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LAPPEENRANTA UNIVERSITY OF TECHNOLOGY  
School of Business and Management

*Master's Thesis*

## **Value-based selling of column connection solution as part of project sales**

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Lahti 18.4.2016

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## ABSTRACT

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**Subject:** Value-based selling of column connection solution as part of project sales

**Year: 2016**

**Place: Lappeenranta**

Master's Thesis. Lappeenranta University of Technology.

86 pages, 10 figures, 13 tables and 1 appendix.

Examiners(t): Professor Anne Jalkala, Postdoctoral Researcher Joonas Keränen

**Keywords:** Customer value, value-based selling, third party influencers, column connection solution

The objective of this study was to find out how third party influencers can facilitate value-based selling in a network and how suppliers should aim to impact on these third party influencers to facilitate value-based selling. The study considers construction industry, selling the column connection solution and third party influencers. Third party influencers examined in this study were structural designers. The study also aims to find out structural designers' value drivers and the differences between the market areas that this study related to.

The theoretical part of the study focuses on two separate areas. The first part of the theory focuses on a value-based selling concept: what it is, what it requires and what are the main barriers for value-based selling. The second part of the theory examines value creation in networks. The present knowledge over value creation in networks and different network actors are presented. Project marketing is also discussed briefly because this study's topic, which is highly related to project business.

The results reveal structural designers' value drivers considering the usage of the column connection solution and present ways how suppliers should aim to impact structural designers to facilitate value-based selling. The main result of the study indicates that third party influencers can have a positive impact on facilitating value-based selling. Structural designers are communicating more or less with all the salient actors in different project phases and they can act as sponsors to support the sales of Peikko's column connection solution and promote solution to other actors involved to the project. This requires that structural designers can understand the actual benefits of how the solution can improve their and their customers' business.

## TIIVISTELMÄ

**Tekijä: Mikael Kiuru**

**Työn nimi:** Pilarikenkäliitoksen arvomyynti osana projektimyyntiä

**Vuosi: 2016**

**Paikka: Lappeenranta**

Diplomityö. Lappeenrannan teknillinen yliopisto.

86 sivua, 10 kuvaa, 13 taulukkoa ja 1 liite.

Tarkastaja(t): Professori Anne Jalkala, Tutkijatohtori Joonas Keränen

**Hakusanat:** Asiakasarvo, arvomyynti, rakennesuunnittelija, pilarikenkäliitos

Työn päämääränä oli selvittää, miten kolmannen osapuolen vaikuttajat verkostossa voivat fasilitoida arvomyyntiä ja miten toimittajan tulisi pyrkiä vaikuttamaan kolmannen osapuolen toimijoihin. Työ käsittelee rakennusalaan ja pilarikenkäliitoksen myyntiä sekä erityisesti rakennesuunnittelijoita, jotka toimivat verkostossa toimittajan näkökulmasta kolmantena osapuolena. Työ pyrkii selvittämään lukijalle myös rakennesuunnittelijoiden arvoajurit sekä markkina-alueiden väliset erot, joita tämä tutkimus käsitteli.

Työn teoriaosuus käsittelee kahta eri osa-aluetta. Ensimmäinen osa-alue käsittelee arvomyyntiä ja pyrkii selvittämään lukijalle: mitä se on, mitä se vaatii ja mitkä ovat mahdollisia esteitä arvomyynnille. Teorian toinen osa-alue käsittelee arvon luontia verkostossa ja eri toimijoiden rooleja verkostossa sekä erityisesti kolmannen osapuolen vaikuttajia. Osio käsittelee myös projektimarkkinointia ja -liiketoimintaa, jotka liittyvät työn aiheeseen hyvin vahvasti.

Työn tulokset selvittävät lukijalle rakennesuunnittelijoiden arvoajurit koskien pilariliitosratkaisuiden käyttöä ja miten toimittajan tulisi pyrkiä vaikuttamaan rakennesuunnittelijoihin heidän arvoajureiden pohjalta fasilitoidakseen arvomyyntiä. Työn päälöydös indikoi, että erilaisissa verkostoissa rakennesuunnittelijat pystyvät vaikuttamaan muihin toimijoihin tukien arvomyyntiä. Rakennesuunnittelijat kommunikoivat projektin aikana muiden tärkeiden osapuolten kanssa ja voivat ehdottaa Peikkon ratkaisun käyttöä heille fasilitoiden arvomyyntiä. Tämä edellyttää, että rakennesuunnittelijat ymmärtävät ratkaisun edut, jotka voivat kehittää heidän sekä myös heidän asiakkaansa liiketoimintaa.

## ACKNOWLEDGEMENTS

In academic literature customer perceived value is typically defined as a trade-off between the benefits and sacrifices of an offer. If I would compare this project to an offer and myself to a customer, the sacrifices of this project were those many hours, days and long evenings of my time that I spent on my computer writing, time that could have been invested to hobbies or social life. However, this project and the last six months provided me immeasurable amount of knowledge and valuable experiences. Now after this project I can conclude that the value of the past six months has been worth of every sacrifice that I have done for this project.

First, I would like to thank Peikko Group who has provided me an opportunity to work for them, and also a chance to perform this Master's Thesis. I would like to address my special thanks to Petri Suur-Askola and Molli Nyman who participated to this study as instructors. I want especially to thank Petri for the time that he invested for me and shared his valuable knowledge during longitudinal discussions that we had throughout this project. I would also like to thank Thomas Persson and Matthias Wölfel for hosting me and helping with this project by sharing their valuable knowledge and experiences with me.

I would like to thank our School of Business and Management, for providing high-quality teaching during the past five years, and my supervisor, Head of the School, Anne Jalkala for participating this project. I would like to express a special gratitude to the other supervisor of this Thesis', Joonas Keränen, for his excellent work and help during my Bachelor's Thesis and now for giving even more valuable help and guidance with this project.

I want also to thank all of my student fellows for unforgettable moments that we have shared during the last five years and friendships that will for sure last for the rest of our lives. Finally, the biggest thanks belongs to my family, and their help and support in the every decision of my life, and to Suvi. With your support and experiences that we have shared in the personal life this project felt a lot easier than it was.

One path has to come to its end and unforgettable student years in Lappeenranta are over now. It is time to open the next door in my life.

Lahti, April 18<sup>th</sup> 2016

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**LIST OF SYMBOLS AND ABBREVIATIONS**

VBS	Value-based selling
TCO	Total Cost of Ownership
B2B	Business-to-Business
CPV	Customer Perceived Value
DMU	Decision Making Unit
NGO	Non-Governmental Organization
S-D logic	Service Dominant Logic
D-U-C	Discontinuity Uniqueness Complexity- model

## INTRODUCTION

Competition in industrial markets has driven companies to change their actions during the last decades. There is a widespread agreement that customer value and creating it has become a key constituent to a firm's long-term survival and growth in competitive markets (Woodruff, 1997; Landrogez, Castro and Cepeda-Carrio, 2011; Töytäri and Rajala 2015). Thus, concepts related to delivery of superior customer value which had been recognized to influence positively on firms' profitability, such as value-based selling, have been in a salient role in business-to-business (B2B) marketing literature in the near past (e.g. Terho et al., 2012; Töytäri and Rajala, 2015). In project and solution business these phenomena have been in an even more central role where purchase processes are longer compared to ordinary products. Procurement knowledge and skills have also developed in the past and buying has continuously become better structured, more sophisticated, and more professional during the last decades (Hunter, Bunn, and Perreault, 2006). This also highlights the importance of value-based selling in the academic literature and in practice.

Academic literature has widely discussed networks and the importance of different actors in the network (e.g. Cova and Salle 2008; Lusch, Vargo and Tanniru, 2010; von Meding et al., 2013). Stakeholders, non-governmental organizations and third parties around the supplier and customer have been recognized to have a significant impact on different networks (e.g. Cova and Salle 2008; Lusch et al., 2010; Skaates, Tikkanen, and Lindblom, 2002; von Meding et al., 2013). Literature has also discussed approaches to value creation in networks (Jaakkola and Hakanen, 2013; Cova and Salle, 2008). Various businesses include many actors and therefore value creation in these businesses often takes place in broader networks (Terho et al., 2015) and involves a network of different stakeholders inside customer firms (von Meding et al., 2013; Lusch et al., 2010). Hence, value creation in networks is seen as an important action when companies are aiming to success in complex networks that include many actors (Jaakkola and Hakanen, 2013).

This study examines value-based selling in network context and investigates how third party influencers around customers and suppliers can facilitate value-based selling. The study also examines how suppliers should aim to affect these third party actors to facilitate value-based selling. This Thesis was conducted in cooperation with Peikko Group Corporation, which acts in construction business.

## **1.1 Research gaps**

Value-based selling approach has been exposed in literature by several authors. These authors have carried out studies in recent years considering value-based selling, practices of value-based selling and customer value assessment (e.g. Töytäri et al., 2011; Töytäri and Rajala, 2015; Töytäri, Rajala and Alejandro, 2015; Terho et al., 2012, 2015; Keränen and Jalkala, 2013, 2014). However, most of the current studies have been examining value-based selling between the supplier and customer. These studies have discussed topics such as dimensions, potential consequences, practices, capabilities and managerial tasks of value-based selling. Value-based selling in networks has been examined relatively less while most of the studies have emphasized to investigate phenomena between supplier and customer. It seems that value-based selling in networks and the impact of other actors to support or interrupt value-based selling have not been investigated in literature so far.

The roles of different actors been discussed and the impact of other actors besides supplier and customer have been investigated and discussed widely in the network literature (e.g. Cova and Salle, 2008; von Meding 2013). The impact of third parties and non-business actors has been discussed in the network context (e.g. Skaates et al; Jaakkola and Hakanen, 2013). Although third party roles exist in many different industrial networks, there is not much knowledge in literature about their effect on value-based selling concepts. However, in some industries, such as in construction and other heavy industries, they are located in central positions in different networks and they might have a significant impact on customers.

In construction industry structural designers are in central role during the planning phase of projects. Because of this Peikko has started to increase actions targeted to structural designers. Peikko has a non-monetary relationship with structural designers, which means that Peikko is providing different tools and services for structural designers but there is not a cash flow between Peikko and the structural designers. However, it seems that their role in a project network and their possibilities to facilitate sales have not been investigated in the past very deeply, rather the knowledge is based on common presumptions and opinions of different individuals. This situation creates an interesting gap for research; how third party roles who have a non-monetary relationship with the customers are affecting value-based selling in networks, and how suppliers can affect these third party roles to facilitate value-based selling. These gaps in the current knowledge and in academic literature create an area for research.

This study indicates that third party influencers are in a central role in construction projects and they have an impact on many other actors in project networks. Research revealed that third party influencers can have a positive effect on facilitating value-based selling in networks. They can support suppliers of solutions with their sales but it requires that third party influencers can realize the value that they can gain by using the solution and also understand the benefits how the solution can improve their customers business. Suppliers can affect third party roles to facilitate value-based selling. This requires identifying high potential actors and individuals, demonstrating how suppliers offering can improve third party influencers' business and reducing the risks that customers and their customers can face. Results of the study also indicates that influencing structural designers customer perceived value (CPV) and creating value in the network are important in order to gain positive facilitating effect.

## **1.2 Research questions and objectives**

This study examines value-based selling in a network context and investigates how third party influencers can facilitate value-based selling. In construction industry there are many parties during a project and many of these actors are in an important

role from Peikko's perspective. Structural designers were chosen to be investigated in this study because of their high involvement in the construction planning process. They are also actively using different suppliers' products and solutions in their daily work. The purpose of this study is to find out how structural designers can facilitate value-based selling of column connection solutions and how Peikko can affect structural designers to facilitate value-based selling of this solution. This topic was investigated in two market areas where Peikko has established sales units, in Sweden and in Germany. Research questions and objectives are presented in Table 1.

**Table 1** Research questions and objectives.

<b>Research question</b>	<b>Objective</b>
1. What are structural designers' value drivers related to column connection solutions usage in planning?	To understand what are structural designers' value drivers.
2. How can structural designers facilitate value-based selling of the column connection solution?	To understand how structural designers can facilitate value-based selling of the column connection solution.
3. How can Peikko affect structural designers to facilitate value-based selling of the column connection solution?	To find out different ways how Peikko can affect structural designers and their work to make them support selling of the solution.
4. What are the key differences in the market areas related to the use and sales of the column connection solution?	To find out the main differences of the market areas and current problems in sales of the column connection solution.

### **1.3 Structure of the thesis**

This study aims to examine value-based selling in a network context and pursues to fulfill the gap that currently exists in academic literature. This thesis is organized as follows. The next two chapters provide the theoretical basis for the thesis. The main focus of the theoretical part of this study is on value-based selling and facilitating value creation in networks. The fourth chapter presents the methodology

of the study and the case company. That chapter also illustrates a typical project in the construction industry and typical actors participating in projects. The aim of that chapter is also to give additional information to readers and to provide them with a better insight to this study's topic. The research process is described at the end of this chapter.

The fifth chapter presents and analyzes the findings of the research. The sixth chapter provides conclusions from the research findings and present literature. Research questions are also answered in that section. Managerial implications, limitations and possibilities for future research are also presented in that chapter. The last, seventh, chapter is a brief summary of the whole study. New information is not provided in this chapter.

## **2 VALUE-BASED SELLING IN B2B MARKETS**

In this chapter the main focus is on value-based selling and other topics that are highly related to value-based selling, such as customer value and customer value assessment. This chapter reviews the most recent knowledge over these issues that have been published in the past few years. At the end of this chapter the barriers for value-based selling approach are presented.

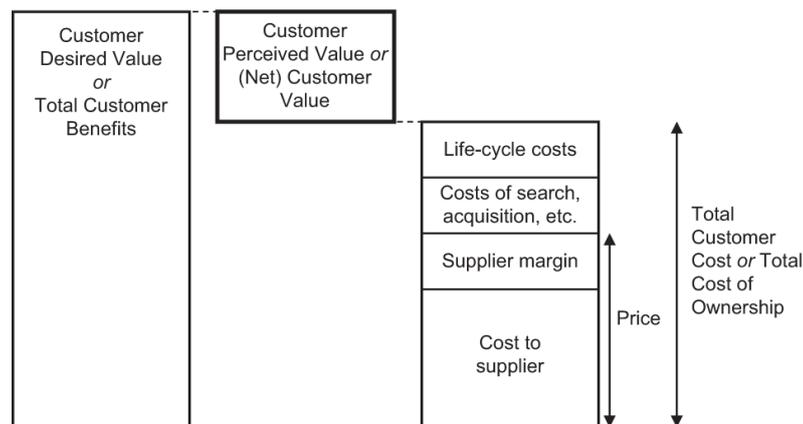
### **2.1 Customer Value in B2B markets**

Customer value is one of the most central themes in management and marketing theory and practice (Khalifa, 2004; Lindgreen and Wynstra, 2005). There is widespread agreement in today's literature that the creation and delivery of superior customer value is considered one of the cornerstones in B2B marketing and key to a firm's long-term survival and growth in competitive markets (Töytäri and Rajala 2015; Slater, 1997; Woodruff, 1997; Anderson and Wynstra, 2010; Ulaga 2011; Lindgreen et al., 2012). Customer value is a key constituent when seeking ways to differ from competitors and gain competitive advantage in complex environments (Woodruff, 1997; Landroquez et al., 2011). Creating superior customer value is also the driver of customer satisfaction, loyalty and retention (Khalifa, 2004). However, recent research over value-based purchasing, value-based selling and co-creation of value state that business marketers need better understanding over issues considering customer value (Keränen and Jalkala, 2013).

In the B2B context, customer value is typically defined as a trade-off between benefits and costs involved in an exchange (Ulaga and Eggert, 2006). The benefits and costs are multiple and can be monetary or non-monetary, such as increased profits and cost savings or decreased risks and increased comfort (Grönroos, 2011; Lindic and da Silva, 2011). The benefits and costs are customers' subjective perceptions that can change over time and sometimes these can be hard to forecast (Corsaro and Snehota, 2010). Thus, suppliers can only generate value propositions and offer value potential, which is realized in the customers' processes as value-in-

use if they accept the offering (Möller and Törrönen, 2003; Grönroos, 2011; Keränen and Jalkala, 2013).

Customer value can be classified as either desired or perceived value. Desired value refers to what the customer expects to have from a product or service offering in a specific use situation in order to achieve the customers' desired goals (Flint and Woodruff, 2001). Customer perceived value is the net value achieved considering all benefits and sacrifices in the search, purchase and use of the offering (Flint, Woodruff and Gardial, 1997). However, desired value and perceived value are not mutual, as these may complete each other and overlap in many cases. Customer perceived value could thus be defined as the difference between the customer's desired value and the customer's total cost of ownership (TCO). (Töytäri et al., 2011.) Figure 1 describes the difference between customer desired value and TCO and illustrates customer perceived value.



**Figure 1** Customer perceived value and total cost of ownership demonstrated (Töytäri et al., 2011).

In relationship marketing the customer perceived value also takes into consideration the additional benefit or sacrifice originating from the relationship with the other company (Grönroos, 2004). From a more general perspective, Lindgreen et al. (2012) stated that the contemporary marketing literature argues that value is created and delivered via the relationship between a firm and its customer. Hence, customer value emerges through interactions over time, where the firm and customer continuously learn from and adapt to each other as their relationship evolves. However, the recent literature increasingly emphasizes that customer value emerges

in customers' value generating processes as value-in-use (Keränen and Jalkala, 2014). In the marketing literature, this often relates to the shift from a goods-dominant logic towards a service-dominant logic (Vargo and Lusch, 2004), or a move towards "servitization", or relationships marketing which leads to a transition from pure products towards services and integrated offerings (Keränen and Jalkala, 2014).

## **2.2 Value-Based Selling**

Value-based selling is a unique concept that differs from the established selling approaches. Understanding and demonstrating how a co-created offering affects and delivers value to the customer's business both lay at the heart of value-based selling. Value-based selling can be defined as understanding and improving the customer's business in a proactive manner. (Terho et al. 2012; Töytäri et al., 2011.) It has been noted that value-based selling has a positive impact on the company's profitability (Töytäri and Rajala, 2015).

In value-based selling value is not created by the seller alone but co-created by the seller and customer realizing in customer's value-generating processes. This requires an inherently two-way orientation where both the salesperson and the customer are active participants (Vargo and Lusch, 2004). Töytäri and Rajala (2015) suggest that value-based selling is characterized by a customer-centric explorative process, value quantification and customer validation in each step, aiming to create value for both parties. In value-based selling buyer-seller relationship must allow using this selling approach to identify and communicate value more extensively to improve customer-perceived value in the B2B exchange (Töytäri and Rajala, 2015).

The sales forces play a central role in implementing a firm's marketing strategy. Unless salespeople understand and persuasively communicate the superior value proposition to targeted customers, a firm's strategic focus on value creation will not impact performance. (Anderson et al. 2007.) The selling behavior entails a mutual orientation and focuses on the value-in-use potential of the offering for the

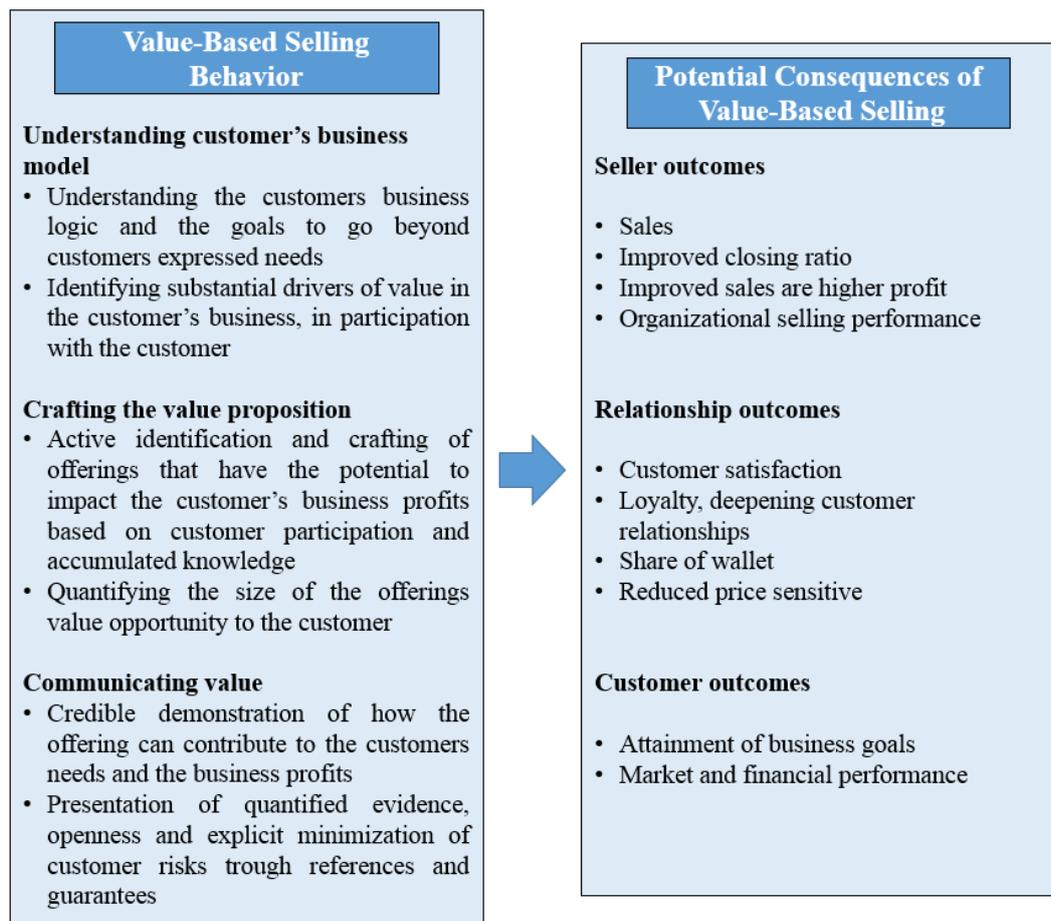
customer's business profits. Therefore value-based selling should be an effective way for salespeople to implement their customer orientation in business markets. (Terho et al., 2012.) Terho et al. (2012) defines value-based selling behavior as “the degree to which the salesperson works with the customer to craft a market offering in such a way that benefits are translated into monetary terms, based on an in-depth understanding of the customer's business model, and thereby convincingly demonstrating their contribution to customers' profitability”.

Value-based selling oriented salespersons provide persuasive evidence for their value claims, while many ordinary salespersons claim to save money or boost customer revenues. Value-based selling requires consultative and calculative capabilities. These skills are seldom found among traditional product salespeople. Thus, value-based sales force is more difficult to train and maintain. An organization shifting to value-based management, customer orientation and solution-focused offering need to actively reshape the salespeople to answer the new demands and to change their way of acting. (Töytäri et al. 2011; Anderson et al. 2007.)

Terho et al. (2012) states that value-based selling goes beyond presenting the benefits of an offering to the customer. The pivotal aspects of value-based selling behavior are efforts to understand the customer's business and the related value creation opportunities, proactive crafting of value propositions that are substantive from customer's point of view, and communicating the value potential to the customer. These are also discussed as the three dimensions of value-based selling. Understanding customers' business model is the first and one of the most essential parts of value-based selling. Understanding and identifying key drivers of customer's earning logic is a key attribute in value-based selling. The focus in crafting the value proposition is on active identification of customers' problems and the creation of mutually valuable solutions to customers' problems. The third dimension, communication of the value proposition to the customer, has been seen as the hardest and riskiest part of sales communication. It requires a demonstration

of how the offering will affect customers' business and profits by presenting a quantified value. (Terho et al. 2012.)

According to Terho et al. (2012), there are three general types of potential consequences for value-based selling behaviors. Potential consequences of value-based selling are different outcomes in sellers', relationships' and customers' level. Sellers' outcomes might increase sales and improve closing ratio of offers with higher profits while organizational selling performance is developing. Increasing customer satisfaction, better customer relationships and reducing price sensitiveness are seen as the relationship outcomes of value-based selling. From the customers' perspective this means achieving business goals and developed market and financial performance. (Terho et al. 2012.) Figure 2 presents three dimensions of value-based selling behavior and potential consequences of value-based selling.



**Figure 2** Three dimensions of value-based selling (Terho et al. 2012).

## **2.3 Putting value-based selling into practice**

In this section the practices that have been recognized to have a positive impact on value-based selling are presented. These practices are tied to the three dimensions of value-based selling. The section also discusses the importance and effect of segmentation, prioritization and data management during the sales process.

### **2.3.1 Understanding the customer's business model**

A key activity for the value-based selling is to identify suitable customers for the value-based approach. It requires a high level of relationship value and willingness to commit from the customers' side (Töytäri and Rajala, 2015). Salespersons need to understand the key value drivers and challenges in both the businesses of customers and customer's customers. Salespersons should uncover what the segments specific and individual value elements are and involve customers to the value assessment process. Setting mutual targets and positioning firms offering to deliver business impact plays a pivotal role in this process. (Töytäri et al., 2011.)

Customers' business culminates in most cases eventually reducing their costs or increasing their revenues. Thus, understanding the financial implications of customers' business is necessary. It should be understood how suppliers can reduce their customers' total costs in the long run and how to find these methods. The main attributes for successful sales is understanding how stakeholders and decision makers are effecting on customer's side. Understanding individuals' roles inside the customer's organization forms the basis for crafting compelling value propositions and communicating propositions effectively. (Anderson, 2006; Keränen and Jalkala 2013.)

Individuals in customers' organizations also perceive value in different ways. For this reason finding right persons to communicate with is important. Affecting directly to decision makers is not always possible, but some individuals in the customer's organization can act like sponsors. These persons who understand the value of offering can drive it forward to decision makers. Gaining sponsorship and

identifying individuals who can act like sponsors in customer's organization is also important during starting phases. (Anderson, 2006; Keränen and Jalkala, 2013.)

Value-based selling is still rather an innovative approach and largely requires proactive marketing and sales to influence carefully selected receptive buyers. Influencing customers' value perceptions should have a place in the early stages of a buying process before customers have not made any choices and have not entered to a bidding process. This requires proactive marketing and selling before and during the early stages of the customers' investment and buying processes. According to Töytäri, Rajala and Alejandro (2015), typical tools for the early stages marketing process include whitepapers, seminars, books, industrial benchmarking studies, and substantiated reference stories. (Töytäri et al., 2015.)

### **2.3.2 Crafting the value proposition**

An effective value proposition requires at least some mutuality and participation from the customer based on dialogue, customer specific data, and other customer inputs. One of the first steps is an assessment about customers' current business. Baseline assessment refers to evaluation of a customers' current performance in order to find areas for development. Benchmark analysis is considered as an effective tool to gain knowledge over customers' business. While the baseline helps customers to identify internal problem areas, benchmarking allows customers to compare themselves with competitors acting in the same industry. Determining customers' current performance was followed by specifying technical and financial outcomes of the delivery. (Anderson and Narus, 1998; Anderson, 2006; Keränen and Jalkala, 2013.)

Value quantification generally requires capability to establish the functional rule from operational parameters to customers' key performance indicators, such as TCO. TCO is a widely used method in quantifying value and also communicating it to customers. Also other methods can be used based on customers' key indicators, such as what they can save from some actions during a longer period of time. Choosing the right economic outcome to be measured and establishing a

relationship between the salient value dimensions and measured value is crucial. (Töytäri et al. 2011; Töytäri et al., 2015.)

Business impact should be quantified in cooperation with the customer. Based on this, suppliers should aim to produce believable calculations of the value potential that the suppliers' offering delivers to customer. These efforts aim to build evidence for the offering's monetary implications in the customer application for value in use. Value calculation tools can be used in this phase to demonstrate short and long term savings for the customer, which is always not obvious to the customer. (Terho et al., 2012; Töytäri et al. 2011; Töytäri et al., 2015.)

After conducting the quantification process it is important to measure and document the actual realized value for the customer. For the customer it shows commitment from the supplier to the customer relationship, and for the supplier it allows the project team to learn and improve its accuracy in further assessments in future. Measuring the realized value also allows for creating reference cases to be used in further sales processes. (Töytäri et al. 2011.)

### **2.3.3 Communicating value**

Once a shared conception of value has been achieved, quantified evidence of value is critically important in influencing customer perceived value. In the negotiation phase the benefits of the offering should be synthesized and the analysis turned into an offering. Value should be demonstrated to customers because they are not always able to foresee the actual value that they can achieve, or they can only see a part of it. (Anderson et al., 2006.) However, there are practices that have been considered as good strategies when aiming to credible communication and demonstrating value to the customer. Communicating the value proposition is defined as the degree to which a salesperson focuses on convincing customers that the proposed offering would impact their profit statement. Active credible communication and demonstrating value to customers are also considered as salient aspects to reduce customer perceived risk. (Töytäri et al., 2011.)

Pilot programs and reference customers can provide effective value evidence in reducing ambiguity about value (Anderson and Wynstra, 2010). References can be used to demonstrate a history of past successes and evidence of the vendors' willingness and capability to deliver superior value (c.f. Jalkala & Salminen, 2010). Ability to present solid and believable reference cases to potential customers can reduce customers' perceived risk significantly, especially if the value calculations credibility is weak. By utilizing pilot programs, suppliers can effectively reduce the risk that customers are facing and also gain feedback and develop offering before the final transaction. (Töytäri et al. 2011.)

Cost calculations are also recognized as an effective tool to reduce risk that customers are facing. Best-practice suppliers base their value proposition on the few elements that matter the most to target customers. What is also noteworthy is that the communication should be executed with a cross-organizational team from the customer's side, which increases the understanding of the communication. Bearing some of the customers' risk is often regarded as the flip side of sharing the value pie. For example, giving an opportunity to customers to see and test a trial version has gained good results when the aim has been to sign a longer contract with the customer. (Anderson, 2006; Keränen and Jalkala, 2013; Keränen and Jalkala 2014; Terho et al. 2012.) Table 2 summarizes the tasks of in each dimension of value-based selling.

**Table 2** Summary of tasks in each dimension of value-based selling.

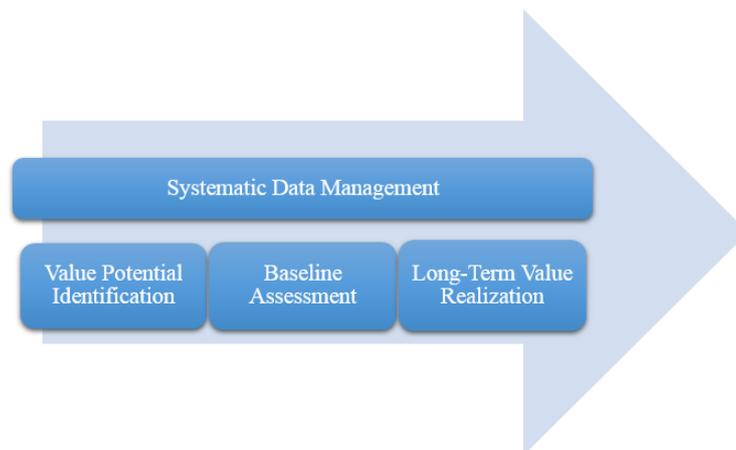
Dimension	Tasks
<b>1. Understanding customer's business model</b>	<ul style="list-style-type: none"> <li>• Identifying suitable customers</li> <li>• Understanding key value drivers</li> <li>• Understanding challenges in customer's and their customer's business</li> <li>• Uncovering segment specific and individual value elements</li> <li>• Involving customer to the value assessment process</li> <li>• Understanding financial implications of customer's business</li> <li>• Identifying stakeholders and decision makers</li> <li>• Gaining sponsorship</li> <li>• Proactive marketing and sales</li> </ul>
<b>2. Crafting the value proposition</b>	<ul style="list-style-type: none"> <li>• Gaining customer's participation</li> <li>• Assessments from the current business and performance</li> <li>• Benchmarking competitors</li> <li>• Finding internal problem areas</li> <li>• Specifying technical and financial outcomes of the delivery</li> <li>• Selecting pivotal KPI's from customers business</li> <li>• Value quantification, TCO, Customers selected KPI's</li> <li>• Measuring and documenting the actual realized value</li> </ul>
<b>3. Communicating value</b>	<ul style="list-style-type: none"> <li>• Turning analysis and benefits into an offering</li> <li>• Demonstrating the most important value elements</li> <li>• Reducing customer's risks</li> <li>• Active and Credible communication</li> </ul>

### 2.3.4 Documenting value and data management

Long-term value realization refers to verifying and documenting that the identified value potential has been realized after the supplier's offering has been delivered. It relates to the post-delivery phase that can last from months to several years. By this time the supplier should follow and ensure that customers have actually received the promised value. Practices for long-term realization can be for example be arranging frequent meetings with the most important customers or executing customer satisfaction surveys. When suppliers are documenting their customer cases, they are often saving information as technical details, content of offering and other important information. Firms should also specify the actual cost savings and incremental profits that customers have achieved after delivery. Realized value is also often depending on the customers' capabilities and their abilities to utilize offerings. Suppliers can utilize this data and share it also externally for example as

reference cases. (Anderson, 2006; Keränen and Jalkala, 2013; Keränen and Jalkala 2014.)

Systematic data management refers to managing relevant customer data during the whole value-based selling process. Systematic data management is on-going and concurrent during the whole process. Collecting customer data from all customer contact points is recognized as a central activity for customer value assessment, although it is challenging. (Keränen and Jalkala, 2013.) Customer data should also be utilized in future projects that have similar features. CRM is an effective tool for saving and handling customer data and it can be utilized in value creating process and strategy creating. It is considered as value creating for both customer and supplier (Keränen and Jalkala, 2013; Payne and Frow, 2005; Lambert, 2010). Figure 3 illustrates systematic data management as an on-going activity through customer value assessment process.



**Figure 3** Systematic data management as on-going activity through customer value assessment process (Keränen and Jalkala, 2013).

### 2.3.5 Segmentation and prioritization

Customer segmentation and customer prioritization have a significantly positive effect to value-based selling. Firms which invest in customer segmentation and rank ordering their customers according to their value to the firm create a better understanding of their customers' business needs. Investments in segmentation

should lead to the identification of customer groups that are looking for high value-added offerings. This should lead to encouraging salespeople to adopt a value-based selling approach for these customer groups. However, even though segmentation is a fundamental concept of marketing theory, many firms in business markets still rely on generic typologies that are only loosely linked to customers' heterogeneous needs and buying preferences. This might be one reason why segmentation has recently found to have a non-significant impact on value-based selling. This result may be due to the fact that many customers still employ a narrow cost-based logic to buying in business markets. These customers with short term buying orientation should not be approached with a selling logic that emphasizes long-term customer value. Rather, they should adopt more transactional selling approaches. (Töytäri et al., 2011.)

Prioritization is a central enabler for salesperson value-based selling. As a selling approach tailored to the specific requirements of business markets, value-based selling requires clear priority settings and cannot be performed successfully across the full portfolio of customers. (Töytäri et al. 2011.) Effective value-based selling requires prioritization because it is a resource-intensive selling approach that requires deep customer insights and upfront investments (Terho et al., 2012).

Firms invest in prioritization with the aim of identifying the groups of high-value customers. Firms should make segment specific value propositions to selected segments in order to attract interest. Target segments should be chosen based on a supplier's expected ability to create and capture value. (Storbacka, 2011; Töytäri and Rajala, 2015.) Customer prioritization should be of major importance for driving salespeople to engage value-based selling. While prioritization generally promotes the use of value-based selling for targeted customers, customer segmentation may have a positive or negative impact on how widely salespeople use value-based selling practices depending on the customers' purchasing orientations in the selling firm's portfolio. (Terho et al., 2012; Terho et al., 2015.)

## 2.4 Barriers for value-based selling

Value-based selling appears to resonate well with high-potential customers emphasizing a cooperative orientation, exchange of information and long-term achievements. Attractiveness to value-based sales depends also on the characteristics of the offering. Customized offerings that have potential to deliver high value with the longer time period for the customer, such as industrial solutions, have been identified to be most favorable for this approach. (Töytäri et al. 2012.)

There is a strong industrial culture favoring aggressive buying with a focus on the initial transaction price. This culture is deeply rooted in procurement institutions, rules, norms, and organizational inertia that resist the adoption of value-based practices. Also people who are focusing on for example on daily production can be reluctant to change raw materials or working methods because of uncertainty and risk. Buyers may enjoy a long-term relationship with a particular supplier, which may have led to lock-in effects and high switching costs if the supplier is changed. This might also lead to losing relationships with the particular supplier and also increase risks of starting to buy from a new supplier. (Töytäri et al., 2015.)

Many managers and decision makers are not able to change their beliefs or working methods. Their beliefs can also be shortsighted or completely wrong. Their desired value perceptions can be determined by the somewhat outdated industrial beliefs, building on transactional supplier relations and commoditized goods exchange. Some beliefs can be sometimes challenging to rectify. (Töytäri et al., 2015.)

In terms of how organizational incentives are defined and distributed within the organizational governance model, the individual decision-maker goals and incentives may not increase the value created when their goals are not aligned with the organizational goals. Each functional area does what is best for it, but not necessarily what is best for the firm as a whole. That can happen especially in procurement departments when their interests can consider only the price, and they

can also be rewarded for price savings even though it can hurt their business performance. (Töytäri et al., 2015.)

Value quantification is seen as a really problematic issue for many industrial companies. The baseline situation may be inaccessible, the customer could be unwilling to share the data due to the lack of trust, the customer may be reluctant to engage in the quantification exercise, the calculation of value may be difficult or the end result may not be credible. Challenges always come up also when customers cannot explicate their real business needs. Lack of trust and credibility can discourage decision makers from sharing essential information. (Anderson, 2006; Terho et al. 2012; Töytäri and Rajala 2015; Töytäri et al., 2015; Keränen and Jalkala, 2013; Keränen and Jalkala 2014.)

When selling solutions and products that create value for the customer over a longer period of time, there exists a risk of failure for the customer. Customers' can worry that are the benefits and possible cost savings realized to capture the incremental revenue and profits that supplier claims for their offering. Personal risk of failure is also a risk that highly affects stakeholders and other individuals who act as decision makers. (Terho et al., 2012; Töytäri et al., 2015.)

Different stages in buyer–seller relationships may be more or less supportive of value-based selling behaviors. Influencing the definition and scope of the evaluation criteria requires access to influential buyers at the early stages of their buying process, before the evaluation criteria are set and the evaluation stage of the buying process commences. The late engagement in the buying process leaves very little room to influence the value conceptions and strives for smaller profits. (Terho et al., 2015; Terho et al., 2012.) Table 3 summarizes the barriers for value-based selling.

**Table 3** Summary of barriers for value-based selling.

<p><b><u>Customer</u></b></p> <ul style="list-style-type: none"> <li>- Low potential Customer</li> <li>- Problems with communication</li> <li>- No access to decision makers</li> <li>- Aggressive buying culture</li> <li>- Relationships with other suppliers</li> <li>- Weak current relationship</li> <li>- Bad selling situation</li> <li>- Individuals concentrating only to one activity</li> </ul>	<p><b><u>Value Quantification</u></b></p> <ul style="list-style-type: none"> <li>- Baseline situation inaccessible</li> <li>- Customer unwilling to share data</li> <li>- Lack of trust</li> <li>- Calculating value difficult</li> <li>- End result is not credible</li> <li>- Customer cant explicate their needs</li> <li>- Customer’s assumptions are wrong</li> </ul>
<p><b><u>Goal conflict</u></b></p> <ul style="list-style-type: none"> <li>- Each business areas own action</li> <li>- Decision makers’ different goal</li> <li>- Rewarding from price savings</li> </ul>	<p><b><u>Buying process stage</u></b></p> <ul style="list-style-type: none"> <li>- Late engagement with customer</li> <li>- Other competitors with their offering</li> <li>- Bidding phase with rivals</li> </ul>
<p><b><u>Institutionalized logics</u></b></p> <ul style="list-style-type: none"> <li>- Value perceptions determined by outdated information</li> <li>- Short-sightedness</li> </ul>	<p><b><u>Customer’s risks</u></b></p> <ul style="list-style-type: none"> <li>- Failure of the offering</li> <li>- Personal failing</li> </ul>

### **3 FACILITATING VALUE CREATION IN NETWORKS**

Value creation in business often takes place in broader networks and involves a network of different stakeholders inside customer firms (von Meding et al., 2013; Lusch et al., 2010; Terho et al., 2015). Jaakkola and Hakanen (2013) describes value co-creation as a processes, which inevitably involve a number of diverse stakeholders who form networks in which resources are integrated and applied through interaction. Global markets offer opportunities for suppliers but it has also various challenges. Cultural differences effect and drivers for customer value are more complicated in different markets compared to acting only in one open market. International companies must be able to adapt local requirements and also shape their company culture in order to improve their business. (von Meding et al., 2013.)

Scholars have been investigating value primarily from three perspectives; the vendor perspective, customer perspective, and a “dyadic” perspective. From the vendor perspective, literature focuses on how firms can create, increase, and capture value in order to maximize the value of their economic activities. From the customer perspective, literature deals with the value customers receive in market exchanges and the dyadic approach to customer value integrates both perspectives. (Terho et al., 2015.) This chapter concentrates on doing business in networks, different groups acting in a purchasing process and how that is affecting creating value in bigger networks from a dyadic perspective.

Value co-creation is an iterative, collaborative process that occurs at three interrelated levels. First, the individual actors execute activities to contribute and receive resources whereby they perceive benefits and sacrifices, i.e. they have their respective value creation contexts and processes. Second, value co-creation occurs at the relationship level through interaction and collaboration between actors. Third, at the network level, resources are integrated into a larger resource constellation through a pattern of activities by a web of actors. This constellation of resources, i.e. the integrated solution, and the activities through which it is created, represent a new value proposition for the customer, compared to the resources available from

individual suppliers. Hence, value co-creation involves value processes within organizations, in relationships between actors, and within a network of actors. (Jaakkola and Hakanen, 2013.)

According to the Actors–Resources–Activities (ARA) -model (Håkansson and Johanson, 1992), companies can be linked in three interconnected layers: via activity links, resource ties and actor bonds, which affect and are affected by the constellation of resources, patterns of activities and web of actors in the wider network. Each actor involved to network has a perspective on the sacrifices they are willing to invest in, and expectations of the benefits they will acquire in the interaction. (Jaakkola and Hakanen, 2013.)

Actors are individuals or groups, such as organizations, that control resources and execute activities (Håkansson & Johanson, 1992). Each actor has a distinct network position based on its relationship and bonds to others actors in the network. The position of an actor may be perceived differently by the various actors in the network and it affects the actor's potential to access resources and influence other actors. (Jaakkola and Hakanen, 2013; Lenney and Easton; 2009.)

Actors control resources, but they need to be integrated to become valuable (Lusch & Vargo, 2006). Resources can be categorized into four types: the knowledge, experience and skills of individuals and groups, and second, organizational relationships. Third and fourth resources that are often tangible, such as products and production facilities, are passive. As interaction between companies develops, their resources become mutually adapted. At the network level, resources can be integrated with a larger set of resources available through a web of actors, which provides a more compelling value proposition for a particular situation. (Lusch et al., 2010; Jaakkola and Hakanen, 2013; Lenney and Easton; 2009; Vargo & Lusch, 2011.)

Activity occurs when actors combine, develop or create resources using other resources. Activity links may be more or less systematic or tight, for example

providing just some products. (Håkansson & Johanson, 1992.) They reflect the need for coordination and will affect how the various activities are executed (Davies, 2004).

### 3.1 Actors in networks

Customer's *decision making unit* (DMU) tends to include various individuals from different departments of the firm. The buying center in industrial markets includes members for example from operations, sales, financing, purchasing and engineering. Members usually have their own preferences and may have different opinions considering the solutions criteria. Thus, understanding each individual's preferences and customizing sales approach for each members needs is a way to add value. Ulaga and Chacour (2001) state that customer perceived value is the trade-off between various benefits and costs of the supplier's offering perceived by different members of the DMU and simultaneously taking into consideration the alternative suppliers' offerings in a certain situation. (Ulaga and Chacour, 2001.)

*Influencers* are individuals located around the customer who have an impact on purchasing decisions: Influencers have a bearing on the buying decision at some stage. They are the top management, external experts, consultants, financial institutions and government policy makers. The buying center does not include only the members of the purchasing team, but anyone, internal or external, who influences the decision. (Cova and Salle, 2008.) Some have gone as far as talking, in the cases of complex purchasing situations, about a "dispersed buying center" to integrate external influencers in a more formal way into the description of a buying center (Bansard, Cova & Salle, 1993). Keränen and Jalkala (2013) refer to sponsors who are located around the customer or a part of customer organization. Suppliers should define and strive to influence these actors because their impact for the purchasing decision (Keränen and Jalkala, 2013).

In the solution context, one actor typically acts as an *integrator* who is responsible for managing the project, engaging with the customer, and coordinating the group

of internal and external contractors (Davies, 2004; Davies, Brady and Hobday, 2007; Windahl & Lakemond, 2006). The integrator selects and coordinates the network of suppliers, integrating their resources into a new entity that becomes a new resource (Davies, 2004). The suppliers to the integrating actor mainly provide the resources requested by the integrator and have less potential to affect the resource integration of other actors. In the solution context, an integrating actor typically needs to develop stronger operational linkages with customers and other suppliers. (Jaakkola and Hakanen, 2013.) On construction business normally one or two bigger contractors or construction companies are acting as an integrator. They are responsible for hiring working force and materials and they are also responsible for outsourcing some actions and hiring sub-contractors and other suppliers.

There are also third party influencers around the customer in many industries, such as engineering offices, architects or consultants in the construction business. In literature these third party roles have been discussed with different names. In their article, Jalkala et al. (2010), use the term *third parties* but also consider this group as *non-business actors*, like Skaates et al., (2002). Non-business actors have a major role in the success or failure of the project supplier (Skaates et al., 2002). Third parties are involved very early and are found all the way through the project cycle. Engagement with this group normally takes place in the project search phase. Thus, they are very important to consider in the project marketing. Although the third party actor is not the end customer of the supplier, and they might have no monetary business with the supplier, they might have significant role to end customers. They can act in a central role in the implementation phase and do specific plans for the end customer before the bid. They can also act like a sponsors (e.g. Keränen and Jalkala, 2013) and propose different solutions or working methods out of standard for end customers, especially if they have had a longitude relationship with the end customer of the supplier.

Affecting these third parties efficiently requires understanding about the network and milieu (Skaates et al., 2002). It is important for the suppliers to keep up their

relations for the third parties also during the sleeping phases. In many cases in construction industry when the end customer is asking other parties to join the planning process, they first contact architects and structural design offices. Developers can suffer a lack of knowledge of used methods and products in the building process. In this case they trust architects and structural designers and consult them when it comes to the used methods and products, in addition to consulting only a contractor. However, the contractor of the project is selected after this process in many projects. Thus, this group can be in a central role when communicating the value of the offering for the end customer and when using value-based approach for sales and marketing.

According to recent literature, the early phases of project construction have changed in the past decade. Project suppliers who have adopted some of the integrating tasks are mobilizing third parties. Traditionally the third parties have owned these tasks. Thus, third parties, being business or *non-business actors* of the customer network, seem “less active” in the design and construction of projects, but they are still important. Even though third parties are involved very early and are found all the way through the project cycle, they do not have the same kind of role as before. Instead of trying to influence and create credibility among actors of the customer network, suppliers have increasingly adopted the role of an active integrator, whose main task is to mobilize these actors in order to deliver value for the customer, as described in solutions literature. (Jalkala et al., 2010; Skaates et al., 2002.) Table 4 summarizes different actors and their roles in the networks.

**Table 4** Summary of different actors' and their roles in network.

DMU	Influencers
<ul style="list-style-type: none"> <li>• Buying center which includes individuals from different departments of firm.</li> <li>• Members usually have their own preferences and may have different opinions considering the solutions criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Individuals located around the customer, such as top management, consultants, and financial institutions</li> <li>• Impact on purchasing decisions and to buying center members at some stage.</li> </ul>
Integrator	Third parties
<ul style="list-style-type: none"> <li>• Actor responsible for managing the project, engaging with the customer, and coordinating the group of internal and external contractors.</li> <li>• Integrators also integrate resources of network suppliers.</li> </ul>	<ul style="list-style-type: none"> <li>• Third parties are involved very early and are found all the way through the project cycle.</li> <li>• Third parties might have a significant affect to end customer.</li> </ul>

### 3.2 Stakeholder management

*Stakeholders* are a group of people who are often involved without their prior agreement, sometimes against their will, and who often view the project as being a disbenefit because it somehow distracts from their local environment. Stakeholders are therefore essentially perceived as non-business actors, such as NGOs, various levels of government, financial institutions, scientific and technical expertise, who react positively or negatively to the project and who can therefore condition the social acceptance. (Cova and Salle, 2008.)

Many parties in the construction industry have been identified as stakeholders: project managers, site personnel, contractors, sub-contractors, local government, communities, media and professional bodies have all been cited as possible stakeholders (von Meding et al., 2013). Stakeholders are normally operating beyond the control of marketing and sales. This is one reason why involving them to co-creating of value can be challenging (Cova and Salle, 2008).

Modern sourcing methods have also led to an increased number of stakeholders for individual construction projects. Because of the increased number, it is also more likely that participants are not always going to agree. The nature of relationships means that stakeholders do need to be managed, especially in construction projects where success is significantly dependent on meeting the stakeholders' needs. Many project failures attribute to poor consideration of all stakeholder needs. (Bourne and Walker, 2005; von Meding et al., 2013.)

According to von Meding (2013), the most common form of stakeholder management used in construction industry is utilitarianism. This approach is largely concerned with maximizing the utility of a firm in terms of profit and growth. The utilitarianism approach is separated to positive and negative. The positive may deliver social goals, while ranking and managing stakeholders, particularly engaging those with power and influence. The negative approach differs in that stakeholders are generally seen as problems and those who display opposition are worked against. Stakeholders also have the ability to cause problems, as argued. In extreme cases it has been found that the stakeholders may have the ability to disrupt or even end projects. (von Meding et al., 2013.)

von Meding et al., (2013) conclude that there are benefits of a more cooperative and inclusive stakeholder approach. Such benefits include long-term relationships, improved corporate image and reputation. Stakeholder management that creates alignment and collaboration is seen as representing success almost as well as stakeholder management that delivers profit and growth. (von Meding et al., 2013.)

### **3.3 Creating customer value in network**

Cova and Salle (2008) suggest a process for the creation of customer value network value proposition. Their process for creation of customer value consists of five actions (Cova and Salle, 2008.), these five steps are:

- Identification of the actors in the customer network, visible and invisible actors, and representing their network.
- Targeting right actors from the customer's network.
- Identifying stake for each targeted actor and identification of the mobilizing factors of targeted actors.
- Setting up an approach for the targeted factors in customer's network.
- Setting up a value co-creation approach with each customer network actor.

This co-creation of value approach with the actors of the customer network therefore leads companies being imaginative when devising their value proposition. Under the influence of S-D logic, by co-creating the value, the design of the customer value proposition (CVP) is being transformed. (Cova and Salle, 2008.) In the value-based selling context, Terho et al., (2012) highlight the importance of understanding the customer's business model. Cova and Salle (2008) also emphasize the importance of finding right actors to contact and analyzing their business and mobilization. In the network context, Cova and Salle highlight the role of the third party actors that could be utilized to gain an indirect access to the targeted actor. By doing this, firms can integrate their resources from the network but it requires a value co-creation approach with each customer network actor. By systematically following each step, value creation can be optimized in the network.

### **3.4 Project marketing**

Projects have been defined as a complex transaction covering a package of products, services and work, specifically designed to create capital assets that produce benefits for a buyer over an extended period of time (Cova et al., 2002). Projects have become an increasingly important part of the value creation process and capability to sell and market projects has become more essential when firms are striving towards success and a steady growth (Jalkala et al., 2010). In construction business, project oriented-working methods have been a prevalent way of building for many decades. Firms in construction industry are firms where the value creation process includes the search, preparation, bidding, negotiation, implementation and transition of a project (Jalkala et al., 2010).

Mandjak and Veres (1998) introduced the D-U-C model for project marketing. The D-U-C model characterizes the activities of project marketing. Related to this model, each project in industrial markets has a specific dimension of project activities: the discontinuity, the uniqueness and the complexity, which especially appears central in the reflection in project marketing. Mandjak and Veres state that the first goal of project marketing is to contend with this economic discontinuity and to recreate continuity with the significant customers and actors through the network of relations. The uniqueness relates to each project's uniqueness and special features. (Mandjak and Veres, 1998.) Companies in the project business are operating with more complex customer organizations than before and the impact of rapid changing of actors taking place in many industries (Jalkala et al., 2010). The supplier, facing the complexity of projects and the project activity, can adapt to this complexity by preparing themselves as well as possible. On the other hand, suppliers can also consider to reduce this complexity by becoming an actor in the construction of the project and in the project environment. (Cova and Salle, 2007.)

Project markets are characterized by the interference of various business actors throughout the whole project cycle, but also by non-business actors, such as the international loan lenders. The role of non-business actors in the success or the failure of the project supplier is significant. For each market it is necessary to clearly identify its actors, their inter-relations, their roles and their influences and to position the supplier among these actors. (Skaates et al., 2002.)

After a project is completed, the relationship between suppliers and customers becomes a sleeping relationship, i.e. a relationship without contract related activity and resource ties, but possibly with bonds of aftermarket dependency, social ties and trust. Thus, it is necessary for the project marketers to focus on the implications of a single project. However, project marketers must also take care of both sleeping and potential relationships in periods when concrete projects are not being prepared or competed. (Skaates et al., 2002.)

## 4 METHODOLOGY

In this chapter the methodology of the research and case company and are presented. The chapter consists of four parts, which are divided. First, the research method, an embedded multiple-case study, is presented. Second, case company Peikko Group and the column connection solution are introduced briefly. Third, the typical actors in construction project are introduced and finally, the research process is described in the fourth part.

### 4.1 Embedded multiple case study

A case study is a qualitative research method whose aim is to get acquainted deeply to specific individuals, such as a company or certain group, action in specific context and that way to understand their behavior. Case studies are commonly used in many areas of science such as psychology, sociology and political science. It is also used in economics to study a given industry or an economy of a certain region or city. Because of the credibility, easiness of adaption and multidimensionality of collecting information, the use of this method has become pervasive also in the research of industrial marketing. In the research of industrial marketing, this method has been utilized to reveal individuals' and groups' decisions and behavior inside the organizations and wider networks. (Borghini, Caru and Cova 2009; Batt 2012; Creswell 2013, p. 97-98; Woodside and Baxter, 2013; Borghini et al., 2009.)

The purpose of a case study is to understand complex social phenomena like organizational and managerial processes or small group behavior. This method is often the preferred research method when questions “how” and “why” are being asked about a modern event and when the researcher has little or no control over the specific event. Even though case study method has similar features related to other research methods; a case study can leverage several sources of evidence, such as direct observation of events, interviews with persons involved in the events, archival data and also for example quantitative data. (Yin, 2009, p. 13, 19; Creswell, 2013, p. 98; Piekkari, Plakoyiannaki and Welch, 2010.)

Multiple-case studies have become more common in recent years even though these are more expensive and time-consuming (Yin, 2009, p. 53). Depending on the study and cases, a multiple-case study can be either holistic or embedded. The studied phenomenon and the research questions affect whether the design of the study is holistic or embedded. Embedded multiple case studies involve sub-units in each case, while a holistic case study considers one case as a whole. (Yin, 2009, p. 53, 46.)

As this thesis aims to gain a deeper insight into the phenomenon of how third party role influencers can act as facilitators in marketing and sales processes and support value-based selling, a qualitative case study is conducted. Two cases were selected for examination to separate the different market areas. These two market areas are completely different and their history and style of construction are completely different even though the areas locate near each other. An embedded approach was chosen to strengthen overall results.

## **4.2 Case description**

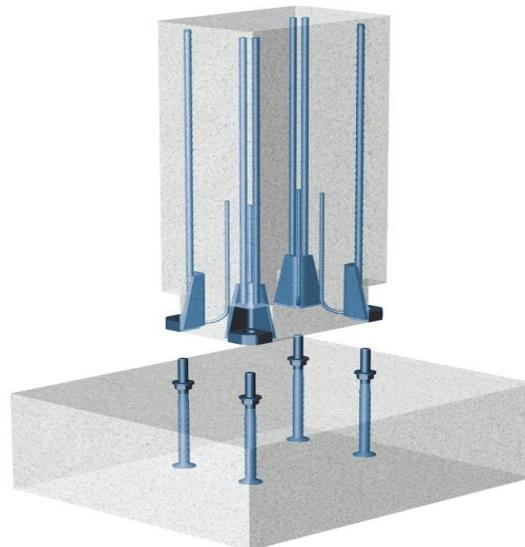
Peikko Group Corporation is a Finnish based, family owned company, operating in the field of construction accessories for concrete building industry. Peikko supplies a large selection of concrete connections and composite beams both for precast and cast-in-situ (cast-in-place) solutions in a wide variety of applications. Peikko also has its own solutions for flooring joints, wind turbine foundations and composite frames. Peikko aims to create value for its customers by developing and manufacturing innovative solutions to connections of concrete structures and providing superior customer service. Typical customer segments for the Peikko products are construction companies, precast factories and producers of heavy industrial machines or lines. In addition to these, Peikko focuses on assisting architects and structural designers for example with sophisticated design tools and software. (Peikko, 2016a; Peikko, 2016b.)

This thesis considers Peikko's column connection solution that is used to erect a column to foundation, slab or to the other column. The column connection solution

includes a column shoe and anchor bolts, which are used to tighten the column to foundation. Column shoes are usually casted to concrete by precasters who manufacture concrete slabs. Anchor bolts are casted to concrete on the construction site or in a precast factory, if bolts are assembled to other column or precast foundation. The column connection solution enables a reliable, safe and fast connection and by using it erection time can be shortened a lot compared to other construction methods, such as In-Situ-Casting. (Peikko, 2016c.) The column connection solution and the use of it are illustrated in figures 4 and 5.



**Figure 4** Column shoes casted to columns and ready columns assembled.



**Figure 5** HPKM-Column Shoe connection with PPM-Anchor Bolts.

### 4.3 Network in the construction project

In this section the project network and how the value chain is divided in most projects are presented. Projects in construction industry are often wide and include many parties. The traditional approach for buying projects is based on a process, which separates the design phase and the realization phase of a project. *Investor* or *developer* is normally the actor who finds a need to construct a building. Normally they construct the building for their own use but some investors are also renting or selling the finished buildings. The investor funds the whole construction. Sometimes the developer can be the investor of the project and funds the construction. In some projects the developer can also have external investors included to the project. For example City governments can support and give funding for the housing construction made by other developers in a certain area.

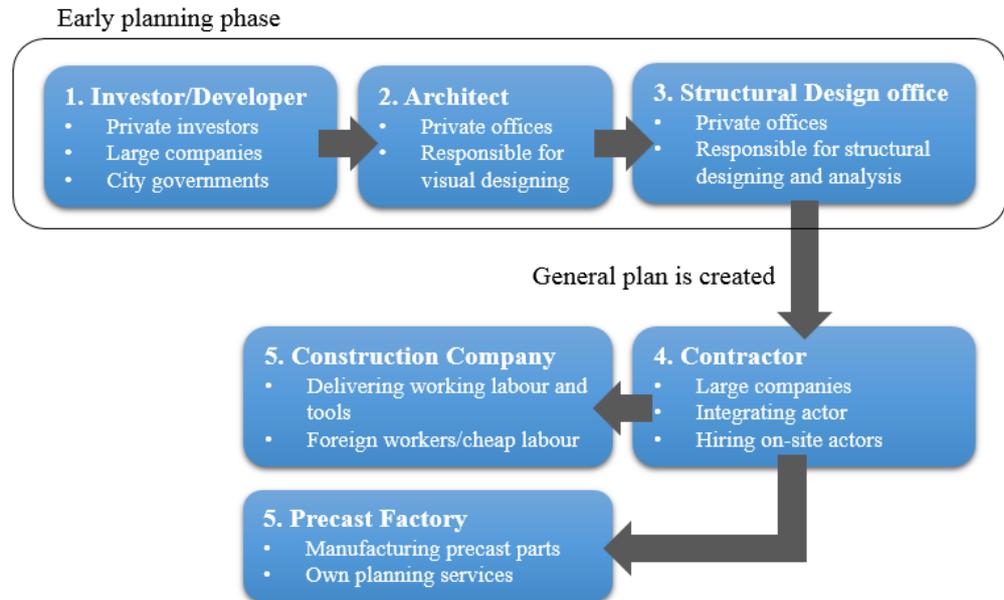
There are three different types of investors. These are private investors, city governments and companies. Private investors build for their own purpose or develop buildings that they are going to rent or sell and earn profits that way. City governments mainly fund housing constructions but also other cultural buildings and office buildings that are normally owned by cities. Companies, especially big ones, are important investor for many projects. These companies build new offices, factories and other building for their own purposes. For example, in Germany the large car manufacturers construct lots of big projects.

From Peikko's perspective, the third party influencers consist of actors in the building industry who are in a central role in the planning and building phase of the buildings and their work is related to the use of Peikko's products, but they do not have a monetary relationship with the supplier. These actors are *Architects* and *Structural Designers*. Architects are traditionally one of the first parties that are involved in the building phase of a project. Architects are responsible for the visual planning of the buildings. Usually architects work independently. In most cases, when the project starts, the investor/developer contacts the architect to create a visual quotation for the building.

Structural designers are responsible for the structural designing and analysis in projects. They try to make the architects' ideas possible to fulfill and are responsible for solving problems in the building structures by using different solutions and products. In the construction business, structural designers can work permanently for various different parties, such as contractors or precast factories. In these cases they work for example to a certain contractor and create structures only for them, or they can work as precast specialists in the precast factory and modify precast structures to be manufactured easier or change certain products. However, most often they work in their own offices. The most important tool in the work of structural designers is the computer and different software that they use for calculating and planning structures.

After the structural designer and architect have created a general plan for the building, the investor hires a contractor for the project. The contractor acts as an integrator in the project. They are responsible for the construction and communication between the site and structural designers. The contractor is often selected by using a call-for-tender procedure. Then the contractor company helps the customer to choose the *construction company*, which will realize the customer's project. The choice can be based on the call-for-tender procedure as well. In many cases some bigger actors in the industry have a construction company integrated to the contractors' organization. The contractor also hires different parties to join the construction, such as *sub-contractors*, precast companies and installation companies.

*Precasters* are interesting group for Peikko. Precasters manufacture used precast concrete parts for the projects. Precasters sell their services and products to contractors and construction companies. Various precasters have their own planning departments and they can sell their planning services. Precasters often do yearly contracts with some concrete connection part manufacturers and the price is one of the key value drivers for them. They usually have their own stock of the most used products. Figure 6 describes the value chain in a typical project.



**Figure 6** Value chain in typical project.

Construction networks include third parties who do not have a monetary relationship with Peikko. The limitation of the study is that it only considers structural designers although investors, developers and architects are also third party customers from Peikko's viewpoint. The next chapter discusses the Structural designers more in depth.

#### 4.4 Research Process

In this study, data was collected through interviews and by participating to customer meetings as an observer. Attending customer visits took place during a longer visit that the author of this thesis made to the both market areas during the research process. The visits to the both market areas made it possible to gain a better understanding of the market areas and to meet interviewees. A large amount of secondary data was also used in this research, which was collected through internal interviews and longitudinal discussions with Peikko's salesmen in the both market areas.

The research process started by getting familiar with the subject and collecting internal materials related to this thesis's topic. At the first phases, internal

interviews and discussions were executed to gain knowledge over the market areas, sales processes, solutions that are competing against Peikko's column connection solution and actors and their roles in the project. The author had prepared questions to support these discussions and notes were made during the meetings. These internal interviews were used as a secondary data to strengthen the primary data. Internal presentations and business plans were also used to gain knowledge over the market areas.

A total of ten interviews were conducted with structural designers working on structural design offices and precast factories in two separate market areas. This data was used as a primary data for the research. In Sweden, three interviews with structural designers were done during a two-day-stay, and in Germany, seven interviews were conducted during five days. In Sweden the interviews took place after a customer meeting, where the local Peikko salesman presented Peikko's products and solutions. After the meeting salesman discussed possible questions with the customers that might come up during the presentation. After that it was asked, whether the designers would be willing to participate in the study by giving an interview. All designers did not have time for this but some of them were able to participate. In Germany, customers were informed about this research project before the meeting and times for the interviews were booked beforehand. These meetings included only the interview, except one customer arranged a visit to their factory to explore their manufacturing facilities.

All the customer interviews were semi-structured and the questions were built on two entireties. Semi-structured interviews made it possible to discuss the topics deeply and also to ask additional questions related to some important findings that came up during the meetings. (Eisenhardt, 1989) All the questions were open and the author also specified the questions in different situations. The other part of the two entireties considered networks in the construction industry and the roles of structural designers' and other actors, and the other whole was related to the use of solutions and structural designers' work. The aim was to find out the habits of structural designers' considering the solutions used in erecting precast columns, and

the benefits and sacrifices of the solution where column shoes are utilized. The aim was also to find out how the network and value chain are divided in both market areas and how structural designers could facilitate value-based selling. The both parts were also created to support and find answers for value-based approach.

Interviews lasted from 22 minutes to 94 minutes and were done in given time scales. In Sweden, all interviews among structural designers were executed and recorded in English. In Germany, most of the interviews were executed in English but there were couple of cases where the whole interview was not gone through because the respondents spoke only little English. In these cases, the local salesman acted as an interpreter and translated the questions and told the most important points to the author after every question. This might have affected the respondents' answers. Even though some of the interviews were mostly done in German, all interviews were recorded. Table 5 presents the primary data of this study.

**Table 5** Primary data of the research.

Company type	Title	Length of the interview
<b><u>Germany</u></b>		
Structural Design Office	Project Manager	47 min
Structural Design Office	Project Manager	97 min
Construction Company, Precast Factory	Technical Plant Manager	57 min
Structural Design Office	Project manager, Owner of the Company	41 min
Precast factory	Technical Software Engineer + Project Manager	49 min
Structural Design Office	Team Leader + 4 Structural Designers	36 min
Structural Design Office	Project Manager, Owner of the company	73 min
<b><u>Sweden</u></b>		
Structural Design Office	Structural Engineer	22 min
Structural Design Office	Structural Engineer	30 min
Structural Design Office	Structural Engineer	24 min

In both market areas the author of the thesis was hosted by Peikko's field salesmen, who work with non-buying customer groups in their market area. The author had

prepared questions and topics to discuss with the salesmen before the visits. The topics and questions were related to their work, market area, customers, solutions and value-based selling approach. Long discussions were carried out during the visits and the author made notes based on these discussions. These discussions provided large amounts of valuable data. Data was also collected during the meetings, when the author acted as an observer while the host gave a presentation to the customers. Some short interviews were also carried out during the site visits and visits to other customers. This data was used as a secondary data to support the findings from the primary data and to understand the current situation from their viewpoint. Table 6 depicts the secondary data of this research.

**Table 6** Secondary data of the research.

<b>Company</b>	<b>Title</b>	<b>Length of interaction</b>	<b>Topics discussed</b>
Peikko Group	Sales Process Manager	65 min	Sales process, role of different actors. Semi-Structured interview.
Peikko Sweden	Field Sales, Technical Support	8 hours	Market area, sales work, customers, VBS, products, actions. Structured questions.
Peikko Group	Business Director, Precast connections	120 min	Market areas, VBS, products and solutions. Structured questions.
Peikko Germany	Sales Representative	8 hours	Market area, sales work, customers, VBS, products, actions. Structured questions.
Peikko Germany	Sales Representative	120 min	Market area, customers, sales work, products and solutions.
Peikko Germany	Sales Representative, Team Leader	46 min	Sales work, customers, VBS, market area, products and solutions.
Peikko Finland	Business Manager, Designers	30 min	Sales process, role of different actors
Retailer	Owner of the company	15 min	Products and solutions, their customers
Construction Company	Site Manager	15 min	Products and solutions, procurement

## 5 RESEARCH FINDINGS

In this chapter the research data is presented and analyzed. This chapter is divided into three parts. First, structural designers and their value drivers are presented and discussed. The second part reveals the research data of how structural designers can affect decision makers in different networks and what are different offices' chances to impact decision making. The third part provides data how Peikko can affect structural designers. Final part of this chapter presents data from the market areas that this study focuses on.

According to the findings, structural designers' work and participation to building processes is similar in the both market areas. Thus, the results considering their work and role in the building phase are discussed together. The following sections are written from the viewpoint of Peikko or structural designers, related to the discussed issue.

### 5.1 Structural designers' value drivers

Value drivers deviated among interviewees who were included in this study. In this study, value drivers refer to entities that increase the value of solutions by improving CPV and provide competitive advantage compared to the usage of other solutions. The main difference between value drivers was related to the each respondent's position in the organization. It became obvious that Project Managers and other employees with a higher position had different value perceptions than employees working in their teams as structural designers. Manager level persons' value drivers included issues related to success in projects and leading people, while ordinary designers' value drivers were more related to solving problems and making their own work easier. However, there were still many common drivers what they both, Managers and ordinary designers, value because Managers normally help their subordinates to find good solutions and they face similar problems as designers. The found value drivers were divided into four sources of value: *saving time, choosing solution provider, reducing risks and software usage.*

### 5.1.1 Saving time

Time pressure was one of the most common issues that came up in both market areas. Respondents' stated that their working load is normally high and their pressure is sometimes huge. A few respondents mentioned that sometimes they have to refuse some projects because they simply do not have time for them. It is also common that design offices miss deadlines of the projects. Thus, all working software, planning styles, methods - everything that saves structural designers' time and *increases efficiency* are seen as significant benefits. By achieving these time savings and managing to do speed up planning process they can serve their customers faster and gain their competitiveness against competitors. This would help also structural designers' to be more satisfied in their work.

*“Permanent time pressure is annoying, that makes you ill” –Structural Designer, Owner of the Office*

If some problems occur in the building phase considering the structures, solving these problems are structural designers task. Designers' aim is to *reduce additional work* and *create good quality structures* that do not need modifying at the later phases. Respondents' stated that in many projects contractor and precaster wants to change some products after the general plan has been made. The actors who are responsible for the construction may have used to work with other solutions or they can find cheaper substitutes, which are the main reasons behind changing products and solutions. When the products are changed the structural design company has to do additional work and modify structures.

*“Sometimes building company finds cheaper products and we have to change these to drawings” -Structural Designer*

*“Normally when construction company comes in they want to change some something” –Project Manager, Structural Design Office*

In structural design offices, project managers are persons who have the main responsibility to communicate with the construction site personnel if problems occur. According to respondents' *well-planned construction site*, which is running *without problems*, and *well-working good solutions* make them satisfied. If problems occur in the construction phase, structural design offices have to do planning and problem solving again. This also takes time and their resources that could have been invested in other projects. Planning a well-organized construction site requires *understanding how products and solutions are working in the construction phase*. By understanding this designers can save their time and create efficient plans that are easy to fulfill and follow by the actors responsible for the construction. Plans have to be also *clear* and *good quality* so that other actors and their workers can easily understand and interpret them. The data indicates that clear plans of good quality created by the designers, as well as other tools and working methods that can help with this, are seen as benefits that the designers and their customers gain. This reduces also the additional work which normally originate from the problems occurring during construction.

*“Man has worked 45 years in the industry with the precast planning, young people in the industry only know the computer, not the other things outside computer screen and cannot always connect their projects to real life.” -Project Manager, Structural Design Office*

*“We have received a good feedback about the quality and well planned structures, that makes you satisfied” -Structural designer, Owner of the Office*

### **5.1.2 Choosing solution provider**

Structural designers use a lot of their time to find *good solutions* for different problems. They use a wide range of various suppliers' products in their daily work. They use time in each project to evaluate different manufacturers' solutions and searching suitable products. In this phase they normally lean on technical manuals, catalogues and website material of each supplier. By using *good manuals* and *reliable good quality products* they can be sure about the reliability of the structures. According to interviewees they would like to have very *simple manuals* with all the

necessary information, which should be also easy to interpret. This saves also their time in many cases when information is easily available and they do not need to do searching and load calculations themselves. Nowadays the technical approvals are in a very central role in German construction. *Updated technical approvals are prerequisite for usage of products in structures.*

*“Most important thing for a new product is an approval. Without an approval they can do nothing. Second they need software or tables to calculate it. Nobody want to calculate that stuff – it takes time.” -Project Manager, Structural Design Office*

The price of the products and solutions that structural designers use in their daily work was not considered important. In certain situations structural designers cannot choose solutions that they want and they are forced to use particular supplier's solutions. However, in situations when they can decide the used products and solutions, they are not interested in the price because they are not buying actor. More important to them is to receive a *good technical support* and manage to *use products easily*. Also *an opportunity for special products* that they can use to solve challenging structures was considered to be a benefit.

*“We put the product on the drawings, we are responsible for it be we don't buy it. We can't pay technical support. We don't get any advantages using product which is 50% cheaper.” -Project Manager, Structural Design Office*

Technical support that suppliers are providing was considered one of the most valuable benefits for designers. During the interviews all respondents did not mentioned about that before it was asked. However, it was found that they consider technical support as something taken for granted, and expect to receive support for free of charge. Some of the respondents' mentioned that they contact technical support really often and that's the one of the key items when it comes to choosing supplier of different solutions.

*“Our aim is to use products with good technical support. That why we use Peikko.” -Project Manager, Structural Design Office*

The possible outcomes originating from using good solution supplier can provide various benefits to structural designers. By using good solutions they can be sure about the reliability and safety of the solution in the construction phase and in finished building. Good products also provide a fast and easy planning. If designers face problems during the planning, fast and good technical support will provide them easy access to receive help which also makes the planning process faster.

### **5.1.3 Reducing risks**

Structural designers are responsible for planning structures and choosing right technical solutions to solve problems in the planning phase of the project. Structural designers are also responsible for plan safety and strong buildings. Even time pressure is high and they have to do quickly decisions, designs, calculations and different solutions, the structures they create have to be *reliable and safe*. This also impacts the choice of the used solutions. Highest risk considering structural designers' work is related to little mistakes that they can do during the planning. These mistakes can lead major problems in the building phase later on. Although the risks are nowadays small and computer calculate the most of the loads, the risk still exists.

*“To make no mistakes, especially in precast, mistakes can be huge if you make them. It’s also plenty of money going away, however insurances are nowadays covering also big part of it. But still it is.” -Project Manager, Structural Design Office*

*“Main problems comes when they see first plans and there exists some problems considering structures. Good offices know how to solve these, and they find solutions quickly. That’s what separate them from low quality offices.” –Project Manager, Owner of the Office*

### **5.1.4 Software usage**

According to the respondents, they use many different software in their work. One of the most valuable benefits considering products and solutions was that different

products and solutions should be *easy to use with different software*. Many suppliers provide a software to support the usage of their products. However, *exporting results* between the supplier's software and the software that the designers use as their main software, did not work in many cases. Respondents also added that a *working software* would improve their work and reduce time. Software should also provide *reliable good quality results* that could be utilized without problems.

Respondents stated that one problem considering the current software that they use is the *amount of data*. According to the respondents, the simple features and products that the suppliers provide include too much data. Some of the respondents mentioned that their programs would be easier to use if all the simple parts would not be too complicated and files would not be too big to handle for their computers. Table 7 summarizes the structural designers' value drivers divided into four different sources of value. The table also demonstrates the possible outcomes that can be originating from designers' value drivers. The table also includes respondents' quotes that illustrates the value drivers and possible outcomes.

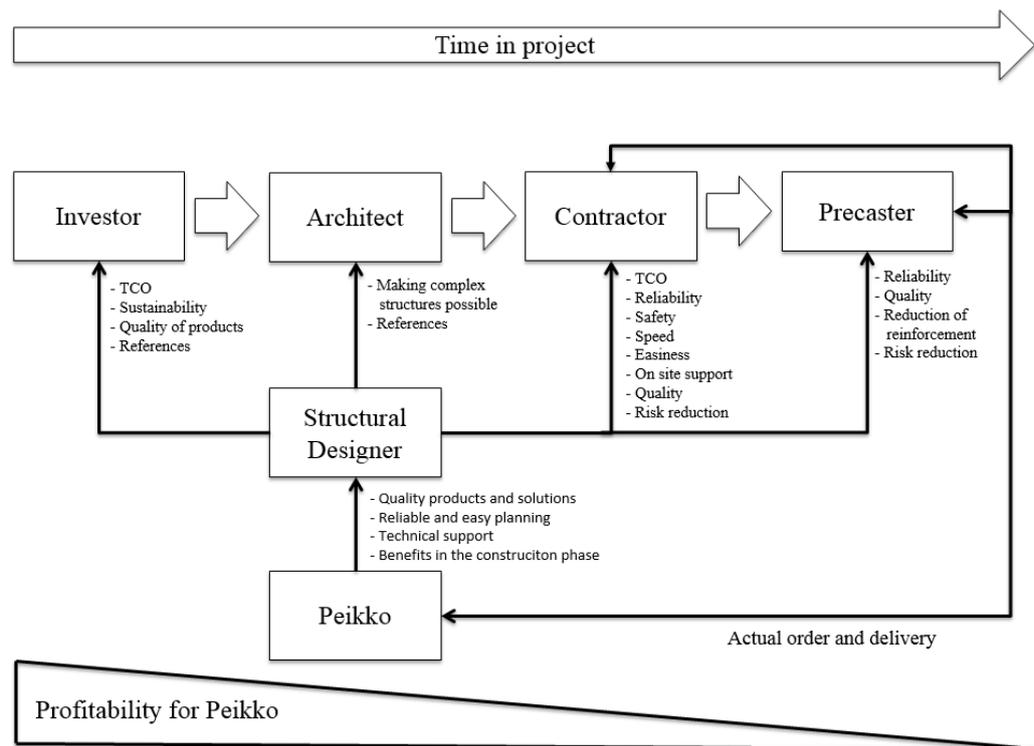
**Table 7** Structural designers' value drivers.

Sources of value	Value Drivers	Outcomes	Quote
<b>Saving time</b>	<ul style="list-style-type: none"> <li>• Efficiency</li> <li>• Quality of plans</li> <li>• Reduce additional work</li> <li>• Understand how solutions work in construction</li> <li>• To plan a running construction</li> </ul>	<ul style="list-style-type: none"> <li>• Serve their customers better</li> <li>• Faster planning</li> <li>• Running construction without problems</li> <li>• Satisfied other actors in project</li> <li>• Higher incomes</li> <li>• More projects</li> </ul>	<p>"No calls from the construction site after planning and no additional work or problems - that makes me happy"</p> <p>"We have received good feedback from the contractor because good quality designs, and this has gained more projects"</p>
<b>Choosing solution provider</b>	<ul style="list-style-type: none"> <li>• Quality and reliability of products</li> <li>• Clear and good quality manuals</li> <li>• Information easily available</li> <li>• Technical approvals</li> <li>• Good technical support</li> <li>• Opportunity for special products</li> </ul>	<ul style="list-style-type: none"> <li>• Easiness of usage</li> <li>• Reliable calculations</li> <li>• Safety use of products</li> <li>• Faster planning</li> <li>• Easy access to receive help</li> </ul>	<p>"They have working solutions and quite good technical support, that's why we prefer that supplier"</p>
<b>Reducing risks</b>	<ul style="list-style-type: none"> <li>• Safety</li> <li>• Reliable and safe calculations</li> <li>• Reliable solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Safe construction</li> <li>• Reliable and safe buildings</li> <li>• Saving money</li> </ul>	<p>"Mistakes can be huge if you make them. It also means plenty of money going away"</p>
<b>Software usage</b>	<ul style="list-style-type: none"> <li>• Reliability and quality of results</li> <li>• Work without problems</li> <li>• Easiness of usage</li> <li>• Easy export of results to other software</li> <li>• Amount of data</li> </ul>	<ul style="list-style-type: none"> <li>• Faster planning process</li> <li>• Files are easy to handle</li> <li>• Plans are easy to interpret by their customers</li> <li>• Results are reliable and safe</li> </ul>	<p>"To get reliable result and use these with other programs is an advantage"</p>

## **5.2 How structural designers can influence other actors to facilitate column connection solution**

The research findings revealed that although structural designers are not always making the decision, their presence is relatively high in the process of choosing column connection solutions and other products. According to the study, structural designers are communicating more or less with all the actors in the project planning phase who are participating to decision making concerning solutions. Even the ordinary designers were communicating with the decision makers and stated that they can always impact them and propose different solutions to solve problems.

Structural design companies face competition when they attend the bidding phase of projects. It is important that structural designers can understand the technical specifications of different products and solutions that they use because they have to be able to prove their calculations and plans for the other actors in the early planning phase. However, research indicates that structural designers should also aim to understand how different solutions work in the construction phase and what the different solutions' main benefits on construction sites are. By communicating the savings that can be achieved in construction by using column connection solution, such as easiness of usage and increased safety on site, structural designers can increase their possibilities to win projects. Figure 9, "Framework for structural designers' possibilities to impact other actors", describes how the structural designers are related to other actors during the project. This framework also illustrates the main benefits that using Peikko's column connection solution can provide to each actor. Structural designers can communicate and demonstrate these benefits to other actors and facilitate the value-based selling of the column connection solution if they are aware of these.



**Figure 7** Framework for structural designers' possibilities to impact other actors.

If the structural design offices can argue the benefits of the column connection solution to different actors, the possible outcome can improve their business. This means that there is no need to modify the structures again to change some products and they can achieve time savings and reduce problems, which was considered one of the most important value drivers for designers. Also planning a well running site saves their time and they can invest their time in new projects.

### 5.2.1 Influence in early phases of project

Investors, architects and structural designers are normally involved in the early planning phases. In the decision making, the investor has the biggest power in choosing suppliers. There are different kinds of investors who build for different purposes. Depending on the purpose of the building, investors can specify the use of certain supplier's products and solutions. This means that they force other actors to use certain solutions or suppliers in the project. This has happened for example in cases where the investor has been building for themselves and wanted to use high

quality and sustainable products in construction. Investors' good experiences with a certain supplier in the past have also led to specifying of the used solutions. However, in many cases investors trust in structural designers and are giving power for structural designers to find solutions that they are used to using in planning and want to work with.

“There have been cases where city governments have required the sustainability of the products. In these cases there haven't been any negotiations about using some other products instead.” -Structural designer

At the early phases, structural designers can offer consultancy to investors and also *propose the use of certain suppliers and their products and solutions*. Building arguments for their choices is important if the bidding process exists between structural design companies. If the structural design company can argue their choices to investors, the possible outcome would be specifying Peikko's column connection solution to be used in the project. To make solution specified in the early phases requires that structural designers must *communicate benefits, such as cost savings to investors and also the quality and sustainability of suppliers*, which has been noted to have an impact to a certain type of investors. According to the respondents, investors who build for themselves consider life-cycle costs of different solutions and do not rely only to purchase prices of solutions. In the early project phases, structural designers can also *communicate Peikko's willingness to participate and help in construction phases and share risks that investor can face*. After the products are specified, there are no negotiations later on in the project about using other methods. Profitability is also higher for Peikko if they manage to do supply contract in the early phases of the project.

Architecture has been developing really fast during the last decades and nowadays they are planning complex buildings that can be hard to fulfill with cast-in-situ methods or other similar methods. However, Peikko's solution enables building complex structures and the solution can be still easily erected. Structural designers can communicate these benefits to architects and investors and *promote and demonstrate* that the solution enables ambitious architectural buildings. This can

also be one issue which might lead to specifying of Peikko's solution because really complex structures are not possible to build with alternative substitute solutions. This activity would also facilitate the use of the column connection solution in complex projects if also architects could understand the possibilities of the solution.

### **5.2.2 Influence in later project phases after the general plan**

When other actors join the project, they normally want to change some products and solutions if those are not specified in the plans. The reasons why they want to change products are related to construction methods that they are used to, their contracts with some particular suppliers or the price of products and solutions. Contractors and construction companies prefer to use methods and supplier's products that they are used to in the past. They consider unfamiliar solutions to be as a risk. Precast factories often have yearly contracts for bulk products, such as anchor bolts and some column shoe sizes, and they want primarily to use products that they already have in their stock.

Structural designers can also *propose the use of the column connection solution* to contractors and precast factories. To make actors at the later phases to adopt Peikko's column connection, designers have to be able to *communicate and demonstrate the possible cost savings* of the column connection solution and *risk reduction* that is possible to achieve by using Peikko as a supplier. In comparison with other used column connection methods, Peikko's solution can provide easier erection, reduced time of erection, reduce workers on site and increased safety during construction. Structural designers can also inform other actors that Peikko is able to provide superior customer service, help customers with erections and deliver high quality products reliable. The respondents stated that they are actively searching new solutions that could help their customers. A few respondents had received good feedback when they had found working solutions for construction phases and managed to increase the performance and reduce costs on site. Respondents stated that they are actively searching new ways to work and they are ready to adapt the use of new solutions. When designers propose new solutions to

their customers, they can reduce customers' risks and tell them about the success in previous projects with the solution.

“Precast factory is normally choosing the products they are using in structures. But I can have impact to their decision and suggest different solutions. We are actively finding new products and sometimes we surprise buyer with some new solution.” -Project Manager, Owner of the Company

The main risk that actors faced in the use of the column connection solution in Germany was related to the precision of anchor bolts that are erected to the foundation. Peikko has a product the aim of which is to provide sharp precision and make erection to be easy and reliable, the PPL-template. However, research indicated that construction companies are not used to using the template and they do not know how to use it. Structural designers can *demonstrate the use of the template* to actors who are responsible for the construction work. This activity requires that structural designers can understand how templates are used on-site and in structures. Structural designers can demonstrate the use of templates in the erection specifications that designers have to deliver with their structures. In these specifications, information for erecting columns and different erection steps are provided. On-site staff is normally working based on these specifications.

Respondents from Germany stated that when choosing the precast parts for the construction, the decision is always on precasters. In Sweden the salesmen also noted that if products are not specified in plans, the precaster always makes the decision. Designers who work for precast factories have a high understanding of the precast structures. They consider themselves as main the decision makers and also stated that they have a high impact on other decision makers. *They also work in the same organization as their procurement department and other decision makers, which also means that they can gain an impact on them easily.* One respondent stated that they can change current solutions to new ones if someone could demonstrate the benefits and cost savings of new solutions. This result indicates that designers working for precast factories can facilitate the use of the column connection solution if they can understand the benefits of the solution and

*communicate and demonstrate* these benefits to other decision makers in the factory. Precast factories also have a high impact on modifying structures that other designers have created. Respondents mentioned that some of the structural designers' knowledge over the erection problems is not that high and they are normally proposing the use of different solutions for them. In these cases other designers have adopted the use of the solution.

“If engineer is not used to work with precast elements we will improve the drawings and change products etc. and create own specified solution if needed. If we are not satisfied we can contact the structural designer and suggest them something else – usually it has worked.” –Technical plant manager, Precast factory+Construction company

“Structural engineers doesn't that much about erection problems but we do and can help them. It's also in German law that you have to describe in the specification how to erect the column. In many cases this isn't every time there. Sometimes construction company doesn't know that they need bracings for example and those supports are expensive – they didn't know that before the erection phase because lack of information. Engineer make description and we normally help them” –Technical plant manager, Precast factory+Construction company

Some respondents said that they had done large projects for well-known customers where Peikko's solution had been utilized. Some projects had succeeded very well and they had received good feedback about the column connection solution from the actors responsible for construction work. Structural designers can also utilize these cases as *references* to convince other actors about the solution. This activity can be done during the projects, but also when there is not on-going projects. The power of references is huge in the construction industry and structural designers show also their references to their customers and other actors. This might also be one factor that has led involvement to projects that design offices have applied for. Table 7 illustrates how structural designers can influence other actors during the project phases to facilitate the use of the column connection solution.

**Table 8** Summary how structural designers can influence other actors in different project phases.

Early planning phases	Phases after general plan has created
<ul style="list-style-type: none"> <li>• Communicating and demonstrating benefits of the solution to investor</li> <li>• Proposing the use of Peikko as a supplier and their products to investor</li> <li>• Demonstrating the benefits of the solution to architects and how it can enable complex structures</li> <li>• Presenting references to investors, architects</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrating and communicating benefits of the solution that can improve construction phases to contractor</li> <li>• Communicating the risk reduction which is possible to achieve by using Peikko as a supplier</li> <li>• Demonstrating the use of PPL-template</li> <li>• Promoting the benefits of the solution to DMUs' in construction companies and precast factories</li> <li>• Presenting references to actors responsible for construction</li> </ul>

Possible outcomes from facilitating the use of the column connection solution would also provide benefits and positive outcomes to structural design offices. When they learn how to use the solution it will provide them with an easy and reliable planning. If they can argue the use of the solution at the early planning phases, the possible outcome would be specifying of products. This means that designers do not have to do additional work to change the structures after contractors and other actors come in on later phases and Peikko's products will be used in the construction. In this case structural design offices can concentrate and use their resources in other projects, which also means a higher income. Also if they manage to argue the use of the solution to actors in the later phases, they do not need to do additional work and change the used solution and products. They can also receive good feedback because of the running site and good solution that they had chosen. This positive feedback can gain reputation and also improve their relationships with different actors. This might also have an effect in future projects when different actors are choosing their partners.

However, all the facilitating activity that designers can do to support the use of Peikko's column connection solution requires that designers have to adopt Peikko's products and solutions in their work. They have to be satisfied to work with Peikko's products, solutions and services. This requires that Peikko and the use of the solution have to provide the designers with benefits compared to other competitors' solutions that can be used to erect columns.

### **5.2.3 Offices impact to choosing a solution is high**

Structural design offices always have a higher power to choose the used solutions for projects when they receive work from the *architect* and when the *value chain in the project is traditional*. *Large and medium size* companies normally receive projects this way. In these cases structural design offices can choose the product supplier and solutions that they want to use in their quotations. In this phase they communicate with the investor and can also argue their choices and promote the use of a particular solution and supplier to investors. *At the early project phases* contractors and precasters are not involved to project and offices want to find working high-quality solutions and they are not interested in the price of solutions. They want to make good quality work and safe and reliable structures that will ensure them their good night's sleep. Some designers stated that contractors must use the products that they have used in the drawings because of the responsibility of planning reliable buildings.

When the investor or developer build for their *own purposes*, they are always more interested in the *quality* of materials and *methods* that are used in the construction phase and in the finished building. They are also more interested in the *life-cycle costs* and these types of investors consider different solutions to be used. In situations like these, structural designers have a *high impact* to act as consultants and suggest different possible methods and solutions to be used. In these cases investors are usually interested in the *technically best* and *working solutions*.

“Every investors is unique, some develop the site – put small things together, some are selling the site and they are interested the maximum profit, This kind of investors are not interested of life cycle costs. I built it and sold it as fast as possible. If company building to themselves – of course they are also considering life cycle costs.” -Project Manager, Structural Design Office

If structural design office has done a *close cooperation* with certain investor, it is possible that they are receiving projects without bidding phase. In these cases the responsibility of choosing supplier of products and used solutions is on structural designer. According to research in these cases designers’ want to use products that will provide best benefits for them and other actors. According to respondents’ *good relationships* to their customers has a pivotal impact in these cases and hence they have more impact to used solutions.

Structural designers in the precast factories have a high impact on the decision in some cases. For example in Germany only a limited number of structural design offices are used to working with precast and for this reason responsibility of precast planning is sometimes outsourced to precast factories. In situations where designers are working in the *same organization* with the Peikko’s *end customer*, they have a high impact on decision making of the used methods because of their possibility to influence inside the same organization.

#### **5.2.4 Offices impact to choosing the solution is limited**

When the investor’s aim is to *rent or sell the finished building*, their target is to finish the construction as soon as possible. They select the most flexible methods that allow changes in structures in the later construction phases, but also to begin construction as early as possible. For this reason they want to decrease all costs in the building phase, also the material costs. In these cases structural designers have to adopt the use of the cheapest methods and products and they are not able to promote solutions with a high purchase price. It is possible that they do not have any impact on investors in these cases.

Research indicated that there are *small offices* that have priced themselves higher and are engaged to do high quality work. They may give opinions about some solutions to their customers but normally they create structures just as the customer requires in every situation. In these cases the solutions that they use may not be the *technically or economically best*. However, they will do the plans just as their customers want to serve them as well as possible.

If contractor or construction companies have their own structural designers, the structural design *office that the investor has hired may not have any impact* on choosing the solution provider if the solutions are not specified at the early stages. At factories, the products can be changed to substitutes if the structural design office *is not used to working with precast solutions*. In these situations the precast planning is then usually outsourced for another office or to a precast factory. In this case the structural designer office does not have any impact on the end customer and choosing the precast connections supplier. Also large contractors and construction companies who cooperate with a certain structural design office can force designers to use the solutions that they want. Table 9 presents different design offices' impact on choosing solutions.

**Table 9** Different structural design offices' impact to choosing solutions.

	<b>High impact</b>	<b>Limited impact</b>
<b>Size of the office</b>	Large/Medium	Small
<b>Type of the office</b>	Independent / Working in the same organization with end customer	Doing projects by end customer's requests
<b>Project phase</b>	Early	Late
<b>Investor</b>	Building for own purpose	Selling/renting finished building
<b>Relationship with their customers</b>	High	Low
<b>Used to working with precast</b>	Yes	No

### **5.3 How Peikko can affect structural designers to facilitate value-based selling of the column connection solution**

Peikko can affect structural designers by different actions. Peikko salesmen visits structural designers on field and presents Peikko and Peikko's products and solutions for them. Peikko's salesmen can also offer help to designers at their offices and provide help on the construction site. Research revealed that structural designers also often contact Peikko's by asking help from the customer service and searching information from websites. Structural designers' value drivers also revealed that designers actively use technical manuals and other materials related to planning, which different suppliers are providing with their products and solutions. This section presents results and analyzes how Peikko can affect structural designers to facilitate the column connection solution sales.

#### **5.3.1 Salesmen activities**

One of the most important and efficient ways to increase awareness of a company's products and services, and to meet customer's problems, is proactive sales and field services for structural designers that Peikko is providing. All the salesmen interviewed for this study stated that it is the best way to *create and maintain relationships*. They stated that meeting customers actively in the field is not the easiest task and it requires a lot of time and effort, but in the long run it pays off. Also creating relationships with new customers always requires meeting them face-to-face. In the first phases of relationships, the meetings are in a crucial role and salesmen added that these meetings should be prioritized high. Longitudinal existing relationships are also extremely important to maintain. Salesmen stated that creating and maintaining relationships, as well as learning to know each customer, are in a pivotal role in value-based selling. They added that normally when they have managed to create a good relationship with the customer, the delivery of value for customer business is a lot easier than for the new customers. However, some salesmen added that some of their colleagues cannot recognize the importance of meeting customers and they are not willing to put their effort to drive around and meet them in the field.

On the meetings salesmen presents Peikko's products and services. During these presentations the technical specifications of high quality products are presented but also the benefits of products and solutions can be demonstrated to designers. Because structural designers are communicating with the other actors, they are also interested in the features and benefits of different solutions in the building phase and in finished buildings. Research indicated that good structural designers can create high quality structures and also understand how the solutions work in the construction phase to create a running construction without problems. This indicates that *communicating the benefits of the solution and demonstrating the advantages that can be gained during the construction* are extremely important when the target audience is not used to use to working with the solution.

After presentations salesmen normally have time to answer questions that might have come up during the presentation, and also discuss other issues related to customer's business. They are also willing to help customers after meetings if they are facing problems with their work. Salesmen added that they have got involved in certain projects by asking the problems that the customer is currently having and suggested a different solution for the problem. This indicates that salesmen should *actively diagnose customers' problems* and *aim to solve customers' problems* with Peikko's solutions. Also a good way to gain access to customer's problems that salesmen had found out is starting to discuss the on-going projects that customers have at the moment. One salesman added that it is important also to try to adapt and try new sales styles and approaches for different customers to recognize and find good sales strategies.

In many cases, Peikko products and solutions are the most expensive on the market but compared to other methods, Peikko's solutions can provide better TCO and non-monetary benefits. Thus, preparing arguments and calculations supporting the delivery of value beforehand is in a central part of the sales planning phase. According to respondents, it is important to understand how solutions work in the construction phase and be aware of possible cost savings and other benefits if those

are relevant. Thus, *quantification of the value is one of the most pivotal parts of credible communication.*

*“If somebody would prove me and show that the life-cycle cost is smaller than alternative product’s, of course I would use that one even the purchase price is higher” – Technical Plant Manager, Precast Factory+Construction Company*

Research findings indicated that value drivers of structural designers, who work in the higher positions, derive from the ordinary designers who mainly work with planning. Research also revealed that different person’s knowledge over solutions is varying depending on their position and how long they have been working in the industry. Project managers are normally the persons who are responsible of the construction site and have high knowledge of different solutions. According to the study, the knowledge of older people, who had worked long in the industry, is significantly higher than that of younger designers. Research revealed that designers work in teams and the project manager is the leader in each project. Managers have the highest power of deciding the used working methods. For this reason, the benefits of the solution and supplier that can add value to designers and their customers’ business should be communicated to project managers. This could be done by communicating directly to them but also designers who work in teams, led by the product manager, can provide indirect access to communicating the benefits to them. If the access is only possible to gain indirectly, the right persons to contact are the designers responsible for planning the precast structures. Research also revealed that almost every office has a network and organization of their own kind. This finding indicates that the salesmen should *aim to understand different design offices’ business models and identify right persons from the customer’s organization.* Demonstrating benefits of the solution to them can improve all designers’ knowledge about the solution.

Salesmen in Germany were actively *documenting* their visits and other customer related information to CRM. According to salesmen, this has helped them because of the large amount of customers. They stated that relationships are also easier to maintain when the important data about their organization, reports of visits done in

past and possible on-going projects and quotations are documented. This has also helped with sharing the information internally with other salesmen.

One respondent who had worked in the industry for 45 years pointed out that knowledge about students, who are graduating and starting to work in structural design offices, is weak in many cases. Students and early graduates are one focus group that can be targeted effectively. Increasing their knowledge and awareness over the Peikko's solutions can be carried out by arranging seminars in universities and participating fairs targeted to students and young designers. Salesmen also agreed about the importance of affecting students and early graduates. Research also revealed that certain offices should be prioritized higher because of the projects and networks they are working. Also the power of decision making was different between the structural design offices. Thus, salesmen should be able to *recognize the high potential customers and audiences*.

“Young people in the industry only know the computer, not the other things outside computer screen and cannot always connect their projects to real life.”

-Project Manager, Structural Design Office

### **5.3.2 Peikko's activities**

Research revealed that the structural designers' value drivers related to the use of different solutions to erect columns. Results also indicate that if Peikko is able to deliver value to structural designers' planning process and improve their business, the possible outcome is facilitating the value-based selling of the column connection solution. Structural designers are acting as decision makers in some situations but they always have a possibility to impact other actors making the decisions concerning the used solutions. Designers added that if they can choose the solutions, they will prefer suppliers with good products related materials, working solutions and good technical support. *Thus, Peikko should aim to add value to designers' planning process through their products, services and software.*

Peikko is already providing a wide range of products for the structural designers that they can use in planning. Research findings indicate that many of the structural designers' value drivers are related to product usage and how using different solutions can help them to be more efficient. According to the respondents, technical manuals are one of the most important tools when they are using different products. Respondents gave good feedback about Peikko's manuals when it was asked. However, Peikko does not offer a manual for the column connection solution. To be able to use the column connection solution, designers have to use two separate manuals. *Creating an own manual for the column connection solution could help the usage of the solution.* This could especially help designers in areas where are not used to working with the solution.

Peikko provides their products to different planning software and Peikko also has its own planning software. Some of respondents gave good feedback about Peikko's software but some of them had had bad experiences with it. *Providing a working software and making sure that products and solutions can be utilized without problems with different software* is important in making designers to adopt the use of the column connection solution. Ensuring that all the *materials related to planning should be of high quality, easy to interpret and reliable* is also important. By ensuring that customers can easily find all products and materials related to planning, such as approvals and technical manuals and erection videos, Peikko can also help designers with their planning efforts. Peikko also has a reference-tool on their website, where customers can find and filter different *reference projects*. Designers are interested in different projects and this is one reason why different references might have a pivotal influence to them in certain cases.

Structural designers are often leaning on the customer service during projects. They often ask help to solve problems in structures or opportunity for special. *Providing high quality customer service and technical support* are one of the main activities that Peikko has earned a high reputation in. Research revealed that it is also the cornerstone why certain structural designers prefer to use Peikko's products and

solutions. All of the interviewees had used Peikko's customer services and gave good feedback on that.

Peikko can train structural designers and increase their knowledge about the solution. This can be done by the salesmen but Peikko can provide materials for designers in websites and fairs, for example. Research indicated that there is a need for simpler materials in certain market areas, such as in Germany. *Peikko should aim to produce and deliver materials targeted to designers, which would concentrate more to the basics of the column connection solution and demonstrate the most important benefits of the solution.* Research indicated that also the use of PPL-template should be demonstrated better in market areas where the solution is not widely known. According to the respondents, it is unclear to many designers, but also to workers on-site, how the template can be used in drawings and on construction sites. Salesmen in Germany stated that a simple brochure, which would provide information over the solution and could be given to customers during the visits and fairs, could help them to increase knowledge about the solution.

Research also indicated that some investors requires high quality products and sustainability of products. Also decreasing risks and problems during construction was found to be extremely important to help different actors to adopt Peikko's solution. Thus, *Peikko should market themselves to structural designers as a customer centric partner, who delivers high quality sustainable products and willingness to help and share designers' and their customers' risks during the projects.* Different activities of how Peikko can affect structural designers to facilitate value-based selling of the column connection solution are summarized in table 10.

**Table 10** Summary of activities of how Peikko can affect structural designers.

Peikko's salesmen activities	Peikko's activities
<ul style="list-style-type: none"> <li>• Communicating and demonstrating different benefits of the solution to designers and also benefits in construction phases</li> <li>• Quantification value with calculations</li> <li>• Diagnosing customer's problems actively</li> <li>• Creating and maintaining relationships</li> <li>• Helping customers to solve problems</li> <li>• Presenting reference cases</li> <li>• Identifying right persons from the customer's organization</li> <li>• Targeting right groups</li> </ul>	<ul style="list-style-type: none"> <li>• Providing premium high quality tools and materials related to structural designers work</li> <li>• Making sure that the solution can be utilized with different software without problems</li> <li>• Providing high quality materials for planning</li> <li>• Providing superior customer service</li> <li>• Making product related materials easily available</li> <li>• Simplifying and creating materials to target areas where the column connection solution is not well known</li> <li>• Presenting references</li> <li>• Marketing Peikko as a customer centric partner who is delivering sustainable high quality products and willing to help and reduce risks of designers and their customers</li> </ul>

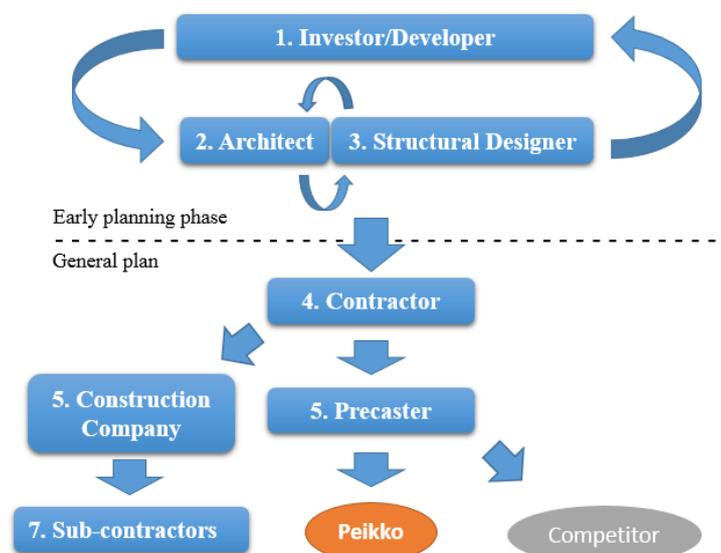
### 5.3.3 Differences between market areas

Although these both market areas are located near each other, the situation and the whole building industry is completely different in these countries. In Sweden the dominant way of building is Scandinavian style construction, where *precast style of construction is popular*. In Germany, the *dominant way of building is cast-in-situ style of construction*, which is most popular in central Europe's market area. It is estimated that in Germany over 80 % of all projects are constructed with cast-in-situ method.

The use of the column connection solution is completely different between the market areas. *In Sweden bolted connection is used as a standard solution to erect*

*precast columns to foundation and everyone in the construction industry knows this solution.* Sweden is also a big precast market and there are a lot of suppliers providing products such as columns shoes. *In Germany this solution is not well known and it is used only as a special solution for special circumstances.* It is estimated that only few construction companies are used to working with this method and only 20 % of all structural designers knows this solution. Peikko is well-known by people and structural designers who work with precast structures. However, Peikko is seen as a small actor in the industry compared to large German companies.

In Sweden Peikko's engagement to projects happens either in the early phase of projects if structural designers are *facing a problem* during planning, or when the *end customer is asking for an offer*. According to Swedish salesmen, they are currently so busy that it is hard to gain early access to projects and search opportunities and new leads because it takes too much resources. *Also active visiting of customers was considered an additional task because it too takes too much time.* Value chain of most projects is traditional in Sweden. Value chain which leads to the use of the column connection solution in Sweden is described in Figure 8.

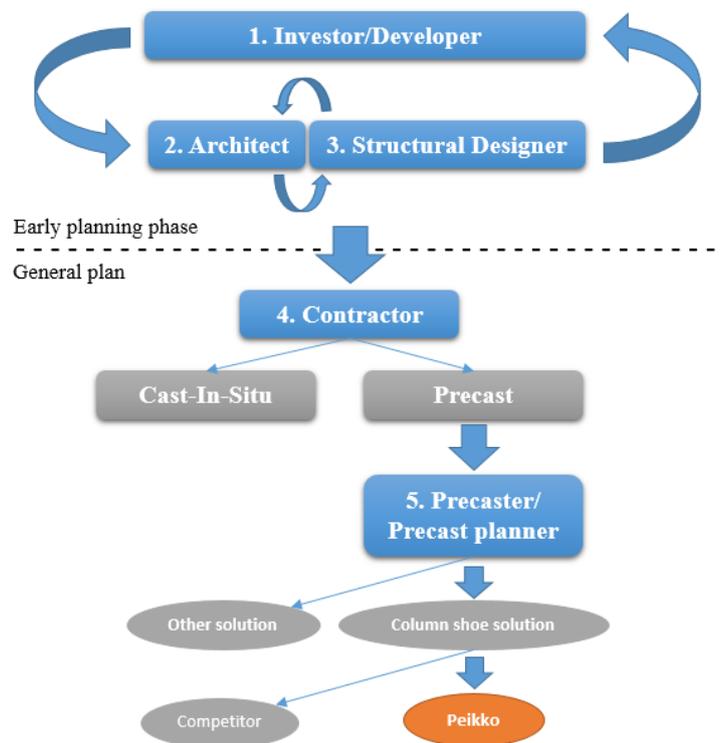


**Figure 8** Value chain in Sweden.

Early project phases in Germany are similar as in Sweden, which is described in Figure 7. In Germany, after the general plan is done, the investor chooses the main contractor for the project. When the contractor has been chosen, they have a decision to use a traditional Cast-In-Situ style of construction or a precast way of construction. It is estimated that 80% of all construction is carried out with Cast-In-Situ way of construction. If the contractor decides to use the precast way of planning, they need to hire a precast factory and in some cases a precast planner because all structural design offices *are not used to working with precast planning*. It is estimated that 90% of the used precast solutions are other substitute solutions for the column connection solution. Depending on the project and the order load on the precast factory, they decide which precast solution to use. *It is estimated that from the rest 10% of column connections Peikko has an 80% share.*

In Germany, Peikko's engagement point to project happens in the early phases if designer contacts customer service after they have faced a problem. The field salesmen are also in a central role to get involvement to different projects at the early phases when they are *visiting customers and seeking opportunities*. They receive projects through normal quotation where contractors and precasters asks an offer. Value chain that leads to the use of Peikko's column connection in Germany is described in Figure 9.

The biggest barrier for selling the solution in Sweden is the price of the Peikko's solution. Competitors with substitute solutions and lower prices have captured the biggest market share in selling the column connection solution. In Sweden the decision about choosing the column connection supplier is in the most cases done by precast factories or construction companies. If the products are not specified to the structures, they can decide what products they want to use. In this case they normally search the cheapest products that they can find, and precast factories also aim for best supplying contracts. Procurement departments are in charge of buying the solution.



**Figure 9** Value chain in Germany.

Precast factories have the main responsibility for manufacturing the columns in Sweden. Precast factories have hired designers for precast structures and they do their own planning for the larger precast projects. They can also modify and replace finished structures if there are mistakes. However, during the modifying, designers can also change the products for some reasons, e.g. if they do not prefer the supplier whose products has been used in the plans. Respondents in Sweden did not have deeper knowledge of precast factories' planning actions, but according to a Swedish salesperson, modifying structures by precast factories to achieve cost savings is common.

From the Sweden's salesperson's viewpoint, their sales actions are too *passive* at the moment. *Swedish construction business is doing well* and there is lots of construction going on in the bigger cities by private investors and city governments. However, their sales are not correlating to the overall situation of the country. They are not executing enough customer visits and promoting their products. Rather, he described that they are passively reacting to customers. He also described that they

do not have enough resources at the moment to apply for new projects or actively seek new sales opportunities. One of the main problems is also *the lack of good and loyal customers*. Salesmen stated that the importance of good and loyal customers is significant when the recession starts again in future.

In Sweden they have also had some *problems with the deliveries* and they have gained bad reputation because of missing delivery times. They do not have their own stock in Sweden and sometimes delivery times are long because parts are supplied from Finland or Europe. According to salesperson, this is one reason for losing good projects. There had been also a few *quality issues* that had gained bad reputation to Peikko in Sweden.

The biggest problem when trying to sell the solution in Germany is *the risk that construction companies are facing in the use of the solution*. Structural designers are also conscious about this risk and that is one reason why some of them do not prefer using this solution. Problems occur normally when the site staff is starting to erect columns and they are not used to working with this solution.

There are three common methods for erecting columns in Germany. First, they use a column with the foundation, where the column is connected to the foundation already in factory. Second, they use the socketed connection, where the column is erected into a concrete socket. The third solution is the Peikko's solution. It is estimated that 90% of all erections are done with the socketed connection or column with the foundation. The column connection solution is used at the moment only as a special solution for special circumstances. According to the respondents, most of the structural designers and construction companies argue that socketed connection and column with foundation are more flexible to use in the planning and construction. They stated that because of the overlapping of the construction and planning phase, it is easier to use solutions that allow flexibility. Also the purchase price of the other solutions is lower compared to the column connection solution.

Salesmen have *good loyal customers* in Germany but selling the column connection solution is considered very challenging. Salesmen had done a plenty of work to improve their sales, and they had managed to achieve some improvements but they were still struggling with the selling of the solution. Summary of main the differences in both market areas is presented in Table 11.

**Table 11** Summary of key differences between market areas.

	<b>Sweden</b>	<b>Germany</b>
Type of market	Large Precast market, country in upturn	Large cast-in-situ market
Use of the column connection	Standard solution	Used only in special cases
Engagement with customers in the early phases	Problems in the planning phase, customer contacts Peikko	Problems in the planning phase, customer contacts Peikko, salesmen searching projects
Competitor products	Similar cheaper products	Other substitutive methods
Main problem with sales	Purchase price	Higher purchase price, actors reluctant to adopt the use of it
Main risks that customers face	Reliability of supplier, quality	Risks during erection (precision), knowledge of the solution
Salesmen	Passive	Active
Customers	Lack of good loyal customers, lots of potential	Good ones, lots of potential
Structural designers	Are used to working with precast	Only a few offices know how to work with precast
Peikko	Known by people who work in the industry	Known by people who work with precast

## 6 CONCLUSIONS

The aim of this study was to find out how suppliers can affect third party influencers and how they can facilitate the value-based selling of the column connection. This chapter discusses around these issues and aims to find solutions to improve sales in the market areas through answering the research questions. In the first section the research questions are answered and discussed. The second section presents managerial implications and in the last, third section of this chapter, the limitations of this study and possibilities for the future research are discussed. Research questions and brief results are demonstrated in following Table 12.

**Table 12** Research questions and results.

<b>Research question</b>	<b>Result</b>
1. What are structural designers' value drivers related to column connection solutions usage in planning?	Structural designers want to use solutions and methods that will improve their work to be more efficient, easier and faster. Main value drivers were good quality products, easy usage of solution, good technical support from the supplier and reliable and safe structures.
2. How can structural designers facilitate value-based selling of the column connection solution?	Structural designers can facilitate value-based selling of the solution by promoting Peikko's solution to other actors, providing for Peikko earlier access to the projects, increasing knowledge of the solution and presenting reference cases to other actors in the project network.
3. How can Peikko affect structural designers to facilitate value-based selling of the column connection solution?	Peikko can affect designers to facilitate value-based selling by creating and maintaining relationships with design offices, actively diagnosing designers' problems, communicating and demonstrating of the solutions value and increasing the knowledge over the solution. Peikko can also affect structural designers to gain facilitating effect by ensuring that Peikko's products and solutions are working superior in the planning phase and marketing Peikko as a customer centric partner delivering sustainable high quality products who is willing to help and reduce risks of their customers.
4. What are the key differences between market areas related to use and sales of column connection solution?	In Sweden the solution is used as a standard and in Germany the solution is used only in special circumstances. Main barriers for the usage and sales of the solution in Sweden are the price of the solution and cheaper similar solutions. In Germany the main barrier is the risk that actors are facing in the usage of products because of their lack of knowledge over the solution.

## 6.1 Answers to the research questions

### 1. *What are the structural designers' value-drivers related to solution usage?*

Research indicated that structural designers are facing various challenges at their work. The main challenge in their work was a permanent hurry and amount of work. They stated that all things that can reduce time used in each project and everything that makes their work to be more efficient are seen as benefits. Designers' aim is to use good quality solutions and materials related to planning. Easy and reliable use of different solutions, which are providing safety during construction and in finished buildings, is important to them.

Easy and fast usage of different software was also one of their value drivers. Different software should provide good quality and reliable results that could be utilized with other software too. Respondents appreciated the technical support and help from the solution provider and stated that these are one of the most valuable services for them. Designers' aim is to manage plan a well-organized construction for their customers and hence improve their customers' business. Finding working solutions and decreasing problems during planning and construction were considered important benefits by the respondents. This had gained them positive feedback and provided good relationships with customers.

Research indicated that structural designers' value drivers are also highly related to improving their customers' business. The possible outcomes of the value drivers would decrease their time used in different projects, increase the incomes, reduce the problems during construction phases, decrease additional work and ensure better relationships with other actors. These are significant benefits from designers' viewpoint and for this reason Peikko should ensure that their products, solutions and services targeted to structural designers are correlating with designers' value drivers.

The value drivers were presented and analyzed in chapter 5.1. This knowledge provides a base for the actions of how Peikko should strive to affect them.

Understanding the value drivers is important in the phases when Peikko is planning for example to create new materials or launch new products targeted to structural designers. Influencing other actors CPV is also considered as an important action for creating value in the network (Cova and Salle. 2008). By delivering value to designers through the products and services, Peikko can ensure that structural designers are adopting the use of Peikko's products and solution. This also improves the structural designers' possibilities to facilitate value-based selling of Peikko's products and solutions when Peikko's products provides an easier and efficient planning than competitors' products. By affecting structural designers' value drivers, Peikko could also strengthen their cooperation with designers. Literature also states that cooperation with the customer at the early stages lies at the heart of value-based selling (Terho et al. 2012; Töytäri et al., 2011).

2. *How can structural designers facilitate the value-based selling of the column connection solution?*

Research revealed that structural designers are in a central role of the planning process of buildings and they are communicating more or less with all actors during construction projects. Although structural designers cannot make the decision, they can always *propose the use of the column connection solution to other actors and promote Peikko* if they can recognize the benefits of the solution and the benefits of Peikko as a supplier. Research indicated that different kinds of offices have a different power to impact decisions related to the used suppliers and solutions. Hence, facilitating the effect is high in networks where structural designers are making the decision. In these cases the designers want to find the technically best solutions that are easy to use in the structures. Designers traditionally choose products that they are familiar with. The facilitating effect is also high in networks where designers have a high possibility to influence decision makers. Their impact to facilitate value-based selling of the solution is limited in networks where structural designers are working for example under contractors' regulations. These regulations, norms and outdated information of some actors are considered also in literature to disturb value-based selling (Töytäri et al., 2015).

Marketing and presenting products to different stakeholders and investors at the early stages of projects is a challenging activity for Peikko because it requires a lot of resources and time. Literature also suggests that one efficient way to affect decision makers and stakeholders is to identify individuals and gain sponsorship to influencers around the customer's decision making unit (e.g. Cova and Salle, 2008; Keränen and Jalkala, 2013). Value-based selling literature has also recognized the role of different individuals in the customers' organizations and highlighted role of them. Authors have found that different individuals can perceive value different ways (e.g. Anderson et al., 2006; Terho et al., 2012). Structural designers can inform the investors of the benefits that can be achieved by using the column connection solution, and also of benefits that could be achieved by using a sustainable, high quality Peikko solution. For architects the column connection solution can enable planning of complex buildings and for actors in the later phases the solution can provide actual benefits, such as cost savings. Research revealed that at the early stages of projects designers communicate a lot with architects and investors and have an impact on them, but also in the later phases they cooperate closely with the contractor and construction company. *Thus, structural designers can act as influencers and promote the use of Peikko and the column connection solution to other actors, if they can understand the benefits of the solution.* Literature also supports this finding. Hence, it can be observed that the third party roles can have a positive effect to value-based selling in certain situations, which depends on the designers' role and location in the network. As a consequence of the facilitating, Peikko can achieve a better ratio for getting their products specified in the early phases of the project, which also means higher profitability in terms of price.

Salesmen stated that the engagement to new projects happens traditionally when a structural designer contacts Peikko and asks help for problem that has occurred in the planning phase. *For Peikko this provides an earlier access to new projects and helps also Peikko to understand designers' and their customers' problems.* This provides also better knowledge for Peikko to understand the problems that usually appears in the planning phase and which issues emerge the risk for different parties

at the early phase of projects. Access to projects at the early stages makes possible a better opportunity for baseline assessment and understanding the customer's business model, which has been seen as a crucial part of the success in value-based selling (Terho et al., 2012; Keränen and Jalkala, 2013). Value-based selling has been observed to gain better results at the early stages of buying and planning process of customers' (Töytäri et al., 2015). By gaining access to early planning phases, Peikko could offer benefits for both structural designers and end customers. By offering support to designers, Peikko can reduce the risks that they face in the planning and provide special solutions if needed. By doing the early supply contract with the end customer, Peikko can increase the reliability of the supply and also make sure that the customer can receive special help from Peikko in the construction phase if needed.

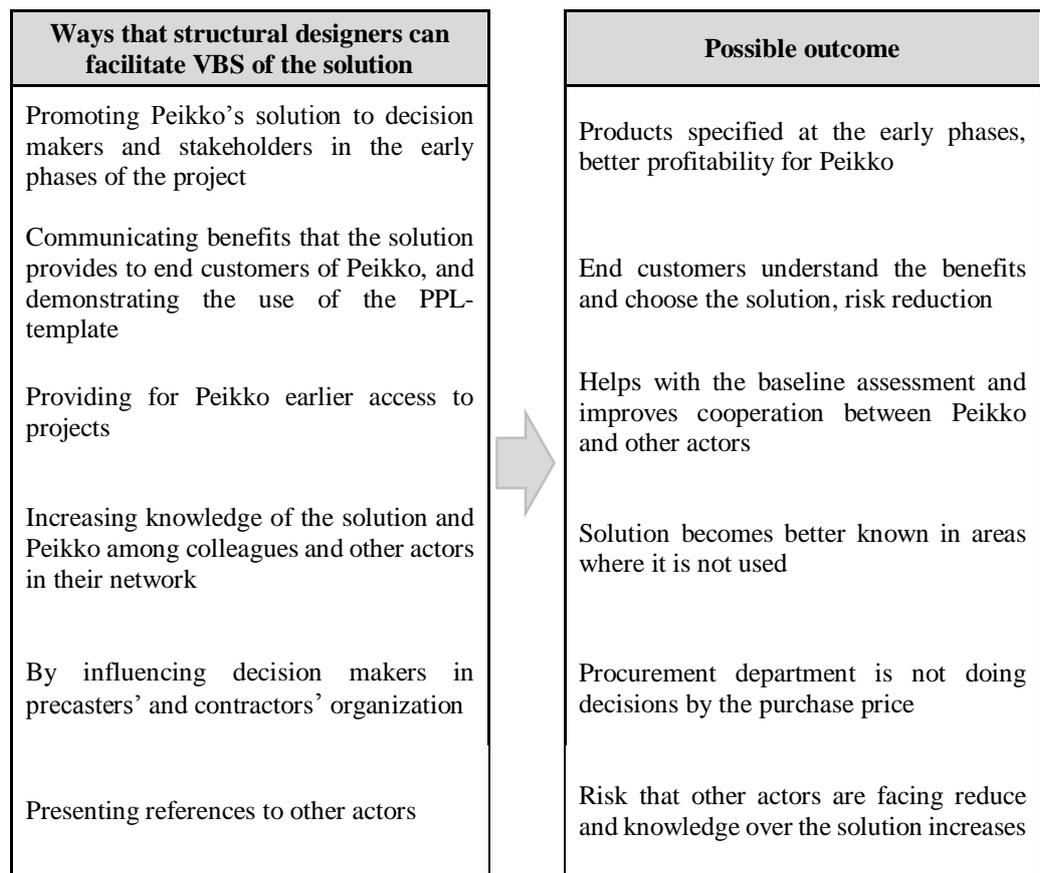
Especially in areas where the column connection solution is not well known, the biggest barrier for the use of the solution is the risk that contractors and construction companies are facing. *Structural designers can reduce this risk by arguing and demonstrating to the construction companies that the solution is simple to use and it only requires adoption of the assembly template.* Structural designers could also explain the use of the template for the construction companies and write specified instructions for the plans that they are using on construction site. In Germany this specification is always required. Value-based selling literature also recognizes the customers' risks as one of the main barriers for successful sales and emphasizes that suppliers should actively strive to reduce the risks (Terho et al., 2012; Töytäri et al., 2011, 2015).

Structural designers can work in the same organization with the construction company or precast factory. These designers can have a high power to facilitate the use of the column connection solution. In such companies the purchasing departments traditionally buy the solutions. According to literature, old fashioned procurement practices can create a barrier for value-based selling because their aim is always to find the lowest purchase price (Töytäri et al., 2015). *However, when structural designers are located in the same organization with the construction*

*company or precast factory, they can have an easier access to communicating with persons in higher positions.* These designers can also have an impact on their procurement department's actions as research revealed. If the structural designer can understand the possible savings and benefits of some solution in the construction phase, they can *propose using the solution to the main decision makers.* This can happen especially in construction companies which have their own precast factory, or in construction companies that are doing close cooperation with precasters. In this case, the construction company is the actor who receives the actual cost savings.

Many structural designers who had worked with the solution recognized the benefits of the solution and they had used it successfully in many projects. These designers had also had good experiences with Peikko. Structural designers could also *use these experiences as reference cases,* which have been noted to reduce the risk that end customers are facing (e.g. Anderson and Wynstra, 2010; Töytäri et al., 2011). These references can have an impact on their colleagues in other design offices, which can *increase the knowledge over the solution in networks and decrease the risks that other actors are facing in the use of the solution.* Designers can also promote Peikko by using their products in the structures or increase the common knowledge of Peikko and the column connection solution by word-of-mouth phenomenon, the effect of which has been recognized in academic literature. Increasing the common knowledge over the solution is important in market areas where solution and Peikko is not widely known.

The results of this study indicate that third-party roles can facilitate value-based selling in the network that they are acting. Current literature over value-based selling and networks also strengthens these findings. Figure 10 presents the main ways how structural designers can facilitate the value-based selling of the column connection solution and possible outcomes from the facilitating effect.



**Figure 10** Possible outcomes deriving from structural designers' facilitation.

### 3. *How can Peikko affect structural designers to facilitate value-based selling?*

When the supplier's aim is to carry out value-based selling methods, one of the first requirements is to understand the customers' business model. This finding also strengthens the existing literature and findings from earlier studies (e.g. Terho et al., 2012). According to research adding value for the customer's business is easier with good current customers that salespersons know better and have a good current relationship with. *Salesmen should strive to identify new high potential customers but also maintain good current relationships.* Research also indicated that identifying right persons from customers' organization and target right audiences is important. Current literature also suggests that value-based selling is more effective to carry out with high potential customers (Töytäri et al., 2012). Research indicated that different design offices have different power depending on how they are located

in the network and what is their office's role, which also highlights the importance of aiming to identify right persons and audiences.

Salespersons stated that they had get involved to certain projects by asking about the customers' problems and on-going projects. *This indicates that salesmen should actively diagnose customers' problems and offer help to solve customers' problems.* Diagnosing customers' problems should also be carried out outside the meetings when salesmen are communicating and working with their customers. When the customers contacts the technical support, Peikko also has an opportunity to gain access to projects. Persons working in the technical service can also diagnose the customers' problems. They should also be able to identify the good leads and communicate these to salespersons who are responsible for certain customers. Thus, later on salespersons have an opportunity to contact the same customer and make sure that they have overcome the problem and ask if they need additional help. These provide earlier access to possible projects and help with the baseline assessment, which has been recognized to support value-based selling approach (Töytäri et al., 2015; Keränen and Jalkala, 2013). The finding also supports the existing literature which highlights the importance of understanding customer's problems and aiming to solve these problems together with the customer (Terho et al., 2012; Töytäri et al., 2011).

Value quantification is seen as a crucial part in value-based approach and literature has also recognized its importance (Terho et al., 2012). Demonstrating the benefits and realized cost savings by calculations and documented reference cases are efficient ways to present proof about the value. Research revealed that in many cases designers' customers cannot see the actual costs originating from transportation and erection of columns. They also cannot recognize that the column connection solution can provide better TCO against other methods in certain cases. *Salesmen should be able to demonstrate the possible cost savings to designers* if those are actual. Customers of the respondents had been satisfied if structural designers had managed to plan a running site and if customers had managed to achieve cost savings. For this reason it is extremely important for salesmen to

prepare calculations and proof about the value and demonstrate to structural designers how column connection solution can improve their customers' business by reducing costs and providing other intangible benefits.

The risk that different actors face in the use of the column connection solution is the main barrier for the use of the solution in Germany. Literature also indicates that the customer's risk is usually one of the main barriers when aiming to value-based selling (Terho et al., 2012; Töytäri et al., 2015). *During the demonstration of value Peikko should also present proof of how the risks of failure could be reduced in the planning and construction phases by using the column connection solution and services that Peikko is offering to designers and their customers.* The right use of the PPL-template verifies that anchor bolts are erected correctly to the foundation. This is the main risk that different actors face in the use of solution. For this reason increasing knowledge of the right use of the template is essential. Providing help to designers during the planning process and offering help to actors in erection phases can decrease the risks that customers face.

Research also revealed that structural designers' knowledge over Peikko's column connection solution is not high in all market areas, such as Germany where the style of construction is deriving from the Scandinavian style. For this reason all communicated features should not be only technical specifications. Rather common benefits and advantages how the use of the column connection solution can help other actors during the construction phase and provide safe and fast erections. This also means that Peikko should modify their marketing activities and materials in areas where designers and other actors do not know the column connection solution. Simplifying and creating materials that demonstrate the usage of the column connection solution and PPL-template can improve the adoption of the column connection solution.

Salesmen stated that they have had projects where customers had been using the solution. After construction work they had received good feedback from designers and actors who had participated in the construction. Salesmen should aim to collect

and document this material where actual and intangible value has been realized by different actors. This material should be also utilized during the communication and demonstration of the value to customers in new projects. *Collecting and documenting reference material related to use of the column connection solution* would be extremely important in market areas where the solution is not widely used. Also the literature emphasizes the role of systematic data management and the importance of documenting reference cases (e.g. Anderson, 2006; Anderson and Wynstra, 2010; Keränen and Jalkala, 2013; Keränen and Jalkala 2014).

Research indicated that in many cases structural designers can decide the products and solutions that they want to use in the planning process. In many cases these solutions will end up to final plans. Thus, *influencing structural designers CPV in a positive manner Peikko has to ensure that their products are working superior in the planning phase to help designers in their daily work*. Research stated that the use of good quality products with good technical manuals in planning was considered as a one of their most important value drivers. Technical manuals and other product related materials are always up to date, clear and easily available. Also creating an own manual for the solution could help designers to adapt the use of the solution. Peikko should also make sure that their products and solutions are easy to use with different software. Ensuring that in future customers can receive help with their problems with their local language fast enough is also important. This is an issue that separates Peikko from the competition and is one of the most valuable benefits for designers.

Structural designer were also communicating the benefits to stakeholders and decision makers at the early stage of the project, and research revealed that they can market Peikko's products to these actors. It was found out that sustainability and quality products are in a central role for certain investors, which had led in various cases to specifying of used solutions. Thus, *Peikko should market themselves to designers as a customer centric partner delivering sustainable high quality products and is willing to help and reduce risks of their customers*. The possible

outcome can provide specifying Peikko's products to structures at the early phases of projects, which would also provide better profitability for Peikko.

The findings of this study reveal that Peikko can affect structural designers to facilitate value-based selling of the column connection solution. The findings indicate that suppliers can facilitate value-based selling in networks by affecting other actors. Findings also indicate that influencing designers CPV in a positive manner will strengthen the facilitating effect. Thus, Peikko should aim to deliver value to structural designers by different actions but also to create value in the project network with the designers support. Current knowledge in literature supports also these activities and emphasizes the importance of value creation in network when selling solutions (Cova and Salle, 2013; Jaakkola and Hakanen, 2013). Table 13 summarizes the most important activities how Peikko should affect structural designers to facilitate value-based selling.

**Table 13** Summary of most important activities how Peikko can affect structural designers to facilitate value-based selling of the column connection solution.

<b>Main activities how Peikko can affect structural designers</b>
<ul style="list-style-type: none"> <li>• Creating and maintain relationships with design offices</li> <li>• Active diagnosing of designers' problems</li> <li>• Credible communication and demonstrating the value to designers</li> <li>• Increasing the knowledge of the column connection solution among designers</li> <li>• Ensuring that Peikko's products and services are working superior in the planning</li> <li>• Marketing Peikko as a customer centric partner delivering sustainable high quality products and who is willing to help and reduce risks of their customers</li> </ul>

4. *What are the main differences in the market areas related to the use and sales of the column connection solution?*

The situations in both markets that this thesis is examining are different. In Sweden the column connection solution is widely known and used as a standard solution to erect columns to foundation. Solution has been also been used in the market for a long time and there are many other suppliers with similar products. Products also do not have enormous differences and there is competition between the companies in quality, reliability, delivery accuracy, service and pricing. Competitors' products are cheaper and that creates the main barrier for selling the solution. The main risks that customers face in the usage of the solution are reliability and quality, but these are small issues compared to price.

Peikko has a lack of good loyal customers in Sweden and that is also one of their main problems at the moment. Most of salesmen are also passive and reluctant to actively visit customers and gain early access to projects that way. For this reason the engagement with the customers happens at the early phases only if the customers contacts Peikko, or when the actors at the late phases ask an offering.

Germany is a cast-in-situ market which means that they are not using precast items as a standard. If precast is chosen to be used as the method in construction, the used solutions are usually other solutions than Peikko's column connection solution. Peikko's solution is only used in special circumstances and projects. Substitute solutions' purchase price is lower but Peikko's column connection solution can provide better TCO by being faster, easier to transport and reduce labor needed for erections.

Risks that different actors face creates the highest barrier to successful sales in Germany. It was estimated that only 20% of structural designers in Germany know the solution. Also the contractors and construction companies are not used to handling the column connection solution. Salesmen in Germany visits their customers actively and they also mentioned that they have gained good results and

created good relationships with certain customers. They had also managed to get involvement to many projects at the early stages.

Both market areas, Germany and Sweden, have high potential for selling the solution. In Sweden the most important ways to affect structural designers, and other actors, are providing superior customer service, communicating non-monetary benefits and making sure that existing products and product related materials are of high quality. Visiting customers, meeting their problems and maintaining and gaining new good relationships should be prioritized high, while the country is doing well and the construction industry is having an upturn. Salesmen should actively strive to gain earlier access to projects and aim to get Peikko products specified in the early planning phases.

In Germany Peikko and the column connection solution are not well known. Main competitors are the alternative methods that are used in most cases. Actors in the construction industry have used these methods for a long time and they see new column connection solutions as a risk and additional cost. The risk that construction companies are facing in the use of the column connection creates the highest barrier for successful sales in Germany. Active visiting of customers and promoting and demonstrating the use of the solution are the most important activities in Germany at the moment. Salesmen should also actively offer their help in the erection phases.

## **6.2 Managerial implications**

Research indicated that Peikko's salesmen have to be able to communicate and deliver value for the structural designers that would also improve their own and their customers' business. Arranging extension to sales training where increasing salesmen knowledge of value-based approach and quantification would be important. Training for building different arguments for different customers and also increasing their knowledge over life-cycle calculations, reducing customers' risk, communicating pivotal benefits and how to utilize these are in an important role when aiming to value-based selling of the column connection solution. The main results of this study could be utilized in planning of this training.

Research indicated that the quality of products and also reliable delivery of the solution is really important for different actors in projects, and problems with these issues have originated bad reputation for example in Sweden. Because Peikko cannot compete with the prices, Peikko should ensure that the quality of the products is always high and delivery problems should be overcome in different market areas. This means renovating the supply chain methods and stocks, and executing sharp quality control in manufacturing.

To make structural designers to adopt the use of Peikko's solutions and to facilitate selling of the column connection solution, all the materials related to planning should be of high quality and matching to the value drivers of designers. This means updating old manuals and getting rid of black and white leaflets that still exist in some units. Also making sure that Peikko's products and solutions can be utilized with different software and overcoming problems with Peikko's own planning software is important.

One of the main findings of this study stated that increasing awareness about the column connection solution is important in market areas that are not precast markets. This means different actions in the field but also localized marketing materials to respond to right purposes. Visiting customers, meeting their problems and maintaining and gaining new good relationships should be prioritized high in order to create good relationships with the customers. Also creating marketing materials based on increasing the knowledge and also commitment to help customers on-site are needed. For example brochures and videos that demonstrate the basics and benefits of the solution could be utilized to increase the awareness of the solution in Germany.

Literature and research indicate that reducing risks that customers face is extremely important in value-based selling and it can be done by demonstrating value through documented reference cases. Collecting material that demonstrates the actual realized value and reference cases and utilizing it is one of the best ways to reduce

risks. Peikko should offer a database to collect this material and also encourage salesmen to collect this material. Peikko should also offer construction site service for contractors and construction companies with the erection of columns to decrease risks that they are facing during construction.

CRM has been implemented during the last year but it is not used very effectively at the moment. The biggest problem in using it is in the employees' willingness to use it, but there are also little bugs that should be solved and corrected. Peikko has a working customer segmentation but there are plenty of information and customers whose information should be modified and made corrected. On customer classification by the customer groups there are problems and at the moment because of the complexity of some customers there might be wrong information. Because of this the analytics and follow-ups that can be exported from the CRM gives wrong information. In addition, utilizing it as a part of value-based sales is not efficient. Also implementing the use of prioritization to part of CRM would be important, as the research also pointed out. CRM is also used for documenting customer visits but this activity is also executed by few salesmen. Increasing their knowledge and training them to use CRM as part of their sales planning would be important.

### **6.3 Limitations and further research**

The study had certain limitations. There are several third party influencers in the construction business network. In this thesis only the structural designers were examined. They were chosen to be examined in this study because of their work, which is highly related to the use of Peikko's products and solutions at the early phases of the projects.

Peikko has sales units in 33 countries globally. Two market areas were chosen to be examined in this study. These were Sweden and Germany. Even though these are located near each other, the construction industry, construction methods and habits are completely different between these two countries. By choosing these two market areas it was possible to collect extensive data over this issue.

Present literature has examined value-based selling as a phenomenon between the customer and supplier. It seems that this study is one of the first studies that examines value-based selling in the network. Research indicated that other network actors can have a positive effect on facilitating value-based selling. To understand this phenomenon better, and when aiming to conceptualize value-based selling in the network context, further research is needed. This study also examines only the construction industry, and as it is widely known, value-based selling approach has been investigated in the past in many industries. Also the present network literature and knowledge of third party influencers and their impact on value-based selling is minor. There is a need for further research to gain more knowledge over these actors and their impact on value-based selling.

Research had a limitation that it considered structural designers and all results were based on their experiences. To strengthen these findings, Peikko's end customers should also be investigated and how structural designers are affecting them. This could provide more useful information to investigate value-based selling in networks and third party influencers' possibilities to facilitate value-based selling. Data from Germany was collected by interviews that a salesperson had arranged. Majority of them had done close cooperation with Peikko and this might have affected respondents' answers in a positive manner. Because of the language there were also some difficulties during the interviews, which might have impacted on the respondents' answers. In Sweden only three interviews were conducted with the structural designers. More data would have been needed to strengthen the findings but it was not possible during the research process.

For Peikko this research provides many practices and actions that can boost the selling of the column connection solution in the market areas where the solution is not used as a standard product and it is utilized only in special cases. For the market areas, such as Sweden, where the solution is used as a standard solution for the construction, this study clarifies the role of structural designers and their value drivers that can be used when aiming to fulfill this group's needs. As research findings stated, the biggest barrier for selling the solution in Sweden is the cheap

substitute solutions. To find additional ways to solve problems in selling the solution in Sweden, further research would be needed to execute and investigate Swedish contractors, construction companies and precast factories and their actions. Main consensus of the research should be finding problems and challenges from their business and find ways how Peikko could make them adopt us of the column connection solution.

## 7 SUMMARY

In this Master's Thesis third party influencers' affect facilitate value-based selling was examined. Importance of delivering superior customer value has been identified as a key to success in competitive markets. Also development of procurement actions has been noticed while providing complex offerings such as solutions has increased. Thus, the importance of value-based concepts has increased in the near past. It seems that is not existing studies investigating value-based selling in the network context so far. This study revealed that third parties in the network can have a positive facilitating effect to value-based selling and have a remarkable effect on other actors of the network as a sequence of supplier's actions.

Research indicated that third party influencers can act like sponsors in project networks and communicate the benefits of the solution to other actors in the network. However, this requires that influencers understand the benefits of the solution themselves, which will also help their customers to improve business. Research also revealed that in construction projects structural designers are the right actor to communicate the benefits of Peikko's solution because they are planning buildings with their products and solutions, but they are also communicating more or less with all the other actors in the early phases of the project. Research also clarified that different offices have different possibilities to facilitate selling of solutions depending on their position in the network and on the characteristics of the company.

This thesis also clarified the actions of how Peikko can affect structural designers to facilitate value-based selling. Research revealed, and also the existing literature highlights the fact, that salesmen activities are in a pivotal role when company's aim is to execute value-based selling. The most important salesmen activities that were found out were maintaining and creating relationships, active identification of customer's problems, value quantification and communicating the value. Research indicated that Peikko can affect to structural designers trough other ways when designers search information about Peikko's products and using Peikko products

and services in their daily work. By providing high quality products and services to structural designers, and affecting their CPV, Peikko can help designers to adopt the use of the solution.

This thesis also investigated structural designers' value drivers and what were the main differences between the market areas that this study was handling with. Structural designers' value drivers were highly related to increasing the efficiency, reliability and easiness of planning as their aim to create good quality structures that are easy to interpret and that provide smooth construction. Research also found out that influencing structural designers CPV in a positive manner can support their affect facilitating value-based selling of the column connection solution. This can also improve value creation in different networks. Main differences between the market areas originated from the style of construction in market areas. In Sweden the column connection solution was used as a standard solution to erect columns. In Germany the solution was considered as a special solution for special circumstances. In Sweden the main problems were related to the price of the solution, quality and delivery issues, whereas in Germany the main barrier for selling the solution was the risk that customers face because they are not used to working with the solution.

However, the world is continuously changing and so are the economic fluctuations between the different market areas. Construction business is highly related to economic situations of different countries because city governments and big companies have a big share of all larger construction projects. For this reason it is absolutely important for companies that act in construction business to understand their customers, deliver the value for them and gain longitudinal relationships that last also in the phases of recession. This is one key to success and to profitable business during poor times.

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## APPENDICES

### Appendix 1. Structural designers' interview structure

#### Questions for Structural Designers

1. Name, Company, Title, Experience in current/similar work.

#### Networks

2. Is your office working independently? (not inside the CC or Precaster/architects working for the same company)
3. What is your office's role in the planning/building phase of projects?
4. Who is usually asking your office to join a project?
5. Is there bidding existing in this process with other structural design offices?
6. How you have been ended up for designer of the projects you have won? What have been the main issues compared to competitors you have won?
7. Who makes the final decision of used connection? Are you communicating with them? Who is that person normally in your company who is communicating with them? (Is there room for negotiations considering used connection type? Do you have any impact choosing used solutions – are they listening you?)
8. Who are the other actors that your office is working cooperation when considering a bigger project/individual project?
9. Describe the role of other actors during the planning/building process. (Role of Precaster, Construction Company, Contractor, other)
10. What are they usually asking/requiring from you when you are cooperating with them? Which are the main benefits they are searching in the project phase?
11. What are their main challenges/problems in each project from your point of view? Could you help them?
12. Is there any trend/other issues in industry going on at the moment and also maybe affect also in future?

#### Products/Solutions

1. What are the challenges that you are facing at your daily work?
2. Which things could help you to be more efficient in your work? Is there tools/use of some products or solutions that especially helps or could help you?
3. How do you measure or asses the benefits you experience? What makes you satisfied at your work?
4. What is the most common types for column connection in your area/daily job? Which ones are the most popular? Why?
5. What solution you prefer to use? Why?
6. When you receive a project, can you decide what products you want to use in RFQ? (Is there a contract with company that is hiring you that they have to use products specified in Design you have made?)
7. Can you recognize the benefits of bolted connection type in building phase?
8. Do you get any benefits using bolted connection instead of other methods? Is there any challenges using bolted connection in structures?
9. Who are gaining the benefits when using bolted connection from your point of view?
10. What expectations you have considering products/services? Main improvements?

11. How different product manufacturers or solution providers help you while considering your daily work? Which are the issues that could be improved? Customer services role?
12. What kind of things would help you most when you are starting to work with new solution/product?