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Designing Customer Value Proposition for Power Transmission Department

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PREFACE

I started working for the case company department as a Sales Manager in January 2012, and since then I have had the time and opportunity to get to know the case company, its current employees, its existing customer offerings, as well as its customer base. With the time passing and more visits to customers, seek for creating a more focused customer value proposition became evident to me.

During the past decade, the case company has suffered from several staff changes which over time led the unit to lose its focus from its intended markets in the Finnish power transmission industry. This resulted into a state where the problem is thought to derive not from the case company department, but from the industry itself. It also hindered the efforts to make necessary changes in the customer value proposition which led to a relentless seek for new customers in hope of improvement. By suggesting a new customer value proposition, I hope to gain business back from competitors and to build more solid relationships with customers.

The approach in this Thesis is not to rely on the past knowledge, but to find new ways to differentiate from competition by considering, discussing and identifying specific needs of a certain group of customers in the industry market which obtain the most potential. In this approach, the necessity to choose a certain market, identify new innovations, and listen to the needs of selected customers will play a key role.

The development of the final customer value proposition was a long, but a rewarding road for me to travel. And I would like to thank the wonderful staff of Metropolia University of Applied Sciences. Especially, Thomas Rohweder, Marjatta Huhta and Zinaida Grabovskaia as well as the current case company, but also my previous employer for the opportunity to participate in this Master´s program.

Mikko Vaaraniemi

Helsinki, 5 May 2013

ABSTRACT

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The objective of this Thesis is to develop a focused customer value proposition for the power transmission department of the case company.

Due to the nature of this study, the method chosen for this research is the exploratory single case study. This enables the use of multiple sources of both qualitative and quantitative data utilized to ensure validity and reliability of the Thesis. The research design of this Thesis consists of four steps of analysis based on best practice in designing a customer value proposition.

The outcome of this study is a customer value proposition developed grounded in the analysis of the profit potential of three markets where the power transmission department of the case company operates in. These markets are the stationary, mobile and marine. First, these markets are briefly overviewed and evaluated. Second, from the most promising market a particular customer group is selected and their needs are analyzed. Based on their needs, the most suitable and effective customer value proposition for this particular group is formulated which should enable the case company department to increase its revenues thought sustainable and profitable sales growth. The study also suggests practical implications for the management as for what should be done to put this proposal into practice.

Keywords	Customer value proposition, Industry analysis, Focus customer group, Needs analysis

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Tämän opinnäytetyön tavoitteena on kehittää tutkitun yrityksen voimansiirto osastolle kohdennettu asiakasarvolupaus.

Opinnäytetyön luonteesta johtuen lähestymistavaksi on valittu tutkiva yksittäistapaustutkimus. Tämä mahdollistaa monilähteisen, niin kvalitatiivisen kuin kvantitatiivisen datan hyödyntämisen, jonka voidaan katsoa lisäävän opinnäytetyön oikeellisuutta sekä luotettavuutta. Opinnäytetyön tutkimusrakenne koostuu neliportaisesta analyysista joka pohjautuu parhaan asiakasarvolupauksen suunnitteluun olevan käytännön hyödyntämiseen.

Työn lopputulema on asiakasarvolupaus, jonka kehitys pohjautuu kolmen markkinan tulos potentiaalin analysointiin, joilla tutkittava voimansiirto yritys toimii. Nämä kolme markkinaa ovat paikallinen, liikkuva sekä meri. Ensimmäisenä markkinoista luodaan yleiskatsaus ja niitä vertaillaan. Toisena, potentiaalisimmalta markkinalta valitaan tietty asiakasryhmä, jonka tarpeet analysoidaan. Tämän asiakasryhmän tarpeiden pohjalta luodaan sopivin ja tehokkain asiakasarvolupaus ehdotus, jonka tarkoituksena on luoda tutkitun yrityksen voimansiirto osastolle mahdollisuus kestävään ja kannattavaan myynnin kasvuun. Työ myös ehdottaa käytännön toimeenpanon ohjeita johdolle, joilla ehdotus voitaisiin ottaa käyttöön.

Avainsanat	Asiakasarvolupaus, toimialakartoitus, asiakaskohderyhmä, tarvekartoitus

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1 Introduction

This Thesis aims at developing a focused customer value proposition for the case company unit, the Power Transmission Department.

1.1 Case Company and Unit

The case company of this Thesis is a medium-sized company operating on Finnish metal and construction market. Its main products/services are power transmission components and maintenance, industrial pumps, hydraulic components and assemblies, welding equipment and material, bellows and pipe fittings. Currently, the case company employs around 130 people. Its headquarters are located in Vantaa, with two other locations in Turku and Ylöjärvi.

The unit of this Thesis is the Power Transmission Department. This unit is a small operator focused on serving the Finnish power transmission market. Main products/services are diesel and petrol engines, gearboxes, couplings, drive shafts, air motors, maintenance for bus transmissions and other represented components.

1.2 Business Problem

The case company of this Thesis searches for new ways to improve its sales results. It is evident that a range of efforts is needed to achieve this objective, but the main focus should be placed on the development of a new, highly-focused customer value proposition (CVP). To develop such a CVP, a complex analysis is necessary to complete, including the analysis of the intended industry; customers and competitors; the analysis of the current state of the case company offering; as well as the analysis of the needed offering, from the point of view of the main stakeholders, the case company and its customers.

These areas need to be analyzed to formulate a new CVP with a clear focus which will help the case company to position itself in its intended industry and markets. In this Thesis, the development of this focus for the new CVP is considered to be the main business challenge and the main outcome of the study.

1.3 Research Objective and Research Methodology

The objective of this Thesis is to develop a focused customer value proposition for the case company unit, the Power Transmission Department.

In the existing highly competitive market, it is essential for the case company department to be able to differentiate from competitors to gain market share, but it is also important to not lose its existing customers and suppliers to competitors. The path chosen in this Thesis for the case company department is to differentiate by building a new CVP considering service-dominant logic which can give the case company unit a leverage to differentiate from its current more product-dominant competitors.

The chosen method for the development of the new CVP is, first, the industry analysis and, second, the needs analysis of the selected customer group.

This study is written in six sections. Section 1 overview the case company and its business problem and sets the objective for this Thesis. Section 2 presents the chosen research approach and its design as well as the process itself. Section 3 discusses about the best practice for the study and is divided in five subsections that aim to present the best way of creating a CVP. Section 4, presents the analyses done based on the best practice to building a CVP. Section 5 suggests is where the actual final CVP proposal is created based on the validation of an initial CVP. Section 6 summarizes the research done and suggests practical implications on how to implement the final CVP proposal into use.

2 Method and Material

This section explains how the research process is conducted, what are the methods for data collection and data analysis, as well as how reliability and validity can be assured.

2.1 Research Approach

The research approach applied in this Thesis is based on an exploratory single case study research (Baxter et al. 2008; Yin 2003). This type of study allows researcher to seek answers to research questions by asking questions of How, Why and Where (Yin 2003). Based on Baxter et al. (2008) exploratory case study should be used to explore situations in which the evaluated intervention does not have a clear single set of outcome.

Do to the unique nature of companies and set research objective the case can be considered as a single phenomenon. This research approach allows also the analyzing and measuring of both qualitative and quantitative data. The amount of evaluated data will also be more comprehensive and triangulating the sources will add reliability to the findings.

2.2 Data Collection and Analysis Methods

This study uses a variety of data sources. The data for the study is collected through a number of sources, mainly through archives of company records, analysis of the current case company documentation and research interviews.

The data collected for each step of research is detailed in Table 1 below.

Table 1. Research steps and data collection.

Step	Purpose of analysis	Data	Documented
Steps 1 and 2 (Section 4.1 and 4.2)	*Case Company and Department Background; SWOT Analysis of the Case Company Department and Its Current CVP*	○ Archives (company records and documents; case company satisfaction survey) ○ Data: stakeholder interviews (colleagues):	Field notes, memos, internal documents, survey results Interview questions (Appendix 1 and 2)
Step 3 (Section 4.3)	*Business Dynamics in Industry*	Data: archives (company records and documents) ○ Information: public financial and statistical data, trade magazines, business press, government sources) ○ Data: stakeholder interviews (colleagues):	Field notes, memos, internal documents Open source information (published) Interview questions (Appendix 3)
Step 4 (Section 4.4)	*Focus Customer Group*	○ Data: archives (company records and documents) ○ Data: stakeholder interviews (colleagues):	Field notes, memos, internal documents Interview questions (Appendix 4)
Step 5 (section 4.5)	*Customer Needs analysis*	○ Data: archives (company records and documents) ○ Data: stakeholder interviews (customer):	Field notes, memos, internal documents Interview questions (Appendix 5) Questionnaire (Appendix 6)
Step 6 (section 5.2)	*Validation of Initial CVP*	○ Data: stakeholder interviews (colleagues):	Field notes, memos, internal documents Interview questions (Appendix 7)

As seen from Table 1, each step of research employed a different set of data. The idea with this data collection approach was to set boundaries between research steps, in order to limit the amount of data (Baxter et al. 2008) analyzed at each step.

The data collection for Steps 1 and 2 comprised the materials from company archives and stakeholders used for describing the case company background and current state. In Step 3, archives, public information and stakeholder interviews are analyzed to determine the Business Dynamics in Industry. In Step 4, archives and stakeholder interviews are applied to examine Focus Customer Groups. In Step 5, archives and stakeholder interviews are analyzed to conduct Needs Analysis and Customer Needs in Sales Dominant Logic. In final Step 6, the Initial CVP proposal is validated using a stakeholder interview.

Interviews carried out in the study represented a semi-structured interview type, with open-end questions asked at the end. The questions were formulated to collect both qualitative and quantitative data. Qualitative questions included such open-end options which contained the How, Why, Where and What questions suggested by Yin et al. (2003). Qualitative questions were formed to either give comparable lists of written data or numbers. Based on the subjects described in Sections 3.1 to 3.4, following interviews were carried out shown in Table 2 below.

Table 2. Interviews carried out during the making of this Thesis by subject.

Interview	Type	Participants	Date	Duration	Topics
Based on Section 3.1, Customer Value Proposition					
1	Face-to-face	Department Manager	7.2.2013	30 min	Appendix 1
2	Face-to-face	Customer Service Manager	7.2.2013	30 min	Appendix 1
3	Face-to-face	Service Engineer	8.2.2013	30 min	Appendix 1 and 2
Based on Section 3.2 Business Dynamics of Industry					
4	Face-to-face	Department Manager	11.2.2013	30 min	Appendix 3
5	Face-to-face	Sales Manager	11.2.2013	30 min	Appendix 3
Section 3.3 Focus Customer Group					
6	Face-to-face	Customer Service Manager	15.3.2013	30 min	Appendix 4
7	Face-to-face	Service Engineer	15.3.2013	30 min	Appendix 4
8	Face-to-face	Sales Manager	25.3.2013	20 min	Appendix 4
Section 3.4 Customer Needs Analysis (needs, characteristics, interactions)					
9 Customer company 9	Face-to-face	Aftersales Manager	3.4.2013	20 min	Appendix 5
10 Customer company 9	Face-to-face	Purchasing Manager	3.4.2013	20 min	Appendix 5
11 Customer company 4	By phone	Sales Manager	4.4.2013	20 min	Appendix 5
12 Customer company 4	By phone	Chief of Engineering	4.4.2013	20 min	Appendix 5
13 Customer company 11	By phone	Purchasing Manager	4.4.2013	20 min	Appendix 5
14 Customer company 15	By phone	Sales Manager	4.4.2013	20 min	Appendix 5
15 Customer company 1	Face-to-face	Purchasing Manager	9.4.2013	60 min	Appendix 5
16 Customer company 8	Face-to-face	Purchasing Manager	9.4.2013	35 min	Appendix 5
Section 3.4 Customer Needs Analysis (characteristic and interaction qualities)					
17	Questionnaire	Customer company	15.4.2013	10 min	Appendix 6
18	Questionnaire	Customer company	15.4.2013	10 min	Appendix 6
19	Questionnaire	Customer company	15.4.2013	10 min	Appendix 6
20	Questionnaire	Customer company	22.4.2013	10 min	Appendix 6
21	Questionnaire	Customer company	23.4.2013	10 min	Appendix 6
Section 5.2 Validation of CVP within the Case Company Department					
22	Face-to-face	Department Manager	23.4.2013	55 min	Appendix 7

The resulting data from the content analysis of written data as well as that based on interviews and questionnaires was conducted in a logical and

thorough manner. During the data collection, information outside the semi-structured interview was also written down in field notes and later on reflected to the data based given by the analysis to check validity.

2.3 Research Design and Process in This Study

The design of this research is constructed so that its outcome will fulfill the set objective by utilizing a series of analyses based on best practice and data collected in the case company.

Research design implemented in this study is shown in Figure 1 below.

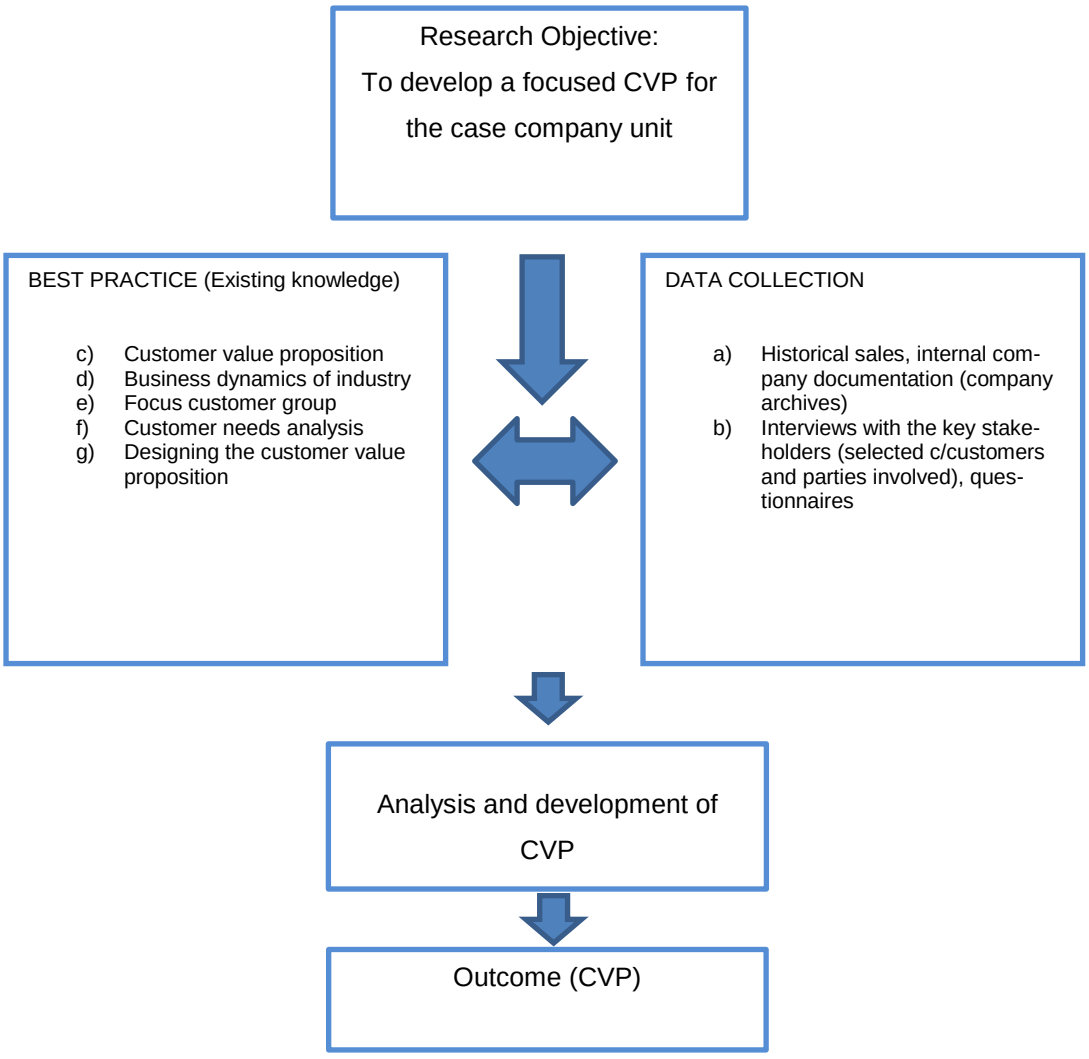

Figure 1. Research design of this Thesis.

As seen from Figure 1, the first phase of the research was to set its objective. The second phase was based on finding the best practice based on existing knowledge as well as to figure out the different data collection methods. The third phase utilized the best practice and data collection

methods found in forms of analysis that aimed for the development of the customer value proposition. The fourth phase formed the outcome for the final customer value proposition.

As for the research process, to achieve the research objective and propose a CVP for the case company Power Transmission unit, the research process is divided into five subsequent steps shown in Figure 2 below.

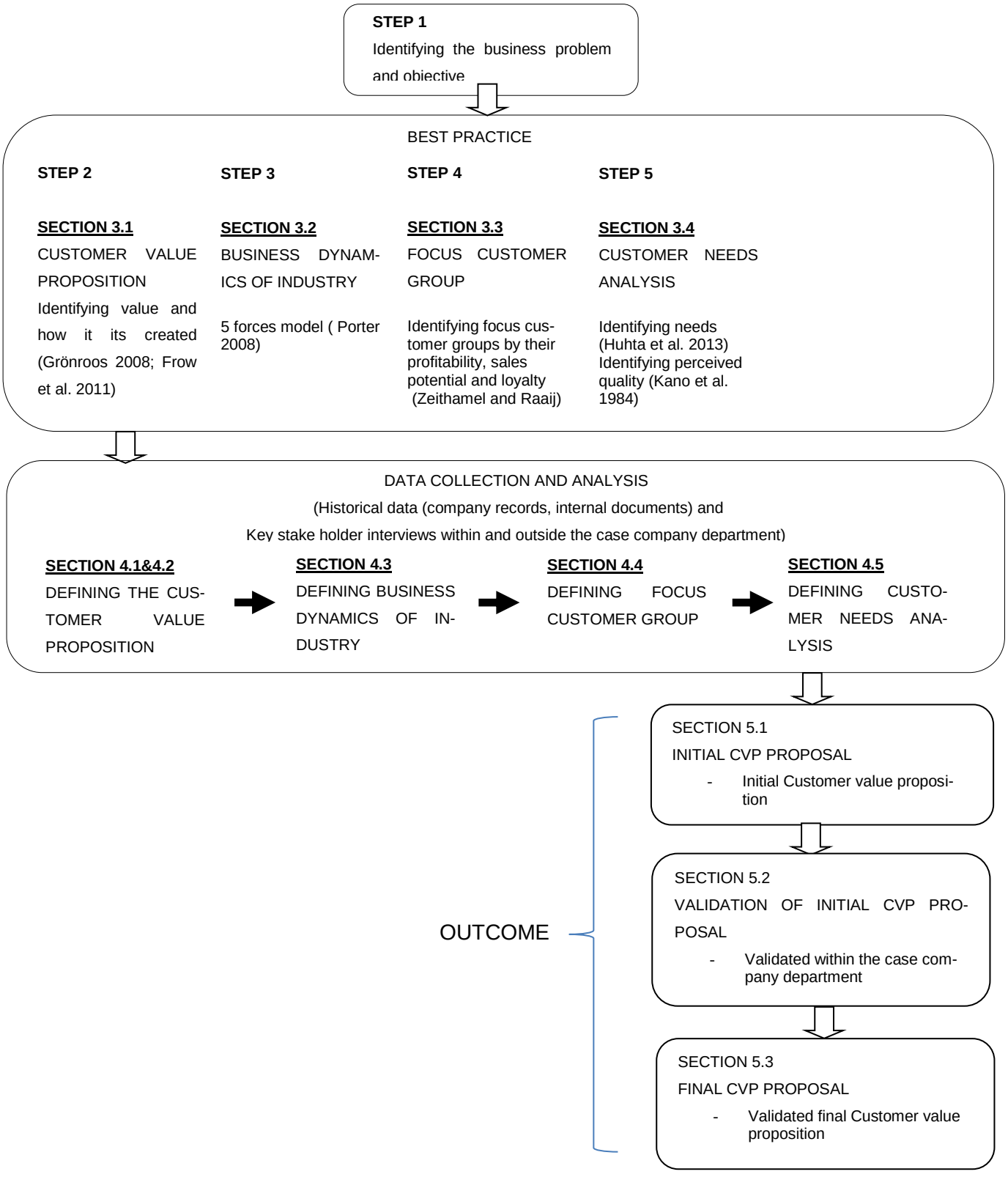

Figure 2. Research process of this Thesis.

As seen from Figure 2, the research process is applied through the following steps. First, the *business problem is identified and objective* set for

this thesis (Step 1, Sections 1.2 and 1.3). The five following steps are part of the best practice used in this research for the design of the CVP. Second, (Step 2, Section 3.1) *Customer Value Proposition*. This Section introduces the definition of CVP as well as discusses it from sales dominant logic viewpoint. Third, *Business Dynamics of Industry* (Step 3, Section 3.2) explains the forces that drive an industry and how their interrelations affect each other. Fourth, *Focus Customer Group* (Step 4, Section 3.3) argues which customers a company should focus on. Fifth, *Customer Needs Analysis* (Step 5, Section 3.4) concentrates on the customer needs and the way how they are perceived. Section 3.5 is an explanatory part which summarizes Steps 2, 3, 4 and 5 related to framework for the design of CVP.

After steps one to five comes the data collection and analysis section which includes the analysis of the four steps described in Section 3, Best Practice. Analysis regarding Step 1, *Identifying the Business Problem and Objective*, is the basis for this Study which is done as mentioned in Sections 1.2 and 1.3. Analysis of Step 2, *Customer value proposition*, is explained in Sections 4.1 and 4.2. Section 4.1 analyses the case company background and 4.2 the current CVP. Analysis of Step 3, *Business Dynamics of Industry*, is done in Section 4.3. This Section is divided in three subsections which each present an analysis of business dynamics for each of the three intended markets, the stationary, mobile and marine. Analysis of the *Focus Customer Group*, described in Step 4, is done in Section 4.4, based on the most promising market found in the previous analysis conducted in Section 4.4. Step 5, *Customer Needs Analysis*, is conducted in Section 4.5 describing customer needs and their characteristics. After the Data collection and Analysis the Initial Outcome is an initial CVP proposal which is then reflected inside the case company in order to validate it into Final CVP Outcome. This is done in Section 5, *Proposal for Customer Value Proposition for the Case Company Department*.

As described above this research design follows a five step analysis approach, based on the Best Practice, which result will be validated in the Analysis and Results Section. The Final Outcome of this study will be a so called Final CVP proposal which validity is reflected by a member in the case company department. This end result itself will be a focused value proposition for a defined customer group in a specified industry market.

2.4 Reliability and Validity

According to scholars when a research is conducted its reliability and validity must be addressed for the credibility of its findings. According to Yin (2003) for a case study validity can be achieved by assessing three forms of validities: construct, internal and external. Due to the nature of exploratory case study research method Baxter et al. (2008) used in this research the construct validity must be issued using a variety of tactics.

To avoid bias and one-minded perspective, three tactics can be used. First, the use of multiple data sources also known as triangulation (Patton 1990; Baxter et al. 2008). Second, clear chain of evidence of data collection must be visible. Third, the resulting initial draft from the research should be reviewed also by other key informants. (Yin 2003) With the use of different tactics enable others repeatability of data collection, that provide the possibility for other researchers to reach the same conclusions as achieved in the initial research. (Yin 2003; Baxter et al. 2008)

The overall reliability of a study can be improved using consistent data collection which results are logically organized. (Yin 2003) The way to achieve this is to use data collection suitable for case study research, as archives and interviews, collecting the answers and forming a database.

According to Yin (2003), Baxter et al (2008) and Patton (1990) the reliability and validity in this Thesis will be achieved as follows. To achieve good level of validity and its correctness, data will be collected from multiple sources that include: Archives, Interviews and questionnaires. Results from these are collected into field notes as they are, and accurately summarized to form accessible computer databases. To add validity the resulting initial draft CVP, formed as a result of the analyses done in Section 4 and 5 is reviewed by case company department key informant.

The level of success achieved considering the validity of this Thesis will also affect its reliability. It is important to provide as accurate and correct data as possible to ensure its repeatability.

The way how reliability and validity in this Thesis were achieved will be evaluated in Section 6.3.

3 Best Practice for the Design of CVP

This section overviews the basic elements in the design of a customer value proposition. It addresses such questions as who a company should aim to gain more profitable sales, with what offer, and how to enable it.

This section is divided into five Sections: 3.1 Customer Value Proposition. 3.2 Business Dynamics in an Industry. 3.3 Focus Customer Group. 3.4 Customer Needs Analysis. The fifth and final Section 3.5 sums up the existing practices into a framework to design a customer value proposition.

3.1 Customer Value Proposition

Many scholars such as Kaplan et al. (2004) and Lanning et al. (1988) have studied the concept of customer value proposition and who it should be aimed at. In very simple term, value proposition means offering, and it consists of several elements, namely *customers, value* and *proposition*.

According to Brock Smith et al. (2007), the definition of *value* is not clear but can be generalized as either *benefits less sacrifices* or *benefits divided by sacrifices*. A supplier can focus its *value proposition*, for example, towards customers, employees, etc. This Thesis focuses on the *supplier-customer* perspective.

It is known that the supplier-customer type of customer value proposition itself can consist of tangible or intangible assets or a mix of these. Traditionally, customer value proposition has been considered to give the customers the so-called *value-in-exchange* (Grönroos 2008). However, Vargo et al. (2010) and Grönroos (2008) have implicated that customers actually create *value-in-use.* These two value assumptions form the basis for the so called Goods and Service Dominant Logic.

In *goods dominant logic* (GD logic), customer is thought to get *value-in-exchange*, which means that value for the customer is created only at the point when the *operand* tangible resources change hands. *Service dominant logic* (SD logic) introduces the idea of *value-in-use.* In this model, value-in-use for the goods or services comes from and is created by customer and customer only (Grönroos et al. 2011). According to Grönroos (2008) value-in-use is the value that the customer sees in a product or service to fit in its specific needs. When the customer is provided with the

necessary goods or services potential, the customer then adds and implements certain activities to transform the provided resources into real value.

According to Grönroos (2008), providers provide their customers with an *operant* resource and, in order for the customer to obtain value-in-use the customer should first become a value co-creator. In a value co-creation process, the provider offers assistance but customers produce value themselves. In order to understand this process, it can be divided in an open and closed part. In the open part, provider and customer are working hand-in-hand and trying to come up with a solution that would best fit both parties. When the open part is over, the closed part starts when it is up to the customer to create the value-in-use. (Grönroos 2008)

The difference in GD and SD logic is illustrated in Figure 3 below.

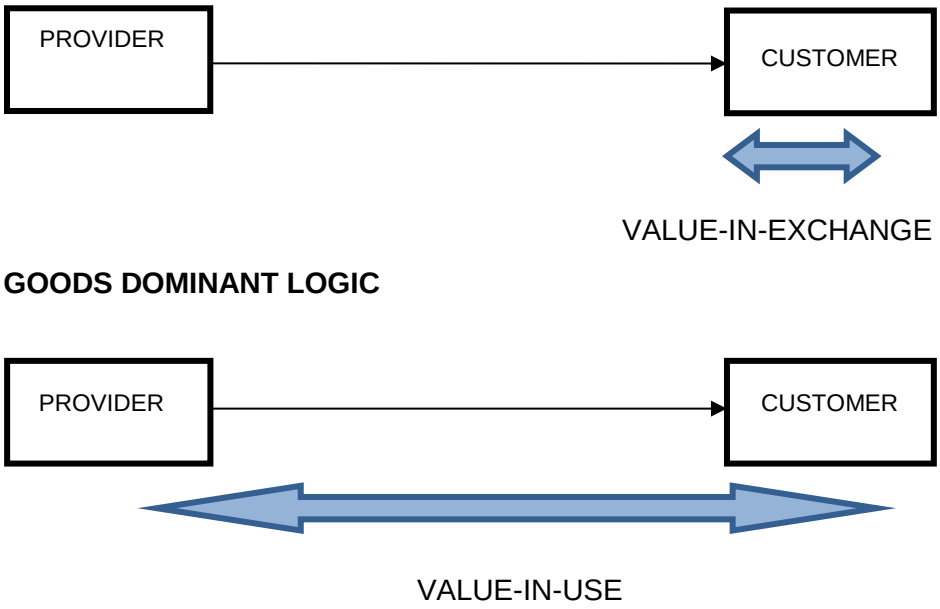

Figure 3. Perceived value difference between goods and service dominant logic. (based on Grönroos 2008).

As seen from Figure 3, there is a difference in the perceived value in GD and SD logic. In SD logic, even though provider is not taking an active part in customer value-in-use process, it can affect it by making *value propositions* that open a way for service value co-creation. Value co-creation is a process that should be considered both, from the provider

and customer points of view, and a service-based provider should try to understand the value-in-use processes of the customer. (Grönroos 2008)

According to Spohrer et al. (2007), service system engages in three main activities to co-create value: First, by *proposing* value to customer; second, by *accepting* this proposal, and third, by *realizing* this proposal. The idea of these activities, if put together with Grönroos`s idea of the provider and customer value co-creation, can be illustrated by Figure 4 below.

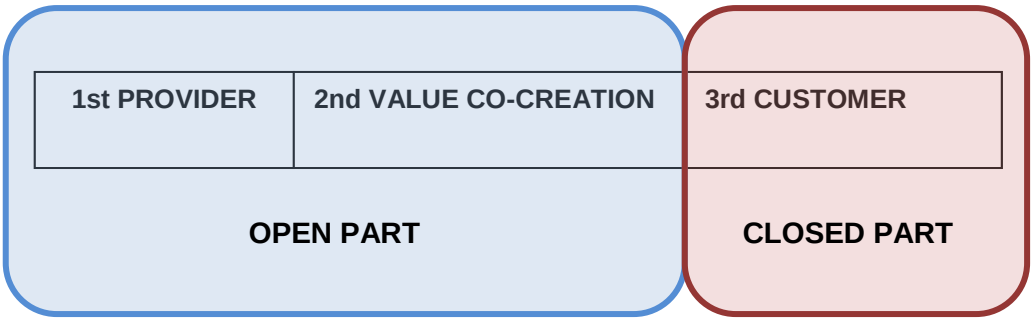

Figure 4. Provider and customer in value co-creation. (based on Grönroos 2008; Spohrer et al. 2007)

In Figure 4, provider and customer are shown to be engaged in the open and closed parts of the value creation process. When the process is thought of in such a way, it opens new ideas and possibilities for designing new types of customer value propositions.

According to Brocke et al. (2010) and Wyner (2000), to design a customer value proposition the company needs to identify its core competence, focus customer group(s), focus customer group needs, and find a way to express its offer. Brocke et al. (2010) also claims that customers and their needs have a direct effect on the company offer, thus also the amount of costs, capacity and resources needed to fulfill them. Another approach to designing a value proposition is presented by Frow et al. (2011). This design relies on a five step approach described in Table 3 below.

Table 3. Stakeholder value proposition planning framework. (based on Frow et al. 2011: 233)

(1) Identify stakeholders. (2) Determine core values. (3) Facilitate dialogue and knowledge sharing. (4) Identify value co-creation opportunities. (5) Co-create stakeholders VPs.

Differing from Brocke et al. (2010), this approach suggested by Frow et al. (2011) considers not only the need and value itself, but the value chain behind the need. Frow et al. (2011) claims that with an S-D logic based approach a company can increase its value better than by only focusing on profit maximization. According to Frow et al. (2011), this can be done by identifying the value within a network of stakeholders. Both Brocke et al. (2010) and Frow et al. (2011) suggest that value proposition should be built on collected data. The data gathered should be based on both qualitative and quantitative resources (Frow et al. 2011).

The approach which may be suggested for the case company department can utilize parts from both approaches. The first and second steps can be based on Brocke et al. (2010) research, first, to identify the case company core competence and then, second, to find out the focus customer group(s). The third step may follow a joint idea of identifying the core customer needs and the values, but can also consider the value co-creation possibilities within a network of stakeholders. The fourth step can be the creation of the customer value proposition based on the data and knowledge gathered from the previous steps. This four step approach will require performing a series of complex analyses, but can enable the case company department to create an effective customer value proposition.

3.2 Business Dynamics of Industry

The purpose of this Section is to explain the different aspects that shape an industry or a market and the ways how to evaluate them. According to Helms et al. (2010), to achieve this, researchers and business practitioners have used the so-called strengths-weaknesses-opportunities-threats analysis (SWOT). Other scholars such as Arulselvan et al. (2008) and Nair et al. (2002) suggest network and co-integration approaches that rely more on quantitative data. Another approach, by Michael Porter (1998), suggests a five forces model. When comparing the SWOT, network and co-integration approaches, the Five Forces Model offers a more systematic framework which can enable the researcher to gain more in-depth

understanding of an industry or market. However, if debated as a method within the scholar community (see, for example, Hax et al. 1999; Coyne et al. 1996), the five forces model approach is chosen for this Thesis for its clarity and thoroughness.

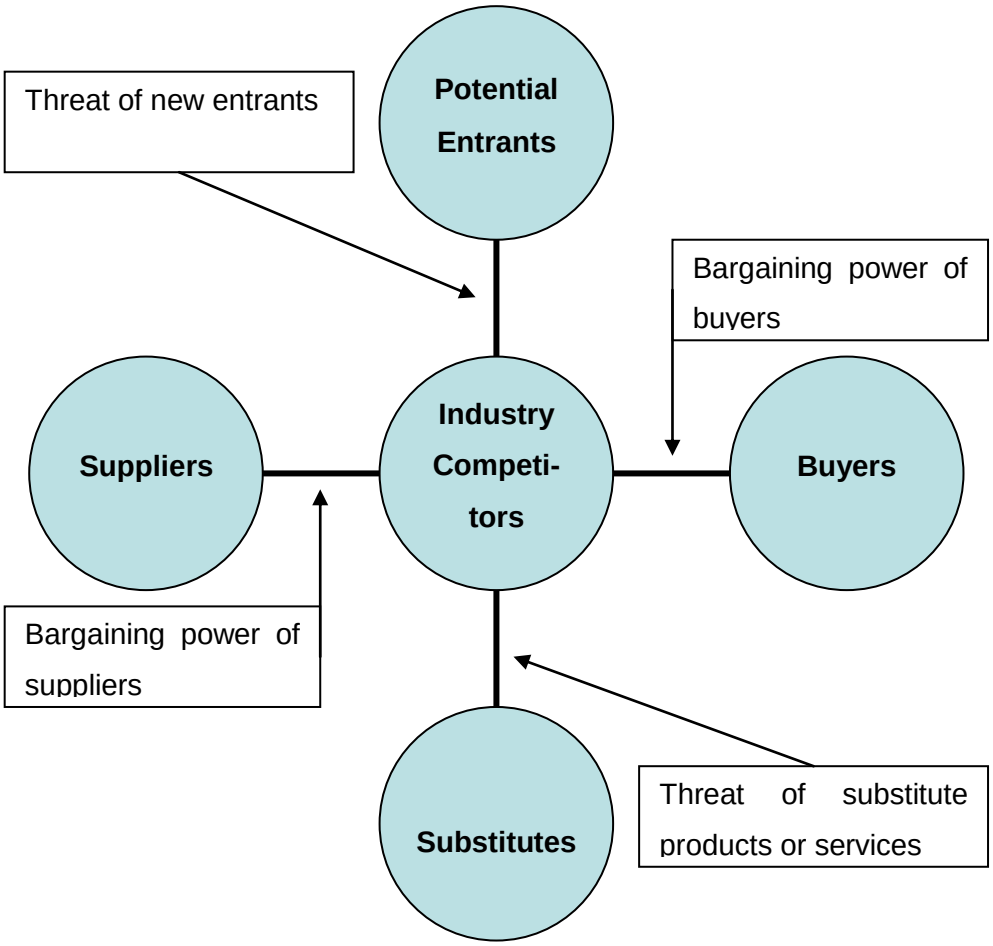

Figure 5. Michael Porter´s Five Forces Model. (based on Porter 1998: 4)

As seen from Figure 5, the Five Forces model comprises five main forces driving the industry: a) Suppliers, b) Buyers, c) Entrants, d) Substitutes and e) Industry competitors. In the five forces model, an industry is supposed to operate so that all these forces are dependable on characteristics that will either reinforce or diminish each force. For a company, the industry or industries that have the most potential as for revenue and life time, as well as those with the weakest forces that drive competition, should be the most preferred option. Due to the significance of each particular force, the subsections below discuss the five forces in detail; they will later be used for analysis in Section 4.3 as a tool for the evaluation of the most potential industry market for the case company.

3.2.1 Bargaining Powers of Buyer and Supplier, and Threat of Substitutes

According to Porter (1998), *bargaining power* of buyer and supplier are two counteracting forces. If one gets stronger, the other one weakens. The powers that have the most effect on an industry are listed in Table 4 below.

Table 4. Bargaining powers and their effect on buyer/supplier. (based on Porter 1998)

SUPPLIER POWER RISES ⇧	**BARGAINING POWER**	**BUYER POWER** ⇧ **RISES**
High price and high profit when low	Concentrated or large volume purchases	Low price and more profitable to buyer when high
Higher price and profit due to differentiation which also rises buyer switching costs	Standard or undifferentiated needs and switching costs	Lower price and more profitable for buyer when standard. Switching costs are also lower
Beneficial when need is low	Suppliers need for to contend with substitute products	Beneficial when need is high
Supplier benefits when risk for backward integration buyer is high	Supplier backward integration of buyer products or services	Buyer benefits when risk is lower
When quality need is high suppliers are more scarce and have more power to determine price and profit level	Quality need of buyer	When quality need is low buyer has more options from which to choose to achieve best price
When certain function is needed suppliers are more scarce which gives them more power to determine price and profit level	Function need of buyer	When function is not so relevant the buyer can choose the most beneficial solution for them

As seen from Table 4, for the buyer to concentrate on large volume purchases relative to supplier sales has a positive effect on their *bargaining power*. However, for the supplier the power is higher if the industry is dominated by few companies and is more concentrated than the industry the supplier sells to. Industries which are not seen important from the supplier perspective will increase the *bargaining power* of the supplier (Porter 1998). An industry which is, for instance, considered niche indus-

tries from supplier point of view will fall down to this category. This will even increase if the product or service is purchased from the industry which represents a significant fraction of the buyer´s purchases. In other words, *bargaining power* will be affected by the attractiveness of the potential sales, seen from either supplier or buyer point of view, together with their motivation to pursue better conditions. The attractiveness of sales and sensitivity to low prices aim to either lower or raise the cost of product or service, which is also related to profitability.

Standardized and undifferentiated buyer needs are typically the needs for quality and function. Buyer power increases if their need for product or service is standardized and low in terms of quality and function. With these needs, supplier *bargaining power* is relative to how it needs to contend with *substitute* products or services to hold or gain a particular market share. Possible *substitutes* that can perform the same function of a product or service limit the potential returns of an industry by placing a ceiling on the prices the company in this industry can profitably charge. *The more attractive the price performance alternative offered by substitutes, the firmer the lid on the industry profits.* (Porter 1998: 23). Additionally, standard products and services have typically lower switching costs compared to the tailor-made ones. Moreover, if a buyer can use standardized products or services, it is easier to switch to another supplier with relatively low switching costs.

Whether a company is operating or considering to operating on certain market the *bargaining powers*, threat of *substitutes* and their influence and interrelations should be considered as part of the CVP decision making process. For the case company, these forces and their effects will be researched in Section 4.3.

3.2.2 Threat of Entrants

Another force that affects the industry is threat of *entrant*. New *entrants* bring new capacity and desire to gain a market share as well as resources. New entrants can bid down the prices or the costs can be inflated as a result of their activities which lead to the reduced profitability. However, before an *entrant* can pursue its place in an industry it needs certain initial resources to overcome entry barriers and incumbents reactions. (Porter 1998; Karakaya et al. 2007) These can be divided into three categories which are: *Incumbents structural advantages, market strength*

and *needed financial investments*. These categories are shown in Table 5 below.

Table 5. Categorized entry barriers and reactions that affect the threat of entrant to an industry. (based on: Karakaya et al. 2007)

CATEGORY	INCUMBENTS STRUCTURAL ADVANTAGES	INCUMBENTS MARKET STRENGTH	INCUMBENTS NEEDED FINANCIAL INVESTMENTS
ENTRY BARRIER	Economies of scale	Government policies	Facilities
	Incumbents with proprietary technology	Magnitude of market shares held by incumbents	Marketing efforts
	Incumbents with absolute cost advantages	Number of incumbents on the industry	
	Incumbents with superior processes	Customer loyalty	
	Incumbents with cost advantages due to experience	Brand identification	
	Accessibility to distribution channels	High profit rates earned by incumbents	
	Trade secrets held by competitors		
	Incumbents possessing strategic raw materials		
	Incumbents access to raw materials		
	Customer switching costs		
	Incumbents with government subsidies		
REACTION	Expected post entry reaction of incumbents	Known history of retaliation	
		Attractivity of the market	

As seen from Table 5, the entry barriers and reactions behind the three categories shape up the composition of the competition. In practice the entry barriers and reactions shown in Table 5 are a mixture that is unique to any industry and its different markets, and they evolve with time.

3.2.3 Intensity of Rivalry among Existing Competition

Another force that affects the industry is rivalry. Rivalry is the behavior of an individual company towards other companies operating in its own industry and market. Rivalry occurs because companies feel the pressure or see the opportunity to improve their position. According to Porter (1998), the nature and shape of rivalry consist of actions and reactions result of twelve forms of competition. These forms are shown in Figure 6 below.

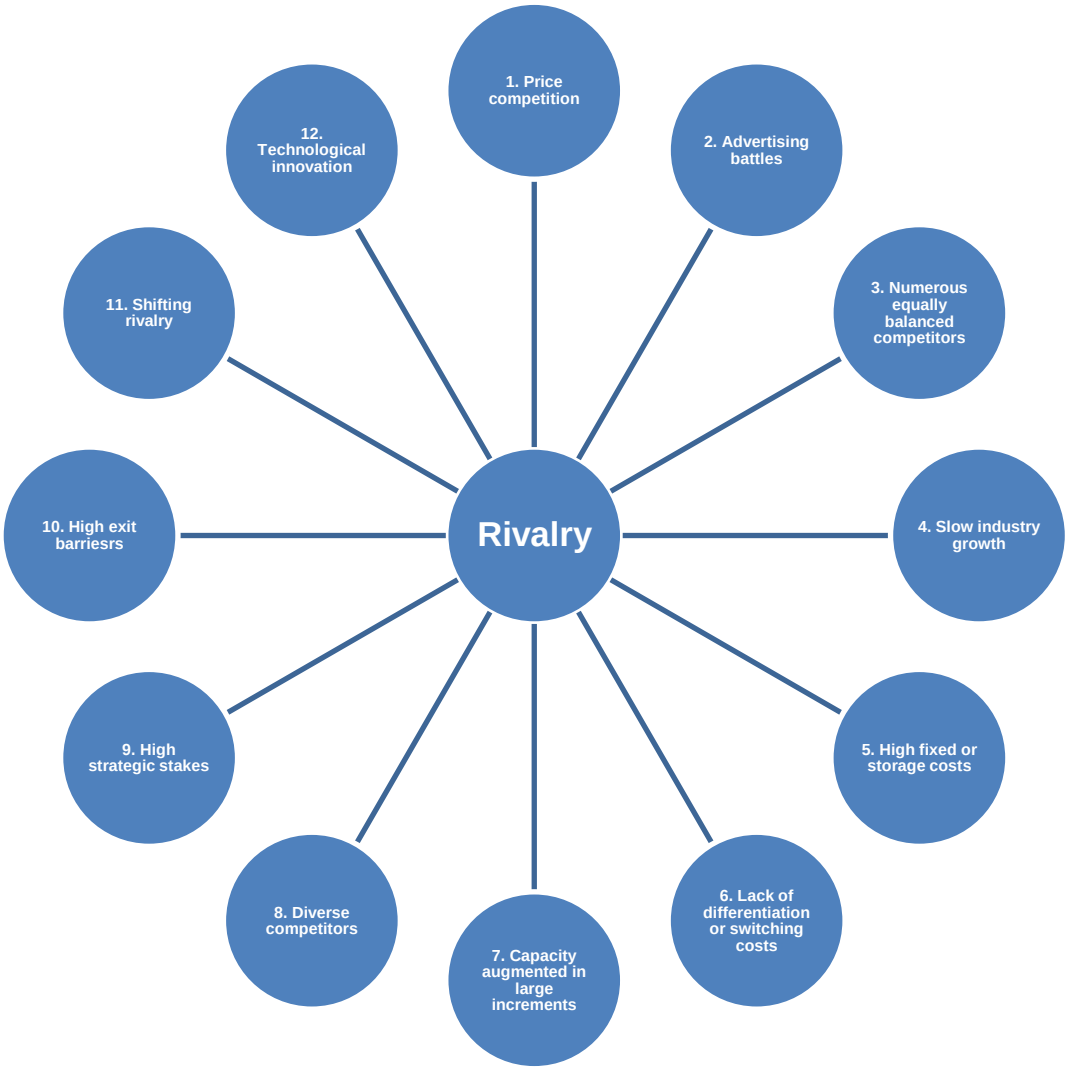

Figure 6. Twelve forms of competition that affect the shape and nature of rivalry. (based on Porter 1998)

Figure 6 shows the twelve forms of competition and this paragraph explains more about the ones that are considered the most dominant. Price competition is unstable and might leave the entire industry worse-off. Slow industry growth and equally balanced competitors may eventually need to resort to advertising battles (Porter 1998). Rivalry can also be influenced by high fixed or storage costs. Additionally, these subjective and objective barriers can be considered in such a way as to be able to differentiate from competition.

Summing up, to be able to differentiate from competition on an industry, it is important to know the forces that form its characteristics and its competitive landscape. These five forces*: the bargaining power of buyer and supplier, threat of substitutes, threat of entrant*s and *rivalry* are interlinked and changes in one affect also the others. As for the rivalry, Keil et al. (2011) refers to rivals that can deter focus from the company core industry and its focus customer groups, and thus distract the company. The focus customer groups, therefore, make another vital element in creating a market focus for the company.

3.3 Focus Customer Group

Dibb et al. (2000) suggests a divide between the customer bases into the so-called primary heterogeneous groups which consist of homogenous material. Storbacka et al. (1997) suggest a similar divide, but emphasizes the meaning of profitability. Storbacka et al. (1997) claim that "*the need for segmenting the customer base is a function of the differences between customers in terms of preferences, sales volume, transaction intensity, and customer profitability".* They argue that the key attribute to determine the need for segmenting the customer bases is the distribution of profitability within the customer base (Storbacka et al. 1997: 481). Both Storbacka et al. (1997) and Dibb et al. (2000) agree that to be able to use company resources most efficiently the needs of customers on different levels of profitability need to be identified. Both also prefer the retrospective type of analysis which is based on historical data. Following this recommendation, this type of analysis will be applied to determine the case company departments focus customer group analysis in the subsequent sections.

Raaij (2005) claims that profitability of a customer or a group of customers is not only based on sales volume and its profitability, but on the total profitability which takes in account also the supportive sales and marketing functions. Zeithamel (2001) also suggests loyalty as one of the key elements to be considered. Finally, Dibb et al. (2000), Storbacka at al. (1997), Raaij (2005) and Zeithamel (2001) emphasize considering the reasons that effect the segment size and segment growth, its competitive intensity, and fit with company objectives and capabilities.

Figure 7 below shows the three main aspects of sales potential, profitability and loyalty in relation to each other.

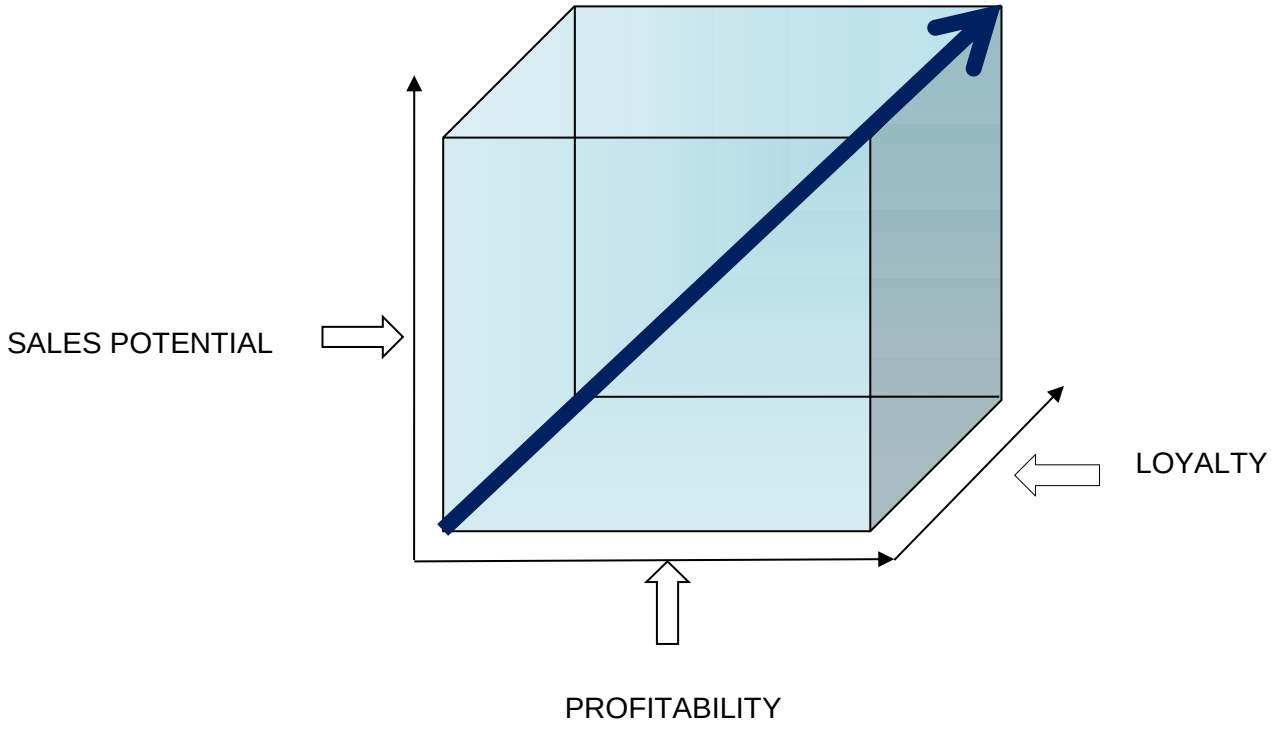

Figure 7. Sales potential, profitability and loyalty. (created based on Dibb et al. 2000; Storbacka 1997; Zeithamel 2001; Raaij 2005)

In Figure 7, each of the axes represents a different aspect of business. The x-axis represents *profitability,* z-axis *sales potential* and y-axis *loyalty.* Taken together, they create a picture of certain overall profitability. As sales potential, profitability and loyalty strengthen, the more profitable the customer group becomes. This resulting trend is portrayed by the arrow in the middle.

According to above findings, a company should focus its intentions, based on a certain group of customers that enable it to use its resources

effectively. One way to achieve this is to consider the three aspects, *the sales potential, profitability in total* and *loyalty* that are present in a company´s customer base. (Dibb et al. 2000, Storbacka 1997, Zeithamel 2001, Raaij 2005). This effectiveness should form the base for a company´s CVP, because the way how the CVP is focused can also be expected to affect sales results. Based on this notion, this approach will also be chosen for the case company and its CVP creation process.

3.4 Customer Needs Analysis

Based on literature overview, there is plenty of material regarding to how to identify the requirements behind a need, but the sources are more limited on discussing how to identify the initial needs themselves. The approach to reveal the actual needs can be, first, to identify the initial levels of needs between stakeholder groups (Huhta et al. 2013) and then to investigate the characteristics and necessity of a need (Kano et al. 1984) for the joint stakeholder group.

Huhta et al. (2013) suggests that needs differ depending on particular characteristics of the stakeholder group (for example, demographics). The needs themselves can be either objective or subjective and because they are based on different stakeholder perspectives they can be contradictory. To identify these needs Huhta et al. (2013) suggest a thorough analysis framework which is based on, first, profiling the stakeholder group and, second, on finding out and analyzing their needs based on the triangulation technique that utilizes a combination of qualitative and quantitative data collection methods.

Compared to Huhta et al. (2013) method, Kano et al. (1984) suggest a model that divides the needs into groups based on their so-called quality attributes. Both Huhta et al. (2013) and Kano et al. (1984) agree that needs originate from different sources, but Kano et al. (1984) suggests that these origins come from either the market or from the customer itself. According to Kano et al. (1984), the quality attributes can be divided into five categories: *attractive, one-dimensional, must-have, indifferent* and *reverse* quality attributes, and the way how stakeholders perceive them is directly linked to stakeholder satisfaction. These attitudes described by Kano et al. (1984) have later been put to test and accepted by many, for example, Högström et al. (2009), Löfgren et al. (2008), Tontini (2000) and

others. Tontini also suggested modifications to these original characteristics. Based on the classification by Kano et al. (1984), Löfgren et al. (2008) summarize the five quality attributes as follows.

Attractive quality attributes provide satisfaction when fully achieved but do not cause dissatisfaction when not fulfilled (Kano et al. 1984) These quality attributes are not normally expected and are often left unspoken by customers. They are sometimes referred to as surprise or delight attributes.

One-dimensional quality attributes result in satisfaction when fulfilled and result in dissatisfaction when not fulfilled (Kano et al. 1984). Lee and Newcomb (1997) referred to these quality attributes as “the-more-the-better” attributes – that is, the more there is, the better the customer likes the product.

Must-be quality attributes are taken for granted when fulfilled but result in dissatisfaction when not fulfilled (Kano et al. 1984). The customer expects these attributes, and thus views them as basics. Customers are unlikely to tell the company about them when asked about quality attributes; rather, they assume that companies understand these fundamentals of product design (Watson 2003).

Indifferent quality attributes are aspects of a product that are neither good nor bad; consequently, they do not result in customer satisfaction or customer dissatisfaction.

Finally, the term reverse quality attributes refers to attributes in which a high degree of achievement results in dissatisfaction (and, conversely, a low degree of achievement results in satisfaction). For example, some customers prefer the basic model of a product rather than more elaborate version (Gustafsson 1998).

These quality attributes and their effect on customer satisfaction are shown in Figure 8.

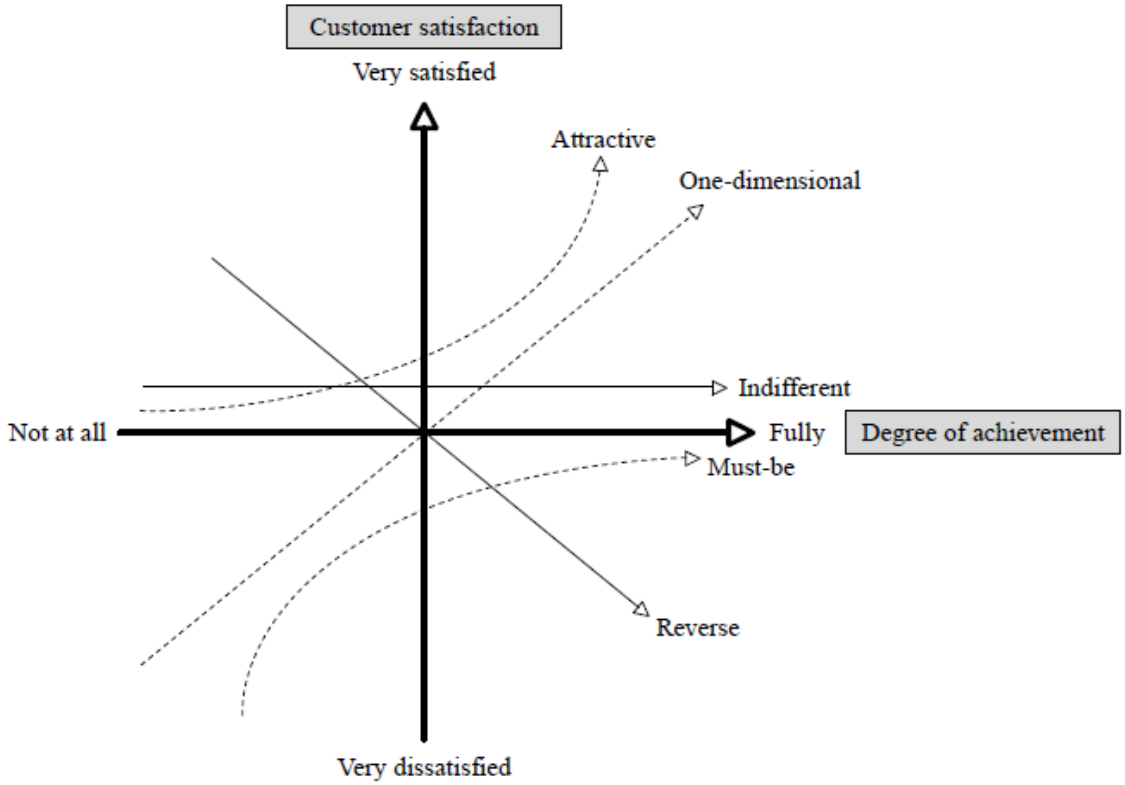

Figure 8. Kano model attributes and effect on customer satisfaction. (adopted by Hogström et al. 2009)

To identify the attributes Metzler et al. (1996) suggest a four question approach presented in Table 6 below.

Table 6. Four question approach to finding quality attributes of a need. (based on Metzler et al. 1996)

- (1) Which associations does the customer make when using product x?
- (2) Which problems/defects/complaints does the customer associate with the use of product x?
- (3) Which criteria does the customer take into consideration when buying product x?
- (4) Which new features or services would better meet the expectations of the customer? What would the customer change in product x?

To apply the ideas presented in the above approaches to the CVP creation, this process will need certain customization. Based on the assumption that the intended focus customer group may have defined the need for CVP already, a full stakeholder profiling may not be needed. However,

to develop an effective CVP, it is important to look into the needs and their quality attributes from different stakeholder perspectives. To implement this approach, it will require triangulation of qualitative and quantitative data collection and analysis. (Huhta et al. 2013). The chosen data collection methods, as well as the case company stakeholder needs analysis itself, are based on this approach and presented later in Section 4.5.

3.5 Framework for the Design of Customer Value Proposition in This Thesis

Based on the opinions gathered from the literature overview and presented in previous Sections 3.1, 3.2, 3.3 and 3.4, a variety of variables need to be addressed to create a CVP for a company. When put together, these variables form a complex framework affecting the CVP. To structure this complex approach, the framework can be divided into four main steps of analysis which are equally important and necessary for the CVP creation process. These four steps are depicted in Figure 9 below.

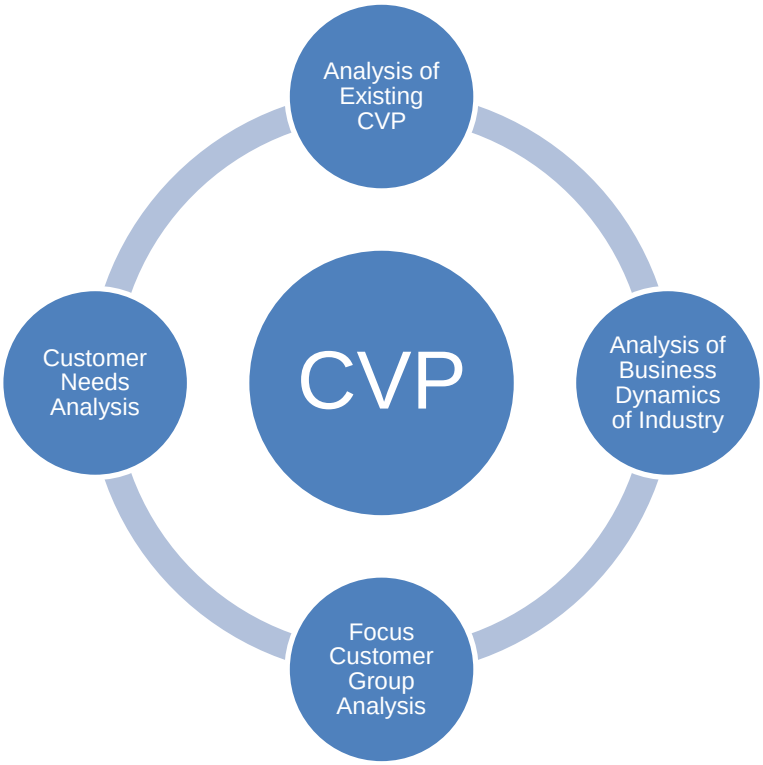

Figure 9. Customer Value Proposition CVP creation Framework.

The meaning of each step illustrated in Figure 9 can be described as follows. First, *Analysis of Existing CVP* helps to understand the existing CVP and its effects on the company and its customers. Second, *Analysis*

of Business Dynamics of Industry aims to give comparative results which industry or markets the company should operate on. Industry or markets are chosen based on the company core competences identified in the first step. Third, *Focus Customer Group Analysis* is based on the results obtained from the first and second steps. This step tells the company which customer group it should focus on. The group is formed by evaluating historical data and dividing customers into groups based on their potential and profitability. Fourth, *Customer Needs Analysis* evaluates the needs of a certain focus customer group based on the results of the first, second and third steps. After that, the needs are identified and arranged in order of priority based on their importance to the focus customer group.

This thesis tries the above described approach for the development of the CVP proposal for the case company. To succeed in the CVP creation process, the steps will be implemented in the given order. Based on this analysis, an initial CVP proposal will be formulated for the case company which will define: *Where* it should operate, *who* it should serve and *what* it should offer. To validate the quality of this initial proposal, this Thesis will present and discuss the CVP proposal with the stakeholders in the focus customer group. After the validation, the final proposal will be created. This approach is applied and the results are presented in Section 4. The CVP proposal and its validation are formulated in Section 5.

4 Analyses and Results for the Design of CVP

This section applies the analytical tools suggested in Section 3 for the development of a CVP for the case company department. This section presents the results of the analysis starting from the analyses of the case company departments current CVP, the analysis of the intended industry, the focus customer group and their needs.

4.1 Background: Case Company and Department Description

The case company of this study was established in 1958 to meet the customer demand on the Finnish power transmission market. The case company started with importing small gasoline combustion engines and automatic transmissions. In 1962, a German heavy industrial power transmission company, acquired licenses for the automatic transmission and changed brand. This acquisition provided the case company with the opportunity to represent and import also the German company´s products on the Finnish market, and sales revenues from 1962 to the early 1980-s mostly relied on this company´s offering. At the same time, the case company made attempts to launch its own products such as power units, snowmobiles, snow throwers and hydro copters. At that time, power units were the most successful out of this range, and they were produced until the early 1990-s.

In 1988, the founder of the case company decided to step down as the acting Chief Executive Officer (CEO) and join the board as its chairman. This gave way for his son to continue as the successor. Compared to the pioneer strategy of the first CEO, the new CEO´s strategy for growth was to develop and streamline operations that would give more fertile ground for organic growth. Over time, the strategy evolved and led the case company to seek expansion over the borders of power transmission industry through acquisitions.

Currently, the case company consists of a group of seven different individual companies which employ roughly 120 people in three locations with a combined turnover of EUR 40 million. However, to keep things in control these companies operate under Company 1 supervised by the CEO. All the companies, except for the case company, consist of one to three departments that focus on a certain industry or market.

Figure 10 illustrates the current case company structure and the departments behind each company.

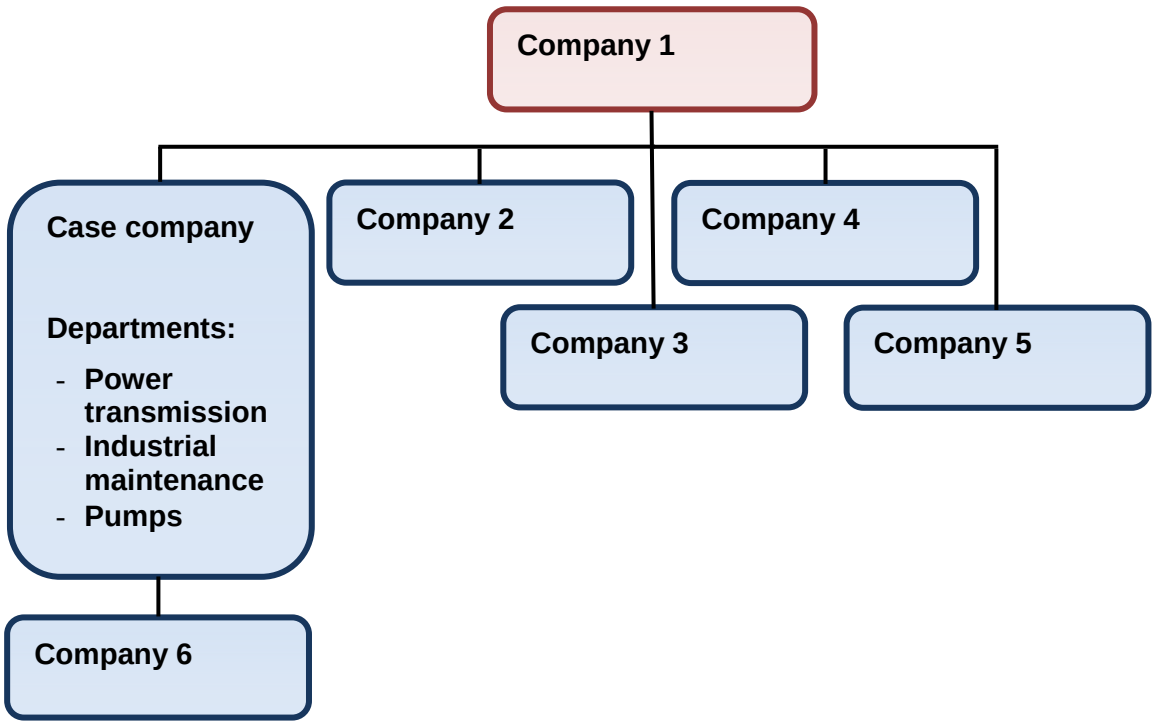

Figure 10. Case company group structure.

As seen from Figure 10, the seven companies under Company 1 are separated and have their own independent management and responsible for assigned internal operations. All seven companies as well as their departments share supportive processes provided by Company 1. The supportive processes are: Procurement, Logistics, Marketing and Information Technology. Besides the processes, Company 1 provides also tangible assets such as main office building space, lease cars and equipment. All of the companies, except for Company 1 itself, outsource the supportive processes and tangible assets from Company 1.

A brief way to present the case company Department is to summarize its strengths, weaknesses, opportunities and threats (reported in Appendix 1) in a diagram, as illustrated in Table 7.

Table 7. The case company department SWOT. (based on Appendix 1)

THE CASE COMPANY POWER TRANSMISSION DEPARTMENT	
STRENGTHS *Extensive knowledge and experience* from Finnish power transmission industry *Motivated team* that is willing to make changes to improve departments performance *Shared functions* enabled by case company group structure *Full authorization* from current CEO to make necessary changes	**WEAKNESSES** *Shared functions* enabled by concern structure enabled by Company 1 No *defined CVP* for specific market Business is *dependent on co-operation with outside representatives*
OPPORTUNITIES To *differentiate from competition with a CVP that is based on S-D logic* mindset *Acquire companies or new representatives* from the power transmission industry	**THREATS** *Confusing CVP can deter customers* to competitors *Current representatives may want to end co-operation* if results are sales objectives are not met

The first definite strength of the case company department is its *extensive expertise and knowledge* in its specific Industry. The second strength, confirmed by the recently conducted employee satisfaction survey, shows that departments *staff is currently more motivated* as it has been ever in the past. The survey results also show that the team members have a will to accept change and innovate, if it helps to yield in better results. The third strength, the overall company group structure provided by Company 1, enables the case company unit to benefit from *shared functions*. Finally, the fourth strength is the *authorization from the CEO* which allows the case company unit management to do and act as it sees necessary to reach its sales objectives.

As for the current weaknesses, the first controversially is a strength that can also be considered a weakness, *shared functions*. By using shared functions, the case company department can probably benefit from better contract terms compared to making individual decisions. However, with more independence it would have more options to choose from, and decide and tailor its business concept to fulfill its sales objective. The second weakness is *undefined CVP*. Originally in the 1950s, the focus market was the customers that had a need for small gasoline engines. Nowadays, the case company department serves the power transmission industry, but with no clear focus customer group. The third weakness, *Business is dependent on co-operation with outside representatives*, is evident as the case company business model is to be a distributor of goods.

Case company department has also some opportunities that could lead it to better sales results. First, it can to *differentiate from competition with a CVP that is based on S-D logic*. The competition in the power transmission industry is relatively mature and based on G-D logic (Appendix 1). Therefore, a different mindset would most probably help the department to differentiate. The second opportunity would be to *Acquire companies or to introduce new representatives* from the power transmission industry. For the success of this action, the case company would require the knowledge which market and customer group needs it should focus on, is it becomes part of its CVP.

The current and future threats that affect the case company department are the following: first, *Confusing CVP can deter customers* to competitors. The second threat is *Current representatives may want to end co-operation* if the sales objectives are not met. Both of these threats are present for the moment, but not immediate.

Taken together and based on the former and current sales results, the current department strengths have not been enough for it to reach its set sales objective. With the current sales level and cost structure, the case company department struggles to make profit. Cutting costs could bring some improvement, but this path would not help to generate new sales. Based on the SWOT analysis, it would be fair to suppose that the *weaknesses* and *threats* the unit is experiencing presently are related to its CVP. It also seems justified to suggest that they could be improved by

addressing the unit's *strengths* and *opportunities*. To enable growth in sales though better profitability and competitor differentiation, it seems that the company should focus its efforts on creating a new CVP that is based on S-D logic and which would focus on a certain group of customers in a certain market. Such a CVP proposal will be presented in Section 5.

4.2 Case Company Department Current Value Proposition

Currently, the department CVP is a mix of products and services that aim to serve the need of Finnish power transmission industry. However, in practice to serve the industry as a whole the case company would need an extensive *something-for-all* type of CVP offering. Considering the task, any company would struggle to achieve such CVP, and for the department to succeed it seems all but improbable.

The power transmission industry is divided into three main markets that are known to have different needs. The nature of these markets is analyzed more closely in Section 4.3. The needs for particular products or services can, if not studied, manifest themselves similar in appearance or in context in all these markets. However, when the needs are taken into closer inspection, their physical features and also perceived qualities probably end up being different. For the case company department, the lack of extensive CVP, together with these differences of needs between markets, confront it with more obstacles. To begin the analysis conducted in this Study it is, first of all, important to start to investigate the current CVP. The CVP is currently based on the following products and services which are listed in Table 8 below.

Table 8. Current CVP offering of products and services by case company department.

CURRENT CVP OFFERING BY CASE COMPANY DEPARTMENT	
PRODUCT	SERVICE
Power production - Diesel engines - Petrol engines - Air motors	Engine assembling Air motor service Warehousing
Transmissions and Retarders - Manual - Automatic - Hydrodynamic - Planetary transmissions - Retarders	Bus transmission service Bus transmission warehousing
Cardan shafts - Cardan shafts - Cross-units	
Slewing rings	
Industrial shock Absorbers	
Couplings - Tooth couplings - Decoupling clutches - Torque limiters - Pump adapters - Fluid couplings	
Gears - Spur gears - Planetary gears	
Axles	
Winches	

As seen from Table 8, at the moment, the department CVP consists of various products and related services. The needs of the three markets

are intertwined, so that it is difficult to separate them. Table 9 below lists the current CVP Strengths, Weaknesses, Opportunities and Threats.

Table 9. Case company department current CVP SWOT (based on Appendix 2).

CASE COMPANY DEPARTMENT CURRENT CVP	
STRENGTHS *Wide CVP portfolio* covers power transmission from power generation to its transfer. *The CVP is versatile* and has something-for-all in the power transmission industry High or medium *quality known Western brands*	**WEAKNESSES** CVP is too wide for the current organization Some representatives are dissatisfied to poor sales results Some products and their services are at mature stage or/and competition is intense CVP is not differentiated from competition
Opportunities Differentiate from competition with better service considering S-D logic To focus on certain market on the Finnish power transmission industry and these customer needs	**Threats** Globalization lowers barrier for customers to seek and use foreign competitors G-D logic driven competition will lower profitability Dissatisfied representatives will seek for new distribution channels

Based on Table 9, the current CVP can be described as seemingly focused on the power transmission industry; but the sales potential and profitability is limited by outside representatives and low differentiation from competition.

The current CVP's strengths are: first and second, Wide *CVP portfolio*, *Versatility* and *Known quality brands*. The *wide and versatile CVP portfolio* has abled the case company department to focus on majority of the customers operating on the Finnish power transmission industry. Third, the *known western quality brands* have helped the offering to stand out from low cost competition.

The weaknesses of this CVP has been, first, that the wide CVP portfolio limits the depth of product and application-related knowledge as well as might be confusing for the customer to comprehend. Second, poor sales results have left some representatives dissatisfied. This has led to some of them either terminating any co-operation with the department or seeking some additional distribution channels. Third, parts of the CVP offering are based on mature highly competitive products and their servicing. The potential and lifetime of these types of products and services has been gradually diminishing and cannot be relied on much longer. Fourth, CVP is not differentiated from competition and, as a result, the only way to compete in the mature market is by price.

The opportunities to improve the CVP are, first, to seek for other types of *differentiation, based not on G-D logic but on S-D logic*. This way the case company would be able to add value and differentiate to achieve better profitability. Second, considering the size of the organization, the case company should *focus only on serving a certain market in the Finnish power transmission industry*. This approach would help the case company department to focus its efforts and specialize on the actual customer needs, currently evident in the market, which should lead to better satisfaction of both the customers and the representatives.

The threats the department is facing are mostly three. First, *Globalization lowers barrier for customers to seek and use foreign competitors*. Second, *G-D logic driven competition will lower profitability*. This is the threat that is already present and will also affect other competitors. Finally, *Dissatisfied representatives will seek for new distribution channels*. This threat is linked to the previously mentioned considerations, one of the reasons being that web-based sales channels are opened and accessible to anyone. However, some representatives still need local presence and in these cases distribution is either passed on to other local competitors or companies can establish their own sales offices.

Summing up, based on the SWOT analysis the problems the CVP faces point to a common challenge. The CVP can be considered to work for now, but as competition intensifies the use of this CVP will lead to lower profitability and also fewer sales. As the case company department aims to increase its profitability and sales, a better approach would be to focus only on a certain market and its actual customer needs. This way the

case company would be able to differentiate from competitors by offering better value to its customers. This would lead to an increase in profitability and sales and be equally beneficial for the customers.

4.3 Business Dynamics of Industry

The analysis of business dynamics of the industry is conducted following the Porter (1996) approach to industry analysis. To conduct this analysis, five forces that drive industry dynamics and competition are scrutinized. These forces are: a, b) Bargaining power of buyer and supplier, c) Threat of substitutes, d) Threat of entrant, e) Rivalry.

Porter´s five forces model is typically used to conduct an extensive industry analysis for the company to build its strategy on. In this Thesis, the model is applied for the analysis in a pragmatic way that does not aim to explain a state of the industry, but evaluates how these forces affect each of the three markets of the department. Based on this evaluation, the market that is considered most promising to enter is chosen for further analysis (in subsequent Sections 4.4 and 4.5). The analysis is based on the gathered data, with the results summarized in Appendix 3.

4.3.1 Business Dynamics on Stationary Power Transmission Market

The stationary power transmission market can be characterized by a number of specific features. These are, first of all, the size of companies, low or mid volume production, conservative company culture and mature highly competitive market.

The stationary power transmission market represents the biggest market of the case company department. According to Tilastokeskus (2012), the annual size of Finnish metal and machine industry is estimated to be about EUR 26 billion. Over half of it accounts for the stationary industry which makes it the largest of the three case company markets when compared by potential sales volume. This makes it also the market that, on average, accommodates the biggest companies by means of annual turnover. The fact how the balance of *bargaining power of buyer and supplier* have effect on a market is related to its size, but how it is balanced depends on the following characteristics. Typically, the companies base roughly 80-90 percent of their sales on export, and they possess the capabilities to outsource their production and procurement to save on operative costs. These companies tend to keep their core competence such

as research and development in Finland, but products and services are often sourced through local channels situated near to their production locations. These companies also possess the possibility to migrate to the growing and emerging markets such as China and South America to achieve better sales and profit, and usually consider Finnish market less important or desirable. in Finland, like in other places in Europe, the stationary market grew rapidly after World War II, but slowed down as the market saturated. As the local needs matured, the pressure to build new factories and plants shifted elsewhere, and currently the market is mostly based on aftersales.

Overall, the market need for products or services in the stationary market is currently rather moderate or low in terms of its volume. The end products or services are often tailored to a specific customer need which results in high differentiation as for the needed supplier products or services. This differentiation leads to higher switching costs. Therefore, this market is focused on building special solutions that often require more quality from the product or service they utilize. However, in many cases the intensifying need to improve company profitability on a competitive market together with fast paced company quarter mindset has led many companies to look for options and to trying substitute products or services. This real *threat of substitutes* can be seen as the need to compete against low cost, basic quality, basic function products and services that still perform the necessary tasks requested by the customer.

Financial data shown in Figure 11 below demonstrate the stationary power transmission market average profit and turnover level in Finland.

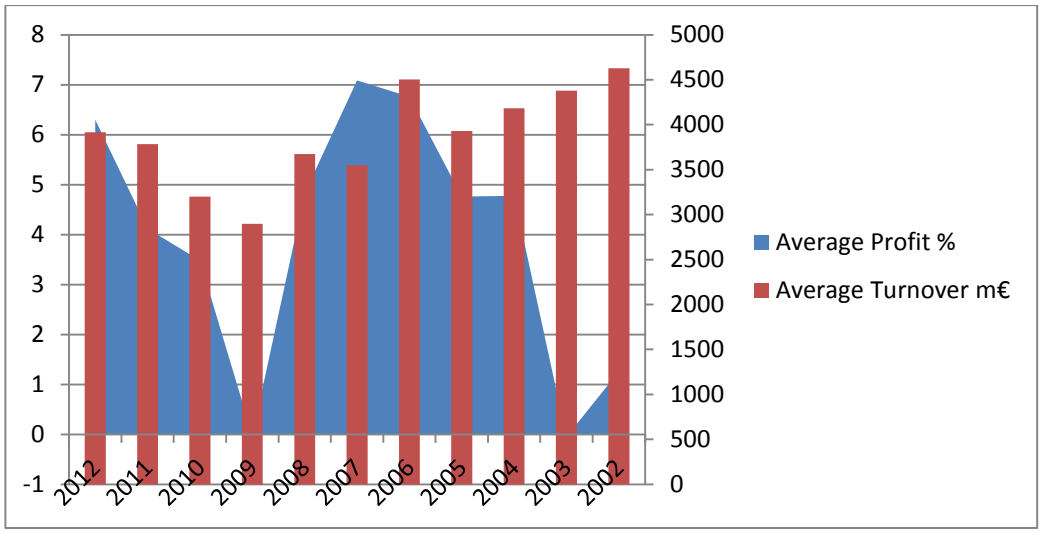

Figure 11. Turnover and profit of leading Finnish stationary power transmission companies from 2002 to 2012. (based on: Annual reports; Fonecta B2B)

Figure 11 is a compilation of average profit and turnover of list of 25 leading stationary power transmission companies based on their listings in public sources, as well as the results of interviews (described in Appendix 3). The financial data is based on historical sales data from two sources, the company annual reports and Fonecta B2B web service. In the Figure 11 itself the blue area demonstrates the average profitability percentage of these companies and the red bars represent their average turnover. Overall both the average profitability and turnover data shown in Figure 11 demonstrate that the stationary power transmission market has grown steadily over the decade. The market declined during the recession in 2009, but recovered rapidly. The current macroeconomic status signals from growing and emerging markets seem positive for 2013 and beyond. However, in the growing and emerging markets the government and financial sector have started to tighten rules on loans, and the strength of Euro versus Dollar versus Yuan currency rates used in these markets will play a key role in the near future.

New entrants on the stationary power transmission industry are not common. Incumbents that already operate on the market possess the experience and proprietary technology that give them certain cost advantages. The distribution of products and services is based on old relationships together with potential high switching costs work effectively as a barrier to entry. The attractiveness of the market to an outsider can be considered high if they look at profitability, but not if considering the overall mature trend. To suit the initial need of the market, an entrant would need to

make investments to facilities and equipment that most incumbents have already done during the growth years. Incumbents do not seem to be actively seeking new substitutes and to be able to serve the market need an entrant would probably need to be represented locally.

Competition in the market can be described to be mature and stable as and many competitors seem to be satisfied where they are and are trenched into position. Competitors are numerous but equally balanced, and they tend to operate on a dealer basis for foreign products or services for the stationary as well as the mobile market. Some have seen the opportunity to specialize for the needs of a narrow segment, but most rely on a wider offering. Many competitors use product oriented approach, and services are only offered as supportive functions such as warehousing and maintenance. During the years, slow local market growth together with price competition has eaten profitability from the standardized products. Many competitors import simple low cost products in large volumes from low cost countries as China or India. Exit barriers for these competitors are set high, especially for those that have specialized only in power transmission. Barriers to exit can for some be also emotional, especially for those who have operated for a long time, such as the case company.

Figure 12 below shows the average profitability and turnover of an assortment of Finnish stationary power transmission market competitors from 2008 to 2012.

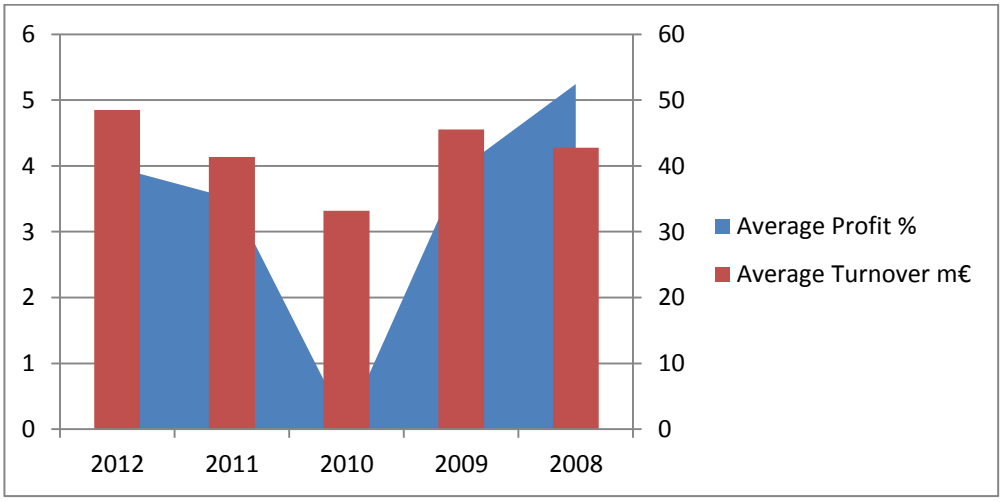

Figure 12. Average profit and turnover of competitors in the stationary power transmission market from 2008 to 2012. (based on Fonecta B2B)

The competitors whose average profit and turnover are shown in Figure 12 have been chosen based on the results of interviews (described in Appendix 3). Financial data is based on historical sales data from two sources, company annual reports and Fonecta B2B web service. Based on these data, the average profitability and turnover are positive and growing. Compared to the companies represented in Figure 11, the competitors did not suffer from the effects of the 2009 recession in 2009, but a year later. This was caused by the sudden drop of high customer demand which resulted in excess of stock for many companies and lower need for replenishment orders.

Based on the findings, the business dynamics on the stationary power transmission market can be summarized as follows. The buyer *bargaining power* is higher, compared to the provider, because of the shifting production and low cost *substitutes* imported by competition. *Competition* itself can be expected to intensify if the market needs weaken. The threat of new *entrants* will probably stay low if the current market trend continues. However, companies should stay on alert for new innovations or disruptions in the macro-economy that might shift the balance of the overall business dynamics.

4.3.2 Business Dynamics on Mobile Power Transmission Market

The mobile power transmission market can be characterized by a number of specific features. These are, first of all, mid- or large volume production, diverse low cost and function needs, as well as faster paced decision making as compared to the stationary market.

Based on data gathered from Tilastokeskus (2012) and reflected in historical financial results of the companies that operate on the Finnish mobile power transmission market, the annual market size is estimated to be around EUR 10-13 billion. This makes this market the second largest in terms of its overall volume. And as in the stationary market, the *bargaining power* of buyer and provider rely on the business dynamics between these two, which results from the market forces described in the text below. The companies that operate on this market rely in 70-90% of their sales on export, and compared to the stationary market, they are typically middle or small-sized companies. The smaller size prevents these companies to benefit from the economies of scale that typically allow larger companies to establish locations on the new growing or emerging mar-

kets. Currently, these companies tend to locate their key operations in Finland and handle their domestic and foreign sales through either own sales office or a dealer. This approach makes the market vulnerable to outside threats, but for the case company, the local presence in decision making and production is a benefit. Compared to the stationary market where large players are relocating production elsewhere and the domestic market is either stable or in decline, this market is definitely growing.

Overall, operators in this market tend to base their strategy and sales on moderate or high volumes. Similar to the stationary market, the end products and services are often differentiated from the more mass produced standard items, but instead of one-offs, they are typically based on platform thinking. These platforms allow companies to offer their end-customers a service to tailor the end products to better suit their needs. The purpose for the platform approach is to keep switching costs low. As the companies target medium or high volume production rates, the need for quality and function can also be considered medium or low. In some cases, legislation and the environment where the end products operate set special requirements for higher quality or function. This is the case, for example, in the mining and forestry sectors.

Financial data in Figure 13 below demonstrate the average profit and turnover in the Finnish mobile power transmission market from 2002 to 2012.

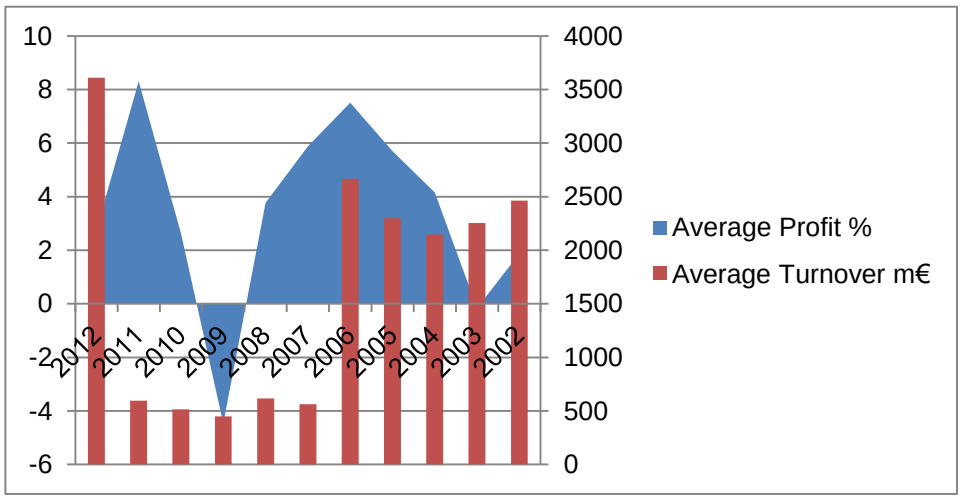

Figure 13. Turnover and profit in mobile power transmission, from 2002 to 2012. (based on Annual reports; Fonecta B2B)

The graphs presented in Figure 13 are based on historical financial data of a selection of the leading companies operating in the market. Data for the graphs is gathered from public sources and enriched based on the results of interviews (summarized in Appendix 3). Graphs show that mobile power transmission market has grew rapidly in the beginning, until the market declined during the recession in 2009. The current macroeconomic status signals from growing and emerging markets seem to be rather positive for 2013 and beyond. However, as in the stationary industry, in both of these markets the tightened rules on loans and the strengthening currencies used in and between these markets will play a key role in the future development.

Similarly to the stationary market, *new entrants* on are not common in the mobile market. However, if compared to the stationary market, on a general level, the size of investment for a start-up incumbent willing to operate on this market can be considered somewhat lower. Despite this fact, incumbents that already operate on the market possess the experience and proprietary technology that give them certain cost advantages. As in the stationary market, the distribution of products and services is based on old networks and relationships. However, compared to the stationary market, switching costs due to difference of the volume of purchases and less differentiated products or services can also be considered lower. The attractiveness of market to an outsider can be considered high if they look at profitability only. But to suit the needs of the market, a new entrant would need to make vast investments to facilities and equipment that most incumbents already have.

Competition in the mobile market is rather mature and stable, as in the stationary market. Because of shared similarities between the market needs of both stationary and mobile industries, majority of the competition is in the hands of the same companies. Services such as warehousing, sub-assembling and maintenance are often part of value proposition of these major players, which is somewhat similar to the needs in the stationary market. However, due to the volume and pace of the mobile market, the frequency of use of these services can be considered rather higher. The volume-based need for low costs and specific functions of products and services is very characteristic of the mobile market. To enhance profitability and either rise or lower switching costs, both the competition as well as their customer companies are actively looking for *sub-*

stitute products. The same competitor base on both the mobile and stationary markets also results in similar exit barriers which are specialization in power transmission or emotional attachments. However, in both the stationary market on mobile market, some competitors have made investments to represent a certain brand.

Because of the shared competition between the stationary and mobile markets, the average sales and profitability amongst the competitors is the same as described in Section 4.3.1. For this reason, the analysis will not go further into it.

Based on the analysis, the business dynamics on the mobile power transmission market can be summarized as follows. *Bargaining powers* of buyer and provider can be described to be in balance and equal in amount. Compared to the stationary market and due to smaller company sizes, buyers are not able to invest and shift production abroad, but as a counterweight to this, they are able to benefit from volume purchases. *Competition* itself can be expected to keep stable if the market need keeps follows the organic growth provided by macroeconomic trends. In case the overall number of customers rise or new innovations appear, the threat of new *entrants* or *substitutes* may materialize. Otherwise, the risk can be considered low, but similar to the stationary market, the companies should stay on alert for these changes that might shift the balance of the overall business dynamics.

4.3.3 Business Dynamics on Marine Power Transmission Market

The marine power transmission market can be characterized by a number of specific features. These are, first of all, highly differentiated needs affected by governmental regulations, sizes of companies and the end products. The marine market has characteristics from both stationary as well as mobile markets, but its needs are often unique and specially designed to withstand the marine application environment.

The annual marine market size in Finland, based on Teknologiateollisuus Ry (2013), is estimated to be around EUR 6 billion and employing 21 000 people. Companies that operate on this market vary from one man manufacturing companies to large multinational companies such as STX Finland Oy or Wärtsilä Oyj. Many of the larger sized companies base their sales on export, but small and middle sized tend to focus 30-40% of their

sales focus in the local market. As with the stationary market, the larger companies especially can benefit from the economies of scale, and many have already established their branches near the new growing or emerging markets in search of better sales and profitability. And similar to the stationary and mobile markets, companies in the marine market try to keep intellectual property such as research and design, as well as administration located in Finland, while all sales are handled through either own sales offices or dealers. Overall, the marine market, compared to the stationary and mobile market, can be considered relatively differentiated and small in size. This, together with the fact that large players are relocating production elsewhere and the domestic market has been in decline for years, lowers the markets attractiveness compared with the stationary and mobile markets.

As said earlier, the market need for products or services in the marine market is considerably differentiated. In terms of volume, it can be described as low or moderate. Compared to the stationary or mobile markets, the end products and services are almost always tailored to a specific customer need but also follow certain European and Finnish maritime legislation. This legislation, besides giving a framework on how to build applications forms, also serves as the basis for maritime insurance policies. And for the end customer, this means that if their vessel does not fulfill all legislative requirements, the customer is unable to get insurance and without insurance it is illegal to sail or operate in many international waters. The high differentiation depending on the harsh maritime environment and added with the legislative aspect forms a niche market for supplier products or services. For the buyer, this differentiation leads to higher switching costs. Special solutions often require high quality for the product or service they utilize. However, unlike in the stationary market, this highly differentiated small to medium series production has not attracted low cost substitutes on a large scale.

Financial data shown in Figure 14 below demonstrate the marine power transmission market average profit and turnover level in Finland.

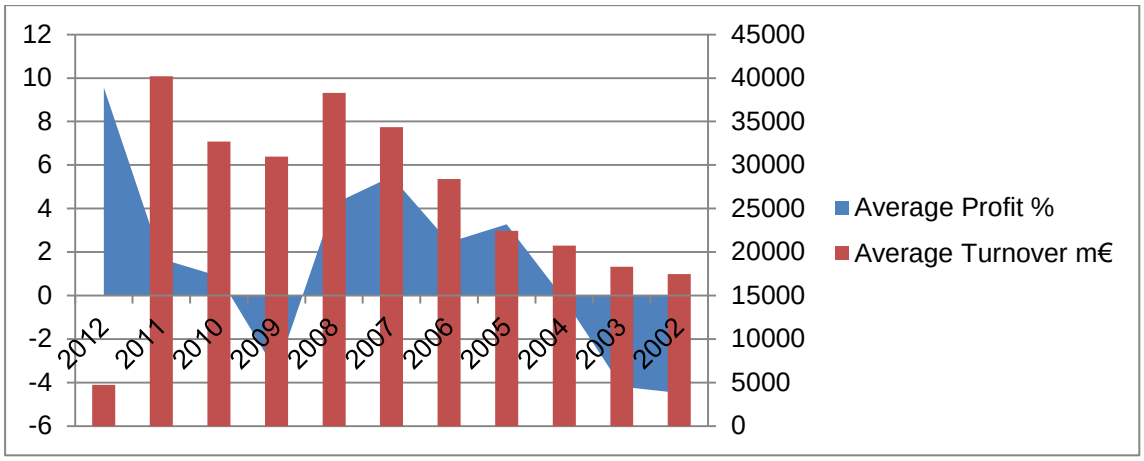

Figure 14. Turnover and profit of the leading Finnish marine power transmission companies from 2002 to 2012. (based on Annual reports; Fonecta B2B)

This Figure 14 is a compilation of the average profit and turnover of a list of 23 leading stationary power transmission companies based on their listings from public sources as well as the results of interviews (described in Appendix 3). The financial data is collected using historical sales data from two sources which are the company annual reports and Fonecta B2B web service. The sudden rise in average profit in 2012 is a result of inadequate publicly of the financial data announced in 2012 and is based on the figures of only one company. All in all, the data compared in Figure 18 demonstrate that the turnover of the marine power transmission market has grown over the past decade. But similar to the stationary and mobile markets, the marine market also declined during the recession in 2009, but was able to recover. Despite the growth in average turnover, profitability of the market can be seen as poor as compared to the stationary and mobile markets.

As said earlier, substitutes and consequently *new entrants* on the marine power transmission industry are not common. Similar to the stationary and mobile markets, the incumbents that already operate on the market possess the experience and proprietary technology that give them certain cost advantages. Old networks and relationships together with high switching costs relating to differentiation and legislation work as a barrier to new entry. Market attractiveness to an outsider can be considered low taking into consideration its poor profitability. However, similar to the mobile market and unlike the stationary the market, this trend can be considered to steadily grow.

The average profitability and turnover from 2008 to 2012 of an assortment of Finnish marine power transmission competitors is shown in Figure 15 below.

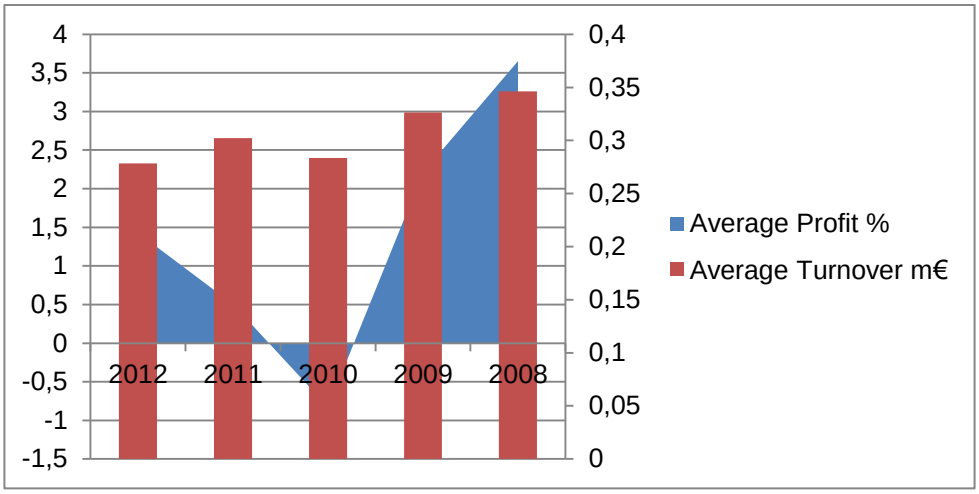

Figure 15. Average profit and turnover of competitors in marine power transmission market from 2008 to 2012. (based on Fonecta B2B)

As for the stationary and mobile markets, the competitors whose average profit and turnover were represented by Figure 15 were chosen based on the results of interviews (described in Appendix 3). Financial data is based on historical sales data from two sources, company annual reports and Fonecta B2B web service. Based on the data, the trend in the average profitability and turnover is similar to the stationary and mobile markets, and it is positive and growing. However, when compared, both the profitability and sales are considerably lower in the marine market. Additionally, when comparing to the sales figures of competitor companies operating in the marine market (presented in Figure 14), the competitors also suffered from the marine recession in 2010.

Compared to the two previous markets, the business dynamics on the marine power transmission market can be summarized as follows. The buyer *bargaining power* is in scale or lower compared to the provider because of a small niche market that lacks *substitutes* based on differentiated needs backed up by tight maritime legislation. Based on low competitor profitability, *competition* itself seems to be intense; and if the initial market need weakens, it can be expected to intensify. The threat of new *entrants* will probably stay low, if the current market trend continues.

Overall, power transmission products and services are used as core system components and considered important. The gross parts of sales on all of the three markets are based on export and are related to the state of the world economy, currency exchange rates and also the rate of interest for investment capital. Additionally, companies that operate from/on the Finnish market are also obliged to follow the same local legislation. In this industry, purchases are not dominated by a few players, but spread between various suppliers. However, the size or potential of a market relates to the number of suppliers in general. Majority of the companies have protected their core competence by patent or other means of protection that aims to lower risks for competitor attacks, but also shelter them from supplier backward integration.

Summing up, since the case company department operates in three industry sectors, all three were analyzed. The three markets turned to share some commonalities and differences that affect them all.

First, the *stationar*y power transmission market is characterized by low and mid-volume production done by medium to large companies that have the possibility to operate on growing and emerging markets. This has led the Finnish market to mature and become saturated in terms of competition as the majority of large scale production has shifted abroad. Overall, the sales potential and profitability on this market can be expected to decline.

Second, the *mobile* power transmission market is characterized by medium and high volume production. Compared to the stationary market, the majority of the companies that operate on this market do not possess the ability to relocate their production. Competition on both the stationary and mobile power transmission markets is formed by the same companies. If the declining trend of the stationary market continues, some of the competition can be expected to focus more on the needs of the mobile market. However, over time, the competition will probably intensify, but the overall growing trend of the market itself can balance this shift.

Finally, the *marine* power transmission market is characterized by low or moderate production volumes which rely on highly differentiated needs. This differentiation has probably helped the market to lower the threat of substitutes. However, the small size of the market, tight governmental

legislation as well as unstable macroeconomic situation has resulted the companies to generate high turnover, but at low profitability. This affects also the competition, which however, has been able to achieve better profitability. Unlike the mobile and similar to the stationary market, companies that are able to will probably relocate their production abroad, and this leads to a decline of the overall market size.

Based on the analysis conducted in Section 4.3 it is evident that two of the markets are going to be stable or decline and one is growing. As for the case company, it would seem best to focus on serving the needs on the growing market to achieve better sales and profitability. Based on this notion, the *mobile* power transmission market and its customer needs will be chosen for further analysis that aims to creating a better CVP for the case company department.

4.4 Focus Customer Group

For any company it is important not to waste resources by targeting unprofitable customers. As it was demonstrated in Section 3.4, to distinguish profitable customer groups a company needs to know, first, its potential customer base and, second, the profitability of the customer group or groups in it.

Since researchers and business practitioners typically use the retrospective type of analysis (as demonstrated in Section 3.4) which is based on historical data, this type of analysis is also chosen for the case company analysis of the focus customer group(s).

For the case company, the analysis of the sales potential, profitability and loyalty of its customer groups results are visualized and presented in Figure 16 below:

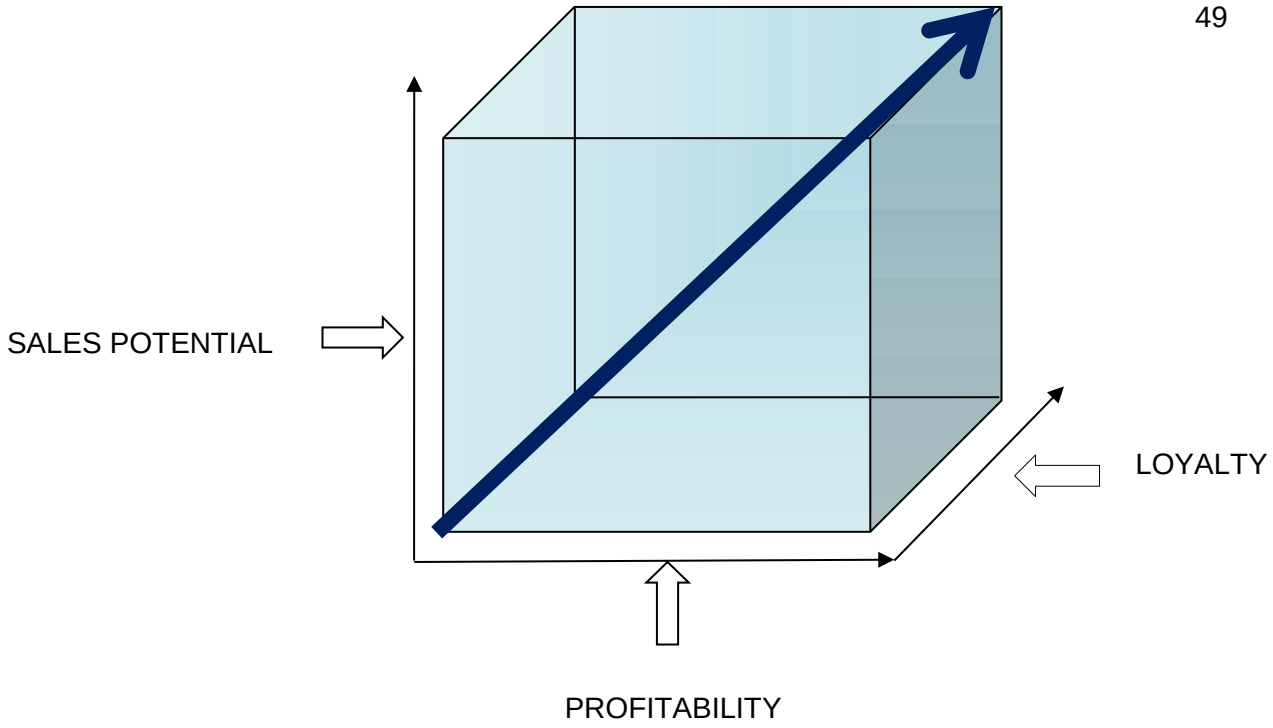

Figure 16. Sales potential, profitability and loyalty. (created based on: Dibb et al. 2000; Storbacka 1997; Zeithamel 2001; Raaij 2005).

Based on the results from Section 4.3, the analysis of customer focus group was done concentrating only on *the mobile power transmission market* that seemed to possess the most potential.

To be able to access correct data, historical sales data from mobile customers were picked out to form a group that was analyzed. This was achieved by using the definition of mobile customer group (introduced in Section (4.3.2) and applying it to the historical data ("sales_customers 112012_832013.xls"). This group was then extracted to do the following analyses explained in Table 10 below:

Table 10. Logic of analysis of focus customer group

First, to analyse its sales and dividing customers in two groups based on average sales. The group that had average or above sales was chosen for further analysis. (based on "sales_mobile 112012_832013.xls", done based on the historical sales figures over the period 1.1.2012 - 8.3.2013);
Second, to analyse the total profitability the transaction intensity, profitability, and needed supportive sales and marketing functions were summed up. (Numerical transaction intensity and profitability data from historical sales figures over the period 1.1.2012 - 8.3.2013). Verification for transaction intensity and also the needed supportive sales and marketing functions were done by interviewing inner company key stakeholders based on the questions shown in Appendix 3).
Third, to analyse the loyalty. (By interviewing inner company key stakeholders based on the questions shown in Appendix 3).

These results were summed up to show the total sales, profitability and loyalty of each customer. Based on the combined result from these analyses, those customers that had high sales, high total profitability, and high loyalty were formed into one group (listed in “best_mobile customers 2012”, Appendix 4).

In addition to the result, it is necessary for this analysis to consider (see Section 3.4) some other reasons, such as the segment size and segment growth, its competitive intensity, and fit with company objectives and capabilities. In this Thesis, these reasons were considered separately, as part of the case company description (in Section 4.1) and thus are not repeated here.

Summing up, based on the findings from the available knowledge and best practice (Section 3), it can be considered rational for the case company to pursue such customer group that maximizes the three aspects. For the mobile market, this group includes OEM and Aftersales customers. Further analysis concentrates on the needs of this group of customers.

4.5 Customer Needs and Requirements

As explained in Section 3.4, to know the needs and their characteristics of its customers is essential for any company. These give the company a basis to form its CVP to increase its sales. This Section analyzes the needs and the perception of these needs by different stakeholders in the focus customer group (as identified in Section 4.4). The analysis itself was divided into three main steps, starting from: **Step a)** *Needs, their characteristics, forms of interaction* between customer and provider as well as the value creation possibilities were identified by conducting a series of interviews (discussed in Section 4.5.1). **Step b)** *Characteristics* behind each need and their *qualities* were analyzed using a questionnaire based on the Kano model (described in Section 3.4 and discussed in Section 4.5.2). **Step c)** *End results* were summarized to form a pool of options which formed the basis for the creation of the initial and final CVP (presented in Section 5).

4.5.1 Needs, Buyer-Provider Interactions and Value Co-Creation

The first step (a) consisted of a set of semi structured interviews (the questions and summary of results can be found from Appendix 5). To find

out as many needs as possible it was important to triangulate the needs of stakeholder groups that were related to value creation inside the customer focus companies. The stakeholder groups, which were interviewed for this analysis, were represented by three perspectives: *Sales, Purchasing and Engineering*. The focus group itself included the companies that represented both the original equipment manufacturers, the aftersales and outsourced assembling. Based on the interviews, 32 needs were discovered. These needs comprised of both products and services and were divided into ten main categories. The needs and the main categories are shown in Table 11 below.

Table 11. Needs of focus group customers and the needs main categories (based on the interviews results).

MAIN CATEGORIES	NEEDS
1) Axles	Differential axles Bogie Axles
2) Engines	Diesel engines Gasoline engines Brand X accessories and parts Rubber supports Sensors
3) Transmissions	Transmissions Transmission output adapters Automatic transmissions Brand Y spare parts
4) Wheels	Tires Rims
5) Bearings	Bearings Slewing rings
6) Gears and Gearboxes	Tooth gears Planetary gears Differential gearboxes Transfer cases Pump drives Track drives
7) Couplings	Rotator couplings Pump adapters Jaw couplings Flexible couplings
8) Cardan shafts	Cardan shaft
9) Drives	Belt drive Chain drive Conveyor related components Track related components
10) Service and spare parts	Service Heavy machinery spare parts

Based on the interviews, the interviewees also identified the main characteristics behind each need. The interviews also revealed that customers appreciated similar characteristics behind a similar need. Based on the results, the characteristics were summarized into six main categories,

which are: *Delivery time, Quality, Portfolio, Aftersales* and *Technology*. The results also showed that different stakeholder groups prioritized different characteristics. For example, people from Engineering were more concerned about technology, quality and aftersales; and people from Purchasing about the price and delivery time. The summary of these characteristics behind each need is summarized in Table 12 below.

Table 12. Needs and their characteristics (based on Appendix 5).

	MAIN CATEGORY	1	2	3	4	5	6	7	8	9	10
	NEED	Axles	Engines	Trans-mission	Wheels	Bearings	Gears and gear-boxes	Cou-plings	Cardan shafts	Drives	Service and spare parts
CHARACTE-RISTIC	Delivery time	x	x	x	x	x	x	x	x	x	x
	Quality		x		x	x	x	x	x		
	Price	x	x	x	x	x	x	x	x	x	
	Portfolio	x	x	x			x	x	x	x	x
	Aftersales	x	x	x		x	x			x	x
	Technology	x	x	x		x	x	x			

Table 12 shown the overall summary of the characteristics in every need. Some questions (e.g., Questions 4 and 5 in Appendix 5) asked about the interactions and their qualities that exist between the buyer and provider when doing business, and which type of interactions are appreciated.

The result of the interview also showed that, from the customer point of view, the interactions were mostly made by three stakeholder groups: *Purchaser*, *Sales* and *Engineering*. The interactions from these three groups targeted the provider and were spread out towards six different stakeholder groups in the provider organization. These groups were: *aftersales*, *sales*, *logistics*, *administration*, *purchasing* and *engineering*. These interactions are mapped in Figure 17 below.

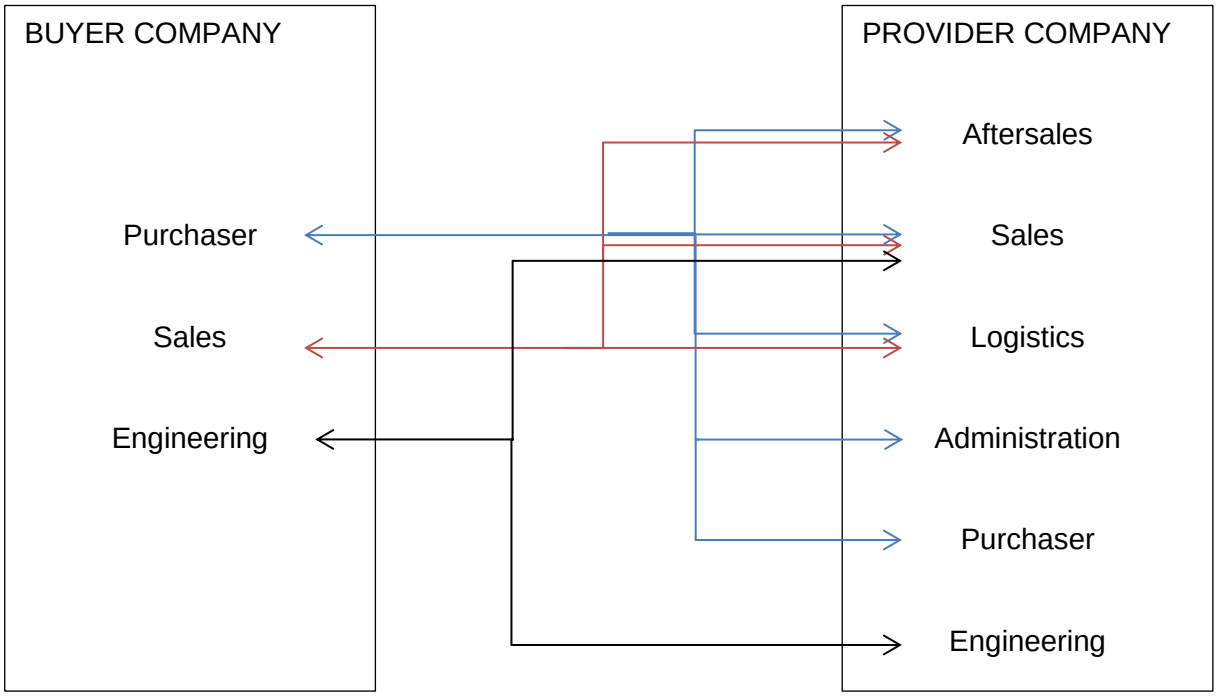

Figure 17. Buyer to Provider company stakeholder interactions. (based on Appendix 5)

As seen from Figure 17, the most wanted group in these interactions was *the sales* of the providers, with all three buyer groups (the *purchaser*, *sales* and *engineering*) targeting this provider group. Besides these, the buyer company *purchaser* and *sales* also shared interactions towards the provider *aftersales* and *logistics*.

When asked about the qualities that the buyer company stakeholders appreciate in the provider company staff, twelve qualities between the different interactions. These twelve qualities are listed in Table 13 below.

Table 13. Qualities appreciated by the buyer company stakeholders. (based on Appendix 5)

Quality 1	Competent staff
Quality 2	Technical expertise (knowledge, support 3D drawings, quality, extent and preciceness of answers)
Quality 3	Technical support capabilities
Quality 4	Job is done from Start-to-Finish
Quality 5	Responsibility
Quality 6	Quotations & prices (that hold)
Quality 7	Fast answers (availability)
Quality 8	Do not underestimate
Quality 9	Clear order confirmations
Quality 10	Notice, if there is a delay
Quality 11	Open for discussion
Quality 12	Openness

The respondents also separately indicated which qualities they prefer to see in which group o the provider staff. These qualities separated per group are shown in Figure 18 below.

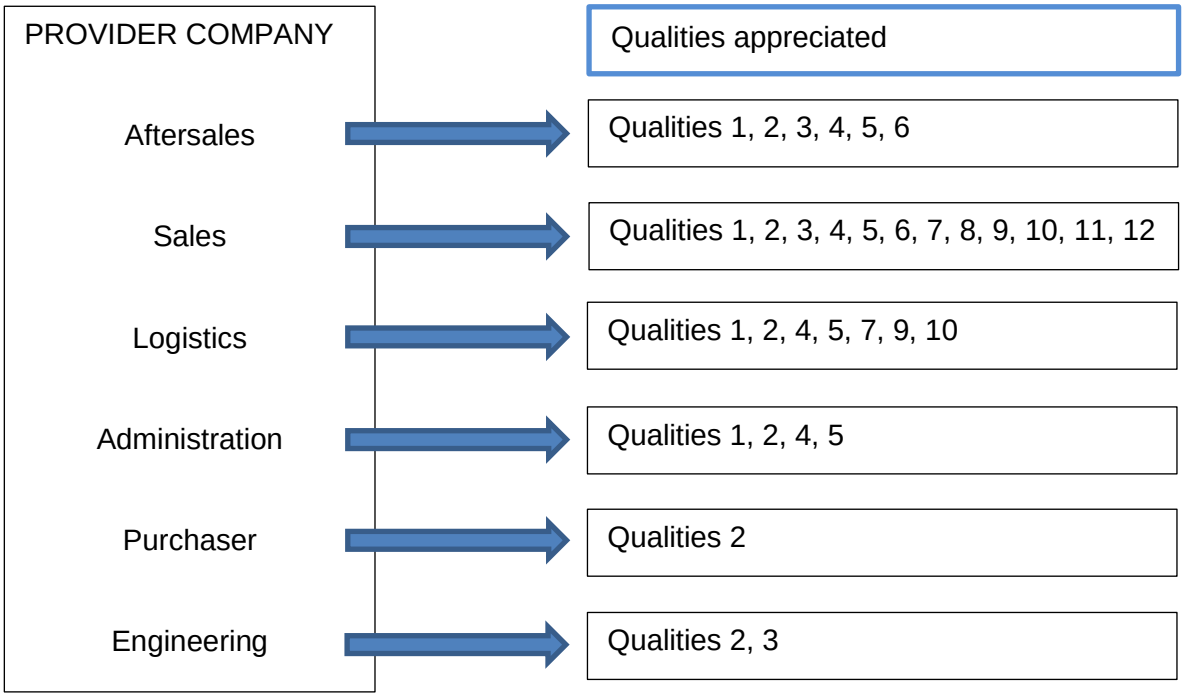

Figure 18. Qualities appreciated by the buyer stakeholders in the provider company stakeholders (based on Appendix 5).

As seen from Figure 18, the some of the qualities are more common than others. For instance, quality 2 (*technical expertise)*, is appreciated in all of the six provider stakeholder interactions. Qualities 1, 4 and 5 (*competent staff*, *job is done from Start-to-Finish*, *responsibility)* are the second most

appreciated qualities seen as important in at least four types of interactions. Quality 3 (*technical support capabilities)* exists in at least three of the stakeholder interactions. Qualities 6, 7, 9 and 10 (*quotations & prices*, *fast answers*, *clear order confirmations*, *notice, if there is a delay)* are each seen important in at least two of the groups. Qualities 8, 11 and 12, (*do not underestimate*, *open for discussion*, *openness)* are only seen important once each.

In interviews, Questions 6, 7 and 8 (Appendix 5) aimed to find new possibilities for the open part of value co-creation discussed in Section 3.1. Finding these aimed to help the case company to differentiate its CVP. The results based on the questions in Appendix 5 showed that all of the 32 previously mentioned individual needs shared similarities at the customer as shipment, dismantling from box and installation. Many of the needs did not need additional work before they were installed except for needs in main need categories 2, 4 and 6. From these main categories the customers were willing to outsource services related to tires and rims, diesel and gasoline engines as well as planetary gears. The services requested are mentioned in Table 14 below.

Table 14. Possibilities to co-create value for individual needs, based on customer willingness (based on Appendix 5).

MAIN CATEGORIES	NEEDS	WILLING TO OUTSOURCE SERVICES
2) Engines	**Diesel engines** **Gasoline engines** Brand X accessories and parts Rubber supports Sensors	Ready assembled: Engine + pump adapter + rubber supports + electrical wiring + electrical connection boxes + painted
4) Wheels	**Tires** **Rims**	Ready assembled: tire + inner tube + rim
6) Gears and Gearboxes	Tooth gears **Planetary gears** Differential gearboxes Transfer cases Pump drives Track drives	Ready assembled: gearbox + pinion + hydraulic motor + hydraulic valve + hoses

The result from Table 14 shows that customers are willing to outsource parts of the assembly functions that would otherwise be made inside the company.

4.5.2 Qualities of Characteristics of Needs

However, although based on the interviews results (described in Appendix 5) these actual needs and the characteristics that the focus customer group appreciated were clear, it was still unclear how important they were in relation to one another in the minds of the focus customer stakeholders. In short, it was important to also know how a characteristic was perceived between different focus customer stakeholders. This made *Step b)* and was done by conducting a web-based questionnaire (with the questions and summary of results described in Appendix 6).

The questionnaire consisted of 46 pairs of questions that were formed based on Kano et al. (1984) methodology (described in Section 3.4). From these pairs, the first question was the so-called functional question and the second, a dysfunctional one. The questionnaire was sent to the same stakeholders that were interviewed in *Step a),* but in *Step b)* they were encouraged to share the questionnaire with other inner company stakeholders that took part in value creation related to the power transmission department.

The way how the customers perceived a certain characteristic could be interpreted through five *quality attributes* (discussed in Section 3.4). The

quality attributes of: *Attractive (A), One-dimensional (O), Must-be (M), Indifferent (I) and Reverse (R) quality attributes* could be interpreted using Table 15 suggested by Kano et al. (1984).

Table 15. Resulting quality attribute based on functional and dysfunctional questions (based on Kano et al. 1984).

		Dysfunctional question				
Functional question		Like	Must-be	Neutral	Live with	Dislike
	Like		A	A	A	O
	Must-be	R	I	I	I	M
	Neutral	R	I	I	I	M
	Live with	R	I	I	I	M
	Dislike	R	R	R	R	

The way how the questionnaire participants had answered the functional and dysfunctional questions revealed the quality attribute behind the characteristic. For example, when asked about delivery time for the need of axles described in Appendix 6:

How do you feel if the delivery time for axles is short? (Functional question)
How do you feel if the delivery time for axles is long? (Dysfunctional question)

The result for the functional question was: *Like* and for dysfunctional: *Dislike*. Based on the results and looking into the corresponding cell in Table 16, the quality attribute for delivery time for axles was (O), *One-dimensional.*

The summary of the result was divided into six characteristics earlier revealed in the interviews: Delivery time, Quality, Price, Portfolio, Aftersales, Technology and their quality attributes. The results are shown in Figure 19 below.

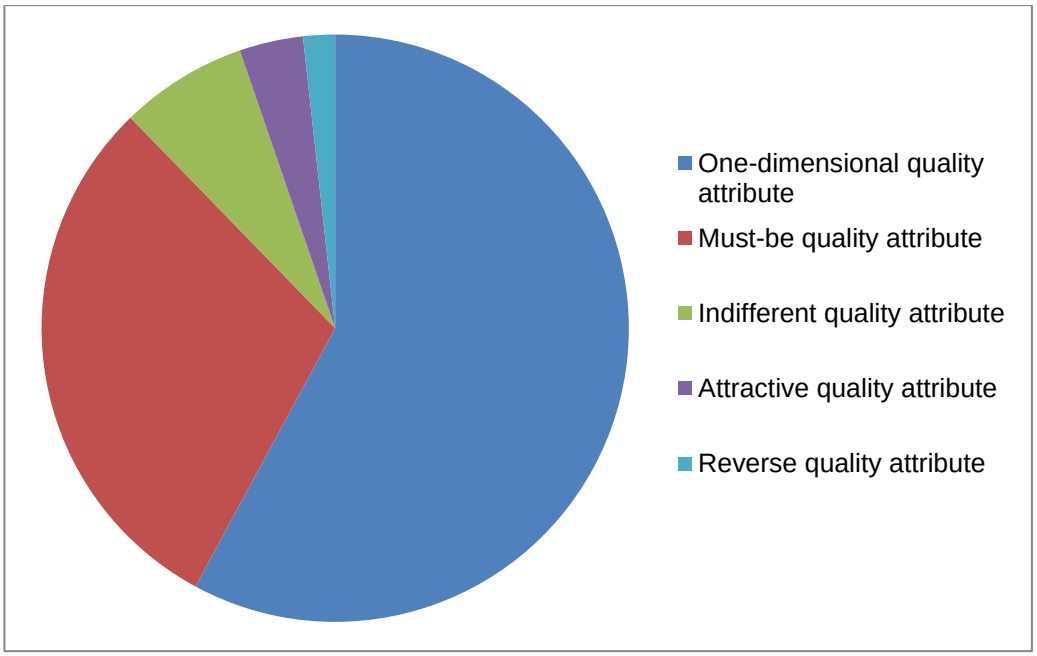

Figure 19. Quality attributes related to all characteristics of all needs. (based on Appendix 6)

The results of the questionnaire showed that, overall, two of the five quality attributes (*One-dimensional* and *Must-be)* were dominant. How these quality attributes affect each of the ten needs (the Axles, Engines, Transmission, Wheels, Bearings, Gears and gearboxes, Couplings, Cardan shafts, Drives, Service and spare parts) is listed in Table 16 below.

Table 16. Quality attributes of characteristics behind each of the needs. (based on Appendix 6)

Need/Characteristic	Delivery time	Quality	Price	Portfolio	Aftersales	Technology
Axles	O		M	R	I	M
Engines	O/I	M	M/I	M/A	O/M	O/I
Transmission	O		O	M	O	M
Wheels	O	O	O			
Bearings	M/O	M/O	A/O		O	M/O
Gears and gearboxes	O	O	O	M	O	O
Couplings	O	O	O	O		O
Cardan shafts	O	O	O	O		
Drives	O		O	M	O	
Service and spare parts	O/M			M	O/M	

The needs and quality attributes shown in Table 16 are based on the results of the questionnaire (Appendix 6). The interpretation of how the quality attributes influence customer satisfaction is shown in Figure 20 below (introduced in Section 3.4).

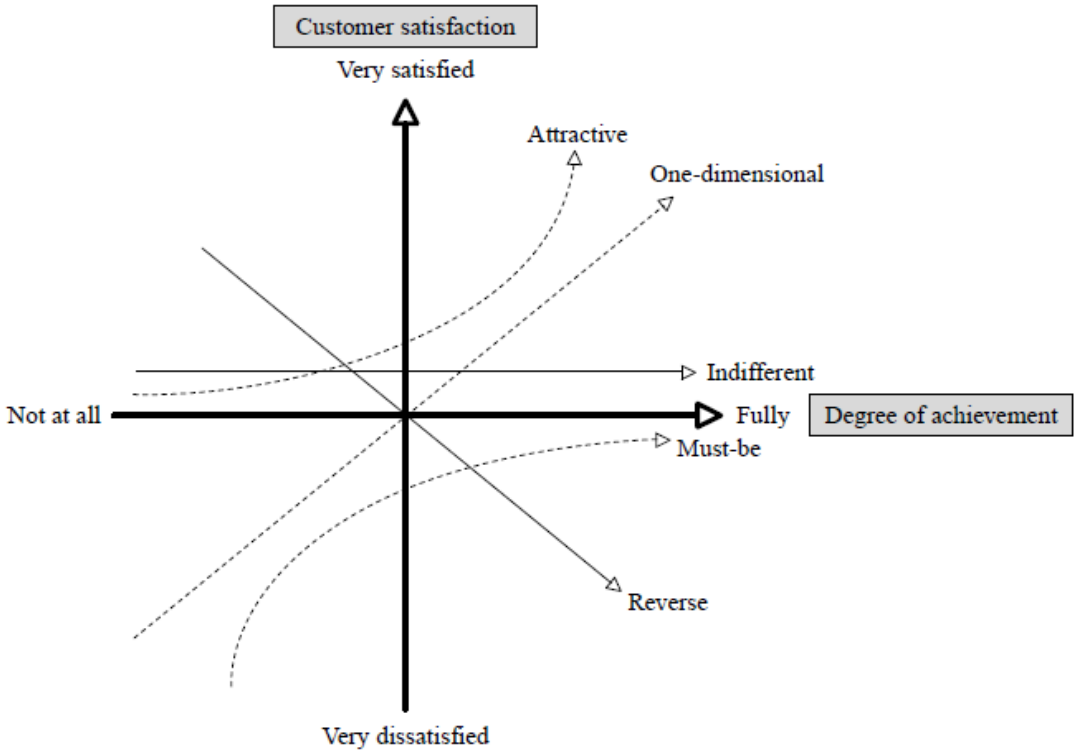

Figure 20. Kano model attributes and effect on customer satisfaction. (adopted by Högström et al. 2009)

Based on the results of quality attributes shown in Table 16 and their influence on customer satisfaction shown in Figure 20, preferences for each need can be formulated. These preferences can either lower or raise the customer satisfaction. For the case company it is important to achieve high customer satisfaction and these preferences are viewed from the point of view of raising customer satisfaction. Preferences of quality attributes are listed in Table 17 below.

Table 17. Preferences of quality attributes that affect the characteristic behind the needs. (based on Appendix 6)

Axles (O) Faster the delivery time the better (M) Must be low price (R) Not too wide portfolio (I) Aftersales indifferent (M) Must be technologically advanced	Engines (O/I) Faster the delivery time the better / Delivery time indifferent (M) Must be good quality (M/I) Must be low price / Price indifferent (M/A) Must be wide portfolio / The wider the portfolio the better (O/M) The better the aftersales the more satisfied / Must be aftersales (O/I) The more technologically advanced the better / Technologically advanced is indifferent
Transmission (O) Faster the delivery time the better (O) Lower the price the better (M) Must be wide portfolio (O) The better the aftersales the more satisfied (M) Must be technologically advanced	Wheels (O) Faster the delivery time the better (O) Better the quality the better (O) Lower the price the better
Bearings (M/O) Must be short delivery time / Shorter delivery time the better (M/O) Must be good quality / Better the quality the better (A/O) The lower the price the more attractive / Lower price the better (O) The better the aftersales the more satisfied (M/O) Must be technologically advanced / The more technologically advanced the better	Gears and gearboxes (O) Faster the delivery time the better (O) Better the quality the better (O) Lower the price the better (M) Must be wide portfolio (O) The better the aftersales the more satisfied (O) The more technologically advanced the better
Couplings (O) Faster the delivery time the better (O) Better the quality the better (O) Lower the price the better (O) The wider the portfolio the better	Cardan shafts (O) Faster the delivery time the better (O) Better the quality the better (O) Lower the price the better (O) The wider the portfolio the better
Drives (O) Faster the delivery time the better (O) Lower the price the better (M) Must be wide portfolio (O) The better the aftersales the more satisfied	Service and spare parts (O/M) Shorter delivery time the better / Must be short delivery time (M) Must be wide portfolio (O/M) The better the aftersales the more satisfied / Must be aftersales

As shown in Table 17, besides the fact that customers look for different characteristics behind each need, almost all the needs share the same

quality attributes. The two needs that share all commonalities are *Couplings* and *Cardan shafts.*

The findings made in Section 4.5 relate to customer needs, their characteristics, stakeholder interactions, and value co-creation possibilities give the case company the necessary foundations to further develop its CVP. Based on these data, the creation of the CVP will be discussed in Section 5 below.

5 Proposal for Customer Value Proposition for the Case Company Department

This section presents the customer value proposition based on the results of analysis of presented in Section 4.3 (Business Dynamics of Industry), Section 4.4 (Focus Customer Group) and Section 4.5 (Customer Needs and Requirements). First, Section 5.1 presents an initial CVP proposal which is then validated by interviewing the case company stakeholders in Section 5.2. Finally, Section 5.3 presents the Final CVP Proposal for the case company power transmission department.

5.1 Initial CVP Proposal

To overcome the business problem (indicated in Section 1.2) and considering the results of the SWOT for the current CVP (in Section 4.2) and needs analysis (Section 4.5), the following CVP can be proposed for the case company department.

The new CVP focuses only on covering the need of *the mobile power transmission market*. In order to differentiate from competition, the CVP also focuses on *the strengths* that the case company possesses.

Based on the six found characteristics of *need, delivery time, quality, price, portfolio, aftersales, and technology* (identified in Section 4.5.1), three could be considered such that the case company department could affect them in its current organization to offer more value. These are: the delivery time, portfolio, aftersales and technology. First, *the delivery time* could be affected by better warehousing. Second, *the portfolio* could be affected by using multiple suppliers. Third, *the aftersales* could be affected by better utilizing experience and maintenance facilities as well as warehousing. Fourth and final, *the technology* could be affected by adding the complexity of a product using assembly services provided by the maintenance facilities.

Based on the characteristic of the customer need and their qualities, qualities that the case company could affect and which were seen as *must-be* (based on results shown in Section 4.5.2) were grouped to demonstrate their significance for the customers (given two plusses in Table 18 below). If the quality was other than must-be (e.g., *attractive* or *one-dimensional*), but one that could be affected, it was given only one plus. The characteristics of a need that could not be affected and which quality was a *must-*

be was given two minuses. Any other quality of needs that could not be affected (e.g. *attractive* or *one-dimensional*) was given one minus. Based on the given sum of plusses and minuses, the following five needs were chosen. First, *the service and spare parts* collected six plusses. Second, *transmission* got 5 plusses. Third, *gears and gearboxes* and *drives* received was three plusses. Fourth and final, *engines* received two plusses. All the other needs had either a sum of zero plusses or minuses or just minuses.

In Table 18 below summarized the needs, qualities and their characteristics. The first column shows the list of the five needs, the second column their characteristics and the third column the effect which can add value.

Table 18. New CVP products and services. (based on Appendix 6)

NEED	CHARACTERISTICS	VALUE ADDING EFFECT
SERVICE AND SPARE PARTS	++ (M) Must be short delivery time ++ (M) Must be wide portfolio ++ (M) Must be aftersales	(M) Warehousing (M) Multiple suppliers (M) Aftersales experience and facilities
TRANSMISSION	++ (M) Must be wide portfolio ++ (M) Must be technologically advanced + (O) Fast delivery time + (O) Aftersales - (O) Low price	(M) Multiple suppliers (M) Assembly services (O) Warehousing (O) Aftersales experience and facilities
GEARS AND GEARBOXES	++ (M) Must be wide portfolio + (O) Fast delivery time + (O) Aftersales + (O) Technologically advanced - (O) Quality - (O) Low price	(M) Multiple suppliers (O) Warehousing (O) Aftersales experience and facilities (O) Assembly service
DRIVES	++ (M) Must be wide portfolio + (O) Fast delivery time + (O) Aftersales - (O) Low price	(M) Multiple suppliers (O) Warehousing (O) Aftersales experience and facilities
ENGINES	++ (M/A) Must be wide portfolio / wider the better ++ (O/M) Aftersales / Must be aftersales + (O/I) Fast delivery time / indifferent + (O/I) Technologically advanced / indifferent - - (M) Must be quality - - (M/I) Low price/indifferent	(M) Multiple suppliers (M) Aftersales experience and facilities (O) Warehousing (O) Assembly service

As seen in Table 18 the needs and their *value adding effects* of multiple suppliers, warehousing, aftersales experience and facilities as well as as-

sembly services differ per each need. But when creating the CVP, fulfilling the ones based on M qualities *(must-be)* should be given most attention, followed by O qualities *(one-dimensional*). This is because if the M is not met, it will lead to direct customer dissatisfaction. Based on the analysis of interactions (described in Section 4.5.1), the way how the needs and their *value adding effect* are offered should also be considered. CVP will most probably be offered mainly through *the Sales* staff, so the qualities that relate to interaction through this channel should be specially noted. However, based on the needs and their value adding effects, the customer stakeholders will most probably be in contact with also other case company representatives. First, *warehousing* will be handled through the *logistics* department. Second, *aftersales* and *assembly services* will be handled through the *Aftersales* department. To ensure customer satisfaction in all these interactions, the sales, logistics and aftersales departments should fulfill the qualities listed in Section 4.5.1.

Based on the above, the initial CVP should be built on, first, WHO: *the mobile power transmission market* focus customer group. Second, WHAT: *the focus customer group needs* and the value adding effect that the case company departments can suggest; and third, HOW: through *the main interaction* channels of sales, logistics and aftersales to ensure customer satisfaction by taking care of the customer. This initial CVP is described in Figure 21 below.

THE INITIAL CVP PROPOSAL

WHO - The mobile power transmission market focus customer group

WHAT – The focus customer group needs using case company departments value adding effect

NEEDS

Service and spare parts	Transmission	Gears and gearboxes	Drives	Engines
Service Heavy machinery spare parts	Transmissions Transmission output adapters Automatic transmissions Brand Y spare parts	Tooth gears Planetary gears Differential gearboxes Transfer cases Pump drives Track drives	Belt drive Chain drive Conveyor related components Track related components	Diesel engines Gasoline engines Brand X accessories and parts Rubber supports Sensors
VALUE ADDING EFFECTS PER NEED (M) must be fulfilled, the more (O) is fulfilled the more satisfied the customer				
(M) Warehousing (M) Multiple suppliers (M) Aftersales experience and facilities	(M) Multiple suppliers (M) Assembly services (O) Warehousing (O) Aftersales experience and facilities	(M) Multiple suppliers (O) Warehousing (O) Aftersales experience and facilities (O) Assembly service	(M) Multiple suppliers (O) Warehousing (O) Aftersales experience and facilities	(M) Multiple suppliers (M) Aftersales experience and facilities (O) Warehousing (O) Assembly service

HOW - through taking care of customer satisfaction on main interaction levels

SALES – CUSTOMER	LOGISTICS - CUSTOMER	AFTERSALES – CUSTOMER
Quality 1 Competent staff Quality 2 Technical expertise (knowledge, support 3D drawings, quality, extent and preciceness of answers) Quality 3 Technical support capabilities Quality 4 Job is done from Start-to-Finish Quality 5 Responsibility Quality 6 Quotations & prices (that hold) Quality 7 Fast answers (availability) Quality 8 Do not underestimate Quality 9 Clear order confirmations Quality 10 Notice, if there is a delay Quality 11 Open for discussion Quality 12 Openness	Quality 1 Competent staff Quality 2 Technical expertise (knowledge, support 3D drawings, quality, extent and preciceness of answers) Quality 4 Job is done from Start-to-Finish Quality 5 Responsibility Quality 7 Fast answers (availability) Quality 9 Clear order confirmations Quality 10 Notice, if there is a delay	Quality 1 Competent staff Quality 2 Technical expertise (knowledge, support 3D drawings, quality, extent and preciceness of answers) Quality 3 Technical support capabilities Quality 4 Job is done from Start-to-Finish Quality 5 Responsibility Quality 6 Quotations & prices (that hold)

Figure 21. Initial CVP proposal for the case company department.

The initial CVP in Figure 21 is represents *WHO* the case company department should go after, *WHAT* it should offer and *HOW* to offer it. To make sure that the proposal is seen valid also by other internal stake-

holders, this CVP was put to test. The results of validation are described in Section 5.2 below. After that, the final CVP proposal is suggested in Section 5.3.

5.2 Validation of CVP within the Case Company Department

To validate the initial CVP, debates were held about its plausibility. Two stakeholder groups were identified, the case company management and the customer stakeholders, but due to a limited time the CVP was presented only to the case company management. The company management was interviewed based on the questions shown below (the results are summarized in Appendix 7). This feedback was then used to correct and form the final CVP proposal.

To validate the initial CVP the following six questions were asked:

Question 1: *What is your initial impression when comparing the current CVP to the suggested initial CVP?* The reply was that, based on the previous experience, the initial CVP seemed plausible and indicated the needs that the management knew the customers needed. From the needs themselves, *drives* especially were considered highly competitive. *Service and spare parts* and *the aftersales* overall were seen as an interesting opportunity, but to function properly the staff would need more training.

Question 2: *How do you feel about the new CVP being focused on serving the needs of the mobile market and not the stationary or marine markers?* Overall, all the markets were seen to share similarities. However, the marine market stood out because of its unique needs based on tough legislation and environment. The positive outcome was that the initial CVP indicated the needs that could be used also to fulfill part of the needs for the stationary and marine markets, if needed.

Question 3: *The initial CVP would exclude the following items that exit in the current CVP: air motors, retarders, cardan shafts, cross-units, slewing rings, industrial shock absorbers, couplings (tooth, decoupling, torque limiters, pump adapters), axles and winches. Would you see this as a problem?* According to the responses, except for excluding the needs for slewing rings, pump drives and decoupling clutches from the main needs groups of bearings and couplings, all others were not seen important. These three were seen to be part of the so-called value adding effect of

technology mentioned in the initial CVP in regard to gears and gearboxes, as well as engines.

Question 4: *How do you evaluate the value adding effects related to fulfilling the customer needs? Is the case company department able to fulfill them?* All of the value adding effects of assembly service, aftersales experience and facilities, multiple suppliers and warehousing were felt as important. The interviewees stressed, however, that with involving multiple suppliers the product or service ranges should not compete with each other, but to complement each other in order to keep suppliers satisfied. Warehousing will mentioned as the option that would need investments and before implementing this issue, it must be discussed with the current CEO.

Question 5: *How do you find the requirements set for sales-buyer, logistics-buyer and aftersales-buyer? Is the case company able to fulfill them?* The answer to this question was that none of these is perfect and the most needed issue for improvement is to gain more experience and technical skills on the product and service level as well as the customer applications. It was felt that, in these areas, the case company should be the expert in its field and to reach this, the only way is to train more.

Question 6: *In your opinion, is there something that must be included in the initial CVP proposal based on the current CVP?* The interviewee felt that cardan shafts, slewing rings, pump adapters and decoupling clutches should be included in the final CVP proposal. Cardan shafts were said to be as a complementary product regarding the customer need of transmissions. Slewing rings, pump adapters and decoupling clutches were already mentioned earlier in the answer to Question 3 due to the same reason.

If summarized, the initial CVP was seen as valid except, that for the present, it also needs to include: *pump adapters, decoupling clutches, cardan shafts* and *slewing rings.* These are seen to act as complimentary products that, when added to other needs, can add value to the customer. Parts of the value adding effects of *assembly service, aftersales experience and facilities, multiple suppliers* and *warehousing* need special attention regarding supplier relationships and handling technical training to be carried out successfully. Besides the value adding effects and their re-

quirements for the sales-buyer, logistics-buyer and aftersales-buyer interactions, the department staff needs to gain more product, service and application specific technical competence.

5.3 Final CVP Proposal

Based on the initial proposal presented in Section 5.1 and its validation in Section 5.2, the final CVP was suggested. This final CVP is an end result based on the analyses done in Section 4 and findings from best practice in Section 3. This result reflects the needs of the customers as well as place emphasis on the change of mind-set in the case company. The final CVP is summarized in Figure 22 below.

THE FINAL CVP PROPOSAL

WHO - The mobile power transmission market focus customer group

WHAT – The focus customer group needs and complimentary needs using case company departments value adding effect

NEEDS					COMPLIMENTARY NEEDS		
Service and spare parts	Transmission	Gears and gearboxes	Drives	Engines	Bearings	Couplings	Cardan shafts
Service Heavy machinery spare parts	Transmissions Transmission output adapters Automatic transmissions Brand Y spare parts	Tooth gears Planetary gears Differential gearboxes Transfer cases Pump drives Track drives	Belt drive Chain drive Conveyor related components Track related components	Diesel engines Gasoline engines Brand X accessories and parts Rubber supports Sensors	Slewing rings	Pump adapter Decoupling clutches	Cardan shafts
VALUE ADDING EFFECTS PER NEED (M) must be fulfilled, the more (O) is fulfilled the more satisfied the customer							
(M) Warehousing **(M)** Multiple suppliers **(M)** Aftersales experience and facilities	**(M)** Multiple suppliers **(M)** Assembly services (O) Warehousing (O) Aftersales experience and facilities	**(M)** Multiple suppliers (O) Warehousing (O) Aftersales experience and facilities (O) Assembly service	**(M)** Multiple suppliers (O) Warehousing (O) Aftersales experience and facilities	**(M)** Multiple suppliers **(M)** Aftersales experience and facilities (O) Warehousing (O) Assembly service	**(M)** Assembly service (O) Aftersales experience and facilities (O) Warehousing	(O) Warehousing (O) Multiple suppliers	(O) Warehousing (O) Multiple suppliers

HOW - through taking care of customer satisfaction on main interaction levels

SALES – CUSTOMER		LOGISTICS - CUSTOMER		AFTERSALES – CUSTOMER	
Quality 1	Competent staff	Quality 1	Competent staff	Quality 1	Competent staff
Quality 2	Technical expertise (knowledge, support 3D drawings, quality, extent and preciceness of answers)	Quality 2	Technical expertise (knowledge, support 3D drawings, quality, extent and preciceness of answers)	Quality 2	Technical expertise (knowledge, support 3D drawings, quality, extent and preciceness of answers)
Quality 3	Technical support capabilities	Quality 4	Job is done from Start-to-Finish	Quality 3	Technical support capabilities
Quality 4	Job is done from Start-to-Finish	Quality 5	Responsibility	Quality 4	Job is done from Start-to-Finish
Quality 5	Responsibility	Quality 7	Fast answers (availability)	Quality 5	Responsibility
Quality 6	Quotations & prices (that hold)	Quality 9	Clear order confirmations	Quality 6	Quotations & prices (that hold)
Quality 7	Fast answers (availability)	Quality 10	Notice, if there is a delay		
Quality 8	Do not underestimate				
Quality 9	Clear order confirmations				
Quality 10	Notice, if there is a delay				
Quality 11	Open for discussion				
Quality 12	Openness				

Figure 22. The final CVP based on validated initial CVP.

The final CVP shown in Figure 22 also accommodates the input given by the case company management in the validation interview (summarized in Appendix 7) ensuring its validity for the case company power transmission department. This input included the addition of four needs: Slewing rings pump adapters, decoupling clutches and cardan shafts. Because these needs represented three main groups of needs: bearings, couplings and cardan shafts, which all shared different needs characteristics and their qualities, they could not be infused into any of the existing needs in the initial CVP. These three also shared the feature that, based on the analysis in Section 4.5.2 and Section 5.1, the case company was not able to add value as with other products and services.

Based on the fact that these groups were seen more as complimentary needs of service and spare parts, transmission, gears and gearboxes, drives and engines, rather than any independent needs, they were added into the corresponding sections of the final CVP. The issues were also discussed when giving recommendation about carrying out the final CVP, its value adding effects and improving interactions in Section 6.2, called Practical Implications.

6 Discussion and Conclusions

This section summarizes the research result and offer practical implications for putting the proposal into practice. It also presents the final CVP proposal for the current management and evaluates how the research objective and reliability of this Thesis were ensured.

6.1 Summary

The idea for this Thesis was triggered by the challenge to improve the result of the case company department and increase its sales and profitability. However, due to the complexity of the interplaying factors, the identification of the root problem was not obvious. The root problem was identified after the first stages of analysis and the objective was set to design a new CVP for the case company department. Method chosen for this research was the exploratory single case study which allowed the use of both qualitative and quantitative data collection methods. To formulate an approach to reach the objective, the research design was developed as step-by-step analysis leading to the development of a new CVP. The step-by-step analysis was based on the best practice and existing knowledge from the industry, and was conducted in four steps. Based on the analyses, the initial CVP proposal was produced. This was then validated with the case company to form the final CVP proposal.

The outcome of this study is a customer value proposition developed and grounded in the analysis of the profit potential of three markets in which the power transmission department of the case company operates. These markets are: the stationary, mobile and marine market. First, these markets were overviewed and evaluated. Second, from the most promising mobile market a particular customer group was selected and their needs analyzed. Based on their needs, the most suitable and effective customer value proposition for this particular group was formulated.

Data collection and data analysis in this study utilized a range of different data sources and analysis methods. The sources used consisted of articles, books, company historical data, open source published information, stakeholder interviews and questionnaires. The stakeholder groups that were interviewed as part of this research consisted of the case company employees, its management and customer representatives. The customer representatives were the employees of the companies selected for focus customer group analysis that led to the CVP proposal. The study also

suggested practical implications for the management as for what should be done to put this proposal into practice, so that to enable the case company department to increase its revenues thought sustainable and profitable sales growth.

Based on the research done, the next step for the case company department is to learn the way how to take in use and utilize the final CVP proposal in practice. This will be discussed more in next Section 6.2 below.

6.2 Practical Implications

Since the case company department needed to look for a solution to improve its sales and profitability, the CVP was developed to offer an option to achieve these objectives. The following steps may help to take this proposal into practice, if the new CVP is taken in use.

1. A focused company discussion is needed to evaluate a new CVP for the department which was not possible so far to do due to the time constraints of this Thesis. The participants could share their suggestions as for the new CVP and its probability to yield better sales and profitability for the case company department. The persons involved should range from the Department Manager and the case company CEO to the experts from the department, and probably selected representatives of the customers.

2. After the decision is taken, a step-by-step action plan needs to be developed as to what actions should be taken first and which would require a longer time or more considerable investment. One of the steps in this action plan will be the training of the employees from the sales, aftersales, logistics and engineering. The need for this training was stressed in the validation session, as well as the need for in-depth technical training regarding the products and services in the new CVP. Another step in this action plan would be the knowledge sharing sessions between the stakeholder groups which can be arranged, for example, as training for each other in order to raise their experience and professionalism when interacting with the customers and suppliers.

3. The coverage of needs mentioned in the new CVP should be re-analyzed on a bigger sample in order to find potential discontinuities. After this analysis, these discontinuities must be addressed using

complementary suppliers. It could make another step from the list of steps in the Action plan.

4. The current state of the warehouse also needs to be discussed. Products that are not included in the needs of the new CVP must be gradually eliminated from the stock. A possible remaining stock could be re-arranged to be used in spare parts, transmissions, gears and gearboxes and engines. The new stock should include such spare parts that have high churn rate as well as products that are not specific to addressing only single customer needs.

5. The capabilities of the maintenances facilities and the staff competences need to be further researched and mapped. The maintenance must be capable of providing aftersales service for spare parts, transmissions, gears and gearboxes, drives and engines. Besides the aftersales, staff also needs to be capable of providing assembly services for transmissions, gears and gearboxes as well as engines.

6. Another step in the action plan could be in renewing the marketing materials to suit the new CVP. Brochures, presentations, company website and Facebook pages need to be updated, which could be done with the help of the marketing department provided by the case company group. The outline for the marketing material should be based on addressing the needs, needs characteristics and qualities of customers mentioned in the new CVP. The marketing materials could be developed as a joint effort of the sales, purchasing and engineering efforts.

7. Simultaneously, the sales staff need to start sharing the case company department new CVP with the customers in the Finnish mobile power transmission market. This should be done by being in contact with the customers by mail, e-mail, phone and visits using the latest versions of marketing material provided by the case company group marketing department.

These steps need to be implemented in order to succeed with the new CVP which will make the case company department able to differentiate from competition and guarantee a good level of satisfaction for its customers. It will also give a good opportunity to improve its sales and profitability of the department, compared to the use of the current CVP. With

the validation of the CVP and the added complimentary needs, the department can rely on a focused CVP aimed towards higher results in its focus customer group.

6.3 Evaluation

This Section discusses how the end result can be evaluated based on the objectives set for this Thesis, as well as validity and reliability if research in this Thesis.

6.3.1 Objective and End-Result

The objective set for this Thesis was to develop a focused CVP for the case company power transmission department. To reach the objective, first, the best practice of how to create a CVP in practice was investigated. Based on the literature review, a range of approaches was used and the steps were formulated in conducting the CVP analysis and development. The best practice used in this research combine some of these approaches which were then synthesized into the framework for the analysis of conditions and development of the CVP. Based on the analyses conducted in Section 4, the end result in Section 5 was a more focused CVP proposal compared to the current CVP. Thus, the objective set in the beginning can be said to be achieved.

The new CVP proposal is based on a fewer individual products and services, but compared to the current CVP, it has more potential to meet the needs of the intended customers better. This overall focus for certain customers and their needs is based on an approach that relies more on S-D logic, different from the traditional G-D logic, in which the company should differentiate from the competition by keep customers satisfied. The next step for the case company department will be to implement the new CVP into action. This will surely create its own challenges, but confidence among the staff in the willingness to change will play a key role in succeeding this.

6.3.2 Reliability and Validity

According to Yin (2003), research question needs to be formulated and answered in an objective way which will enable sufficient repeatability of research.

Based on Section 2.4, validity in this Thesis was ensured by using a wide range of data collection and analysis methods, with the data gathered from multiple sources and accurate data records based on archives, interview field notes and questionnaires that were summarized into the case study database. Bias was avoided whenever possible by utilizing the opinions of respondents and experts, as well as different internal company and customer stakeholders.

The small sample of interviews and questionnaires used in this research can create a challenge in terms of validity. However, based on a small number of companies operating in the focus customer group, the sample would be quite limited even if a large selection were asked. The validation of the initial CVP was also provided by one person from the case company only, the Department Manager, which can also be seen to affect validity.

Based on Section 2.4, special efforts were taken to ensure reliability through describing the process of data collection and analysis so that repeatability of this Thesis results could be achieved. However, due to the nature of this research and the related conditions, the end results will most probably vary, if the research is done again, due to time and market conditions change.

Overall, to better address reliability and validity, next researchers should aim for larger samples of opinions. The reliability of the research will then be improved, and the nature of this research may affect it in some other direction, too.

References

Arulselvan, A., Baourakis, G., Boginski, V., Korchina, E. and Panos, P. (2008). Analysis of Food Industry Market Using Network Approaches. *British Food Journal*. Vol. 110 No. 9, pp. 916-928.

Baxter, P. and Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. The Qualitative Report. Vol. 13 (4), pp. 544-599.

Brocke, H., Uebernickel, A. and Brenner, W. (2010). A methodical procedure for designing consumer oriented on-demand IT service propositions. *E-Bus Manage*. Vol. 9, pp. 283–302.

Brock Smith, J. and Colgate, M. (2007). Customer Value Creation: A Practical Framework. Journal of Marketing Theory and Practice. Vol 15 (1), pp. 7-23.

Coyne, K.P. and Sujit Balakrishnan (1996). Bringing discipline to strategy, *The McKinsey Quarterly*. No.4.

Dibb, S. and Wensley, R. (2000).Segmentation Analysis for Industrial Markets: Problems of Integrating Customer Requirements into Operations Strategy. *European Journal of Marketing*, Vol. 36 (1/2), 231-261.

González-Moreno, Á. and Sáez-Martínez, F. J. (2008). Rivalry and Strategic Groups: What Makes a Company a Rival?. *Springer Science+Business Media*. June, 261-285. – Vol. (12),

Grönroos, C. and Helle, P. (2011). Adopting a Service Logic In Manufacturing:Conceptual Foundation and Metrics for Mutual Value Creation. *Journal of Service Management.* Vol. 21 (5), 564-590.

Grönroos, C. (2008). Service Logic Revisited: Who Creates Value? And Who Co-creates? *European Business Review*. Vol. 20 (4), 298-314.

Grönroos, C. and Ravald, A. (2011). Service as Business Logic: Implications for Value Creation and Marketing. Journal of Service Management. Vol. 22 (1), 5-22.

Hax, A. and Wilde, D. (1999). The Delta Model: Adaptive Management For A Changing World. *MIT Sloan Management Review*. Winter Issue.

Helms, M. and Nixon, J. (2010). Exploring SWOT Analysis – Where Are We Now?. *Journal of Strategy and Management*. Vol. 3 No. 3, pp. 215-251.

Huhta, M., Vogt, K., Johnson, E. and Tulkki, E. (2013). Needs Analysis for Language Course Design: A Holistic Approach to ESP. *Cambridge University Press*. First Edition.

Högström, C.,Rosner, M., and Gustafsson, A. (2009). How To Create Attractive And Unique Customer Experiences: An Application of Kano´s Theory of Attractive Quality To Recreational Tourism. *Marketing Intelligence & Planning* Vol. 28 No. 4, pages 385-402.

Kano, N., Seraku, N., Takahashi, F. and Tsuji, S. (1984). Attractive quality and must-be quality. *Hintshitsu*, Vol. 14 No. 2, pp. 147-56.

Kaplan, R., Norton, P. (2004). The strategy map: guide to aligning intangible assets. *Strategy & Leadership*. Vol. 32, 5, pp. 10-17.

Karakaya, F. and Kerin, R. A.. (2007). Impact of Product Life-Cycle Stages on Barriers to Entry. *Journal of Strategic Marketing*. 15 (4), 269-280.

Keil, T. and Laamanen, T. (2011). When Rivals Merge, Think Before You Follow Suit. *Harvard Business Review*. Vol. 89 (12), 25-27.

Lanning, M. and Michaels, E. (1988). A Business Is a Value Delivery System. *McKinsey Staff Paper*. Volume 41, July.

Löfgren, M. and Witell, L., (2008). Two Decades of Using Kano's Theory of Attractive Quality: A Literature Review. *The Quality Management Journal. Vol.* 15, No. 1, pp. 59-76.

Matzler, K., Hinterhuber, H.H., Bailom, F. and Sauerwein, E. (1996). How to Delight Your Customer. *Journal of Product & Brand Management*. Vol. 5 No. 2, pp. 6-18.

Nair, A. and Filer, L. (2002). Cointegration of Firm Strategies Within Groups: A Long-Run Analysis of Firm Behavior in The Japanese Steel Industry. *Strategic Management Journal*. Vol. 24, 2, pp. 145-159.

Patton, M. (1990). Qualitative evaluation and research methods (2nd ed.). Newbury Park, CA: Sage.

Porter, M. (1998). Competitive Strategy: Techniques for Analyzing Industries and Competitors: *First Free Press Export Edition 2004.*

Spohrer, J., Maglio P.P., Bailey, J. and Gruhl, D. (2007). Steps Toward a Science of Service Systems. *IEEE Comput Soc* 40(1):71–77.

Stone, R. B., Kurtadikar, R., Villanueva, N. and Arnold, C. B. (2008). A Customer Needs Motivated Conceptual Design Methodology for Product Portfolio Planning. *Journal of Engineering Design*. Vol 19(6), 489-514.

Storbacka, K., CERS. (1997). Segmentation Based on Customer Proftability - Retrospective Analyses Retail Bank Customer Bases. *Journal of Marketing Management*, 1997, 13, 479-492.

Tontini, G. (2000). Identification of Customer Attractive And Must-Be Requirements Using A Modified Kano´s Method: Guidelines And Case Study. Quality Congress. *ASQ´s 54th Annual Quality Congress Proceedings*. Pages 728-734.

Van Raaij, E. M. (2005). The Strategic Value of Customer Profitability Analysis. *Marketing Intelligence&Planning.* Vol. 23(4), 372-381.

Vargo, S. L., Maglio, P. P. and Akaka, M. A.(2008). On Value and Value Co-creation: A Service Systems and Service Logic Perspective. European Management Journal. Vol. 26, 145-152.

Vargo, S. L., Lusch, R. F., and Akaka M. A. (2010). Advancing Service Science with Service-Dominant Logic: Clarifications and Conceptual Development. *Handbook of Service Science*, Part 2, 133-156.

Yin, R.K. (2009). Case Study Research: Design and Methods. SAGE Publications, Inc., USA.

Appendix 1.

Questions related to the SWOT of the Case Company Department

(Section 4.1)

1. What in your opinion are the case company department strengths? Try to also describe their effects.

2. What in your opinion are the case company department weaknesses? Try to also describe their effects.

3. What in your opinion are the case company department opportunities? Try to also describe their effects.

4. What in your opinion are the case company department threats? Try to also describe their effects.

Summary of the results (Based on interviews)

Section 4.1. Case company department SWOT analysis			
Event	Event 1: Interview (7.2.2013)	Event 2: Interview (7.2.2013)	Event 3: Interview (8.2.2013)
Participants	Customer Service Manager	Service Engineer	Department Manager
Documented	Field notes	Field notes	Field notes
Summary of strengths mentioned	Flat organization that enable flexible solutions. Open-minded and enthusiastic staff.	Small organization with low level of bureaucracy. Simple organization and clear job descriptions. Competent staff. Case company group structure enables recognition on the field.	Good products and strong brands. Experienced staff.
Summary of weaknesses mentioned	Small volume purchases. Wide portfolio overloads engineering and aftersales, thus affecting its quality. Dependence on	Small volume purchases that has left some suppliers unsatisfied. Fragmented offering affect the departments focus to dis-	Only few loyal suppliers. Traditional distributors as the case company department are not needed as they used to,

	shared functions offered by case company group	cover its full potential. Case company department is not differentiated from competition.	because of foreign import and laws against monopoly agreements. Hard to differentiate from competition.
Summary of opportunities	Broad customer knowledge from to gain additional business. High quality offering is appealing also for larger customers	Look for new products and services from different industries. Accept lower profit margins in order to gain additional sales.	Co-operation with customers must be deepened. In-house value adding. New products and services are needed to replace old mature ones. Co-operation with other departments inside the case company group.
Summary of threats	Small organization may hinder growth. Small volume purchases may lead suppliers to seek for new distribution channels. Due to globalization the competition with foreign operators can intensify.	Decrease in industry size. Low-cost import that will lower profits and intensify competition. Due to globalization the role of a traditional distributor can be seen unnecessary.	Customers outsource or offshore their production abroad. A small company can be forgotten by the customers completely.

Appendix 2.

Questions related to the SWOT of the case company department current CVP (Section 4.2)

1. What in your opinion are the current CVP´s strengths? Try to also describe their effects.
2. What in your opinion are the case company department weaknesses? Try to also describe their effects.
3. What in your opinion are the case company department opportunities? Try to also describe their effects.
4. What in your opinion are the case company department threats? Try to also describe their effects.

Summary of the results (Based on interviews)

Section 4.2. Case company department CVP SWOT analysis		
Event	Event 1: Interview (8.2.2013)	Internal documents: offers to customers (1.1.2006 to 30.3.2013)
Participants	Department Manager	500 pages
Documented	Field notes	Reports, records, offers to customers
Summary of strengths mentioned	**Ability to provide maintenance services for the products offered.** **Extensive knowledge of products and services used in the power transmission industry.**	
Summary of weaknesses mentioned	Product expertise suffers from too broad offering. Offering is based on mature products that are no longer extensively used. Frequent staff changes that have had effect on customer relationships.	
Summary of opportunities	Improvement of product knowledge.	

	Improve marketing and brad recognition. Focus on clarity to what to offer to the customers and what to expect as a result.	
Summary of threats	Low sales can lead to unsatisfied suppliers. Problems in procurement which is supplied by the case company may lead to unsatisfied suppliers. Suppliers seek for new distribution channels, in order to improve their sales.	

Appendix 3.

Questions related to Analysis of Business Dynamics of Industry (Section 4.3)

1. How would you describe a key company in an industry?

2. What companies fulfil your description given in question one?

3. How would you describe the differences of stationary, mobile and marine power transmission markets?

4. How would you describe the potential that stationary, mobile and marine power transmission markets possess for the case company?

5. How would you describe the current state and future trend of stationary, mobile and marine power transmission markets?

Summary of the results (Based on interviews)

Section 4.3. Business Dynamics of Industry: For Finnish stationary, mobile and marine markets				
Event	Event 1: Interview (11.2.2013)	Event 2: Interview (11.2.2013)	Internal documents: (2000-2013) Customer lists Competitor lists	Published sources: (2000-2013)
Participants	Department Manager	Sales Manager	3 Sources: Sentera database Folder archives Virtual archives	50 Sources: Annual reports Financial information Company classification lits Market size data Finnish and Foreign Macroeconomic data
Documented	Field notes	Field notes	Field notes	Field notes
Summary of Question 1	Large players in terms of turnover. Industry leaders	Industry leaders that show way to others		

Summary of Question 2	Company names were given based on : 1. Experience 2. List of 500 of the biggest companies in Finland 3. Finnish stock exchange	Company names were given based on: 1 Experience 2 Data from Union web sites 3 Turnover 4 Finnish stock exchange		
Summary of Point 3	Differences: 1 Stationary market is conservative and quite slow in doing changes 2 Mobile market is the most versatile of the three markets 3 Marine market has very specialized needs and high in bureaucracy	Differences: 1 Stationary market consists of mid-sized or large companies that tend to be slow and high in bureaucracy 2 Mobile market consists of small and mid-sized companies that are agile and fast in decision making 3 Marine market consists of all sizes of companies that are restricted by government rules and regulations		
Summary of Question 4	Potential: 1. Small. Stationary market is a mature market with lot of competition. Potential is in decline and shifting to aftersales. 2. High. Mobile market was seen to be less competitive as stationary and worthwhile investi-	Potential: 1. Small. Stationary market is mature 2. High. Mobile market is divided to submarkets and not so competitive as stationary 3. Unknown. Marine market could possess potential, but needs further		

	gating. 3. Unknown. Marine market would need research to get to know the potential.	investigating		
Summary of Question 5	Current state and future trend: 1. Stationary - Not good 2. Mobile - Interest-ing 3. Marine - Un-known	Current state and future trend: 1. Stationary - Not good 2. Mobile - Most interesting 3. Marine - Un-known		

Questions related to Analysis of Business Dynamics of Industry to use when analysing archives. (Step 3, Section 4.3)

Questions are open-end questions used in an informal interview type, aimed to obtain answers how Porter´s five forces affect the market.

I. Bargaining Powers of Buyer And Supplier, Threat of Substitutes:

Relating to concentrated purchases

How is the buyer-supplier market in relation to each other, meaning are the purchases concentrated or not? – Why is it so?
Where are purchases made, locally or from abroad?
Why they are located as they are?

Market dominated by few players

How to see if market is dominated by few players?
Where do the players come from?
Why the market is or is not dominated by few players?

Large volume purchases

How does the volume or amount of purchase correspond with each other between the researched markets?
Why the volume of purchase is as it is?

Price and profit

How is price in relation with profit?
Why the relation is as it is?
Where does price matter most?
Where does profit matter most?

Standard/differentiated needs

How completely is the customer need facilitated?
Where do the needs originate from?
Why the need is standard or differentiated?

Switching costs

How do switching costs affect the market?

Need of quality and function

How quality and function are conceived in the market?
Why it is conceived as it is?
Where does it have most effect?

Need to contend with substitute products

How to identify if substitutes exist?
Why substitutes exist or not?

Niche or low importance market to incumbents

How to define a niche market?
Why some markets are seen more important than others?

II. Threat of Entrant:

INCUMBENTS STRUCTURAL ADVANTAGES

Economies of scale

Why the economies of scale exist? How do they operate? Where do they aim?

Incumbents with proprietary technology

Why proprietary technology is needed? How does it affect entrants?
Where can an entrant obtain the technology?

Incumbents with absolute cost advantages

Why do cost advantages exist? How they are achieved?

Incumbents with superior processes

Why the processes are better than others? How are they managed?

Incumbents with cost advantages due to experience

How this advantage presents itself?

Why does experience have an effect to gain advantages?

Accessibility to distribution channels

How to access to distribution channels?

Why these channels are used?

Trade secrets held by competitors

How to spot a trade secret?

Why do they exist?

Where they exist?

Incumbents possessing strategic raw materials

How to spot strategic raw materials?

Incumbents access to raw materials

How to access raw materials?

Where do they exist?

Customer switching costs

Where do the switching costs have the most impact?

Incumbents with government subsidies

How do government subsidies affect the market?

Why the subsidies exist?

INCUMBENTS MARKET STRENGTH

Government policies

How does government see the market?

Why the legislation is as it is?
Where does it affect?

Magnitude of market shares held by incumbents

How are the market shares divided? Why are they divided as is? Where does this originate?

Number incumbents on the industry

How will the market react to an entrant?
Why the number of incumbents is as it is?

Customer loyalty

How easy will it be for an entrant to gain its position on the market?
Why customer loyalty affects new entrants?

Brand identification

How important are brands considered in the market?
Why is it important?

High profit rates earned by incumbents

Why profit rates are high?

Known history of retaliation

Why would the market retaliate?
How would it retaliate?

Attractivity of the market

Why the market is considered attractive?
How does this show?

INCUMBENTS NEEDED FINANCIAL INVESTMENTS

Facilities

Why facilities are needed?

Marketing efforts

How others market themselves? Where do they market themselves? Why through certain channels?

III. Intensity of Rivalry Among Existing Competition

Price competition

How to identify signs of price competition?

Advertising battles

Where to find signs of advertising battles?

Why are these battles fought?

How are they fought?

Numerous equally balanced competitors

How to compare the competitors?

Why the result is as it is?

Where is the competition situated?

Slow industry growth

How to be able to see if industry growth is slow?

Why is it slow?

High fixed or storage costs

How to define these costs?

Why are they high?

Where do the costs originate?

Lack of differentiation or switching costs

How differentiated the competitors are between each other?

How to compare the differences?

Where do the switching costs show up?

Capacity augmented in large increments

Why capacity is augmented in large increments?

How is it done?

Where does it occur?

Diverse competitors

Why competition is diverse?

How to measure diversity?

Where does it occur?

High strategic stakes

Why the stakes are high?

How the stakes are formed?

Where can it be observed?

High exit barriers

How the barriers are formed?

Why the barriers are high?

Where are they located?

Shifting rivalry

Why is the rivalry shifting?

How to observe it?

Technological innovation

Why others possess technological innovations?

Where do they come from?

Appendix 4.

Focus Customer Group Analysis (Step 3, Section 4.4)

Questionnaire to gain information from inner company stakeholders relating to focus customer group total profitability.

Question 1. Can you shortly describe why the transaction intensity (Sales divided by sum amount of number of purchase orders) is lower than average for the below customers?

Customer	Answer
Customer 1	
Customer 2 Customer 3 Customer 4 Customer 5 Customer 6 Customer 7 Customer 8	

Question 2. Can you shortly describe why the transaction intensity (Sales divided by sum amount of number of purchase orders) is higher than average for the below customers?

Customer	Answer
Customer 9	
Customer 10 Customer 11 Customer 12 Customer 13 Customer 14 Customer 15 Customer 16 Customer 17 Customer 18	

We offer some customers supportive sales and marketing functions that are assumed to affect customer total profitability.

Question 3. Can you describe what these supportive functions are? Then evaluate them by scale of one to five by how much time and attention they require? (one meaning very little and five meaning very much)

	SCALE (from 1 to 5)
1	----------
2	----------
3	----------
4	----------
5	----------
6	----------
7	----------

… If space runs out, continue on the back of this paper.

Question 4. Can you describe why they are needed in overall?

_____

_____

_____

Question 5. What of the supportive sales and marketing functions you just listed do these customers need to fulfil what you stated in question number 4?

Customer	Supportive sales and marketing functions needed
Customer 1	
Customer 2	
Customer 3	
Customer 4	
Customer 5	
Customer 6	
Customer 7	
Customer 8	
Customer 9	
Customer 10	
Customer 11	
Customer 12	
Customer 13	
Customer 14	
Customer 15	
Customer 16	
Customer 17	
Customer 18	

Question 6. Loyalty is also considered to affect the customer total profitability. How would you describe a loyal customer in your own words?

_____

_____

_____

Question 7. How would you consider the below customers fulfil the description of a loyal customer based on your answer in question number 5? (Mark number one after a customer if you think that they fulfil your description)

Customer	If loyal considering your answer to Question 5, mark number "1"
Customer 1	
Customer 2	
Customer 3	
Customer 4	
Customer 5	
Customer 6	
Customer 7	
Customer 8	
Customer 9	
Customer 10	
Customer 11	
Customer 12	
Customer 13	
Customer 14	
Customer 15	
Customer 16	
Customer 17	
Customer 18	

Thank You!

Summary of the results (Based on interviews)

Section 4.4. Focus Customer Group Analysis: Mobile market				
Event	Event 1: Interview (15.3.2013)	Event 2: Interview (15.3.2013)	Event 2: Interview (25.3.2013)	Internal documents: (2000-2013) Customer lists
Participants	Customer Service Manager	Service Engineer	Sales Manager	1 Sources: Sentera database
Documented	1. Field notes 2. sales_mobile 112012_832013.xls	1. Field notes 2. sales_mobile 112012_832013.xls	1. Field notes 2. sales_mobile 112012_832013.xls	Reports, records, offers to customers
Summary of Question 1	Low intensity is result of quantity and price per purchase order	Low intensity, is result of customers that have either series or project based sales	Sales per purchase order are large either because it includes orders of multiple items or an expensive one-off	
Summary of Question 2	High intensity is a result of need for single or series inexpensive items or aftersales	Result of inexpensive item sales or aftersales	Inexpensive prototype, one-off or aftersales purchase orders	
Summary of Question 3	Order follow-up Purchasing activities Product specification Logistics Aftersales support	Technical support Keeping stock Advertising Project development Projects Solution troubleshooting	Quotations Technical specifications Customer visits Aftersales	
Summary of Question 4	Better customer service leads to increase in sales	Customers do not have the resources	To keep customers satisfied in order to achieve sales	
Summary of Question 5	Results in sales_mobile	Results in sales_mobile	Results in sales_mobile	

	112012_832013.xls	112012_832013.xls	112012_832013.xls	
Summary of Question 6	Places orders Accepts price increases Plans their needs well in advance	Rely on case company solutions and do not actively seek for low-cost components from other channels	Customer trusts its provider and is willing to co-operate for common good	
Summary of Question 6 *Summary of Question 7*	One third of customers were considered to be loyal. Results in Results in sales_mobile 112012_832013.xls	Over two third of customers were considered to be loyal. Results in Results in sales_mobile 112012_832013.xls	Over two third of customers were considered to be loyal. Results in Results in sales_mobile 112012_832013.xls	

Microsoft Excel -laskentataulukko

sales_mobile 112012_832013.xls

Appendix 5.

Customer Needs Analysis (Section 4.5)

Interview questions related to identifying the needs and their quality attributes. In Finnish. (Section 4.5.1)

Toimittajan ja asiakkaan välinen kaupanteko voidaan käsittää palveluna riippumatta siitä onko kaupanteon kohteena kiinteä tuote tai palvelu. Tämän haastattelun tarkoituksena on pyrkiä identifioimaan teidän yrityksenne tarpeet niin tuote, palvelu sekä kokonaispalvelun osalta. Haastattelun ja sitä seuraavan lomakkeen vastausten pohjalta pyrimme parantamaan omaa palveluamme teidän yritystänne kohtaan sekä saavuttamaan erottuvuutta muihin kilpailijoihin nähden.

1. Tietojeni mukaan hankitte meiltä seuraavia voimansiirto tuotteita x, x ja x. Voisitteko listata yleisesti, mitä muita voimansiirto tuotteita teillä on nykyisellään käytössä?

1.
2.
3.
4.
5.
6.
7.

2. Entä mille tuotteille edellä mainittujen lisäksi voisitte nähdä tarvetta tulevaisuudessa?

1.
2.
3.

3. Voisitteko luetella tuote kohtaisesti, mitkä ovat niitä ominaisuuksia joita arvostatte näiden valintaa tehdessänne?

	Ominaisuus 1	**Ominaisuus 2**	**Ominaisuus 3**	**Ominaisuus 4**	**Ominaisuus 5**	**Ominaisuus 6**	**Ominaisuus 7**
Tuote 1:							
Tuote 2:							
Tuote 3:							
Tuote 4:							
Tuote 5:							
Tuote 6:							
Tuote 7:							

Toimittajan ja ostajan välinen kaupanteko on prosessi, joka koostuu erilaisista yritysten ja niiden työntekijöiden välisistä vuorovaikutuksista. Näitä ovat esimerkiksi: myyjä/ostaja, taloushallinto/ostaja tai jälkimarkkinointi/huolto.

4. Voisitko listata, mitkä ovat ne teidän ja toimittajienne väliset vuorovaikutukset joita te kohtaatte?

1.

2.

3.

4.

5.

6.

7.

5. Voisitteko luetella, mitkä ovat sellaisia ominaisuuksia, joita arvostatte kunkin mainitsemanne vuorovaikutuksen (Vv) osalta?

	Ominaisuus 1	Ominaisuus 2	Ominaisuus 3	Ominaisuus 4	Ominaisuus 5	Ominaisuus 6	Ominaisuus 7
Vv 1:							
Vv 2:							
Vv 3:							
Vv 4:							
Vv 5:							
Vv 6:							
Vv 7:							

Tuotteiden saapuessa teille, niiden käyttöönotto niin sanotusti lattiatasolla edellyttää teitä hyödyntämään työvoimaanne vaiheittain ja näin samalla lisäämään tuotteen arvoa. Esimerkkinä vaikkapa uuden älypuhelimen ostaminen:
Vaihe 1. Puhelimen haku - Vaihe 2. Purkaminen laatikosta – Vaihe 3. SIM kortin asettaminen – Vaihe 4. Lataaminen – Vaihe 5. Puhelimen käynnistäminen.

6. Voisitko kuvailla aikaisemmin mainitsemiesi tuotteiden osalta ja tuotekohtaisesti, mitä kuvatunlaisia vaiheita niiden lopullinen käyttöönotto yrityksessänne edellyttää?

	Vaihe 1	**Vaihe 2**	**Vaihe 3**	**Vaihe 4**	**Vaihe 5**	**Vaihe 6**
Tuote 1:						
Tuote 2:						
Tuote 3:						
Tuote 4:						
Tuote 5:						
Tuote 6:						
Tuote 7:						

7. Hankitteko jo nykyisin jonkin mainitsemistasi vaiheista valmiina palveluna?
8. Jos mahdollista, olisitteko halukas hankkimaan jonkin näistä vaiheista valmiina palveluna ja jos olisitte niin minkä tai mitkä?
Kiitos!

Summary of the results (Based on interviews)

Section 4.5. Customer Needs Analysis. Interview questions related to identifying the needs and their quality attributes. Summarized in English.				
Event	Event 1: Interview (3.4.2013)	Event 2: Interview (3.4.2013)	Event 3: Interview (4.4.2013)	Event 4: Interview (4.4.2013)
Participants	Aftersales Manager	Purchasing Manager	Sales Manager	Chief of Engineering
Documented	Field notes	Field notes	Field notes	Field notes
Summary relating to questions 1,2 and 3	Products: Cardan shafts, slewing rings, pump adapters, axles, diesel engines, engine rubber supports, transmissions, tires, rims, bearings, angular gears, planetary gears, sensors (inductive, high frequency), rotating couplings, tracks, conveyors. Characteristics: Delivery time, quality, competitive pricing, buffer stock, aftersales network, spare parts, durability, product portfolio.	Products: Engines, axles (2-wheel), bogie axles (4-wheel), transfer cases, planetary gears, tooth gears, pump drives. Characteristics: Price, durability, reliability of delivery, aftersales, technical support, high static load bearing capability, used by others.	Products: Cardan shafts, belt drives, SAE-DIN power take-offs (suitable for all terrain vehicles, cars and trucks), planetary gears, complete diesel and gasoline engine packages. Characteristics: Price, delivery time, product portfolio, measurements, technical efficiency, fuel consumption, fuel tank size, good brochures, easiness and speed of aftersales.	Products: Jaw couplings, pump adapters, cardan shafts, power take-offs (per automotive and truck manufacturer brand), bearings. Characteristics: Reliability, price, known western brand, technology, delivery time, product portfolio.

Summary relating to questions 4 and 5	Interactions: Buyer-aftersales, buyer-sales, buyer-logistics, buyer-financial department. Qualities: Competent staff, Expert knowledge, what is started will be finished, responsibility.	Interactions: Buyer-buyer, buyer-aftersales, buyer-supplier representative. Qualities: Technical competence, technical support, price knowledge, 3D drawings.	Interactions: Sales-sales, sales-aftersales. Qualities: Fast answers, quality of answers, extensiveness of answers.	Interactions: Engineering-sales, engineering-designer. Qualities: Does not under estimate, quotations that hold what is promised, technical competence.
Summary relating to questions 6,7 and 8	Stages: Fastening, welding of support bearing, drilling additional holes, adding oil, adding connectors. Outsourced: Nothing. Willingness to acquire service: Engine with pump adapter and rubber supports.	Stages: Typing in a purchase order, receiving goods, shipment inspection, shelving, mounting. Outsourced: Engines come ready assembled. Willingness to acquire service: Electrical wiring is already outsourced.	Stages: Dismantling from box, fastening, painting, electrical wiring, hosing,. Outsourced: Painting, steel frames. Willingness to acquire service: Ready electrical wiring and connection boxes.	Stages: Fastening, electrical wiring, painting, engine assembling. Outsourced: Painting Willingness to acquire service: Diesel engines could come ready assembled with fluids inside.
Event	Event 5: Interview (4.4.2013)	Event 6: Interview (4.4.2013)	Event 7: Interview (9.4.2013)	Event 8: Interview (9.4.2013)
Participants	Purchasing	Sales Manager	Purchasing	Purchasing

	Manager		Manager	Manager
Documented	Field notes	Field notes	Field notes	Field notes
Summary relating to questions 1,2 and 3	Products: Slewing rings, depends on customer wishes. Characteristics: End customer has chosen the product and no need to discuss about characteristics.	Products: Brand X spare parts, Brand Y spare parts, heavy machinery spare parts in general. Characteristics: Fast delivery, good customer service.	Products: Slewing rings, planetary gears (assembled with brake and hydraulic motor), chain drives, chains (all kinds), differential gears (with high power to weight efficiency), tires, rims. Characteristics: Price, quality, delivery time, ready assembled, high power to weight ratio.	Products: Diesel engines, pump drives, flexible couplings, automatic transmissions, differential gears, planetary gears, track drives, axles (80 ton). Characteristics: Durability, aftersales coverage, delivery time, product portfolio.
Summary relating to questions 4 and 5	Interactions: Buyer-logistics, buyer-sales. Qualities: Clear order confirmations, notice if there is a delay.	Interactions: Sales-sales, sales-technical support, sales-logistics. Qualities: Overall expertise, speed.	Interactions: Buyer-sales Qualities: Open discussion on all levels, openness, preciseness.	Interactions: Buyer-sales, buyer-aftersales, buyer-technical support (engineering and related documents). Qualities: Reachability, technical competence, knowledge about customers products.

Summary relating to questions 6, 7 and 8	Stages: Receiving goods, warehousing, dismantling from box, mounting. Outsourced: Nothing. Willingness to acquire service: Buffer stock.	Stages: Selling, transporting, mounting (not always if part is shipped abroad). Outsourced: Transportation. Willingness to acquire service: Nothing.	Stages: Shelving, warehousing, adding oil, initial assembling, mounting, end assembling. Outsourced: Tires are put on rims by another company. Willingness to acquire service: Tires and inner tube on rims, planetary gear equipment assembling.	Stages: Dismantling from box, removal of storage grease, mounting, painting, small parts assembling, check of oil level. Outsourced: Painting of flexible coupling, fuel and oil tanks come readily assembled. Willingness to acquire service: Painting of track drives.

Summary of needs analysis interviews 2(

Summary of needs analysis interviews 2013.xls

Appendix 6.

Customer Needs Analysis (Section 4.5)

Questionnaire regarding qualities of characteristics of needs. Original questionnaire done in Finnish, questions translated. (Subsection 4.5.2)

Questions related to online questionnaire presented for focus customer group company stakeholders. Questions based on findings in subsection 4.5.1.

1. **Questions related to Axles**

1. How do you feel that the delivery time for axles is short?
2. How do you feel that the delivery time for axles is long?
3. How do you feel, if the axle is low priced?
4. How do you feel, if the axle is high priced?
5. How do you feel about the wide portfolio of the axle provider?
6. How do you feel about, if the axle provider portfolio is limited?
7. How do you feel that the axle provider has a working aftersales network?
8. How do you feel that the axle provider does not have a working aftersales network?
9. How do you feel about that the axles are modern in technology?
10. How do you feel that the axles are not modern in technology?

2. **Questions related to Engines**

11. How do you feel that the delivery time for engines is short?
12. How do you feel that the delivery time for engines is long?
13. How do you feel, if the engine is high in quality?
14. How do you feel, if the engine is low in quality?
15. How do you feel, if the engine is low priced?
16. How do you feel, if the engine is high priced?
17. How do you feel about the wide portfolio of the engine provider?
18. How do you feel about, if the engine provider portfolio is limited?
19. How do you feel that the engine provider has a working aftersales network?
20. How do you feel that the engine provider does not have a working aftersales network?
21. How do you feel about that the engines are modern in technology?
22. How do you feel that the engines are not modern in technology?

3. **Questions related to Transmissions**

23. How do you feel that the delivery time for transmissions is short?
24. How do you feel that the delivery time for transmissions is long?
25. How do you feel, if the transmission is low priced?
26. How do you feel, if the transmission is high priced?
27. How do you feel about the wide portfolio of the transmission provider?
28. How do you feel about, if the transmission provider portfolio is limited?
29. How do you feel that the transmission provider has a working aftersales network?
30. How do you feel that the transmission provider does not have a working aftersales network?
31. How do you feel about that the transmissions are modern in technology?
32. How do you feel that the transmissions are not modern in technology?

4. **Questions related to Wheels**

33. How do you feel that the delivery time for wheels is short?

34. How do you feel that the delivery time for wheels is long?
35. How do you feel, if the wheel is high in quality?
36. How do you feel, if the wheel is low in quality?
37. How do you feel, if the wheel is low priced?
38. How do you feel, if the wheel is high priced?

5. Questions related to Bearings

39. How do you feel that the delivery time for bearings is short?
40. How do you feel that the delivery time for bearings is long?
41. How do you feel, if the bearing is high in quality?
42. How do you feel, if the bearing is low in quality?
43. How do you feel, if the bearing is low priced?
44. How do you feel, if the bearing is high priced?
45. How do you feel that the bearing provider has a working aftersales network?
46. How do you feel that the bearing provider does not have a working aftersales network?
47. How do you feel about that the bearings are modern in technology?
48. How do you feel that the bearings are not modern in technology?

6. Questions related to Gears and Gearboxes

49. How do you feel that the delivery time for gears/gearboxes is short?
50. How do you feel that the delivery time for gears/gearboxes is long?
51. How do you feel, if the gear/gearbox is high in quality?
52. How do you feel, if the gear/gearbox is low in quality?
53. How do you feel, if the gear/gearbox is low priced?
54. How do you feel, if the gear/gearbox is high priced?
55. How do you feel about the wide portfolio of the gear/gearbox provider?
56. How do you feel about, if the gear/gearbox provider portfolio is limited?
57. How do you feel that the gear/gearbox provider has a working aftersales network?
58. How do you feel that the gear/gearbox provider does not have a working aftersales network?
59. How do you feel about that the gears/gearboxes are modern in technology?
60. How do you feel that the gears/gearboxes are not modern in technology?

7. Questions related to Couplings

61. How do you feel that the delivery time for couplings is short?
62. How do you feel that the delivery time for couplings is long?
63. How do you feel, if the coupling is high in quality?
64. How do you feel, if the coupling is low in quality?
65. How do you feel, if the coupling is low priced?
66. How do you feel, if the coupling is high priced?
67. How do you feel about the wide portfolio of the coupling provider?
68. How do you feel about, if the coupling provider portfolio is limited?
69. How do you feel about that the couplings are modern in technology?
70. How do you feel that the couplings are not modern in technology?

8. Questions related to Cardan shafts

71. How do you feel that the delivery time for cardan shafts is short?
72. How do you feel that the delivery time for cardan shafts is long?
73. How do you feel, if the cardan shaft is high in quality?
74. How do you feel, if the cardan shaft is low in quality?
75. How do you feel, if the cardan shaft is low priced?
76. How do you feel, if the cardan shaft is high priced?

77. How do you feel about the wide portfolio of the cardan shaft provider?
78. How do you feel about, if the cardan shaft provider portfolio is limited?

9. Questions related to Drives

79. How do you feel that the delivery time for drives is short?
80. How do you feel that the delivery time for drives is long?
81. How do you feel, if the drive is low priced?
82. How do you feel, if the drive is high priced?
83. How do you feel about the wide portfolio of the drive provider?
84. How do you feel about, if the drive provider portfolio is limited?
85. How do you feel that the drive provider has a working aftersales network?
86. How do you feel that the drive provider does not have a working aftersales network?

10. Questions related to Service and Spare parts

87. How do you feel that the delivery time for service/spare parts is short?
88. How do you feel that the delivery time for service/spare parts is long?
89. How do you feel about the wide portfolio of the service/spare parts provider?
90. How do you feel about, if the service/spare parts provider portfolio is limited?
91. How do you feel that the service/spare parts provider has a working aftersales network?
92. How do you feel that the service/spare parts provider does not have a working aftersales network?

Summary (Based on questionnaire)

Section 4.5. Customer Needs Analysis. Questionnaire results related to identifying qualities of characteristics of needs. Summarized in English.			
Event	Event 1: Questionnaire (15.4.2013)	Event 2: Questionnaire (15.4.2013)	Event 3: Questionnaire (15.4.2013)
Participants (Focus customer group company stakeholder)	Anonymous	Anonymous	Anonymous
Documented	Google drive / excel database	Google drive / excel database	Google drive / excel database
Summary relating to Axles		O) Delivery time (M) Price (M) Portfolio (A) Aftersales (M) Technology	
Summary relating to Engines		(O) Delivery time (M) Quality (M) Price (M) Portfolio (O) Aftersales (O) Technology	(A) Delivery time (M) Quality (I) Price (A) Portfolio (M) Aftersales (I) Technology
Summary relating to Transmissions		(O) Delivery time (O) Price (M) Portfolio (O) Aftersales (M) Technology	
Summary relating to Wheels		(O) Delivery time (O) Quality (O) Price	(A) Delivery time (M) Quality (A) Price
Summary relating to Bearings	(M) Delivery time (M) Quality (A) Price (O) Aftersales (M) Technology	(O) Delivery time (O) Quality (O) Price (O) Aftersales (O) Technology	

Summary relating to Gears and Gearboxes		(O) Delivery time (O) Quality (O) Price (M) Portfolio (O) Aftersales (O) Technology	
Summary relating to Couplings		(O) Delivery time (O) Quality (O) Price (O) Portfolio (O) Technology	
Summary relating to Cardan shafts		(O) Delivery time (O) Quality (O) Price (O) Portfolio	
Summary relating to Drives		(O) Delivery time (O) Price (M) Portfolio (O) Aftersales	
Summary relating to Service and Spare parts		(O) Delivery time (M) Portfolio (O) Aftersales	(M) Delivery time (M) Portfolio (M) Aftersales

Case company department, Product

Case company department, Product and service portfolio questionnaire K2013.xls

Appendix 7.

Questions related to the validation of the initial CVP for the case company department (Section 5.2)

1. What is your initial impression when comparing the current CVP to the suggested initial CVP?

2. What do you feel about that it is focused on serving the needs of customers on mobile market and not on stationary or marine?

3. The initial CVP would exclude the following items that exit in current CVP: Air motors, retarders, cardan shafts, cross-units, slewing rings, industrial shock absorbers, couplings (tooth, decoupling, torque limiters, pump adapters), axles and winches. Would you see this as a problem? Describe.

4. How do you feel about the value adding effects related to fulfilling the customer needs? Is the case company department able to fulfil them? Describe.

5. How do you feel about the specifications set for sales-buyer, logistics-buyer and aftersales-buyer? Is the case company able to fulfil them? Describe.

6. In your opinion, is there something that must be included in the initial CVP proposal based on the current CVP? Describe

Summary of the results (Based on interview)

Validation of the Initial CVP	
Event	Event 1: Interview (23.4.2013)
Participants	Department Manager
Documented	Field notes
Summary of answer to Question 1	Part of needs mentioned in CVP was known to exist and some parts are already present in current CVP. Result was not surprising except for the fact that drives, as well as, service and spare parts are present. Drives were seen as highly competitive, but service and spare parts seemed interesting. From characteristics, aftersales function needs to be improved and warehousing needs to be discussed internally with CEO. Multiple suppliers should be used, but only to improve the products or service coverage.

Summary of answer to Question 2	All markets were seen quite similar, however the marine market is more differentiated. Mobile market was seen demanding, but the CVP proposal could also be used, if needed, for stationary and marine markets.
Summary of answer to Question 3	Based on the initial CVP the products and services are as they should be. Still, slewing rings, cardan shafts, pump adapters and decoupling clutches were seen as good complimentary products that should be included in the final CVP.
Summary of answer to Question 4	Multiple suppliers must be used to improve product/service coverage. Another way might be to use a leading product added with supportive products. However, this was seen challenging in practice. Warehousing is challenging, because Case Company Group is trying to lower fixed expenses. However, if warehousing is a necessity then the case company department must keep stock. Aftersales was seen important, but staff needs technical training before implementation. Assembly services are good supportive function.
Summary of answer to Question 5	Improvement is needed on every level, but basic knowledge is already present. Technical capabilities and application experience were seen important. The staff needs to be the experts in their field.
Summary of answer to Question 6	1.Slewing rings 2. Cardan shafts 4. Pump adapters 4. Decoupling clutches Slewing rings are a complementary product for planetary slewing transmissions. Cardan shafts were seen as a complimentary product for gears and gearboxes and engines. Pump adapters and decoupling clutches were seen as complimentary products for engines.