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THE ROLE OF DOCUMENTATION DURING THE BIDDING PROCESS FOR INDUSTRIAL SOLUTIONS

CASE FASTEMS

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ABSTRACT

Juuso Kääriäinen: The Role of Documentation during the Bidding-process for Industrial Solutions, Case Fastems
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Industrial solutions have become a norm in B2B markets, offering tailored combinations of products and services designed to effectively respond to customer's specific business problems. In order to determine the most suitable solution, a bidding process is initiated. Through this process, proposal documentation is used as a tool for delivering value to potential customers, and its role is to invoke curiosity about the solution and the company. The purpose of this study was to explore the various roles of documentation during the bidding process for industrial solutions in the B2B environment, and to establish a framework for a client-adjusted proposal document. This thesis was commissioned by a manufacturing company called Fastems. To address the lack of established models for understanding the role of documentation in bidding for industrial solutions in B2B environment, a qualitative single-case study was applied to explore this research gap.

A qualitative single-case study approach was chosen to achieve the research aims. This study involved 8 managers with backgrounds in intelligent factory automation solutions from the USA, Finland and Germany. The research is complemented with literature from industrial solutions, sales-management, solution-based value selling, bidding and documentation. Through conducting this research, three main categories were identified; 1) the bidding process of industrial solutions, 2) the various roles of documentation, and 3) client-adjusted proposal document, which were further divided into ten different subcategories. The findings indicate that performing in the bidding process of industrial solutions requires the selling organization to recognize the customer needs and to develop a solution which creates value for them. The findings further suggest that organizations need to understand the various roles of documentation in different business processes before they initiate the renewal process of their documentation templates. In addition, the findings indicate that the development process should be conducted to increase the effectiveness of the bidding process, as it has many positive effects including; capability to deliver value to customers, cost-effectiveness in order to meet the needs of the customer, flexibility towards changes during the process and effectively meeting deadlines.

This study makes theoretical contribution by supporting ideas that have been explored in the existing literature, such as the importance of understanding the strengths of the company and their offering to enable a successful bidding process for industrial solutions. In addition, this research contributes by gaining managerial insights which suggest that the implementation of a new client-adjusted proposal document requires an understanding of the various roles of documents. Based on this study four roles for documentation were identified. Understanding the strengths of the offering through reviewing documentation provides the selling organization the capability to manage, develop and deliver superior customer value proposition for their customers. This study also highlights the important role of the bid / no-bid decision in deciding whether to enter the bidding process. The aim of this decision is in screening the background of the customer and the capabilities of the seller to deliver the solution. Finally, this study also makes practical contributions regarding the role of documentation in the bidding process. The necessity for understanding the role of documentation in the bidding process of industrial solutions can be supported by the argument that proposal document is an opportunity to win the business-case, as it is the executive summary of the value that the sellers solution brings to a customer's problem. My research provides opportunities for further research in understanding the role of documentation in the bidding processes for industrial solutions from a broader perspective.

Keywords: Industrial solution, solution-based value selling, sales management, customer value proposition, bidding, proposal documentation

Preface

The path to completion of this master's thesis has been rewarding and full of positive surprises. This research has been one of the longest projects of my life, and it is dedicated to the people who have supported me during this time. I received help from many people to who I would like to give special thanks for their support.

The biggest thanks go to my superiors, Malla Mattila and Kalle Peltonen. Your extensive knowledge was highly valuable for this research. You provided me with constant support during this process and have improved my performance through sharing your time and knowledge. I would also like to thank Markku Bollmann for his expertise and guidance. These three people have given valuable insights and opinions on how to perform better during the lifecycle of this project. Lastly, I would like to thank all my colleagues who took part in this project and helped me to collect the data.

Tampere, 28th of April 2020

Juuso Kääriäinen

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List of Abbreviations (A-Z)

CVP – Customer Value Proposition

FMS – Flexible Manufacturing System

MMS – Manufacturing Management System

RFP – Request For Proposal

OR – Opportunity Review

1 INTRODUCTION

1.1. Background of the Study

As competition continues to increase due to globalization, selling organizations face tougher markets and encounter numerous problems in the changing environment. Amidst the changes, the topic of documentation has gained interest as organizations seek to gain competitive advantage by taking the customer into account when making strategic decisions. Mead (1998, p. 353) advocated that "in a business setting, technical documentation is not an end itself but a means to an end." Early research on documentation focused on the supportive role of documentation in doing business, for example, as a tool for transferring knowledge, acting as structural governance tool, and as a tool to deliver value to the customer (Mead, 1998, p. 353; Geiger, Varoquaux, Mazel-Cabasse & Holdgraf, 2018, pp. 772–773; Gudknecht, 1982; p.112; Pedraz-Dealhaes, Aljukhadar & Sénécal, 2010, p. 363; Schepker, Oh, Martynow & Poppo, 2014, p. 194). This study contributes to the body of knowledge about documentation, specifically, about the different roles of documentation in the bidding processes for industrial solutions in multinational manufacturing. Due the complex nature of industrial solutions and bidding processes, this study contributes towards industrial and sales-management disciplines. My study positions itself at managerial level which enables the exploration of how sales managers understand the bidding process for industrial solutions and what value is added through documentation.

Töytäri and Rajala (2015) claimed that traditional methods of formulating different documents are one of the key-barriers in sales (Töytäri & Rajala, 2015, p. 63). This is largely due to the fact that organizations did not typically write their documents for their end-users, but instead wrote them from the organizational perspective (Gudknecht, 1982). As stated by Salminen, Lyytikäinen and Tiitinen (2000) the "successful implementation of document standards in enterprises however requires understanding of the role of documents in work processes" (Salminen, Lyytikäinen & Tiitinen, 2000, p. 624). The diversity of different document formats causes problems in understanding and use of information which has led to various standardization projects where the purpose is to define how information is represented in documents (Salminen et al., 2000, p. 624). This takes place especially in situations where the customer is forming a new relationship with

a company, and therefore heavily relies on "extrinsic cues" such as documentation (Pedraz-Dealhaes, Aljukhadar, & Sénécal, 2010, p. 363). To be able to improve their customer offering, selling organizations need to get information from their customers' and determine where value is created in the process (Wise & Baumgartner, 1999, p. 134).

The main criteria in evaluating the bidding opportunities includes, the attractiveness of the project, the project's associated risks, the competitive strengths of the bidder against their competitors, and based on these factors the bid / no-bid decision is made which marks the starting point for creating customer value (Cova, Salle & Vincent, 2000, p. 556; Biruk, Jaśkowski & Czarnigowskaet, 2017). Buying organizations that once made time to talk about their needs, now expect the seller to have the ability to anticipate, diagnose, and understand their problems, and to create a solution and proposal proactively. As mentioned by Payne and Frow (2014, pp. 214-215) the value creation process involves "transforming the outputs of the strategy into programs that both extract and deliver value". This is the base-functionality of solution-based value selling. It means creating value for the customer through combining products and services, as they provide higher value than products and services sold independently. A true industrial solution that has been designed based on the real needs of the customer, delivers value that the customer is looking for (Storbacka, 2011, pp. 699–700; Davies, Brady, & Hobday, 2006; Brady, Davies, & Gann, 2005). In this value-delivery process the technical documentation has an important role, as one of its purposes is to add value to the selling organization's offering for their customers (Frey, 2001, p. 8).

1.2. Study Objective and Research Questions

The primary objective of this study is to describe and analyze the various roles of documentation during the bidding process for industrial solutions in a multinational manufacturing organization in the B2B environment. The objective is pursued by gaining an understanding about the organization-specific capabilities that give industrial solutions providers competitive advantage in the bidding process. This research problem is approached by conducting semi-structured interviews with internal and external stakeholders. One result of this study will be the creation of a new proposal documentation template and training material for internal use.

The central question guiding this research is as follows:

- What is the role of proposal documentation during the bidding process for industrial solutions in a multinational manufacturing organization?

The subsequent questions include the following:

- What are the strengths and weaknesses of Fastems as an industrial solution provider?
- What issues are associated with documentation during the bidding process?
- Why is it important to determine the capabilities of the industrial solutions provider in order to understand the various roles of documentation in building a framework for a client-adjusted proposal document?

The study and research problem are addressed by applying a qualitative single-case study approach. First, the theory behind industrial solution, solution-based value selling, and bidding and documentation are explored in order to understand the interplay among the concepts. The purpose is to find synergy between these concepts and develop a theoretical framework for the reader to understand the empirical part of the process. To be able to provide answers to these questions, there is a need for extensive literature review in order to understand the process of industrial solution selling and the associated challenges.

1.3. Key Concepts

Bidding process: Wibowo, Astana and Rusdi (2017) define bidding process as a "proposal based on the requirements or specifications which have been specified to do something, submitted from one party to the other" (Wibowo et. al, 2017, p. 2).

Documentation: Organizations use documentation in terms of information management; for organizing, restoring and transferring information for their internal and external purposes (Salminen et al., 2000).

Industrial Solution: An ongoing relational process to satisfy customer's needs, and to provide a solution to customers' operational requirements (Pekkarinen & Salminen, 2006).

Proposal document: A customer-specific, tailored, and written offer for the customer. Its purpose is to deliver value to the customer based on their needs and to attract awareness to the company.

Solution-based value selling: The collaboration in the sales process between the buyer and the seller, which aims to win the business and help the customers.

Customer value proposition: The customer value proposition is "a clear and simple statement about how a company is aiming to provide value to their customers" (Payne, Frow & Eggert, 2017, p. 467).

1.4. Assumptions and Limitations

This Masters' Thesis uses a qualitative single-case approach to understand automation manufacturing multinational enterprises (MNEs) based on a combination of primary data (interviews) and secondary data (Fastem's proposal documents). The background of this research relies on the academic literature covered in the literature review, which serves as a guide to steer the data collection and analysis. As this research is a single-case study about one organization working in a specific context, this research does not make generalisations about the roles of documentation within different organizations and industries without consideration.

The role of proposal documentation in the early phases of sales projects is highly important, as they explain the scope of delivery and the purpose of the solution. As I am working in the organization and have experience in the preparation of proposal documentation, the assumptions regarding this study are that sales-managers need shorter proposal documents that would be easy to read and highlight the capabilities of Fastems as an industrial solution provider. This is associated to the assumption that Fastems needs to re-think how they formulate and deliver their customer value proposition to their existing and prospective customers.

When considering the quality of the material used in the thesis, it should be noted that I conducted a total of eight interviewees, seven with executives and one with a customer. In respect to the limitations of this research it is noteworthy that I only interviewed employees who have sales backgrounds and hold managerial positions, with the exception

of one Risk Manager. The results may have been different if the interviews were extended to employees working with the document preparation or to the project management teams. Consequently, the results obtained from this study reflect the sales and customer perspective, and may differ if the interviews are extended to other levels within the organization.

1.5. Thesis Structure

This study was conducted as a commission for Fastems which offers its wide customer base automatized industrial solutions and production management. The research process began in September 2019 when my first meeting with the case company supervisors was held. It was determined that the focus of this study would be to explore if there is a need to develop or renew Fastems proposal documentation in their bidding process, thus, a qualitative single case-study approach was chosen for this purpose. The project was divided into six different phases. This Masters' Thesis focuses on the phases 1-4.

The process started by building a theoretical framework, followed by semi-structured interviews with carefully selected participants. Feedback rounds were held between every phase. Thirdly, the data-analysis was done in order to write out the findings. Based on the results from the interviews the decision about the implementation of the new client-adjusted proposal document is made. The Figure 1 explains the process of this study.

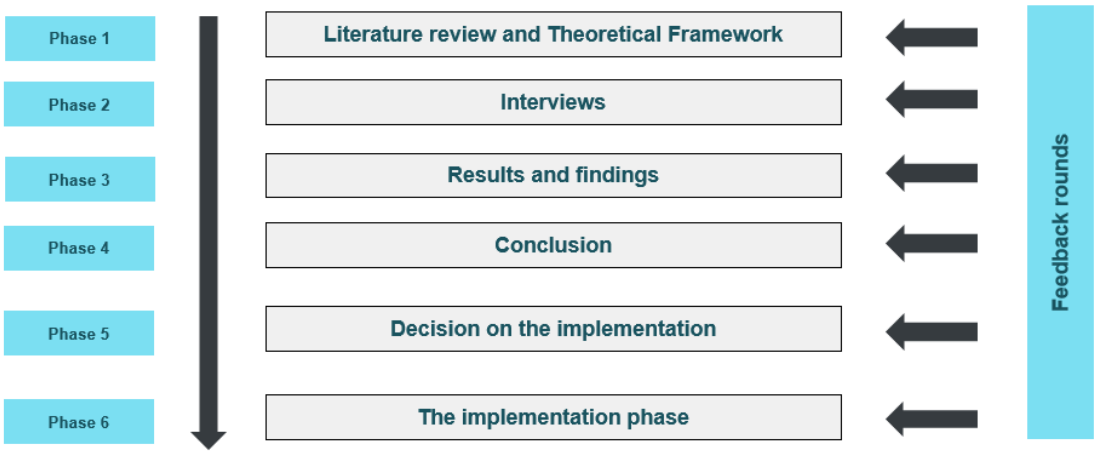

Figure 1. The project chart of this masters' thesis.

This Masters' Thesis is structured in five chapters. In the first chapter I introduced the background of my study and presented my research aims. Next, I turn to the literature to explore the concepts of industrial solutions, solution-based value selling, bidding process and documentation. At this point, I also provide the theoretical framework for this research. In the third chapter, the methodology used in this research is discussed, in this section I detail the data-analysis process. In the fourth chapter, the findings and results of the study are analyzed and presented. Following that, I explore the theoretical contributions and present the managerial implications for Fastems. Finally, I discuss the limitations of this study and provide suggestions for future research regarding the role of documentation in the bidding process.

2 LITERATURE REVIEW

The research started with a broad literature review on the concepts of industrial solutions, solution-based value selling, bidding and documentation. In this chapter, I conceptualize the four different academic theories behind the research. The purpose is to get an understanding of the phenomenon, to narrow down the areas that require further exploration in the academic field, and for building the theoretical framework of the study.

2.1. Solution based Value-selling of Industrial Solutions

2.1.1. Industrial Solution

Sales processes have changed tremendously in the past decades, with product lifecycles getting shorter, while organization's offerings continue to grow wider. Organizations have increasing adopted an approach whereby services are combined with products to provide a more comprehensive offering, these overarching combinations are referred to as integrated solutions (Salonen, 2011, p. 685). Integrated solutions are "unique combinations of products and services that address customer's specific business problems" (Brady, Davies & Gann, 2005, p. 360). There has been a surge in these offerings which include services such as software and lifecycle-services paired with product-categories to provide complete solutions. Integrated solutions such as these require organizations to enhance their offering to maintain competitive advantage. As a result, manufacturers are pushed to provide more complete offers, as solutions offered should create value for their customers. Solutions are defined in numerous ways by academics (Davies, Brady, & Hobday, 2006; Tuli, Kohli & Bharadwaj, 2007: Salonen, 2011, p. 685; Pekkarinen & Salminen, 2006), with one of the most cited definitions being that of Davies et al. (2006, p. 39) who claim that an "industrial solution is a highly-valued and innovative combination of technology, product and service to meet customers' needs and expectations."

The importance of including services into strategies and business-models has been noted in manufacturing-organizations (Cusumano, Kahl & Suarez, 2015, p. 559). According to Tuli, Kohli and Bharadwaj (2007, p. 4) suppliers see solutions as a "bundle of products that are customized and integrated to address a customer's specific business needs". The

logic behind an industrial solution is that value is created in close cooperation with the customer and it is an ongoing process to fulfill customers' requirements (Tuli et al., 2007, p. 4). Industrial solutions have attracted attention not only because of changing market demands, but also because the services provide growing revenue streams for the organization as they complement the product offering (Cusumano et al., 2015, p. 559). Organizations are adopting services in their offering for a variety of reasons, including that they provide "competitiveness in the face of commoditization, slower growth and declining profitability in their main market areas" (Salonen, 2011, p. 683). Moreover, the services are intangible capital as they do not need assets for manufacturing, hence, they have higher profit margins (Davies et al., 2006, p. 40).

Industrial solutions are often volatile and difficult to specify from their nature which is why they add complexity to traditional B2B selling (Åge, 2011, p. 1574). According to Davies (2006) a solution-based business model changes the offering of the organization. The traditional product-based offering has been transformed into a solution by including service elements designed to meet customer needs (Davies et al., 2006, p. 39). In order to create all-inclusive industrial solutions, the company needs to learn how to combine the different elements from products and services into forms and routines in order to establish solutions for their customers (Pekkarinen & Salminen, 2013, p. 145). In this process, Tuli et al. (2007) highlight that focusing on customer needs is integral as it allows the organization to gain competitive advantage that cannot be replicated by competitors. Customers are not always aware of their business needs which means that the suppliers needs to have the ability to ask the right questions to identify both their known and unknown needs. This also involves taking in account the future needs of the customer, as their needs are constantly evolving. (Tuli et al., 2007, pp. 6–7) This collaboration plays an important role in building trust between the customer and seller (Storbacka, 2007, pp. 699–711). Therefore, it can be deduced that the purpose of the industrial solutions provider is to understand their customer's business in order to find the most effective solutions to meet their needs.

2.1.2. Defining Customer Value Proposition

The concept of value is widely discussed in both theory and practice, and it is at the top of the marketing research agenda (Ulaga, 2001, p. 315). The primary focus of all business

activity is to understand what the customers value, and how organization can create value for their customers (O'Cass & Ngo, 2011, p. 646). This view is taken from the traditional "buyer's perspective" in which customer value is seen as the capabilities of a supplier to create value for their customers through their offerings. The second perspective of customer value emphasizes "the seller's perspective", in which the customer is at the center of value creation. The third perspective of customer value emphasizes "the buyer-seller" perspective, in which customer value is created together in networks. (Ulaga, 2001, pp. 315–317)

Khalifa (2004) defines customer value as the difference between benefits and costs. The benefits include the utility value and psychic value of the service, product or the combination, whereas the costs are the financial and non-financial costs, in other words the total customer ownership costs (Khalifa, 2004, p. 662). De Rose (1992, p. 66) determines value in industrial circumstances as "the satisfaction of purchase requirements at the lowest total cost in use". To build on this, Bowman and Ambrosini (2000) explain the concepts of the 'perceived use value' and 'exchange value' at the 'point of exchange'. The point of exchange refers to the moment when the customer is paying for the solution created by the solution provider, the perceived use value is subjective value that is defined by the customer, and the perceived use value is based on the customer's perception of the products or services' usefulness. The exchange value is realized at the point of sale. It can be defined as the amount of money paid by the customer for the created perceived use value. Another important element in the value creation process is value justification which determines that the customer owns the value at the end (Bowman & Ambrosini, 2000, pp. 4–5). Organizations create perceived value for their customers, and the exchange value is realized through the selling of the products. A such, the roots and origins of the value creation lie with the selling organization and in their internal processes and capabilities in creating value through their offerings (Bowman & Ambrosini, 2000, pp. 4–5).

Value creation is a dynamic and multi-staged process involving multiple stakeholders. The role of value creation is important for both the buyer and seller, and the value creation process must be managed at all stages. Despite the involvement of multiple stakeholders, the focus is on the customer, as the selling organization needs the capability to create value to their customers. (Bowman & Ambrosini, 2000, pp. 1–3) In the academic

literature, this capability is termed customer value proposition (CVP). Payne et al. (2017) explain the CVP as "organizations strategic communicating tool about how they are aiming to provide value for their customers" (Payne et al., 2017, p. 467). They further divide the CVP into three parts; "suppler-determined reflecting the value-in-exchange", "transitional" and "mutually determined, which reflects the value-in-use emphasis" (Payne et al., 2017, p. 471). Based on their findings the CVP is determined as a "strategic tool facilitating communication of an organizations ability to share resources and offer a superior value package to targeted customers" (Payne et al., 2017, p. 471).

The value creation process is divided in the article of O'Cass and Ngo (2010) in two important steps by adopting the model of Bowman and Ambrosini (2000): point of value proposition and point of exchange. They emphasize the need for focusing on the point of proposition, which is the stage of designing a pre-emptive value offering strategy. The CVP is a clear and simple statement targeted to a certain customer which shows customers what they can obtain in quantifiable benefits with the solution provided by the selling organization. The CVP supports the solution provider when designing the value offering and taking into consideration price, performance, co-creation and relationship. The purpose of the value proposition is creating curiosity towards the innovative offerings and solution capabilities of the selling organization. The CVP is then formulated as an offering and delivered to the customer. (O'Cass & Ngo, 2010, pp. 649-650)

In early research, the interest of value creation was on the point of proposition, whereas for organizations the process starts at the phase of identifying what value they create for their customers (O'Cass & Ngo, 2011, p. 647). This process involves different steps: exploring and defining what value the case company provides to its customers and what is the actual value they receive from their customers (Payne & Frow, 2014, pp. 214–215). The first step includes mapping all customers and stakeholders and creating a customer journey for understanding the needs of the customers. When mapping the value proposition of the organization, it provides a basis for understanding the need for differentiation and the foundation for collaborative buyer-seller relationship (Payne & Frow, 2014, p. 215).

At the point of exchange the customer explores and discovers the value offering. This stage includes an evaluation of how well the solution provider has listened to the customer

needs, and how effectively the solution can solve their problems. Careful planning and design of the CVP so that it matches customer expectations can provide positional advantage. Positional advantage is the component of value offering at the point of proposition (O'Cass & Ngo, 2010, pp. 649–650) The product-centric approach highlights the product performance through its excellent features and high (Kroll, Wright & Heiens, 1999, p. 375). The relational view approach in turn highlights the importance of developing and fostering relationships with customers and sees that as the key benefit in gaining positional advantage (Ravald & Grönroos, 1996, p. 22). In order to gain competitive advantage, organizations should consider both approaches, combining the different perspective to form a hybrid approach which is all-encompassing O'Cass & Ngo, 2010, pp. 649–650).

Customer value coordinates the actions of the seller in the selling process of industrial solutions. The traditional view is that the price, product, and service attributes are the dominant factors that drive the behavior of the customers, and eventually lead to purchasing of the product or service. The most important factors are the product and service features, and how they have developed together with the customer in order to provide solutions to their problems. (Brady et al., 2005, pp. 360–365) The value creation process always includes the price aspect. According to Hinterhuber (2004) a low price is one consideration when making the decisions to buy a solution, but mostly the customers are more interested in the actual value and what they can achieve with the solution. This can be viewed as a two-way process. On the one hand, a low price is attractive to the customer, but on the other hand a low price can also signify the value of the solution. The lower the price, the lower the value of the solution. Hence, customers may think that a low-priced solution will come at the expense of quality, whereas a high price indicates a better quality solution. The price is a strong way to appoint the status of the organization's products in the markets. (Hinterhuber, 2004, pp. 765–767)

2.1.3. Solution-based Value selling

The increased competition between manufactures has led to a situation where organizations are trying to differentiate themselves from their competitors by offering industrial solutions and by creating superior customer value propositions (Tuli et al., 2007). Solution-based value selling is the approach in which organizations influence the

value for the customer and quantify it in monetary and verbal terms (Liinamaa, Viljanen, Hurmerinta, Ivanova-Gongne, Luotola & Gustafsson., 2016, p. 37). In this sense, a solution is seen as a value offering from the organization that consists of tangible and intangible components (Merve, Rensburg & Schutte, 2016, p. 69).

Research in this area has centred on two different approaches for responding to the customer needs and delivering customer value: solution selling and value-based selling (Salonen, 2011; Töytäri & Rajala, 2015). Salonen (2011) defines "solution selling as providing individualized solutions to complex customer needs and problems" (Salonen, 2011, p. 684). To be successful in industrial solution selling, the individual skills of the employees need to be deployed to the use of the organization, as they provide the solution to the customer (Salonen, 2011). Tuli et al. (2007, p. 14) define solution selling more elaborately as "a complex exercise that involves the consideration of conflicting requirements of multiple stakeholders in a customer organization and sales cycles lasting up to two years". The other view is value-based selling, which has been defined as an approach "that builds on identification, quantification, communication and verification of customer value" (Töytäri & Rajala, 2015, p. 101).

The purpose of providing a solution is to address customer's business needs (Tuli et al., 2007, p. 7). Due to increased competition suppliers are trying to increase their propositions by offering integrated solutions for their customers. Traditional selling techniques are not suitable for selling industrial solutions because industrial solutions are complex. The customer and the customer-relationship play a central role in solution-based value selling (Sharma, Gopalkrishnan & Evanschitzky, 2008, pp. 287–289). Suppliers choose the solution selling approach instead of traditional product-based approach for different reasons. Solution-based value selling enables higher margins, increased profits and longer customer relationships, which provide future security in doing business. It is seen as way to increase competitiveness. When the value is co-created with the customer, the solution is greater for the customer than an individual product or service. (Terho & Jalkala, 2017; Levihn & Levihn, 2016, pp. 209 – 218) According to Levihn and Levihn (2016, p. 218) "these integrated solutions not only enhance the value proposition of the supplier, but also add complexity that effectively raises barriers to competition".

Incorporating industrial solutions and value-based selling in organizations is not an easy process and should not be under-estimated. The transition process from traditional transaction business models to solution business models is complex (Eloranta & Turunen, 2015, p. 394). The traditional organizational structure must be transformed and the transformation process needs to be continuous. In addition, organizations need to adapt a solution-centric customer mindset in order to be successful in solution-based value selling (Levihn & Levihn, 2016, p. 208). The increased competition has led industrial manufacturers to "move towards disruptor" by including services in their offerings (Wise & Baumgartner, 1999, p. 134). The seller needs to ensure that the built value is not lost during the delivery of the solution, and that the solution has a long-term investment value. This complementarity focuses on building shared value between the parties (Visnjic, Jovanovic, Neely & Enwall, 2017, pp. 178–179). The collaboration between the buyer and seller is important to achieve good results, as when both parties understand the nature of the values and risks, the supplier can produce more effective and productive solutions for the customer (Tuli et al., 2007, p. 7). The stage of 'accountability' in the model by Visnjic et al. (2017, pp. 178–179) supports Tuli's (2017) findings that managing and eliminating risks is a necessary part of the value building.

Åge (2011) detailed the model of "business maneuvering", highlighting personal relationships in the buyer-seller relationships. In this model, it is suggested that focusing on customer satisfaction provides a unique competitive advantage that is difficult for competitors to imitate (Åge, 2011, p. 1585). Business maneuvering corresponds with the study by Eloranta and Turunen (2015, p.415) who support the notion that building deep and long-term relationships with customers, suppliers, and third parties, provides competitive advantage. Hence, adopting industrial solutions and value creation into business strategy enhances the differentiation of the core product offering, supports sustainable company growth, allows organizations to achieve superior performance, and differentiates organizations from their competitors (O'Cass & Ngo, 2010, p. 667).

Customers place a high value for innovative solution features, functions, and pricing, but they also look for additional benefits (O'Cass & Ngo, 2010, p. 652). Customers appreciate close customer-firm relationships and co-creation of a solution with the selling organization (Ravald & Grönroos, 1996, pp. 24–26). Salonen (2011, p. 684) defines

providing industrial solutions as the process towards selling individualized solutions to complex customer needs and problems. This includes combining technology, maintenance, consultancy and services, which together create value that is greater than a bundle of different products (Tuli et al., 2007, p. 5; Liinamaa et al., 2016, p. 37). To be successful in solution-based value selling, the individual skills of the employees need to be deployed to the use of the organization, as they provide the solution to customer (Salonen, 2011, p. 684).

Storbacka (2011) stated in his article that the only goal in solution selling is not just to create value for customers. The main purpose is to co-create value and get long-term customer contracts that provide success and mutual benefits. Instead of finding customers for the existing product base, the selling process of the organizations shifts towards finding solutions for current customers challenges (Storbacka, 2011, pp. 699–700). Solution-based value selling provides higher margins and longer customer relationships, so it provides future security for business. It is seen as one way to increase competitiveness. When the value is co-created together with the customer, the solution is greater for the customer than an individual product or service. The industrial solutions add complexity to imitate the offering by the competitors and raises barriers for competition (Levihn & Levihn, 2016, pp. 209–218). High-technology products and integrated solutions are the engines of economic growth and success.

2.1.4. Solution based Value-selling: Central Problems & Opportunities

Sharma et al. (2008) defined several challenges, for which solution selling should respond: market uncertainty, technology uncertainty, competitive volatility and industry standards (Sharma et al., 2008, pp. 287–307). Organizations that aim to operate solution-based value selling need to acknowledge their functions, processes and organizational culture, all of which influence organizational behaviour. The business transition towards a solution selling company will require resources, as the existing business, knowledge and capabilities need a transition towards a solution selling organization. Furthermore, the reward systems play a key role in motivating employees and different teams towards solution selling. (Storbacka, 2011, pp. 699–700; Levihn & Levihn, 2016, pp. 208–209)

According to Salonen (2011) a firm that seeks to become a solution selling company provider needs to implement new ways for communicating with customers, better understand the needs of the customer, and learn to build and provide complete solutions according customer needs in a co-operative manner (Salonen, 2011, p. 686). In this regard, Wise and Baumgartner (1999, p. 135) claimed that the "manufacturer has to look at the value chain through customer's eyes, examining all the activities the customer performs in using and maintaining a product throughout its life cycle, from sale to disposal". The increased competition has led to a situation where information about customers and competitors is widely available. As company knowledge and information becomes readily accessible to all organizations, competitors can imitate their products and exploit new products in the market. (Bowman & Ambrosini, 2000, p. 13)

The role of the selling company is to guide the buyer through the process and ensure an effective communication between the parties. Customers expect both the customer-specific customization and integration of the solution at the customer premises as an integral and taken-for-granted part of the solution (Tuli et al., 2007). In the situation where lack of communication exists, the question is how to design, modify, or select products for the customers solution if the seller does not know the decision participants or decision makers. Kessler, Bierly and Gopalakrishnan (2001) captured this idea in their article and labelled it "vasa syndrome", which refers to project failure due the lack of communication. Customers see the lack of communication and poorly designed coordination across functions as a huge weakness. The seller needs to be able to coordinate different teams and departments in order to complete tasks (Kessler et al., 2001). One solution is to form contingent hierarchies. According to Tuli (2007) the contingent hierarchy enables experts with relevant knowledge to develop the solution according to customer's problems. The experts usually find solutions to customers problems that they were not even aware of prior to their involvement. The contingent hierarchy leads to a greater balance of power between the different teams which enables information to be shared more effectively. (Tuli et al., 2007, p. 6–9) One challenge is associated with understanding that the customer is not only buying products and services, rather they are seeking and paying for guaranteed solutions. Providing the right incentives and bonuses to motivate employees towards a solution-based business is necessary. (Levihn & Levihn, 2016, p. 208)

Organizations associate solution-based business model with various challenges related to complexity and commitments. One fundamental aspect is that delivering complex solutions while making a profit has proved difficult. According to Pekkarinen and Salminen (2013) this can be overcome when the whole organization understands the solution-based business model and fosters an organizational culture for enabling trouble-free collaboration with the customer. Market leading solution providers have adapted different methods to win their competitors. Organizations that want to become market leaders, should gain control of the whole channel to market. The control of the channel is not an easy task, as it demands huge cash reserves. Strategy plays an important role in achieving market dominance. Organizations secure their position through various means such as by initiating cooperation with their customers (Davies et al., 2006), or recruiting people with solution-centric mindsets. as these people are future-oriented and support the organization success (Levihn & Levihn, 2016, p. 208).

Sharma et al. (2008) examined the role of personal selling in the high-technology markets and found several characteristics that pose challenges in terms of solution selling. High-technology markets change quickly due to the fast pace of technological change and the pace of change in these markets is faster than in other industries. Not only is the market highly competitive, but also high-tech products are complex and are typically made to meet specific customer's needs. Moreover, buying decisions related to high-tech products are difficult due to the technological and capital considerations. The technologies and processes are changing at a fast phase, which causes short product life cycles and leads to a situation where the salesforce sell products already in existence at the same time as emerging technologies. This requires future-oriented, qualified, and highly educated salespeople, who are able to sell the value of the solution. (Sharma et al., 2008, pp. 287–307)

2.1.5. Sales Funnel Management

The development of the sales funnel can be described as the first step towards effective management of the bidding process. This involves managing the sales operation, different pipelines, and developing different customer segments. After understanding what the customers value and how to fulfill their requirements, they need to understand who their customers are and which segments are the most profitable to serve. Customer

segmentation is the process of dividing the customer into different groups based on their needs, traditionally based on the demographic and psychological information. (Merwe, Rensburg & Schutte, 2016, pp. 60–63) The sales funnel framework developed by Järvinen and Taiminen (2016) helps organizations to map their existing customer-base in a certain customer-segment, but also to identify potential customers. They divide the customers into four categories: suspects, prospects, leads and deals. Figure 2 demonstrates and explains the development of customer relationships in B2B environment.

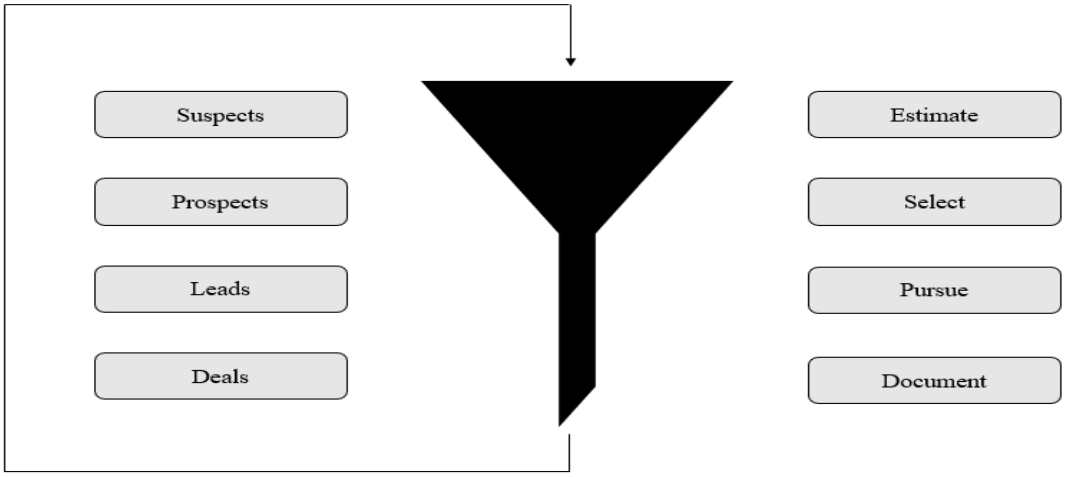

Figure 2. The sales-funnel approach. (Adapted from Järvinen & Taiminen, 2016)

Suspects include all the buyers that are known to the seller. Selecting the most profitable prospects among all the suspects is a critical task. Prospects are customers that meet the predefined criteria from the selling organization to be suitable buyers. It can be said that quality over quantity is a key for successful prospect selection. The next phase from prospect selection is lead qualification. During this process, the selling organization tries to identify the organizations among the prospects that have the highest possibility to a deal. (Järvinen & Taiminen, 2016, pp. 166–167) Leads are organizations which are contacted by the salespeople of the selling organization in order to form deals with them. When a lead is secured, the organization can start the bidding process for industrial solutions (Järvinen & Taiminen, 2016). The sales staff play an important role in assuring that the firms' products and solutions are offered to the markets in the most effective way and that the organization recognizes the different stages of the customer-relationship. Sales managers need to be familiar with the products of their company, but also how they

can compare their products to that of their competitors. They need the ability to tell the customer why their products will make a positive difference in their business. (Grewal et al., 2015, p. 195)

The organization should also have the ability to identify the needs of their customers in order to create value for them. They need to divide the customers into categories based on the associated risks and difficulty of designing a solution. Identifying customers is not an easy task, but it is an important step in the process as it will ensure that organizations do not waste their resources on the wrong customers. In order to gain understanding about the real needs of the customers, an analysis of the customer needs is needed (Lilien, 2015, pp. 543–546). The solution-based value selling can be summarized with the following paragraph: "Customer value is maximized, when the deals and projects are completed on-time, on-budget and as being negotiated" (Kaski, Hautamäki, Pullins & Kock, 2017, p. 47).

2.2. Bidding of Industrial Solutions

2.2.1. The Bidding Process

Bidding has many different definitions in the business environment, and it is used in many different circumstances and contexts (Rothkopf & Harstad, 1994, p. 367). Wibowo, Astana and Rusdi (2015, p. 96) define bidding as a "proposal from one party to the other party to do something in accordance with the requirements or specification and agreed upon". In situations where bidding is used, organizations must consider if they do not take part in the bidding, then someone else will be selling or bidding similar asset in the future (Rothkopf & Harstad, 1994, p. 367). Nowadays B2B markets consist of large multinational organizations who rely heavily on foreign suppliers, so they are selecting their suppliers across national borders (Schmitt & Van Biesebroeck, 2013). Customer preferences and needs vary drastically between different countries and cultures, but one key driver of the business remains the same, the derived demand in which bidding is trying to answer (Lilien, 2015, p. 546).

Ahmad and Minkarah (1988, p. 229) describe bid decisions as "heuristic from nature, as they are made on the base of experience, judgment and perception". The academic literature depicts the decisions behind bidding to be auction-type processes, in which the

bidder's behavior is known and the outcome can be predicted due the unchanged nature of the environment. These assumptions distinguish the bidding theories from practical approaches, as these theories cannot be adopted straight into the organization. (Rothkopf & Harstad, 1994, p. 367)

The aspects within the bidding process are complicated and difficult to exemplify. Reasons for this are related to the formalities and technicalities in the process, as they provide legitimacy in public auctions. The seller is not able to withdraw the offer when it is sent, meaning they accept the proposed terms before submitting their offer. In this way, bidding is considered fair, as it legitimizes the transfer of products and services (Rothkopf & Harstad, 1994, p. 368). It also serves as a deterrent for suppliers who do not adhere to formal procedures (Rothkopf & Harstad, 1994, p. 368). According to Chalal and Ghomari (2006) organizations should be more innovative in order to respond quickly to customer needs and to provide effective solutions to their problems (Chalal & Ghomari, 2006, pp. 293–297).

Cova et al. (2000) discuss the pre-bid analysis, which involves a screening process, and serves as the intermediate stage between the completed project marketing activities and strategies required in order to win the bid. The buyer has enormous power in the competitive bidding process; they define their needs and requirements among suppliers, and choose the best among the proposals, mostly based on price criterion (Cova et al., 2000, p. 556). This leaves the sellers with limited choices in terms of marketing, as such, the marketing approach of the selling organization typically consists of the price criterion due the strong price-competition. Though it is limited by predetermined factors in the bid, project marketing is an effort to give more power to the sellers. The main characteristics of project marketing include unstable buying, uncertainty, long-term communication before the purchase, and highly specified. (Bansard, Cova & Salle, 1993, pp. 125–128)

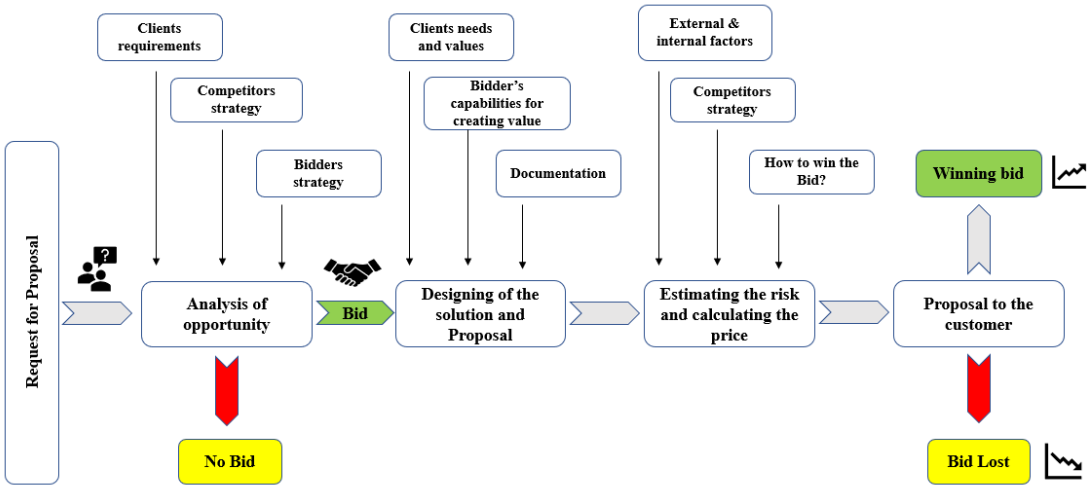

Figure 3. The bidding process in manufacturing industry. (Adapted from Chalal & Ghomari, 2006, p. 294)

Figure 3 illustrates the structure of a typical bidding process in a manufacturing company in a B2B environment and the factors and decisions involved during the process. The process is divided into five different phases; 1. Request for Proposal (RFP), 2. Analysis of opportunity, 3. Designing of the solution and proposal, 4. Estimating the risk and calculating the price, and 5. Proposal to the customer. These five phases include specific stages that enable the creation of a tailored proposal document based on the customer request. The five phases of a typical bidding process are explored below.

2.2.2. Request for Proposal and Analysis of Opportunity

The bidding process for an industrial solution starts with getting a Request for Proposal (RFP) from a potential customer (deal) (Chalal & Ghomari, 2006, pp. 293–297). Requesting proposals or inquiries is one popular way for buyers to find suitable sellers, and it is seen as a potential business opportunity (Biruk et al., 2017, p. 91)The RFP is defined in academic literature as tendering or getting an auction (Rothkopf & Harstad, p. 1994; Laryea & Hughes, 2008, pp. 918–920). The RFP is the first phase through which the scope of the bid is explained. After receiving the RFP a rough analysis of whether to bid or not to bid is made. This phase includes analyzing various elements such as the client's requirements, customers' ability to pay, terms of agreement, likely competitors and their strategy, offering and price-level, to name a few. The rough analysis also includes an analysis of the bidder's own strategy, capabilities, offering and price-level.

The aim is to build a framework of the bidding organization's skills, abilities to fulfil client's requirements, and to pool the past experience in meeting the seller's needs. The purpose is to create a vision of the solution and to improve the sellers competitive situation and highlight the value of their solution (Chalal & Ghomari, 2006, pp. 293–297)

The last step before determining if the outcome is bid or no-bid demands a deeper investigation about the buyer, their needs and requirements. The fulfillment of the customer's business needs is considered a key metric for the solutions effectiveness. It illustrates how well the solution is designed based on the real needs of the customer (Tuli et al., 2007, p. 8). This is carried out so that the best technical solution for the buyer can be designed. The activities for understanding clients' needs and values include company visits, calls, emails and continuous discussion between the parties. Various decisions are made at different management levels to minimize costs and maximize revenue (Biruk et al., 2017, p. 91). The previous experience of the organization is not sufficient to decide if they should bid or not. Many decision-support models have been established, and they favor different criteria to win the contract (Biruk et al., 2017, p. 91). Organizations should make their bid/no-bid decisions according to their own strategic framework. The bid decision is usually made based on various criteria including competition, environment, nature, bid opportunity, and resource capabilities, just to name a few. Due to the unpredictable nature of business and the limited human capability to understand and analyze uncertainties, a more effective tool is needed for decision-making (Lin & Chen, 2003, pp. 585–593)

2.2.3. Bid / No-Bid

Strategic bidding requires a lot of evaluation criteria such as, time, money and decisions which can damage the organization if calculated wrong. The key issue in the bid/no-bid decision making is the analysis of customers' documents, requirements, and the conditions for operations. The so-called screening of the project aims to solve the bid/ no-bid decision for projects. This approach designs the company's marketing activities during the bidding process for solutions (Cova et al., 2000, p. 551). The bidder should also think about their capabilities to deliver said solution, which includes investigating if there is a solution available in the current product-portfolio, or if further product-development is needed (Biruk et al., 2017, pp. 91–92). The analysis of opportunity is

followed by the bid/no-bid decision making. The decision to bid includes the understanding of the current and future competition. The buyer uses many bidders worldwide to obtain the best proposal, which causes a time pressure as well, as time is scarce and competition is fierce. (Jung, Kosmopolou, Lamarch & Sicotte, 2019, pp. 80 – 802)

According to Cova et al. (2000), the screening process is "multibid in scope and aims at positioning a specific project opportunity in front of other project opportunities in a portfolio of projects which can be represented as a matrix, similar to what is done for portfolios of clients" (Cova et al., 2000, p. 556). As stated by Chalal et al. (2006), designing solutions and proposals includes different experts, who make the specific suggestions for the solution (Chalal & Ghomari, 2006, pp. 293–297). The more complex the solution is and the more tasks needed to be done, the more resources and people are required to complete the task (Bansard et al., 1993, p. 126).

Pekkarinen and Salminen (2013) divide the challenges deciding whether to bid or not to bid into three different levels. The first one is associated with the accustomed behavior of the suppliers in tendering customer contracts with strict specifications, which always leads to price competition instead of fulfilling the customer's needs. The second problem reveals the incapability of the suppliers to adapt their offering according to their customer needs. This is attributed to two main factors, strict organizational borders and because the teams are not working in a coordinated manner to fulfill the customer need. Thirdly, organizations suffer an inability to cooperate with the customer to create unique industrial solutions to meet customer needs. To overcome challenges, risk taking and risk sharing must be included in the offering concept. In the highly competitive and global markets of industrial manufacturing solutions, risks are inherent in any offer (Pekkarinen & Salminen, 2013, pp. 148–149)

Wibowo, Astana and Rusdi (2017) defines the bidding strategy in the bid/no-bid phase as a company-specific skill in which an organization uses all the available resources to offer a comprehensive and competitive bid. The decision to bid is the plan for company success and the way in which to win the proposal. The bidding strategy is the organization's plan to achieve the established organizational goals in a highly competitive and ever-changing environment. It is also a reflection of the management's ideas of how to rival the

competition. The role of the bidding strategy is not only to win the competition, but also to give direction to the project success. (Wibowo et al., 2017, pp. 341–342) In this stage, organizations should filter out bids with high chances of failure and focus their resources and proposal efforts on winning bid opportunities that, when successful, provide future-growth for the bidding organization (Lin & Chen, 2003, p. 585).

2.2.4. Designing the Solution and Proposal

When the organization has decided to bid, the next phase in the bidding process is designing the solution and proposal. Preparation of the bid is the plan of the organization of how they are going to fulfill the RFP. Taking customer value into account during the bidding process for industrial solutions is extremely important. There are different evaluation criteria the buyer refers to in order to evaluate the best bids among the suppliers. (Pekkarinen & Salminen, 2013, p. 165) According to Schätzle and Jacob (2019) customers associate suppliers from certain countries of origin (COO) differently. From the COO perspective, customers evaluate the quality of the product and the capability of the supplier based on that criteria. They are not only interested in the supplier's product; they are interested in the co-operation during the bidding process as the supplier delivers the knowledge on how to increase their own efficiency. (Schätzle & Jacob, 2019, pp. 250–252)

There are two challenges according Grewal et al. (2015) which need to be addressed in designing the solution and proposal: the fast-changing technological changes and the growth of organizations from emerging markets. These challenges involve difficulties surrounding pace of change and low pricing. Organizations who operate in emerging markets compete with cheaper offerings which can be difficult when investing in new innovations. For a company which offers world-leading technology and industrial solutions, it is also difficult to compete with low prices, and the business cannot survive in the long-term if it cannot adapt to the existing competitive environment (Kaski et al., 2017). The abilities to develop processes and systems for managing and transferring knowledge is one of the most critical functions in overcoming these challenges and in achieving effective proposal management.

The organization should define its targets according to the level of criteria, for example "must-meet criteria" must be filled before "should-meet criteria" (Lin et al., 2003). The target in this approach is to make sure that the project fit's in the company's business strategy and meets the customer's requirements (Lin et al., 2003, p. 589). In their study, Laryea and Hughes (2008) expressed several risks and factors to consider when deciding whether to bid or not to bid. Bidding time was one of the biggest concerns among their interviewees. When preparing a bid quotation, organizations are given a time limit which usually varies between two to six weeks, or can even be up to 12 weeks if the bid requires more technical solutions. Time was a major concern, especially when the documents are fragmented or contradictory, and did not fully detail the customer's needs. Another important factors to consider are late payments and the economic and political factors in the target country. (Laryea & Hughes, 2008, pp. 915–916; Bansard et al., 1993)

Further challenges in the bidding process are divided by Zhu, Xia and Makino (2015) into internal, external and environmental factors. Internal challenges are for example resistance from employees among internalization and environmental challenges are related to national differences (Zhu et al., 2015, p. 718). The external challenges of bidding are related to misunderstandings that are associated with cultural differences and language barriers between the home and host country (Zhu et al., 2015, p. 718). Grewal et al. (2015) further that one key challenge facing organizations is involvement of multiple stakeholders in the decision-making process in the buyer organization, and the need for sophistication from the seller (Grewal et al., 2015, pp. 193–194). The selling organization needs to form a list of the different key-players at the buying organization, who have influence on the decision-making and sourcing of the product. This will influence the structure and appearance of the proposal. By compiling a list of contacts, key players can be identified, which will help to connect with the right people and leverage the coming pains throughout the bidding process. The key players are, for example, employees with technical backgrounds who are interested in the capabilities of the solution and employees from the sourcing and financial teams who are interested in the price of the solution. The buying decisions are made collectively, either in internal or external groups. The people involved in those groups can be divided as following: the people who use the product, the people who make the buying decisions and the people who implement the buying. (Grewal et al., 2015, p. 195)

2.2.5. Estimating the Risk and Calculating the Price

The price, risk and value are inseparable during the bidding process. When the customer is deciding whether to buy or not, a low price does not give any guidance for long-term investments. (Hinterhuber, 2004, p. 765–767) In the value creation process concepts of price and value should be considered separately, as they are two different concepts. Price is what a customer is willing to pay to get the needed solution for a specific problem, while the value is the vision of the benefits of the value compared to the price (Khalifa, 2004). The price that the customer has in mind is the price image, the so-called reference price. Customers always compare the value against the reference price, which forms the customers price-image of the solution. (Khalifa, 2004, p. 662; O'Cass & Ngo, 2010, pp. 651–652) The price of the bid is one of the critical determinants of the bid, as the customer is mostly interested in the price and it strongly effects the possibility of winning the contract (Wibowo et al., 2017, pp. 341–342). The purpose for realizing the existence of the risk and taking it as part of the strategy is "to win the competition and to provide maximum project performance." (Laryea & Hughes, 2007, p. 911). Grewal et al. (2015) introduced different perspectives on why the risk should be incorporated in the bidding process. The first perspective is addressed with the changes in the B2B buying environment because of the global competitive environment. The organizations do not buy products to meet their own needs, they buy them to satisfy the needs of their own customers. (Grewal et al., 2015, pp. 193–194)

The optimal strategy for setting the price can be characterized by the below relationship (Wibowo et al., 2017, pp. 341–342):

Bid price = direct cost + opportunity cost + competitive advantage fee.

The buying organizations typically use several rounds of competitive bidding for selecting either the most suitable or the lowest-cost supplier, and the selling organization should take notice of this during the process. The suppliers know the game and place their prices accordingly. According to Salonen's finding the solutions should not only be effective, but also cost-effective (Salonen, 2011, p. 876). Vickrey (1961) determined in his "Vickrey auctions", that the winning bidder sets his price on the level of the second-best bidder but expects better performance better and a better solution. Determining the

right bid-price should not be based only on intuition and previous experience, as the decision to bid directly affects the economic efficiency of the bidder. Some models promote decisions "on the markup level by maximizing the expected value of contractor's profit allowing for probability of winning the contract" (Biruk et al., 2017, p. 92).

It is necessary to bid enough to get a sure a profit, but low enough to win the project. This is the moment where a contractor is before an important decision, and they have two different possibilities. The supplier has a good chance to make no profit at all with a low-priced bid, and the second possibility is to not win at all with a high profit margins on a high bid. Between these extreme options is the opportunity to make a reasonable profit. (Wibowo et al., 2015, pp. 96–97) The identified risks need to be incorporated into the pricing of the solution According to Storbacka (2011) this applies in a situation where, for example, "being responsible for performance of customer's process outcomes without direct authority to influence them" (Storbacka, 2011, p. 706). Laryea and Hughes (2007) noted the lack of academic literature about the process of putting the bid price together, and how the risk is incorporated. They asserted that the focus should be on how the contractors actually arrive at a bid price, and what factors affect it. (Laryea & Hughes, 2007, pp. 911–913)

Wise and Baumgartner (1999) presented one big risk for suppliers which should be taken into account when designing the solution and determining the price. When moving towards the customer, the competition of the distribution channels is huge, as they can provide profits for the organizations that control it. Cooperating with a dealer is an easy way of entering the market, but the organization should be careful not to give them too much power over their products. If that happens, the dealer can put pressure on the organization to reduce costs and prices, and even threaten to buy the products from other suppliers, cutting their access to the customers. Organizations that control the distribution channel have a colossal power from the suppliers and the customers. To avoid this situation organizations need to take risks in channel conflicts in order to gain competitive advantage. (Wise & Baumgartner, 1999, pp. 136–137; Kaski et al., 2017, pp. 47–57)

2.2.6. Proposal to the customer

The final stage of the bidding process is sending the proposal to the customer, this stage demands special attention as it is when the winners and losers are determined Simonson & Ariely, 2003, p. 117). Succeeding in winning the bid requires organizations to do close cooperation with their customers in order to understand their needs and values, and provide solutions to their problems (Storbacka, 2011). Enhancing the possibility in winning a bid requires actions from the selling organization. At this stage, organization should involve customers in the development process of the products and focus their efforts on finding new channels. In this way, they can improve their profitability, challenge the dealers, and get closer to the actual source of profit, the customer (Wise & Baumgartner, 1999, pp. 136–137; Kaski et al., 2017, pp. 47–57)

To be considered, the bid should cover all the customer requirements, bid securities need to be valid, and tax and other legal and commercial requirements must be met. Bids that do not cover these aspects are determined as non-responsive and are not considered for the next stage. (Lin & Chen, 2003, p. 589; Eades, 2003, pp. 199–205) Organizations have different possibilities to improve their changes to get the contract. The first one is to develop a technical offer and solution that satisfies the buyers needs at an attractive cost while simultaneously minimizing their own risks incurred through the products or processes. The second option is to design intelligent decision support for the bidding process. In simpler terms, it means the organizations should actively listen to the customers' questions and problems and try to respond to them effectively. This is supported by Chalal and Ghomari (2006) who claim that continuous communication is important when trying to find a satisfactory solution for the customer and developing the sales case. (Chalal & Ghomari, 2006, pp. 293–297)

Being able to provide profitable solutions that address the customer's problems requires a customer-oriented mindset. The supplier needs to understand the customer's business and their core values. By thinking outside of the box, new solutions and methods for creating value for the customer can be achieved while maintaining the profitable business-model, for example, by co-creating the solution with the customer (Pekkarinen & Salminen, 2013, p. 165). The negotiations should lead to an favorable terms between the

parties, and the role of bidding strategy is a necessary part for achieving the desired outcome (Wibowo et al., 2015, pp. 95–96).

According to Frey (2001) a crucial part of the preparation of a proposal is the transfer of marketing information to the Proposal Team. This view is supported in the case-study of Cova et al. (2000). The purpose of the information is to add value to the process and the information needs to be translated into knowledge which can be used in technical and legal proposal documents, such as statements, graphics and references. By incorporating value in the bidding process, the bidding organization should be able to understand that the value that the customer gains from the solution should determine the winner of the bid, not the price. The marketing data in preparing proposals is highly valuable and effective. Frey (2001) highlights the role of intellectual capital transferring process and suggests that it increases the organization's win ratios in terms of profits. This can include data to measure the project, product and competitor knowledge; and the data conversion into proposal documents via effective and articulated business processes.

2.3. Documentation

2.3.1. Documentation as a Structural Governance Tool

The studies in the area of documentation focus on how people use all kinds of documentation in their workplace. According to Salminen et al. (2000) of "documents consist of the recorded data intended for human perception" (Salminen et al., 2000, p. 625). According to Geiger et al. (2018) documents work as instruments for making employees opinions, understandings and motives clear to each other. In a broader perspective documentation is not just a tool that represents different tasks. For instance, practice theories are focusing on the collaborative functions of documentation related to how work is done and how the structures that hold the organization together can be kept (Osterlund & Garlile, 2005, pp. 103–105). Documents reveal much about an organization's operational practices, the incentives behind decision-making (Darville, 1995), and "how different functions of the organization relate to each other" (Darville, 1995, pp. 256–257). (Geiger et al., 2018, pp. 772–773).

Ungan (2006) captures the concept of standardization of documents in his research. Standardization of processes minimizes the uncertainty and variability in the

organization, as it defines how “work rules, policies and operation procedures are formalized and followed” (Ungan, 2006, pp. 134). Documents should represent, in a clear way, the relations between the parties, information, objectives and activities. Before that, the level of detail needs to be decided, which depends on the objective of the document (Ungan, 2006). According to Salminen et al. (2000) an inter-organizational document standardization process is a complicated task, as it requires a lot of effort and work (Salminen et al., 2000, p. 627). Proposals are documents that determine the terms of an agreement between the seller and buyer. According to Schepker et al. (2014) proposals include a variety of different forms, for example, agreements, information regarding scope of delivery, terms of delivery and task execution, to name a few. When considering the definition of a proposal document and everything it should include, documentation is an essential part of the bidding process, as the transaction cost economics provides challenges throughout the bidding process. (Schepker et al., 2014, p. 194)

The proposal design and its structure depend on different elements, for example, transactional attributes. In a bidding process with a low level of risk, the proposal documents act as a legal reminder of the transaction. Whereas, in a situation where a high level of uncertainty and risk are involved, the structure of the proposal document needs to be more refined which requires more time and other resources (Lusch & Brown, 1996). The proposals between two different parties act as tools which are designed to minimize transaction costs, for instance, carrying out the formation of the project, and to minimize the possible losses caused by it (Schepker et al, 2014, pp. 194–195). Schepker et al. (2014) defined the purpose of trading documents as a structural governance tools which functions are based on safeguarding the rights and obligations of the parties. According to Liinamaa et al. (2014) trading documents are company boundary spanning objects sans rival, and aimed to manipulate the other party by effecting their internal structures and mindsets of the employees. (Schepker et al., 2014, pp. 205–206; Liinamaa et al., 2016, pp. 46–47)

The role of documenting a solution’s purpose, different steps, and outcomes cannot be overstated. When preparing proposal documents, organizations should talk about the needs of the customer and how the supplier can solve their problem (Bowman & Ambrosini, 2000, pp. 1–3). One purpose of documenting the solutions development is to build and develop organizational memory and learning from past experiences. The

duration of solution development and implementation can be long, so constant learning is needed. This allows the selling organization to check if they have captured the customers' requirements. The emphasis on carefully documenting the solution is a management, so that management can follow the status of the sale. It helps to develop and deploy the products in a synchronized way when all the units are aware of the different phases and have access to the information. This way, all stakeholders are well informed throughout the process. (Tuli et al., 2007, pp. 9–10) The more complex the knowledge is that should be codified and transferred, the more important it is to utilize documentation as a safeguarding mechanism. An example of complex knowledge can be tacit knowledge, which is challenging to capture explicitly. (Schepker et al., 2014, pp. 205–206; Liinamaa et al, 2016, pp. 46–47)

According to a study by Pedraz-Delhaes et al. (2010, p. 369) a poor quality document can affect the customer's perceptions about the company and its offering (Pedraz-Dealhaes et al., 2010). For that reason, organizations should pay attention to the language of their documents. Business writing pose challenges to the document creation process, when not conducted correctly and professionally. Organizations that offer industrial solutions need to understand the basics of business and technical writing, and how to share the benefits of their solutions with their customers in a clear and effective way. According to Scammel (2006) business writing should pursue the key principles of plain language. The seller needs to understand that they are writing the proposal document for the use of the customer, and not for themselves. This includes the perspective that the text needs to have a clear logic and it needs to be easily understandable. Besides that, the seller needs to think about the target audience of their proposal and who they are addressing. When the readers of the proposal are without technical background, all the technical words should be explained so that the reader understands them. Explaining difficult concepts makes the proposal document easier to read and follow. In addition, including only essential information helps to keep the interest of the subject. (Scammell, 2006, pp. 45–46; Gudknecht, 1982, p. 117)

2.3.2. Documentation as a Value Carrier

The role of technical documentation is present an organization's offering and to add value for their customers. Hence, documentation can be considered as value carrier as it presents

the value of the solution at the customer. This takes place especially in situations where the customer is forming a new relationship with a company, and they are heavily relying on "extrinsic cues" such as documentation (Pedraz-Dealhaes et al., 2010, p. 363). To add value, the quality of the documentation is considered to be an important aspect. Pedraz-Dealhaes et al. (2010) determines the role of quality as follows, "document quality is the extent to which the consumer perceives the document as being comprehensible, fit, task relevant, credible, demonstrative, and systematically arranged." (Pedraz-Dealhaes et al., 2010, p. 364; see also Guillemette, 1990). When customers do not have any knowledge of the organization or their solutions, the proposal document serves as the principal connection to the company and their offering. It gives the information on the solutions "quality, usability and performance" (Pedraz-Dealhaes et al., 2010, pp. 363–365). The technical information that has been prepared in a careful manner will benefit the selling organization, as customers make their purchasing decisions on the basis of the information they are provided with. If the customers are pleased with the solution and the benefits are clearly communicated, they may recommend them to other organizations as well. (Batova, 2014, p. 325)

According to Gudknecht (1982) documents build an image of the organization at the customers organization (Gudknecht, 1982, p. 112; Pedraz-Dealhaes et al., 2010, p. 365). Technical documents are prepared by technical specialists and have become a growing trend during last years as the technology has become more complicated. Technical documents include technical descriptions of the products, interfaces, or software descriptions. According to Mead (1998) the technical documentation professionals need to learn business language in order to add value for the organization. The importance of explaining the value of the solution and what benefits the customer can get from it cannot be overstated and explaining how something works is not enough. The customer needs to be convinced of the superiority of the seller's solution and how it will increase their productivity. Organizations that are offering industrial solutions need to understand the basics of technical writing, and how to share the benefits for the buyers in a clear and effective way. (Mead, 1998, pp. 354–355)

Gudknecht (1982) captures the characteristics and structure of a good document in his article. When preparing documents for customers it is important to write them for end-

users and formulate the structure so that the different users are able to find the information they need. A well-written document will capture the most value when users who are unfamiliar with the company and its offering understand the purpose of the solution. Furthermore, a well-formed document structure speeds up processes as the information is easy to find. Gudknecht (1982) suggests that many document introductions are poorly prepared even though it is one of the most important sections of the document. The introduction, or executive summary, should describe the systems "purpose and personality" (Gudknecht, 1982, p. 112). It should make an overview of the solution and its purpose, and therefore focuses on selling the organization's offering. After the introduction the organization should present the specific technical details of the solution, which includes for example, input /output parameters, system accuracy and specific details about the technology involved. (Gudknecht, 1982, p. 112–115)

Information about the solution has shifted away from a supporting role towards a role where the information has its own value (Mead, 1998, p. 355). Proposal documents that are prepared carefully and respond to the buyer's requirements are necessary in order to position the proposal (Kozik, 2013, p. 719). Frey (2001) determines as proposal as a knowledge product that includes various elements from the organization's different functions. These include, for example marketing, technical information, finance, contracting, risk-management and certifications. The proposal is designed as a tool for selling technical knowledge (e.g. software & products) and services of the organization to the customers. The purpose of the proposal is to meet customer's needs and to provide a solution that addresses their problems. The required activities need to be completed in a specific timeframe and at a reasonable cost (Bansard et al., 1993; Frey, 2001, pp. 8–9).

The content of a proposal document varies according to the user and their needs, but also depending on whether it is aimed for internal or external usage (Frey, 2001 pp. 8–9). Gudknecht (1982) details that technicians like to visualize the solution in its "full functional dimension before further exploring it" (Gudknecht, 1982, p. 112). The features of a good document are completeness, accuracy, traceability and that they are unambiguous (Gudknecht, 1982). The proposal document should be stripped of all unnecessary details, leaving only the necessary things that have been accurately and unambiguously stated. In addition, it is important that if the proposal document contains

a reference to a provision or condition, the origin must be clearly stated. In technical means, a proposal is an offer document prepared by the seller which aims to answer to the customers inquiry (Request for Proposal) and to provide a solution to their problem. Proposals are legal documents that are used in the contracting phase as a point of reference. The legal aspect of the document means that a proposal should be accurate and factual. The proposal is adapted according to the work of the engineering department and the idea is to go beyond the customer requirements and exceed their expectations. The purpose is to offer innovative solutions which highlight the selling organization's core skills. (Frey, 2001, pp. 8–9; Cova, Mazet & Vincent, 1994, p. 44)

The process of designing the solution and proposal includes all the components through which a company can create value for their customers. Document standardization is one approach for improving business processes in companies (Salminen et al., 2000). Frey (2001, p. 8) determines proposal preparation as "assembling, synthetizing, and packaging knowledge within a very limited timeframe". When forming a proposal for the customer, organizations take into account the possibility of future business possibilities which include two different perspectives. The first view includes the possibility for broadening future collaborative relationships with new customers, while the second perspective includes the possibilities of service and maintenance selling for that customer. It is widely known in many industries that organizations adjust their bidding according to their own past experience and expectations. However, in this case, new aspects must be taken into consideration which may require contract renegotiation, this is necessary when the actual requirements of the project differ significantly from what was previously agreed. (Jung et al., 2019, pp. 801–802)

Despite the need for contract renegotiation, the objective is not to make too many proposal documents for the customers. According to Lin et al. (2003) submitting too many unsuccessful proposals to the customer can damage the reputation of the seller as they want to appear to be a reliable and trustworthy supplier. The controlling authority has a remarkable role while preparing the proposal document. Due to existing uncertainty and to avoid future problems with the project, they often conduct a risk analysis by exploring the buyer's resources and references, which is effected by setting the right bid-price. (Lin et al., 2003, p. 585) There are several challenges in creating proposal documentation for

the customers, and errors may appear during the process. Challenges are presented because of unclear mandates and the lack of information in the documents given by the contractor when they are placing an RFP. When the buying organization has not clearly defined their requirements and needs, this causes delays in preparing the proposal as the seller needs to ask specifying questions to the buyer. The seller needs to ask the right questions when preparing their proposal in order to ensure they can fulfil the needs and create a satisfying solution for the buyer. (Kozik, 2013, pp. 712–713)

Mead (1998) suggests that the key to accurate cost calculation in documentation is effective management of the documentation process from the beginning to the end. Documentation should be seen as an investment from the organizations, not as a cost. The documentation has two different characteristics according to Mead (1998): as a services model in which the documentation is a service that needs to be purchased and is deliverable, and as a support model, which considers documentation as an expense and as a part of the project costs. (Mead, 1998, pp. 356–357)

Scholars have represented many models on evaluating the quality of documentation (Smart et al., 1996; Schriver, 1993; Hosier et al., 1992; Fredrisckson, 1992). Smart et al. (1996) explored the relationship between the document quality and the product quality from the customer perspective. They divided document quality into six different categories which are represented below (Meads, 1998, pp. 365–366; Smart et al., 1996):

1. Transcendent quality: The quality of the solution
2. Design-based quality: Documents quality standards, for example, if the proposal is reader-focused
3. Product-based quality: Measures and details on how the solution shows the benefits for the customer, for example, reliability and usability
4. Customer-based quality: Sellers ability to focus on customer needs and how they fulfill them
5. Value-based quality: The difference between the customer satisfaction and cost
6. Strategic quality: A synthesis of the other variables

The represented quality metrics of a document presented by Smart et al. (1996) relies on the assumption that the organization has existing and pre-defined standards for the design

of the documentation. Thus, the model requires a pre-defined quality measurement system. Fredrickson (1992) suggested another model for measuring the document quality, one which takes into consideration customer service, which can be measured by the level of customer satisfaction. In this model, the documents are specifically prepared for each customer based on their needs and the buyer can highlight the functionalities of the developed solution from the customer's perspective.

Poor-quality documents are a waste of time and other resources for both the seller and the customer. A well-prepared document that is of high quality and takes a customer perspective will increase customer satisfaction and the likeliness of sales. (Mead, 1998, pp. 367–368) According to Mead (1998, p. 375), the value adding functions of documentation can be divided into three categories. First, it is presented that a well-prepared document reduces the need for internal investments. This means that by investing resources in preparing the document specifically for the customer, and offering the right solution, it is less likely that there will be revisions. This leads to reduced documentation costs and increased internal efficiency, as employees can dedicate time and resources to other tasks. Secondly, it increases direct return on investment. When the document is of good quality, customer satisfaction is much higher. This is captured by Batowa (2014, p. 325) who claims that when customers are able to understand the purpose of the solution and how they can benefit from it, they are satisfied. Finally, producing quality documents reduces the needed after-sales costs, for example, phone support for the customer. (Mead, 1998, p. 275)

2.4. Theoretical Framework of the Research

The offering of an organization characterizes all the elements through which they are providing value for their customers. It is the embodiment of their value creation capabilities (Pekkarinen & Salminen, 2013, p. 143). Previous studies have acknowledged the growing interest in industrial solutions rather than products and services, especially in industries where the offering has high-value and is technically complex (Davies, Brady, & Hobday, 2006; Tuli, Kohli, & Bharadwaj, 2007: Salonen, 2011; Pekkarinen & Salminen, 2006). In the context of this study competitive bidding is understood as a multi-staged process which involves different phases based on the buyers needs and values; it also takes into consideration the seller's capabilities to deliver the solution to the customer

in the most efficient way Wibowo et al., 2015, p. 96; Ariely & Simonson, 2003, p. 121; Bansard et al., 1993, p. 126). Industrial solutions are an "ongoing relational process to satisfy customer's needs, and to provide a solution to customers' operational requirements" (Pekkarinen & Salminen, 2006, p. 146). Project-based business surroundings are complex and require the development of a solution according to customer needs in a specific timeframe (Cova et al., 1994, p. 30). In order to understand the customers' values and needs, "industrial solution providers need to build close relationships with customers" (Pekkarinen & Salminen, 2013, p. 143).

Research in this area focuses on various academic theories, but the most commonly referred to are industrial engineering and industrial marketing management. This research takes a unique perspective by utilizing academic theories that have not been used in the same frame of reference in other studies, the theoretical approach includes insights from: industrial solutions, CVP, solution selling, value-based selling, bidding and documentation.

Academics have built supporting DSA (Decision System Analysis) models for supporting the bidding process for industrial solutions in project businesses. These models were mentioned firstly by Cova et al. (1994) and the purpose was to reveal the structure of the decision-making process in the customer organization. Figure 4 illustrates the various roles of documentation throughout the bidding process in the B2B environment and how documentation is utilized in the bidding process, value creation, and solution development. The process is divided into five steps and five stages, and is "independent of any project" (Cova, Mazet, & Salle, 1994, p. 29). The approach of Cova and Salle (2007, p.139) highlights that the "process of adapting and adjusting the suppliers offer to the characteristics of the retained project through to its realization". This model enables the organization to adapt and react to fast-changing project opportunities (Cova & Salle, 2007, p. 139; Cova et al., 1994).

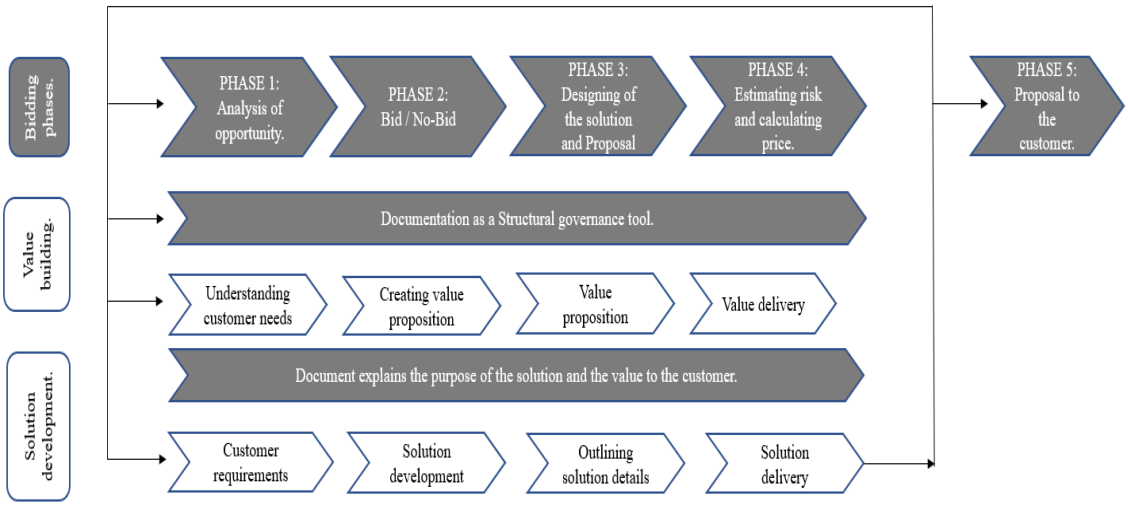

Figure 4. The role of documentation in the bidding process of industrial solutions. (Adapted from Storbacka, 2011, p.703; Liinamaa, 2016 p. 45; Chalal & Ghomari, 2006)

Figure 4 illustrates the theoretical framework of this research. In terms of a knowledge product, it explains the purpose of the solution and value to the customer, while acting as a structural governance tool in sharing tasks, information and in determining the scope of supply. The process starts with a RFP from the customer, at which point, the bidding organization starts analyzing the opportunity. When understanding the customers' latent needs and values, the organization can start developing the customer value proposition and solution according to customer requirements, and finally deliver the proposal to the customer. Documentation is attached to the each part of the process, from building the CVP, to developing the solution based on the RFP, to delivering the proposal to the customer. Justification for the ongoing process is that the customer may change their request during the process. The basis for the execution of a bid for an industrial solution is well-prepared documentation in the proposal phase. The value proposition is used to invoke curiosity about the innovative offerings and solution capabilities of the selling organization. The proposal of the value offering is then formulated as a documented proposal and delivered to the customer. O'Cass & Ngo, 2010, pp. 649 – 650; Frey, 2001, pp. 8 – 9) In their case study, Liinamaa et al. (2016, p. 44) presented that even if the organization is a market leader, they still need to demonstrate the value of their solution for their customers.

Organizations use documentation in information management; for organizing, restoring and transferring information for their internal and external purposes (Salminen et al, 2000, p. 624). Documentation can be used to exemplify the purpose of a task in an organization's strategy and future goals, in this situation, documentation presents the customer value and the details of the solution in a written format (Geiger et al., 2018, pp. 772 – 773). Schepker et al. (2014, pp. 205 – 206) suggests the role of the proposal documents is to serve as a coordinating tool between the buyer and the seller which can be adapted to account for changing circumstances in the best interest of both parties. Ultimately, carefully prepared proposal documentation can increase the performance of difficult B2B relationships (Liinamaa et al, 2016, pp. 46 – 47).

The main purpose of an industrial solution business is to deliver something unique for the customer at a reasonable price. The selling organization is not seen as a seller of goods and services, it acts more in the role of a consultant which offers the solution to the customer to support business grow (Cova & Salle, 2007, p. 141). Customers appreciate reasonable pricing, but further anticipate the uniqueness of their solution (Salonen, 2011, p.685). When solutions are carefully planned between the seller and the customer, the delivery of industrial solutions can be achieved in the most effective way (Gosling & Naim, 2009, p. 742). The right knowledge during the bid/no-bid stage includes the understanding of the customers problem and the capability to develop a solution based on their needs at a reasonable price. Moreover, it demands the ability to understand the risks and competitive environment, and the ability to allocate available resources to develop an effective industrial solution. (Frey, 2001, pp. 8 – 9; Cova et al., 2000, p. 559) The key to writing a winning proposal is understanding the customer's needs, being compliant with their requirements, and accepting the decision criteria of the customer (bidding approach). Then the purpose is to provide the best solution to their problems that add value the customer's operations (solution approach) (Cova et al., 2000).

3 METHODOLOGY

In this chapter, the research methods utilized throughout my study are presented. First, I detail the ways in which this research was conducted and justify my methodological choices. Secondly, the approach is described, and the data collection methods are presented. Finally, I provide a detailed explanation about the data-analysis process.

3.1. Qualitative Single Case-study Research Design

According to Ragin and Becker (1992, p. 8) a case can be described as a "relatively bounded object or process; it may be theoretical, empirical or both". The case-study approach was chosen for this study as there is a "case", in other words, an objective to meet that requires research. Case studies are used in a variety of different research areas for multiple purposes, and for that reason, the definition of a case study varies (Mariotto, Zanni & Moraes, 2014, p. 359). This study adopts a single case-study approach, which in this context, is defined as the description of the various roles of documentation during the bidding process for industrial solutions. Kennedy (1979, p. 663) defines the single case-study as "studies of single events". The multiple case-study is "disaggregated studies on multiple events" (Kennedy, 1979, p. 663). Hence, as this work is commissioned and focuses is on one organization and process, the multiple case-study approach was not suitable for the purpose of this study.

Toppinen and Korhonen-Kurki (2003, p. 202) define the "qualitative case study as an empirical enquiry that explores a contemporary phenomenon in its real-life context, where the boundaries between the researched phenomenon and the context are not clear." (Yin, 2003; see also Toppinen & Korhonen-Kurki, 2013, p. 202). In these situations, the focus is on investigating the "focused phenomenon" (Barratt, Choi, & Li, 2003, p. 329). The explorative case study approach allows the researcher to make important scientific discoveries, but at the same time provides the opportunity to solve the practical problems of the case company (Lewin, 1946, pp. 202–203). The research problem is approached by doing semi-structured interviews with internal and external stakeholders.

While conducting this study, I worked as a Proposal Engineer in Fastems. My responsibilities included supporting global sales, and creating solutions and proposal

documentation based on the customer needs and potential opportunities. My tasks involved evaluating margins and risk levels for customers and suppliers, as well as managing and developing new proposal documentation and tools. My position provided me with a unique opportunity to get in touch with the internal stakeholders and gain a good understanding about the current situation of the current bidding process and documentation.

3.2. Data Collection

There are different ways of collecting data within the qualitative case-study approach. Saunders et al. (2009) presented three different ways of doing interviews; structured interviews, semi-structured interviews, and unstructured and in-depth interviews. The semi-structured interview is commonly used in qualitative research was chosen as the interview method for this study. Semi-structured interviews are well suited for the purpose of this study as a clear understanding of the needed information has been built based on theory. In semi-structured interviews the researcher presents a list of themes that should be covered in the interview, yet the order of the questions is not fixed, as they can change places depending of the flow of the conversation (Saunders et al., 2009). The purpose of this research is to find out what is happening or what has happened, and through that, find new information and results for building a comprehensive conclusion of the topic. Hence, as semi-structured interviews are flexible, this will enable for exploration of unidentified topics and the discovery of new knowledge (Queirós, Faria and Almeida, 2017).

The method used to gather the empirical part of the data was semi-structured interviews. The interviews are the main source of information and data in this research. The secondary data used in this study are the case-companies proposal documents which were used in parallel to formulate the interview questions. The semi-structured thematic interviews were chosen for the purpose of this study as I had prior knowledge of Fastems bidding process and proposal documents. The knowledge acquired through working in the organizations is not limited to what is included in this study, as it includes tacit knowledge gained through work experience which helped me to focus on important areas in the study. The semi-structured thematic interview is a qualitative research method, and it represents the qualitative research approach.

There are several benefits to utilizing semi-structured interviews that influenced my decision to conduct them in this manner. First, a semi-structured interview allows the interviewees to speak freely even when the topic was narrowed (Eskola & Suoranta, 1998, p. 86). The interviews progressed by asking the same questions to all the interviewees, and they had the possibility to express their own views and feelings throughout the interview. Second, semi-structured interviews allow the study participants to answer to the questions openly without any ready-made answers which should produce unadulterated responses (Eskola & Suoranta, 1998, p. 86). Third, using semi-structured interviews allows the possibility of asking clarifying questions to elicit further responses (Eskola & Suoranta, 1998, p. 86). This is advantageous as themes can be discussed in more detail to arrive at a deeper understanding (Eskola & Suoranta, 1998, p. 86).

The internal interviews were performed with people working in managerial positions with a background in sales and risk-management. The external interview was conducted with a person with managerial experience in sales-management. The purpose was to interview people with different backgrounds and levels of expertise from sales, so it is assumed that answers are divergent and variable. The interviews are based on the current bidding process and proposal documents of Fastems. Table 1 introduces the study participants, their background and the length of the interviews.

Table 1. Interviewed participants in this study.

Code	Position	Experience (Years)	Country	Interview length (minutes / pages)
M1	Partner Manager	14	Germany	54 / 13
M2	Sales Manager	12	USA	42 / 9
M3	Senior Vice President of Strategic Intense	33	USA	46 / 11
M4	Sales Manager	11	Finland	46 / 13
M5	Sales Manager, Part handling	9	Finland	49 / 13
M6	Solution Sales Director	21	Finland	41 / 11
M7	Senior Sales Manager & Partner Manager	19	Germany	48 / 14
M8	General Manager, Risk Management	31	Finland	48 /12
Sum		150		374 / 96
Average		18,8		46,8 / 12

The representatives for this study were selected due their long experience with Fastems and its competitors. They represent an international sample of middle and upper level managers. The people involved have both sales and risk management backgrounds, people with this type of experience were considered the most relevant for the purpose of this study. The experience in years varied between 12 to 33 years with an average of 19 years. For the purpose of this study it was necessary to have people with experience of industrial solutions, bidding processes in manufacturing circumstances, proposal documentation and from different sales-funnels. It is important to mention that all the interviewees provided comprehensive knowledge about the role of documentation in the

bidding process as they have experience working in a number of different manufacturing organizations. The sales managers, risk manager, representatives of the machine tool builders and solution director were chosen as interviewees for this study, as they have the best knowledge of the research topic and a long experience from Fastems and its offering.

3.3. Data Analysis

For this research, qualitative content analysis was determined as the method for data analysis. Qualitative content analysis is a method for analyzing data and construing the different meanings in it (Elo et al., 2007). According to Elo et al. (2007, p. 108) qualitative content analysis is "content analysis is a research method for making replicable and valid inferences from data to their context, with the purpose of providing knowledge, new insights, a representation of facts and a practical guide to action". The aim is to compress the research material without losing the information it contains (Eskola & Suoranta, 1998). Qualitative content analysis itself can be divided into three different phases: "preparation, organization, and reporting of results" (Elo et al., 2014, p. 1) The purpose of content analysis is to divide the data into main categories and subcategories which describe and quantify the researched phenomenon. This is necessary in this research in order to gain an essential and broad understanding of the research phenomenon. (Elo et al., 2007, p.106–113)

Inductive content analysis was chosen for the purpose of this study, as the knowledge about the phenomenon in the manufacturing industry, or more specifically, at Fastems, is not clear or is fragmented (Elo et al., 2007, p. 109). Conducting multiple interviews with different sources can lead to fragmented data, and inductive content analysis enhances the value of the research material by making it more meaningful and clearer to both the researcher and the readers (Eskola & Suoranta, 1998). Inductive content analysis is a flexible research method and there are no simple guidelines on how to conduct the data analysis. It is depended on different factors including the situation, the researcher, and the research material. The transcribed interviews of this research are examined via inductive content analysis method. The method is based on coding, themes and patterns that are found in the data to organize and interpret the information. (Elo et al., 2007, p.106–113)

The study participants are involved in the process to develop the bidding process and documents in the early phase before implementation. That reduces the resistance to change in the future, because the people have been involved in the renewing process from an early stage. According to Saunders et al. (2009) the semi-structured interviews can be carried out face-to-face or via telephone or internet. The interviews in this research were conducted both face-to-face and via Skype in English and Finnish. The duration of the interviews varied between 40 minutes to one hour. The interviews were recorded and saved as audio files and then transcribed into Word documents. The transcribed results were reliably restored for later survey, coding and categorizing. The interviews produced a total of 96 pages of transcribed data. The transcribed data allowed me as a researcher to gain a deeper understanding of the data. It is also worth mentioning that most of the quotes were translated from Finnish to English.

After data was transcribed, I formulated categories of the variables. According to Cavanagh (1997) the creation of categories provides channels to describe the phenomenon, in this case, to describe the documentation during the bidding process and to enhance the understanding of the related processes (Cavangh, 1997; Elo & Kyngäs, 2008). Below I justify why I created certain categories with the aim of enhancing the trustworthiness of this study (Elo et al., 2014, p.4). There are challenges in using purposive sampling, especially when considering the reader as it is difficult to prove the trustworthiness of sampling (Elo et al., 2014, p.4). As such, quotations are included in the manuscript to enhance the reliability of my research. Table 2 represents an example of the coding process.

Table 2. Example of coding and categorization of the data.

Quotation	**Subcategory**	**Main category**
"It's difficult to have an accurate collection of what's actually happening. So, in order to have, consistency documentation is key." (M2)	An instrument for managing the bidding-process.	The various roles of documentation.

The most used sampling strategy in content analysis is the purposive sampling, which was used to determine the study participants. This was selected, as the purpose was to

interview people who have the best knowledge of the topic (Elo et al., 2014). As I have worked with the bidding documentation for a year, I already had an idea of potential themes that existed before starting the analysis process. The main categories are formulated around the bidding process for industrial solutions, the various roles of documentation throughout the bidding process, and client-adjusted proposal documentation. The interview questions were formulated based on the main categories and the proposal documents (please see Appendix 1 and 2).

3.4. Fastems Case-description

In this chapter, I will provide a description of Fastems and the case. Fastems Oy is a leading organization in intelligent factory automation solutions for metalworking industries. It offers highly customized factory automation solutions for manufacturing companies in multiple industries, for example, to the production technology, automotive and aerospace industries. The headquarters is located in Tampere, Lahdesjärvi. The firm has net sales of approximately 110 million Euros and employs over 400 specialists and employees world-wide. Traditionally, the company was a technology-leader in their markets and gained competitive advantage by fulfilling their customers' needs in the most effective way. "Fastems is the leading independent manufacturer of factory automation systems", as it aims to improve its customer's competitiveness with intelligent automation and software solutions (Fastems, 2018). Their main customer segments are in aircraft and aerospace, engineering and machine building, construction and mining machinery manufacturer and part manufacturing and assembly industries (Fastems, 2018).

The context of this case is situated in the highly turbulent and fast-changing markets, as the competitive situation of Fastems continues to be challenged. In the current market, there are multiple competitive alternatives which compete for the same customers as Fastems. New competitors are emerging from emerging countries with their lower-cost offerings. The increased competition and technological advances that affect the traditional ways of doing business has led Fastems to focus on improving customer relationships during the bidding process and on the processes of delivering value to their customers. Figure 6 illustrates a simplified bidding process for Fastems from RFP to post-procurement. The increased competition has led to a situation where Fastems is forced to rethink the way they deliver the value of their solutions to their customers.

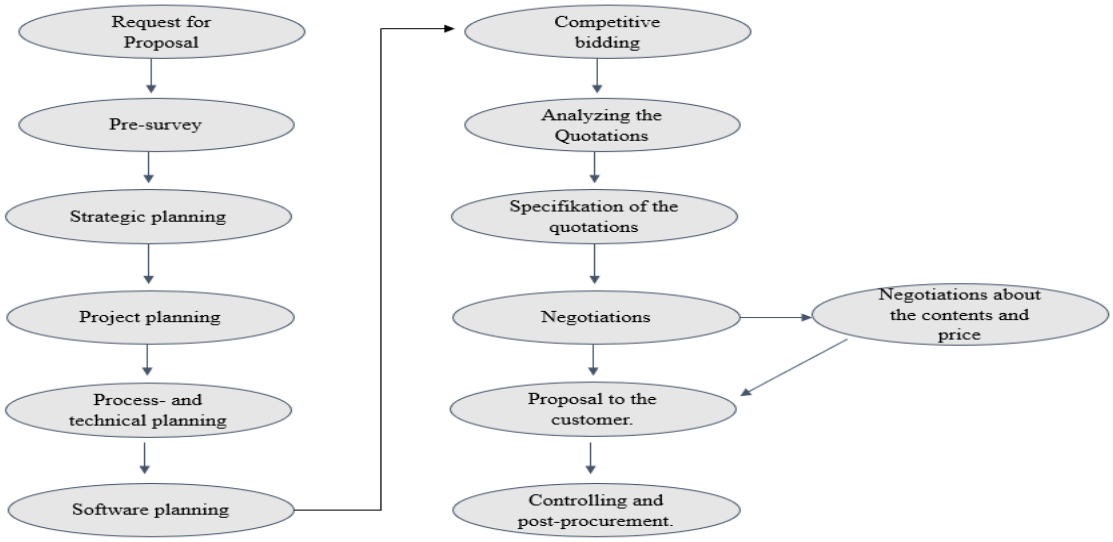

Figure 5. The simplified bidding process of Fastems.

Manufacturing firms market their industrial solutions as full-service offerings. Customers are lay emphasis on two aspects; total costs and the overall performance of the solution. The decision makers in the organization value different things, and the customer needs to be able to divide the information according to their needs and preferences. Overall performance of the solution can be, for example, the productivity of the solution. This includes many test periods in the process industry before the guarantee period starts. As discussed in the literature review, organizations need to be able to divide their customers according to different values; product- and service-based value. The third important value is the relationship-based value, which is done in cooperation with the customer. This effects the completeness of the quotation. The completeness of the offer is captured by Pekkarinen & Salminen (2013, p. 149) who stated that it is a "concept to describe the extent to which a customer's problem/process are solved/controlled by the solution provider". This project aims to address this problem and to rethink the ways in which Fastems is delivering the value of the solution through the proposal documentation.

4 FINDINGS

This Masters' Thesis began with an overview and investigation of the theories of solution-based value selling, industrial solutions, the bidding process and the role of documentation. The background of the research was to investigate the industrial bidding process of Fastems and to find justification for the potential need of renewing their proposal documents or creating an executive summary. As my aim in this research is to understand the various roles of documentation during the bidding process of industrial solutions, I divided my categories based on the analysis of the data as illustrated in Table 3.

Table 3. Identified categories.

Main category	Subcategory
The bidding process for industrial solutions	A: The Capabilities of the Seller Determines the Fluency of the Bidding-process.
	B: Bidding as a company-specific skill.
	C: Increasing customer expectations requires a turnaround in the organizational mindset.
The various roles of documentation	D: An instrument for managing the bidding-process.
	E: Repository of information.
	F: Risk management.
	G: Sales tool.
Client-adjusted proposal document	H: Understanding the Strengths in developing CVP.
	I: Understanding Customer-based Quality.
	J: The Importance of Client-focused Functional Thinking.

The categories have been divided into three in order to get a comprehensive understanding of the phenomenon in the case company. The three main categories include, 1) The bidding process for industrial solutions, 2) The various roles of documentation, and 3) Client-adjusted proposal document. The coding categories have been divided into ten different sub categories, which are discussed in more detail in the sections that follow. In

the below sections, the results of this research are explored. Firstly, I examine the bidding process for industrial solutions, and the factors organization should take into account during the process. Secondly, I explore the various roles of documentation during the bidding process. Lastly, I create a framework for building a client-adjusted proposal document based on the data analysis.

4.1. The Bidding Process for Industrial Solutions

The bidding process for industrial solutions are dependent of various different factors. In the below sections I explore how the capabilities of the selling organization affect to the fluency of the bidding-process. The aim is to further explore how the capabilities of the organization and employees affect to the organizations capabilities to do bidding in order to answer to increasing customer expectations.

4.1.1. The Capabilities of the Seller Determine the Fluency of the Bidding-process

The bidding process for industrial solutions is dependent on various different elements, as has been presented in the literature review. The capabilities of the seller play an important part in the successful bidding process. As mentioned in the sales-funnel approach, everything starts with the success in marketing to attract the interest of potential customers (M1 & M4). The ability to attract customer interest in the organization is the first part of the process. Therefore, it is important to think about customer needs from the outset, from the customer perspective, as mentioned in the following quotation, *"Well it's kind of understanding the customer's need. So, we can think about the process from the beginning with the brains of the customer" (M5).* In addition, one interviewee stressed the importance of listening to customers, "*So, first we have to listen to the challenges of the customer, and then develop the results with the right system" (M7).*

Secondly, the ability to understand and listen to the needs of the customer, and to develop the solutions together was mentioned during the interviews frequently (M1, M4, M5, & M7). The seller needs to offer a good solution and respond based on the buyer needs in the first round of bidding, as if the solution does not match customer needs the seller is not included in the second round of bidding (M1). As mentioned by Bowman and Ambrosini (2000) value creation needs to be managed throughout the whole bidding process. For that reason, the salespeople need to be trained to understand the end-

customer needs and which Fastems' solution meets their requirements (M1 & M6). The effectiveness of the bidding process is based on the abilities of the sales manager to explain the benefits of the solution to the customer and why it fulfills their needs. This is also important as the stakeholders who make investment decisions have different backgrounds, so the sales managers need to know how to best sell the solution to each individual (M2 & M7). The following quote explains the role of the abilities of the salespeople to understand the customer needs and to find the most suitable solution:

> *"This guys who are sending requests for this kind of solution, you need to have a good answer in the first round. So, the salespeople, they had to be trained in understanding what is the real end-customer needs and which solution from Fastems fits those needs. So, you find a balance between the customized system, between the product and coming to the hit. Because for the end-customers normally, if you do not fit in the first round, you are out." (M1)*

After understanding the customer needs, the organization should have the capability to effectively share how much value their solution can bring to their customer operations and daily practices (M1, M2 & M4). One sales manager discussed that customers have a variety of features, and it is the selling organization's responsibility to understand what they are, *"every customer has a different set up that is important to them. The hard job is to determine what they are, and make sure that we do everything possible to show the customer our capabilities related to those features" (M2)*.

The interviewees explained several challenges in the process of understanding the needs of the customer. In some situations, there is a dealer between the seller and the end-customer, which means that information can become fragmented, and the real need of the end-customer may be different from what the dealer conveyed (M2 & M7). One sales manager stressed the importance of visiting the end-customer in these situations in order to get all the details for solving the customer's problem:

> *"So, when we get an inquiry from the machine-builders, this information from the end-customer is in a way filtered, pre-selected. So, we only get information for this need, what they see as a need, but we don't really see a picture of the end-customer. […] And I decided a sales-manager should go on site, to have straight chat with the customer. The first message we got is, 'Oh, Fastems is also selling straight, or*

is also giving a presentation or discussion directly'. They thought we only sell via the machine-builders, so that's why I said earlier that we lost the link to the market." (M7)

As the customer's need are different and the result is not optimal, the seller needs to conduct a clearer analysis of their needs at the end-customer site, and then develop the solution for them (M2, M6, & M7). Salonen (2011) defined solution selling as providing tailored solutions to the customer that are based on their real needs and respond to their problems (Salonen, 2001, p. 684). Communication and understanding the needs of the customer and delivering the complete information internally is important for achieving the best outcomes (M4 & M7).

4.1.2. Bidding as a Company-specific skill

When asking the participants about the strengths of Fastems as an industrial solutions provider, most interviewees highlighted the company's wide offering including hardware, software, and services. Fastems is known for its capability to combine these in order to provide highly customized solutions to their customer's problems, with no competition (M2, M3, M4, M5, M6 & M8). The academic world has noted the growing trend of offering industrial solutions due the higher competition and increased customer demands (Cusumano et al., 2015). The below raw data example combines the capabilities needed to succeed as an industrial solutions provider in the manufacturing industry:

> *"Delivery of the whole solution. We can customize the solution according to the needs of the customer. It's a clear competitive advantage that we have both the hardware and software, and we can model based on these modules, the solution that meets the needs of our customers." (M8)*

The next quotation demands special focus, as it captures the point of this chapter of bidding being a company-specific skill (M4). It highlights the importance of listening to customer's problems and developing the solution based on them. *"In a way, just listening to the customer, making the diagnosis about it, and then making the right content proposal at the right time" (M4)*. One sales manager claimed that Fastems is seen as a trustworthy partner by customers as they have the reputation to achieve and deliver what

they promised (M4 & M6). This is achieved partly through openness towards the customer:

> *"So, in a way I think one of our strengths is the openness towards the customer. And in fact, customers appreciate that we can say that this doesn't work because of this. Don't ask for this. It is a really strong element to gain their confidence." (M4)*

Aside from that, the sales managers highlight the capabilities of Fastems to offer solutions without adding problems to customers daily operations (M2, M6 & M7). Meaning that they can integrate into any kind of system. The reason for that is that there are only a few companies in the world that can provide these kinds of solutions, especially, combining them with the software (M3). Fastems is a complete supplier for mechanical devices, hardware devices and software devices. The interviewees see it as a strength because their competitors need to use suppliers to, for example, deliver manufacturing management software (M1 & M4). The Senior Vice President of Strategic Intense, which is a customer company, viewed the capabilities of Fastems in this way, *"from a product standpoint, your single biggest competitive strength is your software, your modules, and your abilities to interconnect them to machines" (M3).* Based on the analysis, a conclusion can be drawn, that software is one of the biggest strengths for Fastems. This is also expressed in the following, *"well at the moment the software is differentiating us from competitors. We are the market leader in these FMS systems, and then we have been investing in recent years to make software and integrations." (M4)*

Three of the interviewees considered that the ability to succeed in the bidding process comes from the people working in the company, *"we have a lot of good people in the company. When we get all the best qualities from those best people for the projects, then the possibility of success is high" (M5).* Furthermore, it was suggested that company-culture supports the continuous learning of employees (M1, M2 & M5). The below quotes explain the importance of the employees in achieving a positive customer experience:

> *"Really the strengths of the company are the people. First and foremost, it is the wide knowledge, experience in engineering, designing and implementation. And also, the company culture. The ability to listen. The ability to look at any problem… coming to a solution without any drama." (M2)*

The highly skilled employees enable Fastems to offer highly customized industrial solutions for their customers in different industries. The skilled employees and understanding of the environment enable them to innovate solutions for their customers which will fulfil their needs (M5 & M6). One sales manager pointed out, that Fastems is more efficient at creating solutions and proposals than their competitors which can be defined as a company-specific skill (M1).

The importance of the pre-screening process of the customer's background and requirements is important in deciding whether the selling company is going to bid. This was highlighted in the academic literature and is supported in the data-analysis (Cova et al., 2000; Biruk et al., 2017; Jung et al., 2019). Fastems decision to make a bid / no-bid is dependent on many different factors. However, formal meetings and so-called 'opportunity reviews' (OR's) have the biggest influence on the outcome of that decision (M1, M2, M4, M5 & M7). This was supported in the literature review, as after organizations receive an RFP, they make a rough analysis of whether they are going to bid or not. In this analysis, meetings are held where the background of the customer is checked; customer requirements are analyzed, their ability to pay is considered, and the likely competitors and their offerings are assessed (Cova et al., 2000; Biruk et al., 2017; Jung et al., 2019).

When conducting the analysis, other notable factors during the bid / no-bid stage emerged, that are not mentioned in academic literature. Many of the sales managers and the solution directors are involved in the first bid / no-bid decision by themselves (M4, M5, M6 & M7). This is a kind of pre-selection in order to save their own time, so they can focus on more important projects (M1, M5 & M6). Their decision to make the first bid / no-bid decision is dependent on Fastems' abilities to deliver the system, the general price-level, and match the capabilities of competitors. Secondly, if the sales manager or the people in contact with the customer are not enthusiastic about the case, that is the first bid / no-bid decision (M4). But the official decision whether to bid or not to bid is made in the OR, where upper management and specialists review the customer request in more detail (M1, M2, M4 & M5). One sales manager stated the bid / no-bid decision as following: *"Yes, there are formal and informal decisions. And the bid / no-bid decision is made from the sum of them" (M4).*

The effectiveness of the bid-decision is heavily affected by the background and experience of the customer (M1 & M2). The below raw data example highlights that the capabilities of the seller are partly associated with the background of the customer, and the ability to deliver the value of the solution to them:

> *"The effectiveness is really based on the people that we are exposed to at the customer. I say this because our solutions are highly technical. They are highly engineered. They take a specific type of person that has the ability to understand the details of what we are trying to provide. And in a lot of cases, as a salesperson for Fastems, we are exposed to many different types of people within the customer organization." (M2)*

The points of contact vary depending on the size of the organization. For instance, in a small company it can be the owner, in a midsized company it can be on an executive level, and in a large multinational company it can be only the middleman, for example, a buyer. The conversations and negotiations in these three cases are different.

4.1.3. Increasing customer expectations require a turnaround in the organizational mindset.

Customer expectations of suppliers are constantly increasing (M4). As Fastems is a mid-sized Finnish organization operating around the world as a supplier to large multinationals, I wanted to get an understanding about employee and customer opinions. This will uncover what they see as factors that need to be addressed for meeting customer expectations and to enhance the capabilities to deliver value for them through the effective bidding process for industrial solutions. Many opinions were shared on this topic, but one of the most surprising answers related to the ability to understand the customers, listen to customer needs, and offer solutions that do not match their requirements (M2, M4, M5, M6 & M7). The below quotation explains the need for a turnaround in the organizational mindset if the organization want to be a solution provider in order to solve the customers problems effectively, *"in some way we don't understand the customer. Sometimes we are not able to listen to the customer. I already said that in a way we lost the link to the market. […] We are sometimes, in the moment I would say, focusing on products. But we are the solution provider." (M7)*

One sales manager (M6) stressed the importance of creating different pipelines for different products. The highly tailored customer specific solutions require their own pipeline so that they can be created for the customer based on their expectations. It is impossible to bid a highly customized solution through the same pipeline as simple and modular products (M1 & M6). The below extract from the raw data illustrates that the creation of different pipelines to meet customer expectations will lead to a situation where the selling organization does not lose internal time in developing the solution for their customers:

> *"Well, if we think about this kind of proposal environment, and how we are going to determine these, we have a lot to learn. Maybe we don't have enough clear channels to do different things. Whether we provide a basic system, or do we provide these special systems, that we have co-created with the customer." (M6)*

Many of the sales managers were worried about the high costs of the solution, and about the understanding of market-pricing (M1, M2, M3 & M4). Based on the analysis the sales managers emphasised the importance of developing life-cycle services (LCS) for responding to increasing customer demands, *"So, we had challenges in selling the second system, because of challenges in our on-site possibilities, reactions and service and so on. Because our market is really special, it's not a huge market. And service sells the second system" (M1).* These life-cycle services complete the offering with different support possibilities for delivered systems, such as delivering spare parts, offering training and maintenance. These services were frequently mentioned as an area where a solution provider should pay careful attention. The logic is adopted from circular-economy business thinking, which endeavors to increase the product life and utilization rate. These lifecycles include the perspective to offer support in a certain timeframe for the customer (M1, M3, M4 & M8). Incorporating more services into Fastems offerings brings steady revenue with high margins for the organization, and offers the opportunity to increase customer satisfaction. Services will play a bigger role in the future of manufacturing organization's offering, as customers expect services that increase the lifecycle of a product, for example, service and maintenance agreements. The below quotations from a partner manager stress the need for developing LCS and employing people to take care of these as service is important in the second system. This requires a

change in organizational mindset from a product-selling company towards a solution provider. This statement is supported by the below raw-data sample:

> *"And from the point of the view of an end-customer, they want to have us like a big machine tool builder, also our responding time. We are too less fulfilling all their wishes." (M1)*

A director from the customer organization mentioned the same problem regarding the need for service and support for meeting customer expectations, *"no matter how much I prepare our customers for the pricing; they are always shocked how much it actually is. Then there are challenges in services and support due the distance and time difference" (M3).* Service capacity and capabilities do not respond to customer needs, and that results in a poor customer experience. There are two reasons for the lack in support services; not enough employees in service and the organizational structure, because those functions have not been built yet:

> "*I don't know if it's that we are weak in relation to our competitors, but weaknesses emerge when we go to a market where our volume is already low. Then the life-cycle support is of course weaker. Because we have not built those capabilities due the low volume in that market." (M8)*

Other areas of concern relate to meeting customer needs based on the distance between USA and Finland. This causes problems in doing marketing and sales, as the company is not local to US customers and there is a high-level of competition in pallet-automatization. As the competitors are close and local, they offer simpler solutions, which can also cause pricing issues (M2 & M3). The rest of the responses related to the organization's structure and the lack of skilled employees working in the company (M1, M4, M5, M6, M7 & M8). One challenge to overcome is to meet customer requirements by developing a process to transfer and share all the information and details discussed in the negotiation from the sales managers based in various locations to Finland:

> *"It could be also that sales guy is really busy, has not the time to bring to good request to the layout and bid, and then he sends only 80 percent, because in his head he knows the last 20 percent and he forgot to write it in his layout request and his order." (M1)*

As mentioned by Salonen (2011) in order to be successful in delivering industrial solutions to the customer, all skills of the employees must be deployed to the use of organization, which in this study means dedicating more efforts to training (Salonen, 2011). With regards to employees' skillsets, responses were related to the young age of the workers, as they do not have enough knowledge about the organization's offering, their customers, and how to combine their products and services effectively (M1, M4, M5, M6, M7, M8). The sales managers also stressed the young age of employees, especially in designing the proposal documents (M1, M4, M5, M6, M7, M8):

> *"Yes, we don't have the knowledge, we have a lot of young and new people there. And the, we are sometimes using different kind of wording for our products or the solution itself. So, we also have to the same language in the company again." (M7)*

These challenges can be overcome by increasing communication internally (M7). Employee skills can be increased by sharing the tacit knowledge from older employees to the younger ones. The concerns were further related to two main issues, that there are not enough different channels in selling modular products, and that customer-tailored products were associated with losing internal time (M1, M6, & M7). The project organization structure influences processes, such as the way of working and thinking, which can cause certain rigidity in the organization (M5 & M8). Overcoming these obstacles will enhance the capabilities to meet the growing customer expectations.

4.2. The various roles of documentation

Based on the data-analysis it can be concluded that documentation is intertwined into all phases of the bidding process for industrial solutions, both in the pre-sales and post-sales funnel (M1, M2, M3, M4, M5, M6, M7 & M8). The documentation process can be divided according to the sales funnel approach, as it helps to map the customer-base and understand Fastems' potential customers (Järvinen & Taiminen, 2016). During the analysis process, I identified four different functions for documentation in the bidding process for industrial solutions which are explored below.

4.2.1. An Instrument for Managing the Bidding-process

Fastems operates as a project-business which is usually associated with long decision-making processes between different stakeholders and long lead-times in the projects (M2,

M3 & M6). The documentation acts as an instrument for managing the whole bidding process and sales case because it contains all the information related to the project. The documentation contains, for example, all the technical data of the hardware and software which defines the solutions, and explains for which purposes it has been designed (M1, M2, M3, M6, M7, & M8). The below quote from a sales manager (M2) explains the main purpose of documentation, *"it's difficult to have an accurate collection of what's actually happening. So, in order to have this, consistent documentation is key." (M2)*

In order for the documentation to function as a management tool in the bidding process it includes commercial terms and case-specific terms related to the sales case (M8). It gives both parties the knowledge of where and which stage they are at within the project (M4, M5, M6, M7, & M8). For that reason, it is important to add all the details, information and commercial terms that have been discussed and agreed between the seller and buyer in the proposal document (M3, M6, M7, & M8). As seen in the below quote, the solution sales director (M6) stated the need for investing resources in the preparation and appearance of the document, as a professionally presented document gives the customer the feeling of security, *"it gives the customer the feel of security, when the proposal looks professional, and is professionally made. It is a support material. The support material to manage the sales process" (M6)*. By building the idea of documentation as a tool for managing the whole process, the interpretation that everything that is agreed between the buyer and the seller, must be documented. It is the limitation of the risks for both parties, the agreed technical details of the solution, the scope of delivery, and terms and conditions in a written form (M7 & M8).

4.2.2. Repository of Information

The second role of documentation based on the interviews is the repository of information. The proposal document entails the real scope of supply and functions of the sold solution (M1, M2, M3, M4, M5, M6, M7, & M8). Information is stored in the documents. This view is supported by the long lead-times in the project, and to the tacit and fading nature of information which needs to be documented (M2, M6, & M7). The below raw-data example explains the role of documentation as a repository of information, both in the pre-sales and post-sales phase for clearing up the questions regarding the project:

> *"Some of the areas where we are still not clear about. The driver for that is going to be documentation, that will clear up those questions that we may have. And you know, especially when we are awarded with the project, the documentation is the only thing that we have, and the customer has more importantly. That guarantees what the delivery is going to be. So, from a post-sale perspective it is extremely important. And from a pre-sales perspective it is also important to understand what the deliverables can be for the price provided." (M2)*

There are problems in how and in which form the information should be stored for organizational usage (M4, M5, & M7). Due to the duration of the project there is a possibility that the employee who has handled the sales case, could leave the company, and a new employee who has no information about the case, needs to take over the project (M7). The content of the proposal may already be outdated, and there is always room for interpretation, as time has passed (M4). Alternatively, the text is too limited and does not define the phenomenon in detail (M4). This can be solved by forming a databank for standard text templates, that could be customized for customer needs (M1, M4, M5, M6, & M7). One sales manager highlighted the need for internal documentation in order to save and transfer information and details internally:

> *"With the documentation we can immediately start splitting. We have the quote, which is external document, but we should also think about documentation internally. Because you said yourself, we have certain time range when a project is going on. It could be half a year, it could also five years. And in the end, nobody knows what has been discussed five years ago." (M7)*

Standardization of the general document-templates for simpler solutions was mentioned as one key to this problem (M4, M5, M6, & M7). However, writing generic proposals using standardized templates does not work for the highly tailored solutions (M1, M5, & M6). This causes problems for high-risk and customer-tailored solutions, as there are not standard text templates available which could easily be customized. The people responsible for preparing the texts need to form the texts from the beginning, which creates a huge workload in every project (M1, M4, M5, M6, & M7) The interviewees highlighted the purpose of documentation is to also provide a the description of the content so it can be used as a tool for communicating the details and the purpose of the solution from the sales team to the project team. This is solved in forming a document for

an organizations internal use, or by carefully saving all the material in electronic folders (M1, M4, M5, & M7). The role of documentation is to deliver the information and the scope of supply which has been sold from one team to another. They should be able to understand the content of the sold solution immediately in order to proceed with the project in the delivery phase (M1, M5, & M7).

4.2.3. Risk Management

The third role of documentation is to act as a tool for managing the risks associated with the bidding process and the sales case, as it contains the scope of supply and all related details about the project (M1, M2, M3, M4, M5, M6, M7, & M8). In the process where the proposal documents are prepared by someone other than the sales managers, it is crucial that the document is prepared carefully to ensure all the elements are included and that there are no mistakes (M1, M4, M5, M6, M7, & M8). In most cases the proposal document is sent to the sales manager, who will takes it to the customer. The below raw data example explains the important role of the proposal document as a tool for risk-management in a multinational manufacturing organization, where the sales managers are working independently all around the world, without the support of their colleagues:

> *"Think about the situation that most of the cases are carried out in a way that the sales manager will get the proposal document in the offer folder. Then he will take it with him and goes to the customer. In such a case, the role of the proposal document is extremely important. It must contain all the information; it must be selling, and it must contain enough details to achieve the credibility in the eyes of the customer." (M5)*

When considering a typical bid or sales case, when an agreement is made, all the technical details and data has not been collected and verified between the seller and buyer (M8). They will be confirmed at the beginning of the delivery or during the project (M8). Organizations use documentation for themselves and for the customer to avoid business risks (M4 & M8). The following extract shows the importance of paying attention to the quality of the proposal documentation to support change management during the project: *"In order for it to be good enough and to say directly that this is what we agreed on, and*

if you want something else, you must make a request for change. It protects us from our business risks" (M4). The risk management functionality of the proposal documentation is associated with the different types of customer-segments, as some are more difficult than others, which is explained in the below quote:

> *"The contractual management is done because there are certain types of customers that are remarkably heavy, for example the automotive industry. So, we have consciously risk-evaluated those cases. Well, the aerospace industry is heavy as well, but it is a more familiar environment for us. Car factories tend to be difficult as they have these factory standards, and they want a customized service." (M4)*

The above quote was one example of a situation where a detail was incorrect on one page of the document and expressed how difficult it can be to correct it afterwards. This is mainly due to the fact that the customer can refer to the proposal document and demand the delivery as described (M1, M4, & M8). When the customers are big multinational organizations in the B2B environment, such an error can crash the entire business of a medium-sized supplier. Everything that is negotiated during the bidding process should be included, or otherwise there will be costs either to the buyer or to the seller (M6, M7, & M8). The Risk Manager stated the process in preparing the proposal documents as follows:

> *"There is a balance of terror. When it's necessary to think about how much to invest in the offer. That being the case, when a client has not yet shown sufficient interest in investing, it is not worth doing a lot of work for the proposal. On the other hand, what is done is then done carefully. That's what I would say. What we do is done carefully." (M8)*

According to the interviews the quality of the documentation has an effect in managing the risks associated with the solution delivery and the project. The Solution Sales Director pointed out the role of high-quality documentation, stating that: *"it generates competence and secures the process" (M6).* I also enquired about the role of quality within documentation, and what benefits are achieved through investing resources in quality documents. The role of the quality in documentation as a risk management tool was seen as highly important by all participants, *"it is extremely important, that the proposal*

documents are good from content and technically comprehensive" (M5), as it allows to manage risks throughout the whole project by safeguarding operations and limiting risks. When everything that has been discussed and agreed between the parties is included in the proposal document, risk is reduced (M1, M2, M4, M5, M6, M7, & M8). The below quotation illustrates the role of proposal documentation in managing the risks associated with the sales case in relation to long lead-times:

> *"The easy answer is yes, absolutely. It is important for us as a company to have documentation that is consistent from case to case to case because of these long lead-times. You discuss a case for half… or almost a year after the initial contact. It's difficult to have an accurate collection of what's actually happening. So, in order to have this, consistent documentation is key." (M2)*

In some cases, the proposal document can be reviewed by Fastems' competitors as the RFPs provide a list of the companies included in the bidding. In this situation, it is necessary to understand what is written in the document to ensure that the competitors do not get trade secrets, for example, regarding the pricing or the software (M8). However, this can also be viewed as a positive, as knowing what the competitors will offer in terms their of solution gives Fastems the possibility to refine their proposal and make their offer more attractive (M8). The quality allows the organization to perform project change management during the project which helps in risk management. Therefore, it is important that everything that has been agreed is documented (M6). This helps in managing the case or project during the bidding process as well, when an employee leaves the company for example as previously stated (M7). In the project business it is not possible to start from zero with a project that is already going on, as it would certainly have an impact on the customer experience. The customers have certain expectations from the seller, and they need to be fulfilled even if an employee leaves the company. The below raw-data example explains the role of good documentation both from the customer-experience and risk-management perspectives:

> *"Yes, and also… Security thinking. If I leave the company, or someone gets really awfully sick. Someone has to take over their projects. They can't start from zero, because the customer is thinking; What organization this customer has, is this the*

right partner for me? So, this is also the point on how to archive the information. Yes, and the second point is, customers are sometimes tricky in negotiations." (M7)

The role of documentation as a tool for managing risks cannot be highlighted overstated. It also has a preventive role in managing the risks before the actual project phase. The interviewees highlighted the importance of the layout. Layout is a 2D or a 3D representation of the solution to the customer. The customer can see the details of the solution from the layout, and if the customer believes that the solution that has been developed is the right one, he will immediately ask for the price of the solution. This is the situation where a well-prepared documentation that has been developed based on the actual needs of the customer, has a preventive role in risk management. If the customer has a different imagination of the price of the solution than the seller, there is no need to progress with the project, so the future risks associated with the sales are minimized or avoided entirely (M2, M3, M4, M5, & M6).

4.2.4. Sales Tool

The fourth role of documentation is to act as a sales tool both in the pre-sales funnel and in the post-sales funnel. According to the interviewees it has two different meanings. In the pre-sales phase, the purpose is to attract the attention of leads and to explain the value and the benefits of the solution to the buyer in a way that they understand it and turn can be converted to customers (M1, M2, M4, M5, & M7). One interviewee pointed out, that *"all data that goes to the customer, is like part of marketing. It is about creating the image and building credibility towards the customer" (M5).* A proposal document acts as a knowledge product for the customer, as it represents the technical and software capabilities of the seller (M5, M6, M7, & M8) A Senior Sales Manager explained the importance of high-quality documentation as sales tool and the possible consequences as follows:

"The quality must be everyone in our organization, a high-level quality. Because this is our knowledge. This is the base of our business. Yes. And if we fail in realizing something at the end, because we have missed the documentation, then we have to pay extra money." (M7)

The interviewees highlighted the need for paying attention to the quality when preparing the proposal documentation. It is especially important that the information is accurate and contains enough details to make it credible for the customer, *"the role of our proposal document is extremely important. It must be correct, it must be selling, it must contain enough information to make it credible to the customer, otherwise it has no purpose" (M5).* Organizations are utilizing documentation both for themselves and for their customers. The purpose in creating documentation for themselves is to determine the delivery content, the delivery pipeline, and to highlight the benefits the solution makes to their business (M3, M4, & M8). The second one is to display their knowledge and superiority when compared to competitors, and share the benefits of the solution. In order to represent the value, benefits and knowledge of the seller, the sales staff needs to understand the proposal documentation (M5). The below quotation explains the role and purpose of the proposal documentation:

> *"Well, of course, it defines the solution. The purpose of the document is to describe in our own words, what the customer is buying. So, on the one hand it provides the customer the details of the solution, but on the other hand it works for us, in a way, as a baseline for the delivery." (M4)*

As mentioned in the above chapter, the visual aspects of proposal documentation plays a role in preventive risk-management. The visuality has a bigger role in terms of explaining the value of the solution, as it makes it easier for the customer to understand the solution and to help build a positive first impression (M1, M3, M5, M6, & M7). This finding was surprising, as most interviewees said that a written clarification of the solution is not sufficient. The participants expressed that a well-written document alone is not effective as most of the customers will not read it nor understand it (M1, M2, M3, M4, M5, M6, & M7). Visuality will increase the likeliness of a sale, as customers want to see pictures of their solution. This idea is supported by the customer who mentioned that, *"a pretty proposal with a ton of details doesn't mean anything. They can't visualize what it is they are buying" (M3).* In particular, people with a technical background want to see a visual representation of the solution (M1, M3, M5, M6, & M7), *"normally we sell our product to technical guys. And the technical guys like to see the product" (M1).* The customer stated the importance of the visuality over and above the technical text, highlighting the importance of layout, as it is works as a good sales tool. It helps in gaining the confidence

of the customer, as it shows that the organization is professional (M1, M3, & M5). One sales manager pointed out that the credibility of the proposal document is higher, if the seller is able to simulate their production, *"so, the obvious trend is that the customer's credibility in our proposal is quite different, when we can simulate and show it somehow to the customer's productions" (M5).* The visuality increases the confidence of the customer, as presenting a visual representation of the solution explains the capabilities of the seller and demonstrates how the customer problems will be fulfilled with their solution:

> *"So, in other words you are gaining the confidence of the customer, that you are understanding how to put this to work. As opposed to your 70-page proposal, it's all about the product. It has a very little to do with the customer. That's tough. They want to see it specifically to their application. That's my experience." (M3)*

When comparing my data with the literature, there are divergences in relation to the benefits of using reference-theories as part of the proposal documentation. In academic literature they were seen as effective, whereas one interviewee claimed that they ineffective because customers do not see them as trustworthy, this is reflected below:

> *"Well, I like them, and they are great… But you know, here in the US everybody is not trustful of them. So, they believe that they are just sales pitches. They are friendly customers that allowed you to use the story. So, I haven't seen them be as useful as you might think. You are better off with examples." (M3)*

According to the analysis, the other findings were related to the abilities of the sales managers to summarize technical text. One sales manager (M4) stressed the challenges in creating effective summaries:

> *"That's the challenge. It should be a comprehensive description, but at the same time short and concise enough. Producing such text is usually quite tricky. You can write nonsense relatively quickly, but the problem is that no one is going to read it. It pushes the reader elsewhere. Either it's too short, and it doesn't define the solution comprehensively enough or it's done carelessly." (M4)*

The interviewees highlighted the need for summarizing the benefits of the technical solution in bullet points to explain effectively to the customer why they should buy the product from the seller (M1, M2, M3, M4, M5, M6, & M7). The ability to effectively summarize texts was discussed by one sales manager, who stated that, *"no one is going to read that thoroughly unless he is the engineer or the technical guy. So, it really boils down to understanding the customer needs and then taking the bits and pieces of the 90 pages" (M2).* Taking the most important parts of the proposal document which highlight the feature-benefits to form a new proposal document or an executive summary is seen as a positive improvement (M1, M2, M3, M4, M5, M6, & M7).

4.3. Client-adjusted Proposal Document

When the organization understands the various roles of documentation in their organization, they can start to build a new document template (Salminen, Lyytikäinen and Tiitinen, 2000). This final section of the data-analysis focuses on building a client-adjusted proposal document. Firstly, the strengths and weaknesses of the current proposal document are analysed, as understanding them helps to plan the organization's future objectives in terms of proposal documentation. With increasing competition in the automatization industry, organizations have started to pay attention to their products, services, and solutions. The response to increasing competition has been creating unique solutions based on customer needs. But it is not easy to write all the technical details of the solution in a proposal document (M6 & M7). As mentioned by Mead (1998), organizations need to understand the basics of technical writing, and be able to express the benefits of the solution in a customer-centric way (Mead, 1998).

4.3.1. Understanding the Strengths in developing CVP

To gain a deeper understanding of Fastems' proposal documentation participants were asked to share their thoughts on the strengths of the current proposal documentation. Throughout the discussion they explained how the CVP should be formulated for existing and prospective customers so that they can understand the content and the value of the industrial solution in a more effective and structured manner. When asking the managers and customers about the strengths of documentation, a prominent response was that the amount of details in the current proposal documentation is considered an advantage as it

shows the professionalism of the company to the customers (M1, M2, M3, M4, M5, M6, & M8). This is captured in the following quotation, *"our proposal is professional. It much more professional than our competitors" (M6).* Fastems ability to create detailed proposals based on the customers need was also considered beneficial, as one sales manager stated, *"we have the ability to create very detailed and specific proposals in the proposal preparation phase." (M5)*

Another frequently mentioned strength of the proposal documentation was the amount of text and the length of the proposal document (M6 & M8). The Solution Sales Director pointed out that the length of the document varied depending on the country. As was highlighted in the literature review, customers evaluate suppliers from certain countries of origin (COO) differently (Schätzle & Jacob, 2019). From the COO perspective, the customer then refers to specific evaluation criteria, for example, to the quality of the product, and then evaluates the capability of the supplier accordingly. The supplier's product is only part of the offering as they are also interested in the cooperation during the bidding process, as the supplier shares knowledge on how to increase their own efficiency (Schätzle & Jacob, 2019). The Solution Sales Director made the below comment:

> *"In some countries the quality of the proposal is measured with the amount of paper it contains. This one Belarusian case, the machine tool dealer praised that they went to the customer with two suitcases full of printed single-side paper." (M6)*

In other countries, for example the USA, Finland and Germany, a proposal document that is short in length and highlights the customer benefits is seen as more effective than a long proposal document (M1, M2, M3, M4, M5, & M7). According to the interviewees both the length and the content influence the professionalism of Fastems, *"the strength is the number of pages. Number of pages and its technical content, that's where our strength is. It brings competence. That proves our professionalism" (M6*). One of the strengths mentioned during the interviews was that it is a tool to easily build the order confirmation (M8). The risk manager noted that Fastems' proposal documentation already includes the general terms of delivery and terms to be agreed on case-by-case basis in the first round of bidding which allows Fastems to prepare order confirmation easier when the project

progresses, *"almost by changing the title you can make an order confirmation. So, it serves as a contract. So, the current proposal template is almost a ready contract. That's its strength. And that's because of the length" (M8).* Other issues that came up during the analysis process were the ability to create very detailed presentations of the solutions, and write them in a text format (M1, M2, M5, M6, M7 & M8).

4.3.2. Understanding the Customer-based Quality

As was already discussed in the literature, customer expectations of the proposal documentation quality are increasing, and based on the analysis, different interviewees understood the role of the customer in preparing proposal documentation. Customers are look at the documents in a different way than the employees at Fastems (M4, M6, & M7). Sales managers have different opinions about development needs than an employee working with contractual background in risk-management. This has affected the results regarding the role of the customer in preparing the new proposal documentation. The first aspect in understanding the role of the customer in the preparation phase is the length of the proposal document (M1, M2, M3, M4, M5, & M7). These concerns related to the readability, as no one is going to read a 50 to 90-page proposal in detail (M1, M2, M3, M4, M5, & M7). This was expressed in the following extract, *"well [if it is] 50 pages… the customer starts asking for reading instructions. Today no one wants to get deeper into the subject." (M4)*

The problems with the length of the document also relate to the need for better sales materials, *"it's too much. It's not specific… I mean it's too specific. It's just too much. I need better sales tools" (M3).* This was supported by the views that customers do not read the whole proposal document which renders the materials ineffective sales tools (M1, M2, M3, & M6), as one sales manager stated, *"like I said; nobody that has presented the 90-page proposal has any thoughts to actually to read the whole thing" (M2).* One sales manager also noted that, *"the end-customer doesn't want to go line by line by line. For this, for the first round and two rounds, we should reduce, reduce our quotation, from information site" (M1).* This is because the markets and customer preferences are shifting, and the people who read the documents are changing which can be attributed to the generation change on the employee's side:

> *"I think it's everywhere, but in America especially the younger the person… The younger the customer is, they are all young compared to me. I'm almost in my sixties, so everybody is young. But they won't read, they are not going to read a 75-page proposal. I really wonder if anybody can read them. Or I still enjoy reading a hard-copy newspaper, my son reads the newspaper from his phone. You know that, that proposal, that's the reality when you have a seventy pages proposal, and if they don't read it." (M3)*

The amount of the information in the proposal document is attached to the readability of the document. The second development phase in increasing the understanding of the customer is related to the amount of information in the proposal document which should be minimized (M1, M2, M3, M4, M6, & M7). The interviewees expressed that there is too much information in one document, and when they go to a sales meeting, they need reiterate the main points of the proposal to the customer. The problem is how to distinguish the important text from the offer, for example, what has been changed in the content after the first round of the bidding process (M1, M2, M3, M4, & M7). The below quote shows the reader's reluctance to review the proposal document, *"but the first meeting was like that, they had our proposal documentation on the table, and they thought it is too long. Could you tell us the content, as we don't want to read this?" (M3)*

Every manager was concerned about the relevance of the information that is included in the proposal document (M1, M2, M3, M4, M5, M6, M7, & M8). The relevance of the information effects the length of the proposal document as well, so it is considered a possibility to shorten the document by removing irrelevant information from the proposal or add it as an attachment. In particular, the relevance of the information is directed towards the software descriptions, which were seen as generalized descriptions which customers do not understand as they are written from an organizational perspective, and thus, the customer story regarding the usefulness of the software is missing:

> *"Well then another thing we're missing from the proposal document, is if you open the proposal and look at what MMS4100 is doing. Our proposal tells us exactly what MMS4100 can do. That is what our salespeople can tell the customer. But our proposal, and neither the sales manager can tell the customer, what happens then after that. So, it doesn't tell the whole story, what if...? and what happens after that?" (M6)*

Based on the analysis it can be stated that the information is scattered around the proposal document, as stated by one interviewee, *"now we are coming to the point of having a bundle of information from the beginning to the end of the quote" (M7).* The organizational standard in preparing the proposal documentation varies significantly, and that is seen as a weakness (M1, M5, M6, M7, & M8). In this regard, one participant noted that, *"there is a certain inconsistency. We should think of Fastems consistency there." (M6)*. The importance of the customer-focus towards the solution cannot be seen currently from the document (M2, M5, M6, & M7). One interviewee claimed that, *"the customer should be in the center, not Fastems"* (M6). The below quotation explains the importance of including the customer-process to the creation of the document, as the customer has the impression that the document has been created for them:

> *"That is, the templates are too generic and general. Not any customer process is related to them in any way. The customer doesn't recognize their own applications from those standard templates. The customer should get the feeling that, okay, this has now been made for me, this proposal." (M5)*

The above listed areas for improvement are seen as slowing down the bidding process for industrial solutions at Fastems due to long, complicated and inconsistent documentation. The proposal documents are currently too Fastems specific, and the customer-process cannot be seen from the documents meaning that customers cannot clearly identify their customized solutions. After all, the main purpose of the proposal document is to attract the customer with the features and benefits the solution offers them, so they buy the system. In this case, the proposal is written by managers working at Fastems who are knowledgeable about their offering, however, they are not written with the customer in mind (M1, M3, M4, M5, M6, & M7).

4.3.3. The Importance of Client-focused Functional Thinking

There are different steps that are necessary to understand any development process that takes place. First, it is integral to understand the role of documentation and the strengths and weaknesses of the current proposal material so that informed decisions about the next development steps can be made. Secondly, to make improvements in the bidding process, Fastems needs have more discussions and communication with one another, which will

also help in finding common language in the organization (M1, M5, M6, & M7). As Fastems is a project organization with different delivery pipelines, these teams need to communicate with each other more effectively. This can be achieved, for example, by taking the delivery pipeline into account in the pre-sales phase (M6). According to the data, the development of the proposal documentation should begin by updating the contents (M1, M2, M4, M5, M6, M7, & M8).

> *"Bring it to the point. So, meaning that, okay we don't need a 70 pages quote. We can press this together to the real need of information. Where is the same value for example of information transfer, but in a much more compact way." (M7)*

If it decided that information should be removed or condensed, it is necessary to consider the reasons for reducing information, and what the benefits it would bring. The below quote highlights the benefits of reducing the information:

> *"But if it was 50 percent smaller […] that would increase comprehension. Maybe we would come to an agreement a lot sooner without the customer asking questions that are included in the proposal." (M2)*

When I asked the customer if they thought that dividing the information would bring some benefits, they believed it would (M3). They considered that it would help them to explain the content of the delivery, benefits to the customer, and that the end-customer would come to a buying decision more efficiently if the information was divided according to the decisionmakers (M3). At the same time, when organizations focus on the descriptions, they should also take into account the customer benefits and how to formulate them according to every customer (M1, M2, M4, M5, M6, & M7). One sales manager noted that, *"it should really be written in every proposal, their own description of what it is all about. What is offered into which environment" (M4).* The proposal document should present the technical capabilities of the solution, but should also personalize the benefits of the solution, this could be achieved by, for example, using five specified bullet points detailing the benefits (M1, M2, M4, M5, M6, & M7). These can be demonstrated through paragraphs of higher spindle utilization, unmanned manufacturing, and increase in personnel resources (M1 & M6). Using general descriptions of the functionalities is not effective, as the customers do not understand

them (M1, M2, M4, M5, M6, & M7). The below raw data illustrates the need to clearly write out which customer problems the solution addresses:

> *"The customer orientation should be there. Generally, which customer problems these particular functions and functionalities will solve instead of always having the functional description. We should start thinking about the proposal material in a customer-centric way." (M6)*

The customer centricity and writing the feature-benefits is are important as they will increase the likeliness of sales. Using examples of already installed systems was mentioned as one possibility to demonstrate the systems (M3). There was also discussions about a price-table for the customers, meaning they should offer the price at the beginning, as customer is always interested in the price (M1, M2, & M5). The following quote from a sales manager exemplifies this point, "*the price used to be last, so the customer started from there." (M4).* When I asked about the possibility creating an executive summary for Fastems, most of the interviewees supported it (M1, M2, M3, M4, M5, & M7). The below quote of a sales manager from the USA explains the benefits of using an executive summary:

> *"Yeah, in a lot of cases with companies that I have been associated with in the past that sell technical types of equipment there has been an executive summary. Which can apply to those decision-makers who are not truly interested in those details of the 90 pages. But just want to get a brief summary on what we are proposing. I think that would be very helpful." (M2)*

As this research is focusing on the development of Fastems' proposal documentation templates, or in developing a new executive summary, it is necessary to include the contractual perspective in terms of risk management to the development process. It is important that even if the sales team and the customers would prefer a shorter proposal document that captures the feature-benefits and the customer value, the role of the proposal document is also to secure the organization. The risk manager raised an important point when thinking about the development process of the proposal documents. If the documents are divided into many different documents, the problem will be that all the documents that are part of the document are not sent to the customer. From a contractual perspective, it is important to include them as a part of the proposal document,

and to send them to the customers as it is not legally binding if the customer has not received it. Safeguarding operations and risk management must be kept in mind when developing the proposal documentation.

Finally, based on the results I from the data analysis, it can be concluded that there is a need for client-focused functional thinking when developing a client-adjusted proposal document. Understanding what the customers stand to gain through Fastems solutions includes the creation of a CVP targeted to a certain customer. This needs to be done in a manner which considers the contractual and risk management perspective as the proposals are multi-purpose, used for selling the technical knowledge of Fastems as well as to safeguard the operations and limit the risks associated with the sales cases.

4.4. Summarizing the findings

The content analysis resulted in three main categories and ten subcategories. Based on the analysis, I identified four different roles for documentation in the bidding process for industrial solutions. The results of the study show that the sellers' abilities and capabilities determine the fluency and outcome of the bidding process. Understanding the real needs of the customer and the capability to create value for the customer is the key to success in the bidding process. Continuous communication with the real end-customer in developing the solution is necessary in achieving the right outcome and is a key driver for starting the bidding process (M4, M5, & M7). Additionally, the bid / no-bid decision is a crucial part of the bidding process and is dependent on both formal and informal decisions, but ultimately the official decision is made on the formal opportunity reviews where the end-customers background and Fastems capability to deliver the solution are analyzed (M1, M2, M4, M5 & M7). The risk manager summarized the results of this study effectively:

> *"After all, we are doing documentation in the proposal phase for the use of the customer and for ourselves. We are doing it for the customer so that they would be doing business with us. And for that, the customer needs to know what we are offering them in terms of delivery content, and what is the actual product or service. And then on the other hand, they want to know with which commercial terms he can do the contract." (M8)*

Moreover, the strengths of Fastems as an industrial solutions provider are based on their software, wide offering, and their capability to deliver highly tailored industrial solutions all over the world based on the customer needs (M2, M4, M5, M6, & M8). These capabilities are supported by the professional employees at the company (M1, M2, & M5). The below quote explains the role of the capabilities of sales managers in listening to the needs of the customer, and by leading them to a solution that is favourable for both parties:

> *"We achieve the best results in situations where we steer the customer in the right direction, and during that process the customer realizes that this is what I want. In this situation, sales have been successful. The sale may not be successful if we say in the first meeting that this is what you need." (M5)*

Based on the data analysis four different roles for documentation were identified: an instrument for managing the bidding process, a repository of information, a risk management tool and a sales tool. Firstly, documentation controls sales from start to finish, due the long lead-times it is difficult to accurately recall what has been negotiated about the case between the seller and buyer (M1, M2, M3, M6, M7, & M8). Secondly, it stores all the information that has been negotiated throughout the project and details the purpose of the solution (M1, M2, M3, M4, M5, M6, M7, & M8). Thirdly, as it contains all the negotiated information, it acts as a tool for managing the risks involved in the project. For this reason, a consistent focus on quality documentation is highly important (M1, M2, M3, M4, M5, M6, M7, & M8). Fourth, quality documentation acts as a sales tool to explain the value and benefits of the solution which increases the likeliness of sales (M1, M2, M4, M5, M6, & M7). However, a well-written proposal document is not enough, as customers need visuality in order to understand the solution (M1, M2, M3, M4, M5, M6, & M7). The analysis enabled the identification of the four key roles of documentation and based on them a framework towards building a client-adjusted proposal document has been proposed. Figure 6 represents the summary of the results based of the data analysis. Organizations needs to understand the roles of documentation in their organizations and their purpose before they are able to develop new proposal tools.

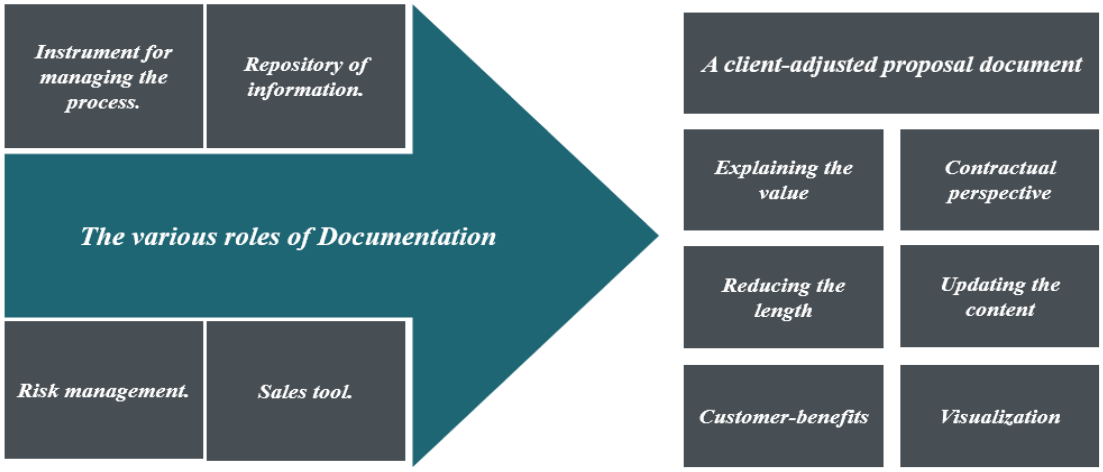

Figure 6. Summary of the results.

The results of the data analysis indicate that proposal documentation has an impact on the effectiveness of the bidding process, value delivery, and managing the bidding process. It impacts teams, managers and customers differently, and various stakeholders have different associations around the proposal documentation. The first acknowledgement is that the length of the proposal document should be minimized, as most sales managers and customers find the current documents tedious and time consuming. This leads to the suggestion that the unnecessary information should be removed, and the text should be formulated in a more customer-friendly manner by highlighting the feature-benefits and customer value. As this research has shown, the bidding process for industrial solutions is challenging, as they involve a big investments and different stakeholders with varying interests. Based on the analysis, it can be concluded that there are multiple factors that need to be taken into account when preparing proposal documentation for customers. To connect the solution-based value selling for industrial solutions, bidding process and documentation, the organization must focus on the client and their needs, detailing the benefits of the solution for the customer and explaining what value the customer will gain from the solution. By using shorter proposal documents with relevant information and including visual aspects such as pictures, flowcharts, and a ROI-calculation for assertion, the outcome will be positive for both parties.

5 DISCUSSION AND CONCLUSION

5.1. Research Summary and Reflection

The purpose of this study was to understand the various roles of documentation during the bidding process for industrial solutions in a multinational manufacturing organization in the B2B environment. This is explored by gaining an understanding about the organization specific capabilities that give industrial solutions providers competitive advantage in the bidding-process. To approach this problem, a qualitative single case-study approach was chosen for this research. This allowed the managers and customers involved to explain, describe and share their knowledge and opinions on the research phenomenon.

To be able to understand the phenomenon, the following research question was developed: “what is the role of proposal documentation during the bidding process for industrial solutions in a multinational manufacturing organization?”. I also formulated three sub questions to supporting me in responding to the main research question. The literature on solution-based value selling, industrial solutions, and documentation and bidding is extensive, but the roles of documentation in creating a proposal remain limited. This study addresses and complement this research gap on the various roles of documentation during the bidding process for industrial solutions. The sales perspective is dominant throughout the research, but for practical reasons, the risk management perspective was also included.

The key theoretical contribution of this study was to understand the various roles of documentation when building a client-adjusted proposal document. Firstly, the key theoretical contribution in the research is that these theories have not been used in the same frame of reference before which provides my study with a unique perspective on the subject. The theoretical part introduced the academic theories behind the research phenomenon which included industrial solutions, solution-based value selling, solution selling, bidding and documentation. These have been explored in the literature review to create an academic framework that supported this study. Furthermore, this research contributes new insights on the growing body of literature in the field of industrial solutions, bidding, and especially on the role of documentation in delivering the CVP.

Secondly, the methodological contribution was versatile as I had access to unique interviewees. The data sample provided access to different perspective, as it included both internal and external interviews from the USA, Finland, and Germany which resulted in a broader understanding about the role of documentation in the bidding process, and how a client-adjusted proposal document should be formulated. This study also makes practical contribution for Fastems which will be elaborated further in chapter 5.3 managerial implications.

The methodological part of this masters' thesis included qualitative data collection and data analysis. In total 8 interviews, 7 internal and 1 external, were conducted with Fastems middle and upper-level managers from Finland, Germany and the USA. The external interview was conducted for a customer from the USA. The data-analysis process included the transcription of interviews, coding, categorization and framing analysis. After the data was coded three main categories were developed: 1) the bidding process for industrial solutions, 2) the various roles of documentation, and 3) client-adjusted proposal document. These framings were divided further into ten different subcategories, from A to J to provide further details about each category,

5.2. Theoretical contribution

This study makes a contribution towards the existing literature that industrial solutions are integrated solutions which consist of hardware, software, and services, with the purpose of addressing customers' business needs and their problems in the most effective way. They are dynamic and agile in nature according to the organization's relationships with their customers (Brady et al., 2005; Salonen, 2011; Davies et al., 2006; Tuli et al., 2007; Pekkarinen & Salminen, 2013). The second theoretical contribution of this study is the recognition of the importance of the solution provider creating a CVP that is targeted to a certain customer which highlights the benefits of the solution as its purpose is to invoke curiosity about the selling organization. (O'Cass & Ngo, 2010; Payne & Frow, 2014). Ravald and Grönroos (1996) suggest organizations should focus on their offering as a "value carrier" (Ravald & Grönroos, 1996, p. 23). In accordance with Grewal et al. (2015) the analysis in this research supports the view that the sales managers need to be familiar with the offering of their own company, so they can inform the customer about how their solutions make a difference when compared with a competitor's solution

(Grewal et al., 2015; Salonen, 2011). The data analysis supported the notion in existing literature that the official bid / no-bid decision is one of the most important parts of the bidding process (Biruk et al., 2017; Cova et al., 2000; Pekkarinen et al., 2013), and further revealed that sales managers make bid / no-bid decisions independently based on the attractiveness of the project.

Thirdly, this study builds on the existing literature, asserting that the most effective outcome is achieved when the solution is co-created with the customer (Tuli, Kohli, & Bharadwaj, 2007: Salonen, 2011; Pekkarinen & Salminen, 2006). That said, the results of this study highlighted the biggest challenges associated with the failures in the bidding process and value creation are related to "vasa syndrome", as coined by Kessler et al. (2001), which refers to project failure due to lack of communication. The results of the data analysis showed that the methods of bidding for industrial solutions and creating value for the customers are always associated with the organizations field of business, size of the company, and the number of employees. One important part of the bidding process is to listen to the problems of the customer and to develop the solution based on their needs. In this situation, different activities and screening processes should be used based on the purpose and context (Tuli et al., 2007; Biruk et al., 2017; Ariely & Simonson, 2003). However, based on the analysis, in some cases organizations provide their own standard offerings and products instead of creating a solution to meet their customer's needs (Biruk et al., 2017; Kaski et al., 2017).

As stated by Salminen et al. (2000) the successful implementation of document standardization requires an understanding of the various roles of documentation in different processes (Salminen et al., 2000, p. 624). Previous research on documentation has focused on the role of documentation as a tool for information change, value-transfer, and as a sales tool (Pedraz-Dealhaes et al., 2010; Schepker et al., 2014). This research brings valuable insights to the existing literature by presenting new roles for documentation that need to be taken into account when developing a client-adjusted proposal document. These roles include documentation as: 1) a tool for managing the process, 2) a repository of the information, 3) a tool for risk management and 4) a sales tool in representing the knowledge of the company and the customer value.

The first role of the documentation is to determine the scope of supply and terms of delivery for the buyer, this will also clarify questions that customer may have. For the seller, it determines the scope of supply and many other things related to the sales case (Schepker et al., 2014). The documentation controls the sales case in its entirety, as it contains all the information related to the case. It acts as an indicator for both the buyer and seller as to the current stage of the project, but the continuous communication between the parties is also important to achieve the most effective outcome (Chalal & Ghomari, 2006; Pekkarinen & Salminen, 2013). The second role of documentation is to act as repository of information. Project-business is associated with long-lead times, so the information and scope of delivery need to be stored for future reference, the tool for this is the documentation. While it contains information regarding the terms, it also determines the purpose of the solution. When the information is stored carefully for future usage, it has a positive impact on the customer perception of the organization (Pedraz-Dealhaes et al., 2010).

The third role of documentation is to be a tool for managing risks. Schepker et al. (2014, pp. 205–206) defined trading documents as structural governance tools which are designed to minimize transaction costs in a conflict situation. Everything that has been negotiated needs to be included in the proposal document, as it prevents potential conflicts. It determines the deliverables and responsibilities of both parties. The fourth role of documentation is to act as a sales tool. Documents explain the value and the benefits of the solution to the customer in a way they can understand it, which is achieved by paying attention to the content (Frey, 2001, pp. 8–9; Pedraz-Dealhaes et al., 2010). Therefore, the documents should be written in a form for the end-customers using professional business language and technical writing, as they represent the solutions quality, usability and performance (Gudknecht, 1982; Scammel, 2006; Pedraz-Dealhaes et al., 2010; Mead, 1998). Based on the data analysis organizations should use visuals and pictures of the solution as it increases customer awareness and the possibilities of making sales, especially if buyers with technical backgrounds are the target-group. Based on the analysis it can be concluded that there is a need for summarizing the feature-benefits of the solution in a bullet point format. In this way, customers can gain a brief overview of the benefits of the solution, for example, in the form of an executive summary.

5.3. Managerial implications

In this chapter the managerial implications for Fastems are presented. In terms of managerial implications for Fastems, I would advise the management and board of directors at Fastems to take into account the various roles of proposal documentation during the bidding processes, and to invest resources in developing a shorter client-adjusted proposal document or an executive summary. The decision to bid is decided in the OR, which indicates that the meeting is the starting point for creating the CVP for the customer. Fastems should consider their solutions as a value carrier and utilize their CVP as a strategic communication tool to share how they aim to provide value for their customers with their solutions. Based on the data analysis, I suggest that the CVP of Fastems should be distinguished from competitors by highlighting their capabilities in terms of software as well as the capability to provide highly customized solutions for their customers. As was stated earlier in the literature review, value is created by the seller, but the actual importance and practicality of value is determined by the customer (Bowman & Ambrosini, 2000). An executive summary would help Fastems to convert their projects to real-life investment opportunities at a faster pace. More importantly, it will explain the actual CVP of the solution to the customer and what they are able to achieve with Fastems' solutions. The CVP is the ultimate sales tool and a way to differentiate Fastems from its competitors. Pekkarinen and Salminen (2013) state that the organization that acts as a supplier needs the capabilities to understand different customer value components when improving their proposals in order to gain long-term client support, this applies to Fastems.

It is advised that Fastems should organize the information in a more systematic way in their proposal documents, so that different stakeholders can find the information easily. This includes the development of an executive summary. According to most interviewees, the executive summary or a shorter proposal document would have a positive impact both on the effectiveness of the bidding process, and would also increase the comprehensiveness of the proposal document in the eyes of the customer. The contractual perspective for safeguarding the operations and limiting the business risks needs to be taken into account during the development process. Gudknecht (1982, p. 112) claims that the introduction is the most important section of a proposal document, as it should describe the systems "purpose and personality", however, the introductions of documents

are often poorly prepared. The introduction, or executive summary should provide an overview of the solution and its purpose, and needs to be customer-oriented. The specific technical details come after the introduction which may include, for example; input /output parameters, system accuracy and specific details of the technology involved (Gudknecht, 1982, pp. 112–115). The managerial implications based on the findings of this study are presented in table 4.

Table 4. Managerial Implications for Fastems.

The role of the document	Purpose	Managerial Implication
Instrument for managing the process	• Controls the sales case. • Acts as the redline.	Managers need to put effort into managing vital knowledge and documents, as they include the information related to the sales case. It acts as an indicator for both the buyer and seller as to the current stage of the, but continuous communication between the parties is also important if the most effective outcome is to be achieved. It is support material for managing the project, and in order to do so, everything that is agreed between the buyer and the seller must be documented.
Repository of information	• Pre-sales: Determines the deliverables. • Post-sales: Scope of supply.	Managers need to consider how the information related to the projects is saved for usage within the organization. It is important that information is stored securely, but also that it is easy to find. Project-business is associated with long-lead times, so the information and scope of delivery need to be stored somewhere, and the tool to perform this is the documentation.
Risk Management	• Made for seller & buyer for protecting from business-risks.	Managers should try to ensure that everything that has been negotiated is included in the document. It should be relevant, stored in the organizational systems so it is easily accessible, while meeting the industry standards. It defines the scope of supply and engagement between the buyer and seller. It is an essential part of successful implementation of risk management, as it determines the deliverables. It should deliver the message and speak general language, and therefore careful planning when preparing high-quality documentation is important.
Sales tool	• Selling technical knowledge. • Explains the CVP & benefits.	Managers should focus on preparing proposal documentation as it is a tool for delivering the CVP to customers and serves as the ultimate sales document for winning the bid. The purpose of the CVP is to invoke curiosity about the solution. This is achieved by investing time and effort into understanding customer's problems and requirements, and by improving managers capabilities to deliver the CVP to the customer. Managers should make sure that the customer process is visible from the document as it explains the value and the benefits of the solution to the customer. Managers are responsible for presenting them in a clear and simple way. Documents build the credibility and shows the professionalism of the industrial solutions provider, so the preparation-phase is crucial.

Based on the data-analysis it can be deduced that an executive summary is a tool for busy managers to gain a brief overview of the solution. The executive summary should capsulize the key-information of the solution and the proposal. It should also include the

main benefits, in other terms, the CVP of Fastems, and clearly show how their solution can address customer's problems. The executive summary should be visually appealing and presented in a clear way so that busy managers can easily interpret the information in the proposal. As B2B processes take a substantial amount of time and involve a lot of bargaining and negotiations, they consume the resources of both parties. Decreased time and efforts in evaluating and prioritizing projects in the offer phase will help organizations to use their resources for continuous and future-oriented development. The recommendations for the new proposal document template for Fastems are outlined in the Figure 7.

Figure 7. Recommendations to be included in a client-adjusted proposal document.

Based on the analysis, the length, language, and the visual appearance of the proposal document effect the customers perceptions of the proposal document and influence the bidding process. These are considered areas in which Fastems can make improvements. The length of the proposal document was mentioned many times as an area for improvement. Consequences related to the lengths of the proposal documentation varied between the participants involved. The quality of the language and customer-focus came up occasionally during the interviews. More specifically, the seller needs to put the value they create for their customers in verbal and numerical forms, in other words, they need to make the value visible for the customer through the language. They should emphasize

their ability to deliver an offering that their competitors are not able to rival, for example, business benefits, lifetime costs, production capability, quality and reliability; to name a few. This also includes the abilities in terms of effectiveness and contract management, such as: cost-effectiveness in order to meet the needs of the customer, flexibility towards changes during the process, and hitting deadlines in an effective way (O'Cass & Ngo, 2010).

More broadly, the findings from this study suggest organizations should invest resources in identifying their strengths as a solutions provider and understanding how they can create a superior CVP for the customer in order to improve the efficiency of the bidding process. Organizations needs to consider how to represent the value and benefits of their solution to their customers. For that reason, organizations should understand the various roles of their documentation in different work processes and contexts, as well as which environmental forces are affecting them. This should be done due the fact that the proposal documents play a bigger role when the customer is making a buying-decision. It represents the technical knowledge of the solution provider. Based on the analysis, it can be concluded that the quality and completeness of a well-prepared document plays an important role in the buying organizations decision-making process, as the documents can be used to explain their capabilities to the decision-makers or can referred to as instructions on how to operate the solution. To ensure the effectiveness of the proposal document, it should be well-prepared and written with the audience in mind. The proposal documents guide the bidding process, create its goals, distribute knowledge between different stakeholders, and divide tasks between the actors involved. Moreover, it provides opportunities for internal and external communication across organizational borders.

5.4. Assessing the Quality of the Study

The aim of this research was to investigate the various roles of documentation during the bidding process for industrial solutions. It is important for a researcher to address the quality of their study. According to Noble and Smith (2015, p. 34) evaluation of the research quality is essential if the aim is to utilise them in practice. In assessing the quality of an academic study, the researcher should be able to reflect critically on their research, as academic research must be systematic, exact and disciplined (Vilka, 2015). Vilka

(2015) specified that the requirements of scientific research do not conflict in developing professional work processes, as the demands of scientific research and working life are mutually supportive, and can therefore be combined (Vilka, 2015). This supported the process of combining different existing literature to build an academic framework that enabled me to understand how to perform the development project. In the following section, I assess the quality of this study by focusing on the reliability and validity of the literature review, research methods, and data-analysis, and finally present the limitations of this research. Before addressing the quality of this study, it is important to define the meanings of reliability and validity in qualitative research. According Lakshmi and Mohideen (2013, p. 2753) reliability is the "degree to which measures are free from error". Validity can be divided into internal and external validity. The internal validity is attached to the results, and if they are legitimate "because of the way of groups were selected, data was recorded or analysis performed" (Lakshmi & Mohideen, 2013, p. 2752). The external validity is attached to transferability of the results to other industries or groups (Lakshmi & Mohideen, 201, p. 2752).

The study process began with Fastems providing me with a project to develop their proposal documentation. To ensure the reliability and validity in the literature review, only books, academic journals, and scholars are used. The sources and theories are from scholars and authors that are widely known and appraised. The articles are from reputable publications that are relevant for this study and are peer-reviewed. The four main streams of literatures referred to in the literature review are widely known and researched in academic journals, so the validity of the study lies within the body of knowledge surrounding my work. The aim of scientific research is to produce new knowledge, which according to Vilka (2015), results in the creation of new information that shows how new information can be used in the development of operations or how the existing literature can be combined in new ways. Another strength of my study relates to the fact that I worked within the organization while conducting this research which helped me when selecting which academic literature should be used in this research. Theory triangulation provides a way to ensure the validity of this study, as many different academical theories have been combined in order to build the theoretical framework of this study (Eriksson, 2005; Denzin, 1978).

The research method used in the research has an effect on the reliability of the study. This research utilized with semi-structured interviews to collect the data. As a novice researcher I used semi-structured interviews as they enabled flexibility in the data collection stage and enabled me to gain deeper knowledge about the research phenomenon. Semi-structured interviews were chosen for this study because the goal was to gain knowledge about predefined topics while at the same exploring new issues. While I already had knowledge about the research phenomenon beforehand, the purpose was to gain new knowledge, thus, semi-structured interviews were used. (Chauncey, 2014, pp. 24-25) According to Saunders (2019) a structured interview increases the replicability and reliability of case study research but may have delimited responses from the participants. Standardized interviews were not suitable for this study as the purpose was to get the interviewees to express their views and opinions freely to gain further insights on the proposal documentation. (Saunders et al., 2009, pp. 320 – 324) Due to the fact that I only had limited time to conduct the interviews and the topics were complex, semi-structured interviews allowed me to use specifying questions to deepen my understanding and to clarify interviewee responses.

According to Beverland and Lindgreen (2010) there are three different ways to ensure reliability when building interviews for a qualitative case study: standardizing interview protocols, defining themes from existing literature, and providing the reader with an audit-trail to the data (Beverland & Lindgren, 2010, pp. 13–16). Though standardized interviews were not conducted, this research did include standardized interview protocols (please see Appendix 1, 2 & 3). Fastems' proposal documents were used to contextualize the case, and to building the categories and interview questions. I also enhanced the reliability of my study by using themes in the interview, these were well defined and established in the extant literature. I built the interview questions on the constructs of industrial solutions, bidding processes, and documentation. Thirdly, I have provided an audit-trail to my data by sharing extracts of the raw data in my findings chapter. According to Beverland and Lindgren (2010) one outcome to providing limited access to the data may be that readers feel that theory is forced to fit to (Beverland & Lindgren, 2010, pp. 13–16). This was avoided by sharing the research questions and direct quotations from the interview, thus, increasing the transparency of the research. Thus, within the framework of this study, the three points are followed in the best possible way.

Furthermore, the provide validity in my findings the interviewees included in this study were not modified to suit the context of the study. They were chosen for the purpose of this study due their wide knowledge of the research phenomenon. This includes avoiding the researcher's influence on their perceptions, without anchoring their responses (Eriksson & Kovalainen, 2008), which in this case was challenging, as I also have wide knowledge on the research phenomenon. I tried to avoid influencing the participants with my own perceptions by letting the interviewees speak freely, and only asking specifying questions, rather than sharing my thoughts.

Elo et al. (2014, p. 2) explain that there are certain factors that need to be taken into consideration when writing up the results. According to their study, special attention should be given to the preparation phase, specifically, on the data collection method, sampling strategy, and the unit of the analysis (Elo et al., 2014, p. 2). Even though qualitative content analysis has many strengths in this research, it also presents several challenges. As there are no simple guidelines on the right way to conduct the data analysis, I faced some challenges in formulating the sub categories due to the vast amount of information. I tried to overcome this challenge by dividing them according to their functions. The first three sub categories explore the capabilities of these industrial solution provider in the bidding process. Based on the data analysis, four roles for documentation were identified, which helped me to build the framework to create a client-adjusted proposal document. I needed to reflect on my work continuously and be self-critical in everything that I did, especially as I worked for the organization while conducting the research. The second challenge was in describing the outcomes and results of the gathered data, and to be critical about which aspects were relevant for the purpose of this study. There are no simple guidelines for that. As inductive content analysis is linked to reporting results of the interviews, problems may appear in transferring the results of the interviews into a text format. If all the data is not transferred, writing the analysis and outcomes from the gathered data may pose challenges. (Eriksson, 2005, pp. 43–44; Elo et al., 2014, p. 7 – 8) Therefore, I used two audio devices to make sure that the interviews were recorded, and tried to capture the atmosphere of the interviews by including the quotations in the findings chapter.

Among scholars there are disagreements about the role of a single-case study as a real scientific method. The main limitation of a single-case study is considered to be its inability to provide generalization of the study findings (Mariotto, Zanni & Moraes, 2014, p. 360; Kennedy, 1979). The findings in this research rely on one case study of an industrial manufacturer operating in the manufacturing industry. The findings of this research could be applied to organizations operating within the same industry and with similar backgrounds. That said, this research is not intended to look at the process in terms of contract law, even though it played an important role during the research. So, it should be noted that the results may differ in other companies and industries.

The first limitation in assessing the quality of the study is that I worked in the organization while conducting this research. This can be seen as both a strength and a weakness. As I have worked in the company with the bidding process for industrial solutions and proposal document creation, I had existing knowledge on the phenomenon. In this sense, it was easier to act independently as I had a lot of knowledge about the organization's operations and daily practices. This helped me to identify, contact, and interview the key people who have a vested interest in the documentation. Due the limited timeframe when conducting the research it was not possible to interview external stakeholders, which is considered a limitation in terms of the research sample, meaning that other important perspectives may be absent. Another benefit to working in the organization is that I had access to Fastems proposal documents which were used to contextualize the case, and for building the interview questions. Completing a master's thesis as a commission for a company increases the ties to the company and to my professional life. It was a great opportunity to increase my learning about the bidding processes, industrial solutions and documentation in a real-life environment. The negative aspects of working at the same company is that the opinions of my fellow workers and the interviewees may have had an effect on how I interpreted the data by centering my focus on Fastems, and less on the customer perspective.

The second limitation related to this study is that this research involved internal and external interviews from three different countries, Finland, Germany and the USA. The interviewees all possessed a sales-background which undoubtedly had an effect on the results. When considering the quality of the materials used in the research, it should be

noted that I only conducted interviews with managers, both internally and externally which meant that the research produced rich data in a short period of time. Due the fact that research processes usually take a longer period of time, and the time period of this master's thesis is relatively short at only eight months, this limited my capacity to collect data. Even though other participants were considered suitable for this study, they could not be interviewed due to the timeframe. Consequently, the results obtained reflect the internal sales perspective, and the results may differ if interviews were extended to include other levels of the organization. These levels included, for example, the proposal managers who are responsible for preparing the documentation, or the project organization who uses these documents after the sales have been made. Hence, a gap in the study exists as the network perspective could not be included in the study. To increase transparency, further interviews should be performed with external stakeholders.

5.5. Future research possibilities

The interviews produced rich data about the various roles of documentation and about the bidding process for industrial solutions. Due to the nature and the objectives of this master's thesis, it was not possible to include everything in this research. Based on the results and limitations of this study, two research gaps were identified. This study indicates that further empirical research on the various roles of documentation at different stages of the bidding process is necessary. As a single-case study, the results of this research cannot be generalized in other industries without caution (Mariotto, Zanni & Moraes, 2014, p. 360; Kennedy, 1979). Thus, further studies could be conducted to gather data from various markets, organizations, and industries, and the results could be tested by other solutions providers.

Further empirical studies could also be performed to gain a broader understanding about the various roles of documentation in the bidding process for industrial solutions in multinational manufacturing organization. This could be performed by focusing on documentation other than proposal documentation, for example, marketing material or the documentation utilized during the project. This would enable organizations to gain an understanding the roles of documentation in the delivery-phase of the project. By interviewing other employees, such as, bid managers and project managers internally, the

results may produce different findings. Moreover, interviewing more external stakeholders could produce different results in relation to the client-adjusted proposal.

Finally, the important role of the bid / no-bid decision in bidding for industrial solutions should be researched with more vigour and depth. One salient issue raised throughout the interviews included the need to investigate how the RFP documentation or information that is available at the time of the bid / no-bid decision affects the screening of the project. This includes the view that if all the details are not clear, or the information is fragmented, it will lead to a no-bid decision or can result in a higher price, even when the project is associated with a low-level of risk. Research could also explore if there is a lot of documented information available in the RFP, and the project is associated with a high-level of risk, does this make a positive bid decision more likely. Another topic that warrants further exploration relates to supplier databanks, where successful case-stories are stored, specifically, research could examine how databanks could be used for internal usage to avoid making the same mistakes made in future projects. One example is to use such information to design the organization's marketing activities.

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APPENDICES

Appendix 1. Interview questions for Internal interviews.

Warming up questions:

This research is carried out to find if there is a need in developing or renewing Fastems proposal documents. I personally believe that your knowledge and feedbacks would be highly important during this project in developing our operations.

a. What is your name and what is your current position at the company? How long have you worked at Fastems?

The bidding processes of industrial solutions

1. What are the strengths of Fastems as a solution provider?
2. What are the weaknesses of Fastems as a solution provider?
3. What steps are the most critical for the successful bidding-process of industrial solutions?
    a. *How should it be developed in order to be more effective?*
4. What do you see as the factors that effect on the decision whether to Bid / No-Bid?

The role of documents in proposal preparation

5. Why is documentation important during the bidding process?
6. How important do you see the quality of proposal documentation in the bidding process?
7. How are you using our current proposal material?
8. What difficulties do you encounter in using our current proposal material?
9. What are the strengths and weaknesses of the proposal material according to you?
10. How should the proposal material be developed?
    a. *How should we demonstrate the key benefits of our solutions?*
11. What differentiates our proposal documents from competitors?

12. What would you think about the possibility if Fastems has a short executive summary as proposal document with the legal aspects (max 3 pages), and the technical and programmatic capabilities would be as attachments?
13. What should be included in the executive summary?

Open questions:

1. What is the role of customer during the bidding process for Fastems?
2. Looking back on unsuccessful efforts on offering industrial solutions, in your view, what factors contributed to the failures?

Appendix 2. Interview questions for External interviews.

Warming up questions:

a. What is your name and in which organization are you working?
b. What is your company doing and what is your current position at the company?

A short introduction to the subject

This research is carried out to find if there is a need in developing or renewing Fastems proposal documents. I personally believe that your knowledge and opinions would be highly important during this project in developing our proposal operations.

The bidding processes of industrial solutions

1. What are the strengths of Fastems as a solution provider?
2. What are the weaknesses of Fastems as a solution provider?
3. How would you define the buying process with Fastems?

The role of documents in proposal preparation

4. Could you tell in your own words; What should be included in a comprehensive proposal, that YOUR company would choose it?
5. How important do you see the role of proposal documentation in the bidding process?
6. How should the seller demonstrate the key drivers of their solutions in a proposal document?
7. How do you feel, what are the strengths and weaknesses in our proposal documents?
8. How would you like us to develop our proposal documents?
9. What would you think about the possibility if Fastems has an executive summary of the quotation with the legal aspects, and the technical and programmatic capabilities would be as attachments?
10. What should be included in the executive summary?

Open questions:

1. How would you develop the bidding process in order to be more effective?

Appendix 3 Interview questions in Finnish

Alustavat kysymykset:

Tämän tutkimuksen tarkoituksena on selvittää, onko Fastemsin tarjousdokumenttien kehittämiselle tai uudistamiselle tarvetta. Mielestäni sinun tietotaitosi, asiantuntijuutesi sekä palautteesi olisivat erittäin tärkeitä ja merkittäviä toimintamme kehittämisessä.

a. Mikä on nimesi, ja mikä on nykyinen asemasi Fastemsilla? Kuinka kauan olet työskennellyt Fastemsilla?

Teollisten ratkaisujen tarjousprosessi

1. Mitkä ovat mielestäsi Fastemsin vahvuudet teollisten ratkaisujen toimittajana?
2. Mitkä ovat Fastemsin heikkoudet teollisten ratkaisujen toimittajana?
3. Mitkä vaiheet ovat kriittisimmät onnistuneen tarjousprosessin kannalta?
    a. *Kuinka voisimme kehittää tarjousprosessiamme?*
4. Mitkä tekijät vaikuttavat päätökseen, että lähdemmekö tarjousprosessiin mukaan (Bid / No- Bid)?

Dokumenttien rooli tarjousten valmistelussa

5. Miksi dokumentaatio on tärkeää tarjousprosessin aikana, voidaanko sen avulla esimerkiksi saavuttaa kilpailuetua?
6. Kuinka tärkeäksi koet tarjousdokumenttien laadun tarjousprosessin aikana?
7. Kuinka käytät nykyisiä tarjousmateriaalejamme?
8. Minkälaisia haasteita olet kokenut käyttäessäsi nykyistä tarjousmateriaaliamme?
9. Mitkä ovat mielestäsi tarjousmateriaaliemme vahvuudet ja heikkoudet?
10. Kuinka tarjousmateriaalia tulisi mielestäsi kehittää tulevaisuudessa?
    a. *Kuinka meidän pitäisi esittää ratkaisujemme tärkeimmät edut?*
11. Mikä erottaa Fastemsin tarjousasiakirjat kilpailijoiden vastaavista?
12. Mitä mieltä olet mahdollisuudesta, jos Fastemsilla olisi lyhyt tiivistelmä tarjousdokumenttina, joka sisältää oikeudelliset näkökohdat (enintään 3 sivua), ja tekniset ja ohjelmistoihin liittyvät tiedot olisivat liitteinä?
    a. *Mitä tiivistelmään tulisi sisällyttää?*

Avoimet kysymykset:

1. Mikä on asiakkaan rooli Fastemsille tarjousprosessin aikana?

2. Mitkä tekijät vaikuttivat menneisyydessä epäonnistumisiin teollisten ratkaisujen tarjoamisessa?

Appendix 4 E-mail invitation for the interviews

Dear Mr. XX,

I am a student from Tampere University studying economics and currently working in Fastems as Proposal Engineer. I am doing my Masters' thesis for Fastems currently about modelling the bidding process of industrial solutions.

The basis for the execution of a bid for an industrial solution is well-prepared documentation in the proposal phase. The produced proposal documents guide the bidding process, create its goals and provide opportunities for internal and external communication in organizations.

The aim of this research is to find out, if there is a need in developing or renewing Fastems current proposal material. You were considered to be a suitable person for this project because of your extensive expertise. I personally believe that your knowledge and opinions would be highly important and valuable in developing our operations.

This research is carried out via interview which would last about an hour. The interviews will be recorded in order to analyze the gathered data later. Would you like to be part of this project?

Thank you very much in beforehand and have a nice week.

Yours sincerely,

Juuso Kääriäinen

Proposal Engineer