et al.,* 2009b). These business units are built around customer segments and customer teams (Galbraith *et al.,* 2002b), with the perception that flexibility, customization and variety bring value to the customer and consequently create profits for the company (Bowen *et al.,* 1989).This category of business units will be labeled *Value-Adding Service Champs*. Their offering stresses the importance of service components and sees products as "add-ons" (Oliva & Kallenberg, 2003). Services are also viewed as delivering more value to the customer, when the customers are included as active partners in the co-creation process of services (Vargo & Lusch, 2004). These business units may also have a market-oriented and clearly defined new service development process in place (Gebauer *et al.,* 2005). Future competitiveness is seen by these Value-Adding Service Champs to be based on solving customer's problems (Nuutinen & Lappalainen, 2010).

Value-Adding Service Champs are seen to have the best position regarding servitization, when compared to the other three groups (Figure 7). They have, at least partly, overcome the biggest challenges of building a service-oriented culture and a customer-centric configuration to support it. Value-Adding Service Champs are in the position to reach the higher margins, mentioned as one possible benefit from service business, if they are able to utilize the customer knowledge gained through partnerships with customers. By being close to the customers and forming a relationship with them also helps in building a barrier for competition. However, it has to be remembered that if the company as a whole has large capital invested in manufacturing facilities, offering products and solutions (containing both services and products) is important in order to maintain production levels. Even though the framework enables business unit level analysis, the main goal is to optimize the company's operations as a whole.

Business units that are included in the lower, left-hand corner of the framework (Figure 7) are product-oriented and manufacturing-centric. They function on a transactional business model focusing their basic mission of producing and selling material artifacts without appreciation for services (Baines *et al.,* 2009b; Nuutinen & Lappalainen, 2010). Operations are structured around product portfolios and segments, and performance is measured by calculating for example the number of products sold and profitability per

market (Galbraith, 2002b; Shah *et al.,* 2006). As variety and flexibility are seen as costly, customer responsiveness of the *Introvert Bulk Producers* emphasizes standardization and offering undifferentiated products from inventory (Bowen *et al.,* 1989). The units operate with an internal focus, thus they have limited interaction with customers, who are perceived as having only the role of the recipient of the goods produced (Baines *et al.,* 2009b; Vargo & Lusch, 2004).

These Introvert Bulk Producers (Figure 7) represent business units that operate in a stereotypic manner for a manufacturing company. The operational focus is on manufacturing and increasing production efficiency through technological innovations. The business units' basic mission is seen to be manufacturing products and selling products. Thus, manufacturing centricity combined with a product-oriented culture is as such compatible, but it offers no other choice than to take part in the increasing global competition on price and emphasize the products' technical aspects in marketing. However, as the units are internally focused and customer responsiveness includes at the most mass customization, it may be that Introvert Bulk Producers develop products that are technologically superior, but do not have a market. Lack of customer interaction may cause also unwanted products, in addition to insufficient product services, which the customers would require in order to operate the product properly.

The lower right-hand side of the framework (Figure 7) consists of business units, which are service-oriented and have a manufacturing-centric configuration. These business units' basic mission includes creating value for customers; although there may be contradictory views with both product and service mission competing (Nuutinen & Lappalainen, 2010). Solving customers' problems is seen as important, but if the unit has a rigid and hierarchical structure it may cause difficult situations if customization is needed (Martinez *et al.,* 2010; Nuutinen & Lappalainen, 2010). Involving the customer in the value creation process for example may be challenging if the unit has an internal focus and does not have any customer managers. These business units are here after called *Indecisive Focus Seekers*.

This quarter is the only one in the framework that contains a visible contradiction between organizational culture orientation and the unit structure. In a situation where the unit's service strategy aims to become more concentrated on services, the manufacturing-centric structure may hinder such a transition. An example of an Indecisive Focus Seeker business unit could be one offering low-cost services with bulk products. Even though services and customer interaction is emphasized, efficiency and standardization are seen as key. Thus, the unit could be operating in a niche market, offering a certain set of products of superior quality and additional services. However, one could assume that a situation like the one in which

Indecisive Focus Seekers are operating, may lead to internal conflicts about resources and management attention, thus either the production or service strategy is not implemented as it should.

The labeling of the four quarters of the framework aims to simplify the usage of the framework as four labels is easier to remember and refer to compared to multiple bullet points per quarter. Consequently though, the labels represent "stereotypes" and so it should be understood that the four types might actually consist of different companies and business unit

6. Methodology

This chapter discussed the theory base of this thesis and the selection of the case company. In addition data collection and analysis methods are depicted.

6.1 General methodological theory base

This thesis represents a theory-initiated case study. The theoretical framework was developed on the basis of a literature review. To illustrate the theoretical framework, an in-depth case study research design is employed as the process under examination is a new and current phenomenon situated in a real-life context (Eisenhardt, 1989; Ghauri, 2004; Yin, 2003). The case study research methodology is best suited to explore the "how" and "what"-type of research questions (Yin, 2003).

As this study examines only one case company but two levels of analysis are utilized, that of a strategic business unit (SBU) and the company as a whole, a multiple embedded case study approach is used. The two levels of analysis are selected because it is perceived as important to study both the business units separately and the whole company to create an in-depth understanding of the phenomenon. As different SBUs within one manufacturing company can pursue different strategies and operate in different markets, studying only the company level would require substantial amount of generalizations. Here, an SBU is defined as a relatively autonomous unit with the SBU management having control of at least three of the following functions: marketing, sales, manufacturing, R&D, accounting/finance, and human resources (Homburg *et al.,* 1999).

In addition, as the process under examination is related to organizational culture, which in turn is a collective characteristic, also Hofstede *et al.,* (1990) argue that the between-unit level is the correct level of analysis. This is to ensure that subject of study is sufficiently homogenous that it is plausible to justify statements of the culture as a whole (Hofstede, 1998).

6.2 Selection of case company

As this thesis was implemented as a part of a larger research project funded by the Finnish Funding Agency for Technology and Innovation (TEKES), one of the companies involved in the project was chosen as a case company for this thesis as it expressed its own interest in the area of research. Thus, it was assumed that the research phenomenon would be observable in the company in question (Pettigrew, 1988).

In the interest of data confidentiality, the real name of the company is not revealed. In this thesis the case company will be from here on referred to as *ManuCo* and the five business units will be referred to as A, B, C, D, and E.

6.3   Data collection and analysis

In total 20 semi-structured interviews were conducted in spring 2010 with 20 different employees from various organizational levels by the researcher together with the TEKES research project manager. The interviewees were chosen together with the company representatives participating in the research project's executive team, so that people from all five business units would be involved. As the case company has operations abroad, some of the interviews were conducted in English and some in Finnish. In addition, due to geographical constraints, some interviews were conducted over the telephone and by using teleconference, while almost all Finnish employees were interviewed in person. Independent of the interview style, the interviews lasted between 45 and 105 minutes and were recorded and subsequently transcribed.

The semi-structured interviews (Appendix 1) included some general questions in the beginning about the interviewee's career at ManuCo and the business unit the interviewee worked for. The following interview questions related to how service and services are understood by the company's employees (e.g. what are services role in ManuCo's business? How are ManuCo's strengths and weaknesses perceived in relation to the service business?). Also ManuCo's competitive situation and organizational resources were examined as well as internal information flows and customer role and relationships. The interview questions were not adjusted per respondent, excluding choosing the interview language. In the interviews, it was assumed, and also explicitly mentioned by some of the interviewees, that their answers will pertain to the SBU they work for.

In addition to the primary data collection through the interviews, also secondary data, including research project meetings, organizational charts, and company web pages were examined in order to achieve theoretical triangulation (Ghauri; 2004; Yin, 2003).

The analysis of the data gathered by interviews, meetings, and other material are analyzed by the researcher by grouping them first according to business units and then examining the data by themes (Eskola & Suoranta, 2008); organizational culture and organizational configuration. The themes were investigated by utilizing the categorizations derived from literature (Tables 3, 4, 5). Additionally, the

interviews were analyzed on two levels; answers that relate to the SBU in question and the whole company.

7. Case ManuCo: Analysis of servitization capabilities

This chapter's purpose is to introduce the case company and its different business units, and to examine the company level findings based on the interviews conducted with the company employees. In addition, the framework presented in the chapter 5.2 will be employed to depict ManuCo's strategic business unit portfolio with regards to servitization. A detailed view of the case company's servitization capabilities is provided by examining its organizational culture and configuration.

The framework presented in chapter 5.2 is to function here as a gap audit tool for ManuCo regarding servitization. Levin and Gottlieb (2009) present the term 'culture gap audit' in their study as a useful tool in a situation where a cultural change is wanted towards a predetermined preferred culture, but management does not know for certain in what units such a culture may already be in place. However here, as the framework provides a situation description relating to the two major challenges in servitization, it is seen to function as a servitization-gap audit tool. The framework is drawn from previous research and literature and is thus based on theoretical aspects and targeted to provide manufacturing companies with a tool to analyze their current situation and compare it to the service strategy goals set.

The objective of the empirical part of this thesis is to offer an overview of ManuCo's business unit portfolio in terms of capabilities to servitize operations. The company has stated that it wishes to enter the service business and to be able to offer more value to its customers. However, the current state of service operations in the five fairly independent strategic business units is unknown.

Next, a short company introduction is offered, after which the company level findings are discussed. In chapter 7.3 the five business units are analyzed separately after which they are positioned in the framework to create ManuCo's business unit portfolio. Chapter 7.4 presents a business unit portfolio analysis that also summarizes findings from the company and business unit levels.

7.1 Case company introduction

The case company, ManuCo, is a Finnish manufacturing company operating in business-to-business markets. ManuCo is family-owned and the owners are active board members. ManuCo is known for its high quality products and is the market leader in many markets. Currently, ManuCo has been seeking possible means of enhancing its profitability through services, because its products face a highly price-competitive

market, with associated decreasing profit margin. Thus, ManuCo explicitly acknowledges the need of at least exploring the possibility of transitioning to service business.

ManuCo is divided into five strategic business units, all of which compete in fairly separate markets and operate quite autonomously. Four of ManuCo business units' operations aim at offering industry-specific technology or products, whereas its newest unit concentrates mainly on providing services.

7.2 Company-level findings

As this thesis represents a multiple embedded case study, the phenomenon of servitization is examined in the empirical section both on the company level, as well as on the business unit level. In order to answer the research questions regarding the entire ManuCo's current servitization situation, this chapter will examine the interviewees' answers regarding the company as a whole. The analysis is divided into two sections, similar to the structure in the literature review. First, issues relating to the potential benefits that can be derived from adding service to the current offering are discussed, after which the challenges that the transition may entail, are examined.

ManuCo's current situation regarding the customer offering varies extensively depending on the business unit, but a clear pattern could be identified. Most business units offered both product services and services that were not charged for, usually due to habit or industry custom.

> *"We have two types of services: so-called free services and services that we charge for. The first mentioned constitutes a larger portion and is kept in the name of product sales. Meaning that we do at lot of planning, measurements, testing and the sorts just to maintain product sales, and we don't charge for it as it is a part of the products sales margins." (Director)*

> *"This kind of value-based pricing is very strange to our Finnish way of thinking. Here we are used to everything including a little sweat and work."* (Key account manager)

7.2.1 Reasons for servitization

Many of ManuCo' interviewed employees estimated that services and solutions consisting of products and services will become more important in ManuCo's operations, when asked where they see ManuCo in the future. Services were perceived as a fit with the current mission and philosophy of the company and to reinforce current operating strategy that emphasizes pricing based on value.

"I think there is a change taking place in ManuCo that's happening before our very eyes.. I see ManuCo repositioning itself much nearer the front edge, much nearer the coalface now, by getting more intimate with the customers, with their problems.." (Managing director)

"It is true that together with competitors, we have a large installed base. And there is nothing stopping us from taking care of competitors' products as well." (Director)

"ManuCo's basic mission and philosophy has always been that we want people to feel good when they are in buildings that have our products installed" (Director)

"We're not cheap. But we don't even want to be" (Director)

Thus, the potential of the service business had been recognized among the interviewees. However, the objectives for the service business varied a great deal depending of the business unit in question. One reason for the changing mind-sets towards services may relate to the fact that people within ManuCo have realized that, it has become a necessity to offer product-related service in order for the new products that include highly technological components, to function properly.

"And one point is that, for products, and solutions will have added services, because the industry is developing and there will be more electronics, and elements that will require maintenance." (Country manager)

"And we know that we cannot service high-tech solutions if we don't have the service.. ready to act.. and the serve and you know.. it goes hand in hand.. we cannot do one without the other." (Managing director)

In addition, it was mentioned that through traditional component sales, differentiating from competitors is hard, as the added value from the product may not reach the customer due to middlemen in the value chain. Thus, services and solutions are seen as a means to differentiate and hence achieve a more competitive position in the market.

"..because when you look at this component sales, these traditional channels through which these products flow whether to the contractor or to wholesalers, it's hard to add certain products that kind of value-added with which to differentiate from others." (Country manager)

The potential benefits gained from servitization, as stated by the interviewees are in line with the reasons that service literature has discussed: strengthening the customer relationship and consequently the competitive position in the market as well as increasing product sales and differentiation. Interestingly the benefits gained by customers were rarely mentioned.

7.2.2 Challenges in servitization

However, the interviewees considered moving into the service business to require a lot of challenges if it was to be implemented in ManuCo. One of the main challenges identified was creating a service strategy, which is distinguished as vital also by the service literature. Without one, ManuCo's business units have been currently developing, mostly ad-hoc services independently without much information about whether similar things have been done in other units.

> *"Services and innovation should begin from the ManuCo group-level so that things are supported and done together. In that sense it would be important to share information so that nobody's doing this alone. It could be that someone else is doing the same thing." (Technical manager)*

By creating and sharing a service strategy, it was perceived that ManuCo could be able to make services' position and status in the company official and visible to all. However, this would require top management to take a stand, and also an increased amount of communication between different SBUs.

> *"..and of course also the way the CEO speaks about things, so here, the board defines the policy" (Director)*

> *"The strategies of these five business areas have not been yet enough harmonized, so we have separate group strategy and separate business unit strategies." (Managing director)*

When asked from the interviewees what kind of changes would a shift towards services require, many respondents mentioned culture-related issues. The overall culture of the company was perceived as product-oriented. The interviewees from the business units already offering services stated that their actions would be more understandable and accepted, if the potential of service business would be acknowledged by all employees. A few interviewees stated that an attitude change and internal training would be necessary to change people's mindsets and maybe eventually the culture as well.

> *"It'll take its own time and require a lot of our own people, an attitude change or a change in how they perceive things, from a product sales person to selling solutions.. What kind of changes that*

requires, I think that internal training and also making the message more concrete to the people that will take it forward to customers." (Commercial director)

"..I have not the feeling that service is a culture. Service we offer, service we live, service we do, but, this service culture, this is really, this deep understanding for our customer that, creating that..I think this we have to learn." (Managing director)

When asked how ManuCo should proceed with regards to servitization, some of the interviewees challenged the idea of incrementally servitizing operations in ManuCo.

"If you want a quick fix [to become a solutions provider], my personal opinion is that the only way is through an acquisition with which we could take our first steps towards service business. Creating it in our current organization with the current organizational culture and structure, follow-up and reporting could be a too long a road." (Director)

Developing the service business through acquisition was mentioned by some interviewees as the only possibility as it would enable acquiring service experience and service development skills that were seen to be lacking in ManuCo.

As stated in the chapter 5, on building the theoretical framework, this thesis aims to offer a way to view servitization at the business unit level and thus extend current literature with a possibility to servitize only a part of an organization. The idea of a company-wide servitization process was also challenged by some of the interviewees. Especially issues relating to current organizational structure and capital invested in manufacturing were mentioned as reasons why ManuCo's transition to offering mainly services was not considered an option.

"As long as we have factories in ten different countries, I don't see that we [ManuCo] could be totally in solutions business, because in the next few years that business will not be enough to maintain production levels" (Director)

"Well naturally not towards the product [organizational focus in the future] since there diversification and differentiation is getting harder and harder, so it should be something to do with services and solutions. But maybe as I said earlier, that maybe more from solutions than from services." (Managing director)

In addition, the existing competitive environment was also seen as a hindrance for transitioning to services. Beginning to offer something new to current customers could in fact lead to conflicts within the product value chain. These challenges were mainly faced in the markets where business unit C and E were operating in.

> *"Being the first one is always a challenge because the field works in a specific way, customers act in a specific way, competitors act in a specific way and when someone begins to change the system it is not necessarily easy if no one else changes." (Country manager)*

> *"..we have to careful, because every time we add something to our offering, that we don't step on to our customers toes." (Director)*

> *"It [offering services] will require a change in the value chain.. future services will have to be directly targeted at investors and owners, who may be more understanding of the fact that they [services] come with a price tag." (Director)*

Interviewees from the business units already offering some services to their customers recognized the creation of an international service network as one future challenge. They saw proximity to customers as important for maintaining customer relationships and to increase product sales. A global service network was also mentioned as means to gain new customers, as globally operating customers would rather partner with one company than have multiple suppliers.

> *"In services also we are international company, and that can be a benefit to the customer also, we just have to market it better. Some customers are, that's exactly what they want, they're operating all around the world, and if they had to go and find a different partner every time, it's a lot of work from them.." (Sales director)*

> *"Our challenge is to have service in place in all countries.. in all countries we are operating and selling... it can limit our sales where these countries we are not able to have service business in place.." (Director)*

> *"And to make sure that all the service units in Europe have same level of skills, same level of quality of work, same work, same kind of price levels.." (Director)*

A challenge in servitization mentioned by all the business units relates to communicating the change both internally and externally. Some of the interviewees mentioned that there is a will within the company to

move towards services, but the image of a manufacturer still exists both within the company and in the minds of the customers.

> *"Our baggage for now at least is that we have profiled ourselves as an equipment manufacturer for the past 41 years even though we have tried to get rid of that image in the past 10 years." (Sales manager)*

> *".. now that we have taught the customer for ten years that you will get this service for free and we will kind of do their work, how can we change that so that we can make it into a business." (Director)*

> *"We want to be a solutions and service providers, but there is still quite a strong product manufacturer stigma within the company." (Commercial director)*

> *"We should get these kinds of success stories that would internally, the internal marketing is extremely important, very important." (Director)*

> *"Then, maybe we should have also little bit internal marketing, inside the company" (Sales director)*

To a great extent the potential benefits and challenges that were expressed by ManuCo's employees in the interviews are aligned with issues that are recognized also by the previous literature, and discussed in the literature review of this thesis. However, already from the company level findings it could be seen that as the company consists of multiple fairly independent business units, the challenges mentioned varied in importance depending on the business unit in question. These findings form a suitable basis to continue the examination of ManuCo at the business unit level.

7.3   Business unit-level findings

This section presents findings from each of ManuCo's business units. The findings discussed here are gained through interviews with business unit employees and some information regarding the configuration of the units is derived from analyzing the ManuCo's official organizational charts. The objective of this chapter is to answer the research questions pertaining to separate business units and their capabilities to servitize. All of the five business units are analyzed individually using the two dimensions; organizational culture (artifacts and espoused values) and configuration. Tables 3, 4, and 5 that were presented in chapter 5 are utilized to profile the business units, which are then positioned in the framework and labeled accordingly.

The organizational culture profiling is marked with a gray line in each column representing the business units from A to E (Table 6). Above the unit findings markings "P" and "S" refer to a product-oriented culture and to a service-oriented culture. Thus, a purely service-oriented culture would result in a straight line at the right side of a column, under the heading "S". A "middle ground" is offered as in was the case in Tables 3, 4 and 5. The average of all dots in one column defines the business unit's horizontal position in the framework.

As initial observations from Table 6 it appears that the grey dots in business unit A and D's columns are more on the right side suggesting that these business units are culturally more service-oriented than product-oriented. Business unit B's dots form a line that alternates between the left and right side of the column. As the majority of the dots remain on the right side and center, the unit appears to be more service-oriented than product-oriented. Then again, for business units C and E, the grey dots mainly remain on the left and center of the columns and thus suggest that the two business units are product-oriented.

Table 7 represents the business units on rows, thus organizational configuration profiling is done horizontally. This is to help visualize the units' position in the actual framework, as the culture dimension is horizontal and the dimension representing organizational configuration is vertical. In Table 7 the second column from the left is divided into "C"s and "M"s that refer to customer-centric and manufacturing-centric configurations. A "middle ground" is also offered. The average of all dots in one row defines the business unit's vertical position in the framework.

When examining Table 7, the row representing business unit A shows a clear pattern as the dots are all at the top of the row, which means business unit A is customer-centric in its operations. Also business unit D's and B's dots are mainly either at the center of the row or at the top. Thus it appears that three out of five of ManuCo's business units are customer-centric. However, the lines drawn on the rows of business units C and E are, excluding a couple of dots, mainly in the center or at the bottom. This suggests that even though customer knowledge is seen as important the business units are fairly manufacturing centric.

The following sections after Tables 6 and 7 will go through the business unit findings in more detail.

Table 6. Business unit level analysis of organizational culture

Level of Culture	Manifestation	Business Unit A (P)	A (S)	B (P)	B (S)	C (P)	C (S)	D (P)	D (S)	E (P)	E (S)
Artifacts	Number of services offered	Four conceptualized service products		One service supporting product sales and a few service products		One service supporting product sales and a few service products		Various services to support product sales in addition to various service products		A few services supporting product sales and one service product	
	Language	"First visit is for free", otherwise services are a profitable business, not given away for free / "Here we say that it's out service to provide the solution"		"we will always take on a customer's problem and find a solution for it, but I cannot say that we are in [service]solutions business" / "Maybe still today we use more of these product services so that we sell more of our products"		Service seen as relating to different steps of product sales / "This is pretty much component sales"		Services as partly product-related, but value-adding at the same time / "..it's our interest to keep our products in best working condition as long, as we can. And the customer is happy." / "..this is what we are always selling, so this kind of solutions, we are not selling a product."		"[Services are] something that deliver value for the customer and help in the customer's own business.. but it can be this kind of little favors, a little extra." / "To be honest, I feel like these concepts [services and solutions] get mixed up often"	
	Role of goods	Product sales result from services		Goods seen as end-product		Goods seen as end-product		Goods seen as part of the solution		Goods seen as end-product	
	Role of services	Services are the core offering		Services as a part of the product solution, seen as a part of *customer service*		Services mainly used to sell more products, mostly free of charge		Services seen as an important part of a customer solution, many of which are charged for		Services offered to sell products and to get customers committed	
	Role of customer	Definer of value and suitability of service		Partners and co-creators of solutions		Receiver of the solution, definer of quality		Receiver of the customized solution		Receiver of the integrated solution	
	Customer relationship	Mainly partnerships, but also transaction-based relationships		Partnership, even relationship with key customers that participate actively in co-development projects		Mostly transactional, partnerships with key customers,		Partnerships with many customers		Mostly transactional, partnerships with key customers,	
	Performance measurement	Customer satisfaction / Solving the problem once and for all. / High performance seen as important for company reputation.		Offering a product solution that performs well		Technical end-result to match specifications promised / Keeping and delivering promises seen as key.		Customer satisfaction by delivering a turnkey package of technically high quality products		Offering a product solution that performs as promised	
Espoused values	View of unit's basic mission/ Basic philosophy	To deliver value to customers through solutions including services and products		To develop and sell product solutions to serve customer needs		To manufacture and sell products and product-related services		To provide customized customer solutions to create value for customers		To provide product solutions that serve the customer	
	Value delivered by/Value proposition	Offering customer with a functional end-result that includes services and product, which creates value-in use		Providing a functioning product solution that serves the customer		Providing a functional product solution and delivering it so that (If needed) it is customized for the customer		Offering turnkey-packages and high-tech solutions in addition to a collaborating with customers		Providing an end-result that emphasizes product performance / Value delivered through high product quality, quick deliveries and flexibility in manufacturing. / Follow-through seen as important means of delivering value	
	Appreciation	Employee knowledge and know-how and solving customers' problems		Employee skills, technical solutions and operational efficiency		Highly technological products and technical knowledge		Problem solving skills and employee knowledge		High-quality products and product-solutions	
	Views on competitiveness	Future competitiveness gained by offering more services		Future competitiveness gained through a broad offering of products and product-related services / All product categories have competitors, but nobody offer the whole package		Due to more complicated products, also product-related services will increase		Competitiveness based on solving customer's problems and offering more complex products that require services		Competitiveness based on technology-centered product and product services.	
	Strategy / Strategy focus	Obtaining wealth through utilization of knowledge and skills, strategic emphasis on services and solutions		Focusing in strategy more on partnerships and customer-driven product development		Manufacturing technologically advanced products and offering product services		Solving customer problems through offering services and technologically advanced products		Differentiating through providing integrated solutions	

Table 7. Business unit level analysis of organizational configuration

Business Unit		Unit structure /Priority-setting basis	Job titles	Customer knowledge	Role of technology	Process and technology	Facilities	Customer responsiveness	Service development	Organizational focus
						Configuration				
A	C	Smallest unit in ManuCo. Unit organized around research and new business development (both products and services).	Job titles include service business developer, unit consists mostly of research personnel	"Knowing the field is key to everything"	Enables service innovations	A large scale of technology used to provide services and consequently also products	Includes laboratory services, required products acquired from other business units. National operations but cooperation with offices abroad.	Services offered according to customer needs, no standard products in stock	Vital part of the unit operations, implementation still slow	External focus; operations are customer-centric
	M									
B	C	Unit organized partly according to customer segments, partly by production facilities	Job titles mainly related to production and products	Customer knowledge important, especially in common development projects	Enables product innovation	Technology used to deliver more developed integrated solutions for customers	Products manufactured in two factories, international operations, trying to stay close to customers	Partly standardized, partly customized products depending on customer needs	No clear strategy, more dependent of customer requests. Seen as important, but required resources not available	External focus
	M									
C	C	Unit organized around production and product sales	People appointed to business development and new technologies. Nobody appointed to service management or development	Customer knowledge important when designing a solution	Enables product innovation	Technology used for efficiency in production	Products manufactured in two factories	Offering solutions consisting of standardized products	No strategy in place	Partly internal, partly external
	M									
D	C	Biggest unit in ManuCo. Unit organized around geographical areas and within unit multiple customer segments distinguished	Depending on location, but there are e.g. service managers, service coordinators, service engineers	Customer knowledge seen as very important as all solutions are customized	Enables product innovation and thus drives also service innovation	Technology used for both efficiency in production and effectiveness in product delivery "Components are always more or less, for me, a result of a good customer solution"	Multiple factories, no inventories of readymade products. International operations. Various sales offices. Proximity to customers seen as important.	Emphasizing flexibility and product uniqueness as products designed according to customer specifications	No clear process, but developed all the time through customer projects	External focus; emphasis on customer relationships
	M									
E	C	Unit organized around regions and customer segments	People in charge of production development and technical support. Nobody appointed to service management or development	Customer knowledge important when designing a solution	Enables product innovation	Technology used for efficiency in production	Products from a factory in Europe, also regional sales	Offering solutions consisting of standardized products	No strategy in place	Partly internal, partly external
	M									

74

Business unit A

Relating to organizational culture (Table 6), when the interviewees from business unit A were asked what kind of services were offered to customers, they depicted the core offering to consist of services and product sales were seen as a result of these. No services, excluding an initial meeting, are given away for free. As ManuCo's business unit A mainly deals with service products, they recognize a problem within the company regarding terminology usage. The confusion of concepts was seen as a challenge in everyday business.

> *"The term 'solution' is difficult as it is used all over the company; both when referring to product solutions and service solutions" (Director)*

The role of the customer was seen as a definer of the value created, and the services offered by the unit were depicted to be customer-driven. The unit pursues to build partnerships with customers, but they also have transaction-based relationships. When asked about the unit's mission, the interviewees perceived it as finding a solution for the customer and taking care of whatever problem their customer may have and targeting at customer satisfaction.

> *"Customer has a need and that is fulfilled" (Director)*

> *"The customer is satisfied when (s)he doesn't have to deal with the problem anymore" (Director)*

The interviewees from business unit A were aware of the challenge relating to offering services as a part of a company that is traditionally conceived as a component manufacturer. Changing this image was viewed as one of their biggest challenges. However, when discussing their future position in the markets, the interviewees admitted that even though more resources are required to improve the service business, manufacturing remains an important part of ManuCo's operations.

> *"But as we still have manufacturing, one of our main purposes is to get products sold as we have a lot invested in factories and have to use our capital." (Director)*

Additionally, the interviewees from business unit A viewed their value proposition to include offering customers value-in-use, thus placing customers at the heart of operations. Skills to solve customers' problems in order to create value were highly valued in the business unit, as also future competitiveness was seen to be dependent on these issues. Hence, not surprisingly business units A's strategic focus is on

services and solutions. As can be viewed from Table 6, business unit A has a fairly service-oriented culture, which is manifested through both the artifacts and espoused values.

By people count, business unit A is the smallest unit in ManuCo and its work is divided roughly into research and customer solutions. Especially offering services and solutions is segmented according to customers, and total solutions are created by combining different employees' expertise. Business unit A has job titles such as "service business developers" and customer knowledge is highly valued and seen as a basis for developing their offering. In addition, this knowledge concerning the customer's business situation and environment is used as a platform for new service development.

"Knowing the field is everything" (Director)

Business unit A's operations configuration is clearly customer-centric (Table 7), as technology and processes are seen only as means to improve services not as goals themselves, and everything is designed according to customer needs. As the unit's resources are still quite small, they currently have operations in only one country.

To conclude, when comparing the answers of the interviewees to the framework based on a literature review, business unit A appears to be positioned as a Value-Adding Service Champ (Figure 8). To improve their position in terms of the other challenges relating to servitization, the unit should work on defining the customer's role in delivering the services in more detail e.g. through service blueprinting (Bitner *et al.*, 2008) and search for means to build more partnerships with customers to create value from the relationship that would benefit both parties also in developing their own business practices (Grönroos, 2008). In order to build a global service network, business unit A has to gain more resources by convincing the company heads that these service offerings are a profitable business.

Business unit B

When asking interviewees from business unit B what services they offer, the unit's service portfolio was recognized to consist of a few service products and of services given away for free in order to sell products. Consequently, some the unit's interviewees referred to services that were not charged for as "customer service" as they were included in a product solution.

"But you could see it this way, that if they [services] are not that troublesome, so there is no need to price something like that, there has to be this kind of customer service which is not always charged for." (Technical manager)

The unit's employees viewed the unit to be positioned between offering products and services, as goods are still seen as end products. However, as the unit operates in a niche market, most of the customer orders have to be customized and customer needs are thus taken carefully into consideration. Hence, business unit B co-develops some of their solutions together with customers and the employees depict their customer relationships to resemble that of a partnership.

"Our [ManuCo's] different business units are in different positions, so I would say that we are here, between the product and the solution" (director)

"I'd see us as a solutions provider, because we develop all the time these products.. and we even suggest these new solutions to customers" (Technical manager)

"Several of our key customers have said themselves that they do not consider us as component providers, but rather as partners" (Director)

However, performance measurement is mainly based on product functionality, and thus does not represent a very service-oriented culture.

When business unit B's interviewees were asked about their customer promise, they defined the products and unique solutions to serve customer needs and saw value delivered though functionality. Employee skills relating to these technical solutions were appreciated. Future competitiveness in their market was seen by the respondents to depend on the unit's broad offering of products and product-related services.

"In every product group we have different competitors, but nobody offering the same product systems" (Director)

It can be thus stated that business unit B's strategy is in emphasizing building partnerships and through those partnerships take part in customer-driven product development.

To investigate the organizational configuration of business unit B, their organizational chart was examined and the unit appeared to be organized partly according to customer segments and partly by production sites. When the interviewees were asked who was in charge of service development, they did not seem to

77

have anybody assigned to this position, but solutions are created when a customer need arises. The interviewees from business unit B perceived technology to enable innovation and to form the foundation for offering customers integrated solutions. The unit did not have clear service development strategy, but it was seen as important and something that requires more resources.

Overall, as business unit B has a fairly external focus in their operations and is relatively service-oriented, it positions as a Value-Adding Service Champ (Figure 8). Business unit B's operations emphasizes a bit more services than products, and the main focus is offering solutions that consist of both. The unit's values emphasize a more service-oriented culture than is manifested through the artifacts. Also the unit structure depicts this division, since its configuration is a little bit more customer-centric than manufacturing-centric. In order to become more service-oriented the culture in the unit has to begin to emphasize the role of services and also take that into consideration in their performance measurements. For business unit B to focus more on customers, it should assign people to service development, and find ways to use technology in enabling also service development.

Business unit C

Interviewees from business unit C viewed service as something relating to fulfilling customer needs, product sales, and as a manifestation of expertise. One director categorized services to before and after sales.

> *"But we try and reach to sell some specific service before sales. After, there is after sales service." (Director)*

> *"Yes, service is explaining how the system functions, its maintenance or the sorts.." (Key account manager)*

Relating to the previous discussion about terminology, also in unit C the term solution is perceived more tied to actions relating to customers and solving customer's problems. The interviewees saw their own operations to be more related to component sales and occasional solution offerings targeted at partner customers. Unit performance is measured mainly by evaluating how well the technical factors match specifications.

According to the interviewees, the unit's basic mission is to offer product solutions consisting of high quality technology products and some product-related services. The products are seen to provide the

competitive edge in the markets due to their technological superiority. However, value-added based pricing is mentioned as a challenge due to the traditional sales channels and distributors. Business unit C's employees considered services to grow in importance in the future as products become more complex and require more product-related services.

Thus, business unit C's culture is quite product-oriented (Table 6), as services, and customers for that matter, are seen to play a minor part in their operations.

In order to get a view of business unit C's organizational configuration, their organizational chart was examined. The unit is organized around production and product sales. There are people appointed in business development, but nobody in service management. And even though customer knowledge is seen as important in offering solutions, the unit only offers solutions consisting of standardized products. Technology and its utilization in production and product innovation were recognized as important. Business unit C did not have a service strategy in place.

Business unit C is very manufacturing-centric and culturally product-oriented. The main focus of the business is viewed to revolve around manufacturing products and selling them. Thus, business unit C is positioned in the framework (Figure 8) as an Introvert Bulk Producer. The structure of the unit supports this orientation and may hinder service business development. A step towards servitization would include more interaction with customers and identifying the customer's role in the unit's processes. However, it has to be said that business unit C offers a rather bulky products and it is difficult to develop services to support the product (e.g. maintenance). Therefore, if the unit is profitable and can support the other units in their operations, there may not be a need for servitization.

Business unit D

When asking the interviewees from business unit D about services that the unit provides at the moment, it was detected that the unit has the most of both service supporting product sales and service products. This is in line with the interviewees' answers, as many of them did not view the unit to be in product sales.

> *"..this is what we are always selling, so this kind of solutions, we are not selling a product. Of course at the end of the day there is a product to manufacture, but what we are, and what I'm personally selling, is the kind of solutions. Complete solutions for the customer." (Key account manager)*

"And so, in terms of solving solutions for our customers, that's how we see ourselves. We see ourselves as solutions providers rather than manufacturers of products. That's one thing we shy away from." (Managing director)

"ManuCo's business unit D, our modus operandi here is that we design projects, we manufacture them, we deliver them to the job sites, we install tem, we test and commission them, and then we offer after-sales service afterwards. So it really is a turnkey package. We don't see ourselves as manufacturers, we see ourselves more as contractors who manufacture." (Managing director)

Business unit D's customer solutions are hence seen to consists of products and services, most of which are charged for. The customer's role is that of the receiver and customizer, as most solutions are tailored according to customer needs.

"Right now we are solutions provider, we are definitively not a component provider we do not have any.. standard products, products in stock, it's all manufactures by demand because every project is different so we do not have any readymade products in stock.." (Director)

The interviewees from business unit D viewed selling services as possible for them because they are able to back them up with a "story". This means that they are able to explain the end result of buying the solution to customers. This is perceived as an important way to explain the company's price level as ManuCo's products are among the most expensive ones in the market.

"We are good in differentiation of course, because we have a story." (Key account manager)

"..we need I think to better demonstrate the added-value we provide because basically our equipment is pretty expensive compares to competition.." (Director)

Business unit D's espoused values are customer-oriented (Table 6) as the interviewees perceived creating value for customers are their basic mission and described doing this by offering turn-key packages that solve all the customer's problems. In the unit customer problem solving skills and employee knowledge is valued as it is also viewed to secure future competitiveness and form the core of the unit's strategy.

The structure of the unit varies depending on geographical location, as it is the biggest unit in ManuCo and has international operations. However, generally it is seen as important to be close to the customers as nearly all solutions are customized according to customer needs. Even though technology is regarded to provide the competitive advantage, there are people in the unit also assigned to services.

"So within this business unit here in the UK, we have a service manager, we have a service coordinator, we have four service engineers in vans that are out there, and they do the service work." (Managing director)

The interviewed employees from business unit D regarded customer knowledge as very important and as the foundation for customer solutions. The role of technology was viewed as enabling both product and service innovation and used to improve both. Regarding business unit D's physical facilities, proximity to market and operating internationally was emphasized, though it was mentioned that a global standard for the service offering still lacks. In addition business unit D does not have a clear service development strategy, even though services are continuously developed for customer solutions.

Business unit D has a rather customer-focused configuration, in which customers and their operations are considered. In addition to product-related services, also individual sale of services is made possible. When combining these findings with the service-orientation of the unit, business unit D positions in the framework (Figure 8) as a Value-Adding Service Champ. In business unit D's operations servitization has already been recognized as an opportunity to increase sales and customer satisfaction, but development projects have been rather dispersed and individually operated in each country. Thus, no clear unit wide service development operations are in place. The unit would benefit a great deal from increased communication and knowledge sharing within the unit. This would enable developing conceptualized service products and eventually also building of a service network, as a standard offering would be definable. Additionally, conceptualized service products would draw more attention to the customer's role in the service process and to customer satisfaction as a performance measurement.

Business unit E

From the interviews with the unit's employees, it was derived that ManuCo's business unit E has few services supporting the products sales and one recognizable service product, which the customer is charged for. In this unit, as well as mentioned in some of the others, the concept of service is considered a little vague and not easily explainable with examples relating to everyday operations.

The employees interviewed from business unit E saw their operations consisting mainly of component sales and thus relationships are built only with key customers. In their operations, interviewees from business unit E perceived the role of the customer and services to be minimal. In order to maintain customer relationships and image in the market, performance was said to be measured through keeping what has been promised to the customer. The promises mainly relate to securing product functionality.

When asked what the customer promise is and what is offered to customers, interviewees from business unit E emphasized the end result that can be achieved with the use of the products. The basic mission of the business unit was seen as serving customers. Most of the interviewees from business unit E saw that a product service that would explicitly reveal the value gained by the customer would benefit their business a great deal.

> *"So this kind of a service product to a customers from which you could look and be sure that you have gotten what you ordered" (Managing director)*

Thus, the interviewees from the unit viewed that in addition to lifecycle cost calculations; some kind of evidence being offered to customers would help in explaining ManuCo's higher prices.

Additional value was delivered through more manufacturing-centric operations such as product quality, quick deliveries, and flexibility in manufacturing. In the unit, high-quality products and solutions were valued. Future competitiveness is seen to be based on technology-focused products and product services. Providing integrated product solutions was seen as means for differentiation in the markets. Business unit E's organizational culture is mainly product-oriented, even though the benefits reached by using the products were designed to deliver value to the customers.

From the organizational charts provided by ManuCo, business unit E's organizational configuration was examined. The unit is organized around regions and customer segments. There are people in charge of production development and technical support, however nobody is appointed to services. When asked what kind of information is relevant in their business, the interviewees from business unit E considered customer knowledge to form the basis for designing a solution. Still, technology was viewed to enable innovation and it was used to gain efficiency in production. In addition to a factory in Europe, the unit has also regional sales offices. Even though the service business was regarded as important in the future, it was not seen as easily implemented as a part of the business unit's operations.

> *"But I don't see that these [maintenance services] are something that we would start building on a separate service business.." (Managing director)*

Business unit E's organizational configuration is more manufacturing- than customer-centric, as even though customer knowledge is seen as important, it is mainly utilized to manufacture and sell products. Hence, business unit E is positioned in relation to its culture and configuration as an Introvert Bulk Producer (Figure 8). If willingness to servitize is created in the business unit and the company strategy supports it, the

future steps in servitization would require gaining a customer perspective on their operations and using that as a means for product and service innovation. Even though the end result is emphasized, it seems as though they do not know their customers very well and so developing the kind of value that customers would appreciate and be willing to pay a premium is difficult. In the future, developing product related services could be a possibility for business unit E, moving it towards a more customer-centric configuration while maintaining their focus on products.

This chapter has described the positions of all five ManuCo's business units in relation to organizational culture and configuration. From these analyses, a business unit portfolio of ManuCo can be drawn that presents the business units' servitization capabilities (Figure 8).
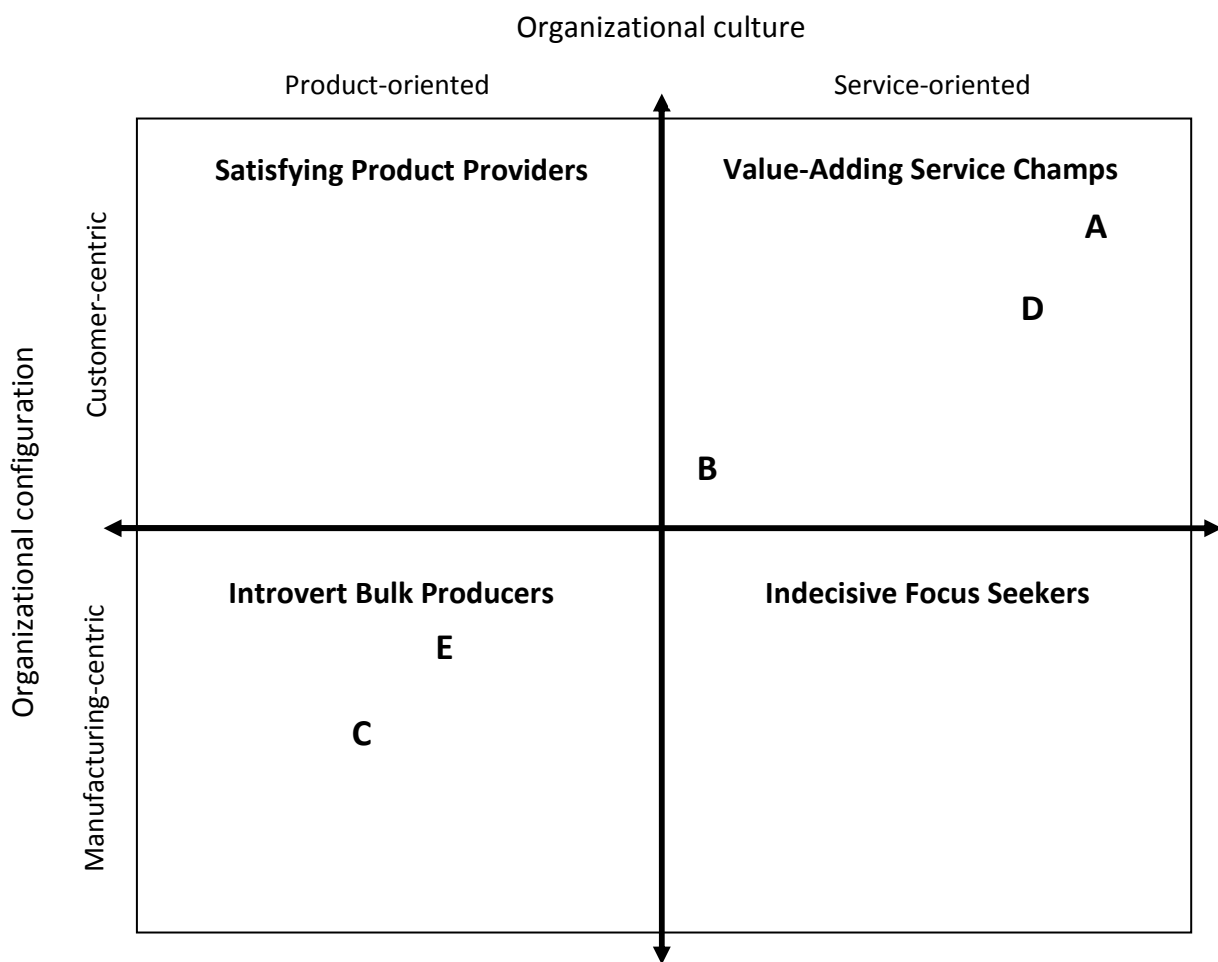
Organizational culture

Product-oriented		Service-oriented
Satisfying Product Providers		**Value-Adding Service Champs**
		A
		D
	B	
Introvert Bulk Producers		**Indecisive Focus Seekers**
E		
C		

Organizational configuration — Customer-centric — Manufacturing-centric

Figure 8. ManuCo's business unit portfolio of servitization

As seen from the business unit portfolio (Figure 8), ManuCo's business units are divided into Value-Adding Service Champs (B, D, A) and Introvert Bulk Producers (C, E). Their operations and positions with regards to servitization and overcoming the two main challenges (organizational culture and configuration) differ a great deal. Business units B, D, and A already posses a lot of knowledge about their customers and have begun some kind of service operations, whereas business units C and E focus solely on manufacturing and selling products.

Business units A and D have clearly taken both a service-oriented and customer-centric approach in their operations and do not even view themselves as manufacturers anymore; a transition towards servitization has already taken place. Business unit B could be defined as offering integrated solutions, as product sales are emphasized and services are offered to increase value gained by customers. Business units C and E are positioned as Introvert Bulk Producers as both of them manufacture fairly standardized products with an emphasis on the technological aspects of the product offering and have mainly transactional customer relationships.

7.4   Servitization of ManuCo – business unit portfolio analysis

From the interviews, it could be concluded that on the company level everyone was well aware that the five business units operate in very different markets. However, regarding the service business, none of the business units knew well what kind of projects the other units had going on. ManuCo did not have a companywide service strategy in place, and even top management was not aware of the business units' positions with regards to servitization. Hence, depicting the portfolio of ManuCo's business units, by utilizing the theoretical framework, was seen as important (Figure 8).

By examining the business unit portfolio (Figure 8) more closely together with the interviewees' answers regarding the whole company, both the commonalities and differences in the comments become more understandable. On one hand, as all the interviewees were managers, they had followed the industry trends and realized that some kind of servitization is required to stay competitive. In addition, taking on services was partly viewed inevitable, because it was recognized that it would enable designing even more technical products, and differentiating both through products and services. On the other hand, everyone was well aware of the realities that are included in manufacturing operations; large amounts of invested capital and a certain amount of product sales to keep the production sites running. Also due to the current market leader position in product sales, there does not exist a "burning platform" for service development.

As mentioned by some of the interviewees in the unit level findings, the concepts of 'service' and 'solution' caused confusion within ManuCo. While the importance of service had slowly been recognized in the company, it had not been fully and openly discussed. Without a service strategy and the top management's blessing, service business development had been "something on the side" for many of the business units. This vague situation within the company had resulted in some business units being short of resources to allocate to service business development, while others feared for their own operations and that traditional manufacturing will be given up.

Interviewees from business unit A concentrating on service business, perceived that it would require an official statement from the top management in addition to success stories in order to get the overall culture of the company backing up the service business development. Even though not all business units would begin to servitize their operations, an understanding of the service operations' benefits would help in making them see that services could increase the value of the whole company and should not be considered as competition to manufacturing operations.

In addition, also external communication was seen as a major challenge by all the business units. Many mentioned that a successful history in products and manufacturing is a burden as ManuCo pursues to become a service provider. Here, it should be considered more carefully how the image of a first class manufacturer could be transitioned to services as well. In addition to the image issue, also the operating field is seen constraining. New ways of operating are feared to cause problems in the traditional value chain. Beginning to offer services may thus require 'reeducating' the competitors, the customers, as well as the employees.

The business unit portfolio is to show what capabilities the business units have in terms of servitization (Figure 8). The situation here is rather polarized, when examining the dimension of organizational culture and configuration. From here, top management of ManuCo, as well as business unit leaders can gain some insight into how to continue or change the current service strategy. Examples of possibilities to develop service knowledge within ManuCo include establishing a "head of services" business unit, for example unit A, that is in charge of centralized service development processes within ManuCo and thus also offers these services to other units. On the other hand, it could be possible to develop services in all three business units positioned as Value-Adding Service Champs. As all three business units operate in different markets and different customer needs, their requirements for service development may differ too much for a centralized service center to be adequate. In addition, the situation of business unit C and E, currently positioned as Introvert Bulk Producers, should also be examined. If the units are profitable and operating in

more stable business environments for example, there may not be an urgent need for servitization. However, if possible, a shift towards a more customer-centric configuration could help in taking a more customer-driven approach to product design and thus improve the manufacturing operations.

From this portfolio containing the five business units, managers of the case company should recognize that servitization cannot be generalized to require similar actions in all units. When making decisions on where and how services are going to be developed in the organization, the most critical question to answer relate to developing the service business in-house or acquiring knowledge from outside. There appears to be a will within the business units A and D to servitize further, but they may not have sufficient internal knowledge and resources to implement the required changes. For the moment being, concentrating servitization actions to these two business units may be more productive than involving also business units B, C and E. However, increased communication, targeted at all the business units, of the servitization process and changes in the service business, would be important. Communicating the chosen service strategy and initiating recording of company-wide best practices regarding product services and service products would offer means to involve all business units at the employee-level.

The following, and final, chapter summarizes the contributions of this thesis by first reviewing the main findings and the theoretical contributions of this study. In addition, the limitations of the study are discussed, after which the future research areas are drawn.

8. Conclusions

Due to the increasing global competition on price, manufacturers are considering to servitize their operations by adding services to their offerings enabling them to begin competing on the basis of value instead of cost. Here, the servitization process is seen as a strategic change, which includes overcoming various internal challenges in order to be implemented successfully. Previous literature has examined this phenomenon from various approaches, but no previous frameworks for business unit level analysis have been offered. Examining servitization at the business unit level was seen important, as in a company consisting of multiple business units, they can all have different strategies, cultures and structures.

The goal of this thesis was to study the servitization of manufacturing companies and to offer a framework for business unit level analysis of servitization capabilities. Thus, a literature review consisting of studies from different academic fields was conducted to answer the research questions relating to identifying benefits and challenges in servitization and distinguishing what challenges can be viewed as the ones having the largest impact. Additionally, as a theory-initiated, multiple embedded case study methodology was used in this thesis, the empirical part of the thesis aimed to answer research questions pertaining to both the business unit and the company level. Identifying the business units' position and capabilities to servitize were analyzed in addition to examining the strategic implications of the company's portfolio of business units.

8.1 Main findings

The main findings of this thesis include a wide review of benefits and challenges relating to servitization of manufacturers that have been discussed in previous studies (Figure 9). It has been argued, that servitization may improve customer relationships, thus creating barriers to competition and enabling higher margins for manufacturing companies. Furthermore, as the nature of service sales is generally counter-cyclical compared to product sales and it holds the potential to create a steadier and balancing revenue stream. Even though outnumbered by the challenges, the benefits that servitization contains offer a possibility for manufacturing companies to escape the competition on price and secure future competitiveness.

In the literature review of this thesis, it was concluded that challenges in servitization are numerous and relate to extending both the business and people's mind-sets. The first three challenges listed below (Figure 9); service strategy, service-oriented organizational culture and organizational structure were identified as

key enabling factors of servitization, if they are overcome. These findings were confirmed in the empirical section presenting a multiple embedded case study. From the interviews with the managers from the case company, it was identified that they struggle with the same challenges as discussed in the literature review.
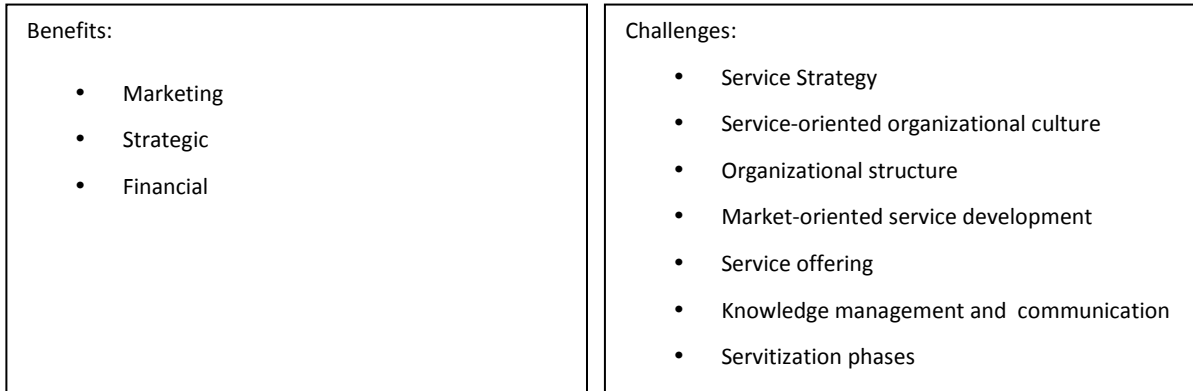
Benefits:	Challenges:
• Marketing • Strategic • Financial	• Service Strategy • Service-oriented organizational culture • Organizational structure • Market-oriented service development • Service offering • Knowledge management and communication • Servitization phases

Figure 9. Benefits and challenges in servitization

Moving towards the service business and creating a service strategy was seen in this thesis as a conscious decision of the top management, which includes stating the preferred future state of the company. In order for a company to implement the service strategy chosen, organizational culture and configuration were seen as the main challenges having the largest impact on the company on its way to servitization. As the notion of organizational culture was researched in more depth, it became evident that the reason for the concepts of strategy, culture and structure to be among the most challenging ones in servitization related to the fact that they are interrelated and together impact the whole business unit or company in question. The term 'structure' was extended to include both what kind of focus and emphases define people's work and the physical structure of the organization, and thus in this thesis the concept of organizational configuration was employed.

From previous studies it was possible to identify two ends for both dimensions and thus organizational culture was divided into service-oriented culture and product-oriented culture. Organizational configuration included manufacturing-centric organizations and customer-centric organizations. These dimensions were used to create a theoretical framework for examining strategic business units' positions with regards to servitization capabilities and the four categories generated from the framework were labeled as Satisfying Product Providers, Value-Adding Service Champs, Introvert Bulk Producers, and Indecisive Focus Seekers.

All the four categories identified have different cultural and configuration capabilities in terms of beginning to servitize business operations. The labeling of the four categories was done by the researcher in order to highlight their distinctive attributes and ease the use of the framework. The Value-Adding Service Champs were seen to be most able to servitize their operations as they already are service-oriented and have a customer-centric configuration which have been identified as the most difficult challenges in servitization by service literature. Introvert Bulk Producers include business units that are product-oriented and have a manufacturing-centric configuration thus representing the stereotype manufacturer that concentrates solely on internal manufacturing operations without much interest in customers or service. The third group, labeled Satisfying Product Providers, includes product-oriented and customer-centric business units, which serve customers mainly through the sale of goods, while offering the required amount of product-related services in order to increase level of product sales. Indecisive Focus Seekers form the lower, right-hand corner of the framework and consist of service-oriented and manufacturing-centric business units. These units may encounter internal conflicts as their unit culture promotes the importance of services and customer-relationships, while the configuration is suited for producing standardized products and does not contain many customer contact points.

By employing the framework created on the basis of literature to the empirical case study, it was distinguished that the different business units within one manufacturing company may actually position differently in terms of servitization capabilities. Thus, the servitization process can be viewed on the business unit level, while taking into consideration that it might not serve the company's best interest to servitize all of the business units, as was the case with the company examined in the empirical section of this thesis.

8.2   Theoretical contribution

This thesis examines servitization of a manufacturing company as a phenomenon determined by a multiple organizational factors. Although manifested to an outsider as an addition of services to the offering, the literature review conducted revealed that servitization in fact includes overcoming many internal challenges. This thesis contributes to service research by developing the view presented already by Bowen et al., (1989) that the degree of servitization achieved by a manufacturing company depends on a combination of organizational factors.

Of the servitization challenges identified, organizational culture and configuration were established to be the most critical ones in implementing the service strategy defined by management. In order to examine

the case company situation with regards to servitization, a framework was created, as previous literature does not offer tools for this kind of internal servitization analysis. The framework advances servitization research by offering means for business unit level examination of servitization capabilities by combining the dimensions of organizational culture and organizational configuration. Both dimensions were depicted in detail by listing their manifestations based on a fairly extensive literature review.

The literature review conducted for this thesis forms the groundwork for the framework in addition to studying the unclear relationship between organizational culture and servitization. Organizational culture has been identified as a challenge for servitizing manufacturing companies, as their traditional product-oriented culture has not been viewed as suitable for service business. However, previous literature has not discussed the cultural issues in detail. In this thesis, organizational culture is viewed as a set of manifestations on two levels, namely those of artifacts and espoused values. These two levels of culture are defined in this thesis for both product-and service-oriented cultures in order to provide the framework a strong theoretical base and enabling transparency when defining positions with regards to servitization.

In addition, as this thesis examines servitization at the business unit level, it was necessary to combine theory from multiple academic fields. This was because dominant discussions in recent servitization research that relate to organizational configuration's impact on servitization have mainly concentrated on whether to integrate or separate service business units. For this study such discussions were not considered relevant, although they provide interesting insights. In this thesis organizational configuration is seen to comprise of what kind of focus and emphases define both people's work and the physical structure of the organization. Thus the term includes both mental and physical structures. Servitization is viewed to require a more flexible and customer-centric organization than what manufacturing companies traditionally have represented.

By combining the dimension of organizational culture and configuration the framework enables examining individual business units in addition to it functioning as a portfolio for analyzing servitization gaps at the company level. Consequently, this thesis utilizes business unit level analysis in proposing a possibility to servitize only a part of the company's operations. This kind of *partial servitization* has not received much attention in previous research as servitization has been viewed mainly as a company-wide change. Thus, the findings and framework presented in this thesis provide a useful review of servitization and a platform on which to base more in-depth research.

8.3 Managerial implications

Servitization has been a rather elusive concept for many manufacturing companies as services have traditionally been considered an unprofitable necessity offered to customers only in order to sell more products. However, in recent years, partly due to the economic downturn and decreased product sales, companies in the manufacturing sector have begun to view services' business potential.

The literature review conducted in this thesis presents a rather extensive, although not exhaustive, list of benefits and challenges relating to the servitization process of manufacturing companies. Even though the most visible change in servitizing manufacturing companies relate to their offering, managers have to recognize the internal changes required. In order to fully exploit the potential benefits of servitization, it is necessary that the service strategy is defined by top management. Hence, management of a company that wishes to begin servitizing part or all of its operations has to take responsibility of the change as the servitization process begins by officially defining service business goals.

Even though servitization has received an increasing amount of attention, the implementation process still remains fairly vague. This thesis proposes a framework for identifying the current position of business units in terms of servitization. Thus, by comparing their current situation and the service business goals set, the company is able to identify servitization gaps and understand the scope of change required. This kind of situation analysis is proposed here as a starting point of the implementation process for manufacturing companies beginning to servitize.

However, this thesis suggests that servitization does not have to be a companywide process. Rather, it is important to take into consideration the individual business units' market situation together with their current organizational culture and configuration to determine whether servitization can improve their operations. The framework presented in this thesis offers insight into the business units' current position in relation to the two major challenges identified in servitization. Business units that already posses a service-oriented organizational culture and customer-centric organizational configuration (Value-Adding Service Champs) are viewed to be more capable to servitize as they have overcome the most critical challenges. Especially in situations where business units operate in different markets, building this kind of portfolio of the units can help in making decisions about how to approach the service business and what business units would be most appropriate for this.

8.4   Limitations

This thesis is based on a literature review supported by data collected from a case study. While it is believed that it provides the required platform, it is acknowledged that as this thesis is a single case study the findings may not be applicable for broad generalizations.

In addition, it should be noted that this thesis concentrates only on the early phase of the servitization process, and the challenges identified in the literature review relate to beginning the transition process to service business. Thus, challenges that servitized manufacturers may encounter are not discussed here and may differ from those mentioned in the literature review. Additionally, as an internal perspective was taken in this thesis concentrating on the supplier side of servitization, there may exist external challenges that were not covered. A study including also the customer side could give further insight into service business and the interdependencies between suppliers and customers.

Relating to limitations in research methods, the analysis of the interviews may have been affected as some of the interviews were conducted in Finnish and later translated into English. However, it should be mentioned that in addition to the researcher, also the TEKES research project manager participated in the initial stages of the analysis in order to avoid any misinterpretation or misanalysis.

In addition, concerning research on organizational culture; it is a complex concept and phenomenon, and therefore it should not be assumed that an outside observer could examine all the levels, as the deepest ones may not visible even to members of the culture. It has been recommended that in order to get as profound a research as possible of a company's organizational culture, one should collect data from detailed interviews with employees, direct observations of the organization's processes, physical location, layout, artifacts and symbols. In addition to these, questionnaire surveys are seen as useful tools to add quantitative data to create a comprehensive analysis (Brown, 1995). Here, the complexity of studying organizational culture is acknowledged and it should be disclosed that this thesis' intention is not to implement a thorough cultural analysis, but to merely study how the organization views its situation and evaluate the manufacturing organization's cultural state and strategic situation with regards to the transition to service business.

8.5   Implications for further research

Although increasingly researched, servitization of manufacturing companies continues to hold various uncovered issues especially relating to internal organizational changes. Moreover, academic scholars from different research streams lack a shared terminology, which could, if agreed upon, advance service research through improved communication.

This thesis explores and develops theory rather than tests theory. Consequently, it provides opportunities for other scholars to test the proposed framework and dimensions. For example it would be useful to test the proposed framework in a study consisting of multiple case companies. This kind of study could be used also to examine a certain industry's companies' servitization capabilities. Additionally, conducting a longitudinal study examining how business units develop with regards to servitization and exploring their transition in the framework would enable advancing theory of servitization stages.

It is recognized that servitization challenges are also connected to customers' operations and hence insights into the customer network would provide additional depth to servitization research and yield knowledge about the inter-organizational relationships.

This thesis is only a modest attempt at providing general guidelines for manufacturing companies making strategic decisions relating to the first steps of servitization. The challenge now is to use this framework as a basis for further empirical research.

References

Alam, I. & Perry, C. (2002). A customer-oriented new service development process. *Journal of Services Marketing*, Vol. 16, No. 6, pp. 515-534.

Alvesson, M. (2002). *Understanding organizational culture*. Sage Publications, London, GBR.

Alvesson, M. & Sveningsson, S. (2008). *Changing organizational culture: cultural change work in progress*. Routledge, Oxon.

Auguste, B.G. & Harmon, E.P. & Pandit, V. (2006). The right strategies for product companies. *The McKinsey Quarterly*, Vol. 1, pp.40-51.

Baines, T.S. & Lightfoot, H.W. & Benedittini, O. & Kay, J.M. (2009a). The servitization of manufacturing. *Journal of Manufacturing Technology Management*, Vol. 20, No. 5, pp. 547-567.

Baines, T.S. & Lightfoot, H.W. & Peppard, J. & Johnson, M. & Tiwari, A. & Shehab, E. (2009b). Towards an operations strategy for product-centric servitization. *International Journal of Operations & Production Management*, Vol. 29, No. 5, pp. 494-519.

Bate, S.P. (1994*) Strategies for cultural change*. Butterworth-Heinemann, Oxford.

Bate, S.P. (1996). Towards a strategic framework for changing corporate culture. *Strategic Change*, Vol. 5, No. 1, pp.27-42.

Bitner, M.J. &Ostrom, A.L. & Morgan, F.N. (2008). Service blueprinting: a practical technique for service innovation. *California Management Review*, Vol. 50, No. 3, pp.66-94.

Boyt, T. & Harvey, M. (1997). Classification of industrial services – a model with strategic implications. *Industrial Marketing Management*, Vol. 26, No. 4, pp. 291-300.

Bowen D.E., Siehl C. & Schneider, B. (1989). A framework for analyzing customer service orientations in manufacturing. *Academy of Management Review*, Vol. 14, No. 1, pp. 75-95.

Bowen D.E. & Siehl C. & Schneider, B. (1991). Developing service-oriented manufacturing. In Ralph H. Kilmann, Ines Kilmann and Associates (Eds.) *Making organizations competitive*, enhancing Networks and relationships across traditional boundaries, Jossey-Bass, San Francisco, CA. 397-418.

Brax, S. (2005). A manufacturer becoming a service provider-challenges and a paradox. *Managing Service Quality*, Vol. 15, No.2, pp. 142-155.

Brax, S. & Jonsson, K. (2009). Developing integrated solution offerings for remote diagnostics. A comparative case study of two manufacturers. *International Journal of Operations & Production Management*, Vol. 29, No. 5, pp. 539-560.

de Brentani, U. (1990). Success factors in developing new business services. *European Journal of Marketing*, Vol. 25, No. 2, pp. 33-59.

de Brentani, U. (1995). New industrial service development: scenarios for success and failure. *Journal of Business Research*, Vol.32, pp.93-103.

Brown, A. (1995). *Organizational culture*. Pitman Publishing, London.

Chase, R.B. & Garvin, D.A. (1989). The service factory. *Harvard Business Review*, July-August.

Chesbrough, H. & Spohrer, J. (2006). A research manifesto for services science. *Communications of the ACM*, Vol. 49, No.7, pp. 35-40.

Davies, A. (2004). Moving base into high-value integrated solutions: a value stream approach. *Industrial and Corporate Change*, Vol. 13, No. 5, pp. 727-756.

Davies, A. & Brady, T. & Hobday, M. (2006). Charting a path toward integrated solutions. *MIT Sloan Management Review*, Vol. 47, No. 3, pp.39-48

De Jong, J. & Vermeulen, P. (2003). Organizing successful new service development: a literature review. *Management decision*, Vol. 41, No.9, pp.844-858.

Denison, D. R. (1990). *Corporate culture and organizational effectiveness*. John Wiley & Sons. New York.

Dunphy, D. & Griffiths, A. & Benn, S. (2003). *Organizational Change for Corporate Sustainability*. Routledge, New York.

Edgett, S. (1994). The traits of successful new service development. *Journal of Service Marketing*, Vol. 8, No. 3, pp. 40-49.'

Eisenhardt, K.M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, Vol. 14, No. 3, pp. 532-550.

Eskola, J. & Suoranta, J. (20008). *Johdatus laadulliseen tutkimukseen*, 8th edition. Gummerus, Jyväskylä.

Finne, M. & Soinio, J. (2010). Servitization: Which way the journey goes? Published in the proceedings of *the 20th RESER conference*, 30th of September- 2nd of October, Gothenburg, Sweden.

Galbraith, J.R. (2002a). *Designing Organizations: an executive guide to strategy, structure, and process*. Jossey-Bass, San Francisco, CA.

Galbraith, J.R. (2002b). Organizing to deliver solutions. *Organizational Dynamics*, May.

Galbraith, J.R. (2005). *Designing the customer-centric organization*. Jossey-Bass, San Francisco.

Gebauer, H. (2008). Identifying service strategies in product manufacturing companies by exploring environment-strategy configurations. *Industrial Marketing Management*, Vol. 37, No. 3, pp. 278-291.

Gebauer, H. & Friedli, T. (2005). Behavioral implications of the transition process from products to services. *Journal of Business & Industrial Marketing*, Vol. 20, No. 2, pp.70-78.

Gebauer, H. & Fischer, T. & Fleisch, E. (2010a). Exploring the interrelationship among patterns of service strategy changes and organizational design elements. *Journal of Service Management*, Vol.21, No.1, pp.103-129.

Gebauer, H. & Fleisch, E. & Friedli, T. (2005). Overcoming the service paradox in manufacturing companies. *European Management Journal*, Vol. 23, No. 1, pp. 14-26.

Gebauer, H. & Friedli, T. & Fleisch, E. (2006). Success factors for achieving high service revenues in manufacturing companies. *Benchmarking: An International Journal*, Vol. 13, No. 3, pp. 374-386.

Gebauer, G. & Bravo-Sanchez, C. & Fleisch, E. (2008a). Service strategies in product manufacturing companies. *Business Strategy Series*, Vol. 9, No. 1, pp. 12-20.

Gebauer, H. & Krempl, R. & Fleisch, E. (2008b). Service development in traditional product manufacturing companies. *European Journal of Innovation Management*, Vol. 11, No.2, pp. 219-240.

Gebauer, H. & Putz, F. & Fischer, T. & Fleisch, E. (2009). Service orientation of organizational structures. *Journal of Relationship Marketing*, Vol. 8, pp. 103-126.

Gebauer, H. & Paiola, M. & Edvardsson, B. (2010b). Service business development in small and medium capital goods manufacturing companies. *Managing Service Quality*, Vol. 20, No.2, pp.123-139.

Gebauer, H. & Edvardsson, B. & Gustafsson, A. & Witell, L. (2010c). Match or mismatch: strategy-structure configurations in the service business of manufacturing companies. *Journal of Service Research*, Vol. 13, No.2, pp.198-215.

Gebauer, H. & Edvardsson, B. & Bjurko, M. (2010d). The impact of service orientation in corporate culture on business performance in manufacturing companies. *Journal of Service Management*, Vol. 21, No.2, pp.237-259.

Ghauri, P. (2004). Designing and Constructing Case Studies in International Business Research. In Rebekka Marschan-Piekkari and Catherine Welch (Eds.) *Handbook of qualitative research methods for international business* by, MPG Books Ltd., Bodmin, Cornwell. 109-124.

Gremyr, I. & Löfberg, N. & Witell, L. (2010). Service innovations in manufacturing firms. *Managing Service Quality*, Vol. 20, No. 2, pp.161-175.

Gummesson, E. (1991). Truths and myths in service quality. *International Journal of Service Management*, Vol. 2, No. 3, pp. 7-16.

Gummesson, E. (1991). Service management: an evaluation and the future. *International Journal of Service Industry Management*, Vol. 5, No.1, pp. 77-96.

Gummesson, E. (1995), *Relationsmarknadsföring: Från 4P till 30R (Relationship Marketing: From 4Ps to 30Rs)*, Liber-Hermods, Malmö.

Grönroos, C. (1998). Marketing services: the case of a missing product. *Journal of Business and Industrial Marketing*, Vol. 13, No. 4/5, pp. 322-338.

Grönroos, C. (2008). Service logic revisited: who creates value? And who co-creates*? European Business Review*, Vol. 20, No. 4, pp. 298-314.

Helms, M.M. & Stern, R. (2001). Exploring the factors that influence employees' perceptions of their organization's culture. *Journal of Management in Medicine*, Vol. 15, n0. 6, pp. 415-429.

Hofstede, G. (1991). *Cultures and organizations: Software of the mind*. McGraw-Hill Book Company, London.

Hofstede, G. (1998). Identifying organizational subcultures: an empirical approach*. Journal of Management Studies*. Vol. 35, No. 1, pp. 1-12.

Hofstede G. & Neuijen B. & Ohayv D.D. & Sanders G. (1990). Measuring Organizational Cultures: A Qualitative and Quantitative Study across Twenty Cases**.** *Administrative Science Quarterly*, Vol. 35, No. 2, pp. 286-316.

Homburg, C. & Fassnacht, M. & Guenther, C. (2003). The role of soft factors in implementing a service-oriented strategy in industrial marketing companies. *Journal of Business-to-Business Marketing*, Vol. 10, No. 20, pp. 23-47.

Homburg, C. & Garbe, B. (1999). Towards and improved understanding of industrial services: quality dimensions and their impact on buyer-seller relationships. *Journal of Business-to-Business Marketing*. Vol. 6, No. 2, pp. 39 – 71.

Homburg, C. & Workman, J.C. & Krohmer, H. (1999). *Journal of Marketing*. Vol. 63, April, pp. 1-17.

Homburg, C. & Pflesser, C. (2000). A multiple-layer model of market-oriented organizational culture: measurement issues and performance outcomes. *Journal of Marketing Research*, Vol. 37, No. 4, pp. 449-462.

Hyötyläinen, R. & Nuutinen, M. (2010). Palveluliiketoiminnan mahdollisuudet ja haasteet. In Hyötyläinen, R. & Nuutinen, M. (Eds.) *Mahdollisuuksien kenttä: Palveluliiketoiminta ja vuorovaikutteinen johtaminen*. Teknologiateollisuuden julkaisuja. Teknologiainfo Teknova Oy, Tampere, 13-19.

Jacob, F. & Ulaga, W. (2008). The transition from product to service in business markets: an agenda for academic inquiry. *Industrial Marketing Management*, Vol. 37, pp. 247-253.

Johansson, P. & Olhager, J. (2004). Industrial service profiling: matching service offerings and processes. *International Journal of Production Economics*, Vol. 89, pp. 309-320.

Kilmann R.H. (1985). Five steps for closing culture-gaps. In Ralph Kilmann, Mary J. Saxton, Roy Sherpa, and associates (Eds.) *Gaining control of organizational culture*, Jossey-Bass, San Francisco, CA, 351-370.

Kotler, P. (2003). *Marketing Management*. Pearson Education, Inc., Upper Saddle River, New Jersey.

Kotter, J.P. & Heskett, J.L. (1992). *Corporate culture and performance*. The Free Press, New York, NY.

Levin, I. & Gottlieb, J.Z. (2009). Realigning Organization Culture for Optimal Performance: Six principles & eight practices. *Organization Development Journal*. Vol. 27, No. 4, Winter 2009.

Malleret, V. (2006). Value creation through service offers. *European Management Journal*, Vol. 24, No. 1, pp. 106-116.

Martin, J. (2002).*Organizational culture: mapping the terrain*. Sage Publications, Inc., Thousand Oaks.

Martin, C.R. & Horne, D.A. (1992). Restructuring towards a service orientation: the strategic challenges. *International Journal of Service Industry Management*, Vol. 3, No. 1, pp. 25-38.

Martin, J. & Siehl, C. (1983). *Organizational culture and countercultures: An uneasy symbiosis. Organizational Dynamics*. American Management Associations.

Martinez, V. & Bastl, M. & Kingston, J. & Evans, S. (2010). Challenges in transforming manufacturing organizations into product-service providers. *Journal of Manufacturing Technology Management*, Vol. 21, No.4, pp. 449-469.

Mathe H. & Shapiro R.D. (1993). *Integrating service strategy in the manufacturing company*. Chapman & Hall, London.

Mathieu, V. (2001a). Service strategies within the manufacturing sector: benefits, costs and partnership. *International Journal of Service Industry Management*, Vol. 12, No. 5, pp. 451-475.

Mathieu, V. (2001b). Product services: from a service supporting the product to a service supporting the client. *Journal of Business & Industrial Marketing*, Vol. 16, No.1, pp. 39-58.

Matthyssens, P. &Vandenbempt, K. (1998). Creating competitive advantage in industrial services. *Journal of Business & Industrial Marketing*, Vol. 13, No. 4/5, pp.339-355.

Neely, A. (2008). Exploring the financial consequences of the Servitization of manufacturing. *Operations Management Research*, Vol. 1, pp. 103-118.

Neu, W. & Brown, S. (2005). Forming successful business-to-business services in goods-dominant firms. *Journal of Service Research*, Vol. 8, No.3, pp.3-17.

Neu, W. & Brown, S. (2008). Manufacturers forming successful complex business services – designing an organization to fit the market. *International Journal of Service Industry Management*, Vol. 19, No. 2, pp. 232-251.

Nuutinen, M. & Lappalainen, I. (2010). Teknologiayritykset matkalla palveluliiketoimintaan: Palvelukyky ja – kulttuuri muutoksen johtamisen tulkkina, in Hyötyläinen, R. & Nuutinen, M. (Eds.) *Mahdollisuuksien kenttä: palveluliiketoiminta ja vuorovaikutteinen johtaminen*, Teknologiateollisuuden julkaisuja, Helsinki, Teknologiainfo Teknova Oy, 170-206.

Ojasalo, J. & Ojasalo, K. (2008). *Kehitä teollisuuspalveluja*. Talentum, Helsinki.

Oliva, R. & Kallenberg, R. (2003). Managing the transition from products to services. *International Journal of service Industry Management*, Vol. 14, No.2, pp. 160-172.

Pawar, K. & Beltagui, A. & Riedel, J. (2009). The PSO-triangle: designing product, service and organization to create value. *International Journal of Operations Management*, Vol. 29, No. 5, pp. 468-493.

Penttinen, E. & Palmer, J. (2007). Improving firm positioning through enhanced offerings and buyer-seller relationships. *Industrial Marketing Management*, Vol. 36, pp. 552-564.

Peters, T. J. & Waterman, R.H. (1982). *In Search of Excellence*. Harper & Row, New York.

Pettigrew, A. (1988). Longitudinal field research on change: Theory and practice. Paper presented at the National Science Foundation Conference on Longitudinal Research Methods in Organizations, Austin.

Porter, M.E. & Ketels, C.H.M. (2003). UK Competitiveness: moving to the next stage. *DTI Economic Paper No. 3*. Institute of Strategy and Competitiveness, Harvard Business School.

Quinn, J.B. & Doorley, T.L. & Paquette, P.C. (1990). Beyond products: services-based strategy. *Harvard Business Review*, Vol. 68, No. 2, pp. 58-60, 64-66, 68

Sathe, V. (1985). How to decipher and change corporate culture. In Ralph Kilmann, Mary J. Saxton, Roy Sherpa, and associates (Eds.) *Gaining control of organizational culture*, Jossey-Bass, San Francisco, CA.

Sawhney, M. & Balasubramanian, S. & Krishnan, V. (2004). Creating growth with services. *Sloan Management Review*, Vol. 45, No.2, pp. 34-43.

Schein, E. (2004). *Organizational culture and leadership*. Jossey-Bass, San Francisco, CA.

Schein, E. (2009). *The corporate culture survival guide*. Jossey-Bass, San Francisco, CA.

Schneider, B. & Bowen, D.E. (1995). *Winning the service game*. Harvard Business School Press, Boston.

Shah, D. & Rust, R.T. & Parasuraman, A. & Staelin, R. & Day, G.S. (2006). The path to customer centricity. *Journal of Service Research*, Vol. 9, No. 2, pp.113-124.

Siehl, C. & Martin, J. (1990). Organizational culture: A key to financial performance? In Benjamin Schneider *(Ed.) Organizational climate and culture*, Jossey-Bass, San Francisco, 241-281.

Silén, T. (1995). *Organisaatiokulttuuri ja johtaminen*. Yliopistopaino, Helsinki.

Simpson, S. & Cacioppe, R. (2001). Unwritten ground rules: transforming organization culture to achieve key business objectives and outstanding customer service*. Leadership & Organization Development Journal*, Vol. 22, No. 8, pp. 394-401.

TEKES Review 272/2010: The Future of Service Business Innovation. TEKES- Finnish Funding Agency for Technology and Innovation. Libris Oy, Helsinki.

Tukker, A. (2004). Eight Types of Product– Service System: Eight Ways to Sustainability? Experiences from Suspronet. *Business Strategy and the Environment.* Vol. 13, pp. 246–260

Turunen, T. (2010). Customer orientation as a development driver in manufacturing: the case of "reverse" servitization. Published in the proceedings of *the 20th RESER conference*, 30th of September- 2nd of October, Gothenburg, Sweden.

Ulrich, D. (1991). Using human resources for competitive advantage. In Ralph H. Kilmann, Ines Kilmann and associates (Eds.) *Making organizations competitive*, enhancing Networks and relationships across traditional boundaries, Jossey-Bass, San Francisco, 129-155.

Vandermerwe, S. (1990). The market power in the services: because the value is in the results. *European Management Journal*, Vol. 8, No. 4, pp. 464-473.

Vandermerwe, S. (2003). Customer-minded growth through services. *Managing Service Quality*, Vol. 13, No. 4, pp. 262-266.

Vandermerwe, S. & Rada, J. (1988). Servitization of Business: Adding value by adding services. *European Management Journal*, Vol. 6, No.4, pp. 314-324.

Vandermerwe, S. & Matthews, W. & Rada, J. (1993). European manufacturers shape up for service. *Journal of Business Strategy*, Vol. 10, No. 6, pp. 42-46.

Vargo, S. & Lusch, R.F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, Vol. 68, January, pp. 1-17.

Willcoxson, L. & Millett, B. (2000). The management of organizational culture. *Australian Journal of Management & Organizational Behaviour*, Vol. 3, No. 2, pp. 91-99.

Windahl, C. & Lakemond, N. (2006). Developing integrated solutions: the importance of relationship within the network. *Industrial Marketing Management*, Vol. 35, pp. 806-818.

Windahl, C. & Lakemond, N. (2010). Integrated solutions from a service-centered perspective: applicability and limitations in the capital goods industry. *Industrial Marketing Management*, Vol. 39, No. 9, pp. 1278-1290.

Wise, R. & Baumgartner, P. (1999). Go downstream: the new profit imperative in manufacturing. *Harvard Business Review*, Vol. 7, No. 5, pp. 133-141.

Yin, R.K. (2003). *Case study research: Design and methods*, 3rd edition, Sage Publications, Thousand Oaks.

Appendices

Appendix 1. Interview questions

1. **Background questions**
   - Your background and work history: in which positions have you worked at ManuCo
   - What is your position at the moment

2. **Service, services, solutions**
   - How do you understand the word 'service'
   - How about 'customer solution'
   - What does the word "solution provider" mean to you, how does it differ from service provider
   - Would you see ManuCo as a solution provider, a service provider or an equipment provider
     - Why so
   - How about in the future, where would you like to see ManuCo
   - What kind of changes would enable ManuCo to gain a solution provider's position in the market
     - Areas where ManuCo excels
     - Areas for improvement

3. **Present situation in services**
   - What kind of services does ManuCo offer its customers
     - In your SBU
     - Elsewhere in ManuCo

   - Which of these are already conceptualized and sold as 'service products'
   - Are there services that are given away for free
   - Do you have any services that have been tailored according to specific customer needs
   - What kind of service have you considered offering in the future
   - What monetary value do you see services having in the future

4. **Strengths and weaknesses in service business**
   - What would you see as ManuCo's strengths (in services or otherwise)
   - What kind of services related challenges does ManuCo have
   - What are the most critical challenges
   - What do you see as solutions to these problems

5. **ManuCo. vs. Competitors**
   - What companies would you consider as your competitors
     - Service business
     - Technology (E.g. Products and systems)
   - How does ManuCo differentiate itself from its competitors
   - What do you think it takes to gain success through services
   - Could you mention examples of companies who have succeeded in it (for example in other industries)

6. **Resources and organization**
   - How is the service development organized at the moment
     - In your SBU
     - Elsewhere in ManuCo
   - What kind of knowledge and competence does the service business require

- Do you think ManuCo has enough of these (knowledge/competence)
- Do you think that you have enough human resources
- Does ManuCo have a partner strategy on services
- How about other resources
  - Facilities
  - Equipment
- Who is responsible of the services at the group level
  - How should it be

7. **Information flow across the organization**
- How is the information flow managed across the different SBUs
- What kind of information is necessary to be shared within the company
- What kind of information do the different SBUs have
- In what form is the information in the company
- How is the network of SBUs steered
  - Who has the overall responsibility of services
- Should the co-operation between SBUs be strengthened in your opinion

8. **Customer value proposition and the role of the customer**
- What kind of customer groups do you serve?
- What is ManuCo's customer promise
- What is ManuCo's image in the eyes of the customer
  - Strengths
  - Weaknesses
- What is ManuCo's relationship with the customer
  - Transactional
  - Partner
  - Something else?
- Has there been services that customers have asked for but you have not been able to deliver
- In order to find a solution to customers problem, how much is there co-operation with different SBUs
- What kind of competencies do the customers need when buying services from ManuCo
- What kind of praise customer usually give
- What kinds of reclamations do you get
- Could value be added through ManuCo's services, in your opinion
- Do you think that you have enough competencies and knowhow so that it could be offered as a 'customer solution' and sold like a product

9. **Ideas for future**
- Could you name three most critical challenges that ManuCo will face in the near future (in service business in particular)
- Do you have any ideas how to solve these
- Any questions or comments you would like to share with us

Appendix 2. List of interviewees at ManuCo

Title	SBU
Director	A
Director	A
Director	C
Manager	C
Country manager	C
Director	C
Key account manager	C
Director	D
Key account manager	D
Commercial director	D
Sales manager	D
Managing director	D
Managing director	D
Director	B
Sales director	B
Technical manager	B
Managing director	E
Sales manager	E
Area manager	D,E,C (USA)
Area manager	D,E,C (Canada)
Area director	D,E,C (Europe/Asia)