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Department of Industrial Management

**VALUE-BASED REFERENCE MARKETING IN A SMALL PROCESS
INDUSTRY SOFTWARE AND SERVICE COMPANY**

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ABSTRACT

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<p>This master's thesis was done for a small company, Vipetec Oy, which offers specialized technological services for companies mainly in forest industry. The study was initiated partly because the company wants to expand its customer base to a new industry. There were two goals connected to each other. First was to find out how much and what kind of value current customers have realized from ATA Process Event Library, one of the products that the company offers. Second was to determine the best way to present this value and its implications for future value potential to both current and potential customers. ATA helps to make grade and product changes, starting after machine downtime, and recovery from production break faster for customers. All three events sometimes occur in production line. The faster operation results to savings in time and material. In addition to ATA Vipetec also offers other services related to development of automation and optimization of controls.</p> <p>Theoretical part concentrates on the concept of value, how it can be delivered to customers, and what kind of risk customer faces in industrial purchasing. Also the function of reference marketing towards customers is discussed. In the</p>	

empirical part the realized value for existing customers is evaluated based on both numerical data and interviews. There's also a brief case study about one customer. After that the value-based reference marketing for a target industry is examined through interviews of these potential customers. Finally answers to the research questions are stated and compared also to the theoretical knowledge about the subject.

Results show that those customers' machines which use the full service concept of ATA usually are able to save more time and material than the machines which use only some features of the product. Interviews indicated that sales arguments which focus on improved competitive status are not as effective as current arguments which focus on numerical improvements. In the case of potential customers in the new industry, current sales arguments likely work best for those whose irregular production situations are caused mainly by fault situations. When the actions of Vipetec were compared to ten key elements of creating customer references, it was seen that many of them the company has either already included in its strategy or has good chances to include them with the help of the results of this study.

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<p>Tämä diplomityö tehtiin pienyritykselle nimeltä Vipetec Oy, joka tarjoaa erikoistuneita teknologisia palveluita lähinnä metsäteollisuusyrityksille. Tutkimuksen toteuttamiseen vaikutti osaltaan se, että yritys haluaa laajentaa asiakaspohjaansa uudelle teollisuudenalalle. Tutkimuksella oli kaksi toisiinsa liittyvää tavoitetta. Ensimmäinen oli selvittää, kuinka paljon ja minkälaista arvoa nykyiset asiakkaat ovat saaneet eräästä yrityksen tarjoamasta tuotteesta nimeltä ATA Process Event Library. Toinen oli selvittää, kuinka tämä arvo samoin kuin siitä pääteltävissä oleva tulevaisuuden arvopotentiaali voidaan parhaiten esittää nykyisille ja potentiaalisille asiakkaille. ATA helpottaa asiakasta nopeuttamaan lajin- ja tuotevaihtoja, tuotannon starttitilanteita sekä tuotannon katkotilanteesta palautumista. Kaikkia kolmea tapahtumaa esiintyy tuotantolinjalla ja nopeutunut toiminta johtaa säästyneeseen aikaan ja materiaaliin. ATA:n lisäksi Vipetec tarjoaa myös muita palveluja liittyen automaation kehittämiseen ja säätöjen optimointiin.</p> <p>Teoreettinen osuus keskittyy arvon käsitteeseen, kuinka arvoa tuotetaan asiakkaille ja minkälaisen riskin teollinen ostaja kohtaa. Myös</p>	

referenssimarkkinoinnin tehtävää asiakkaiden suuntaan tarkastellaan. Empiirisessä osuudessa arvioidaan nykyisille asiakkaille tuotettua arvoa sekä numeerisen datan että asiakashaastattelujen kautta. Eräästä asiakkaasta on erikseen lyhyt case-tutkimus. Sen jälkeen tutkitaan arvoperustaista referenssimarkkinointia kohteeksi valitun teollisuudenalan tapauksessa näiden potentiaalisten asiakkaiden haastattelujen kautta. Lopuksi esitetään vastaukset tutkimuskysymyksiin ja tuloksia verrataan myös tutkimuksen teoreettiseen osuuteen.

Tulokset osoittivat, että ATA:n täyttä palvelukokonaisuutta käyttävät asiakkaiden koneet saavuttavat yleensä suurempia säästöjä ajassa ja materiaalissa kuin koneet, jotka käyttävät vain osaa tuotteen ominaisuuksista. Haastatteluista saatu viesti oli, etteivät kilpailullisen aseman parantamiseen keskittyvät myyntiargumentit toimi yhtä hyvin kuin nykyiset argumentit, jotka keskittyvät lukumääräisiin parannuksiin. Potentiaalisten asiakkaiden osalta uudella toimialalla nykyiset myyntiargumentit toimivat todennäköisesti parhaiten niiden kohdalla, joiden epäsäännölliset tuotantotilanteet aiheutuvat pääasiassa vikatilanteista. Kun Vipetecin toimenpiteitä verrattiin kymmeneen asiakasreferenssien luonnin pääelementtiin, nähtiin että suuren osan niistä yritys on jo sisällyttänyt strategiaansa tai sillä on hyvät mahdollisuudet sisällyttää ne tämän tutkimuksen tulosten avulla.

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ABBREVIATIONS

ATA	Automatic Trend Archive
B-to-B	Business-to-business
DMU	Decision making unit
IT	Information technology
PR	Public relations
SDLC	Software development lifecycle
TCE	Total customer experience
WOM	Word of mouth

1 Introduction

This master thesis is done as part of the industrial management training program in Lappeenranta University of Technology (LUT). It is done for Vipetec Oy, a small expert company that measures and optimizes the efficiency of its customers' production process. It was based in 2001 and has offices in Lappeenranta, Tampere and Kuopio.

1.1 Background of the study

Vipetec is doing research and development continuously and as a result has developed a software and service product called ATA (Automatic Trend Archive) Process Event Library. This concept has been supplied to several customers and large amount of material for references exists from previous years. At the same time reference marketing has been extensively studied in LUT. In Vipetec it was seen that their existing reference material could be utilized more efficiently and for that they decided to initiate this thesis project. The company has been using references as a marketing tool to some extent already before, so they know how much potential there exists in this field.

1.2 Study setting

The main setting of this study is to find the most effective way to communicate to customers the potential that ATA has for realizing value to them. Also the aim is to see if there are differences in how existing customers react to certain arguments compared to companies from a potential customer industry. Before these matters can be discussed, it is necessary to have knowledge about the benefits that customers have already received from ATA.

1.3 Purpose of the study and research questions

The purpose of this study is to utilize the available reference material in the best possible way in the marketing and sales of ATA Process Event Library. The outcome should be a marketing concept which can be utilized as such in future business. There are three research questions:

1. What kind of value existing customers have realized from ATA?
2. How the realized customer value can be quantified?
3. What is the most effective way for presenting the realized value to current and potential customers?

1.4 Structure of the study

In the first part of this thesis Vipetec Oy is presented along with its offerings and strategies. Focus is especially on the functionality of ATA. Next there is the theoretical part which is divided into three sections. First one concentrates on the risk that the industrial buyer faces and also the role of decision making unit (DMU) in connection to purchase is examined. The special features of buying industrial software are also briefly discussed. The second section focuses on the value that customer receives in industrial purchasing and the different value propositions that the vendor can present to the customer. The last section handles the function of external reference marketing, what it includes, and how can it be improved. After the theory there is description of the methodology used to conduct this study. Here it is explained how the empirical material was collected and analyzed. This is followed by an examination of the quality and quantity of the value realized for current customers and a case study about one of them. After this part is the evaluation of the value potential that ATA has for a new industry to which Vipetec wants to offer the ATA service concept. Finally answers to the research questions are presented, compared to the previous research, and the results of this study are summarized.

2 Vipetec

The first section of this chapter consists of a brief company introduction with presentation of ATA and its functionality. The other products and services of the company also get a quick overview. In the second section the strategy which Vipetec has for expanding its business and the challenges related to that are discussed. The information for this chapter was provided by Vipetec.

2.1 General introduction and ATA concept

Vipetec Oy was founded in 2001. The founders were involved in process automation development already nearly ten years before that. Vipetec provides software products and services for monitoring and developing the efficiency of processes. Customers of the company include for example leading forest industry actors. The company was started with only two people but today it has five employees and is planning to recruit more during the next years. Turnover has doubled since the beginning of operation and for year 2014 is estimated to be roughly 500 000 €. The offering to customers can be divided into three main components. First component are software tools for measuring, monitoring, and maintaining the efficiency of industrial processes. ATA Process Event Library is one of these tools. Second component are services and expertise in automation development and control optimization projects and also benchmarking. Third component offered is the training to apply these results effectively. This includes training for machine staff during projects and training for automation staff.

In the case of grade change development three stages can be seen in the service that Vipetec provides through ATA. First stage is the benchmarking of grade changes so practically evaluation of current performance. This means choosing the measurements to be collected, checking which data has been already collected, and start collecting new data. Also analysis is made about the duration of current grade

changes. Based on the information from these actions a performance report is made which includes estimation about the saving potential for customer. In the second stage evaluation reports are prepared based on measurement analysis and relevant background information. This background information focuses on how operators execute grade changes and how automatic grade change program operates. The third stage starts by implementation and validation of given proposals to customer for improving grade change performance. ATA is used to produce information about what are the best working methods in the production line and measure development. Results can be seen from a final report.

Monitoring and maintenance is also done through ATA. It gives efficiency reviews on regular basis. This ensures the efficiency of process control and any deviation from normal behavior can be quickly dealt with. When there are problems, ATA gives a fast overview of what happened in the process. One of the most important features of ATA is that it is also used successfully to standardize running methods. Basically what ATA is supposed to give to customers is more speed in three situations: grade and product changes, starting after machine downtime, as well as recovery of web break.

2.2 Strategy

Today all the customers are located in Finland but the company is preparing to expand abroad. The idea is to get customers from the forest industry that is already served in Finland. At the same time it is aiming to expand to at least one new industry inside Finland. In this thesis the industry under investigation is energy production. In both expansion cases customer references would be the main sales tool. In theory forest industry references from Finland should be very valid also abroad because the production processes are very similar. Nevertheless companies in this industry have the tendency to seek suppliers which have customer references from the same country. The new industry in home country should be chosen so that the existing references are as valid as possible. Otherwise there is a risk that the

targeted customers are not convinced that they will get the same amount of benefit from ATA as current customers.

The expansion strategy of Vipetec is presented in table 1 in the form of Ansoff's Matrix (Business Case Studies). The X in market penetration stands for more efficient selling to forest industry in Finland while the X in market expansion represents selling to forest industry in new countries. In the latter case the product and industry remains the same but the market can be considered new. The X between market expansion and diversification represents selling to new industry in Finland. The market is clearly new and most likely also the product needs to be modified to some extent. However the product concept remains essentially the same.

Table 1. Expansion strategy of Vipetec

	Established products	New products
Established market	Market penetration X	Product expansion
New market	Market expansion X	Diversification X

3 Perceived risk & decision making unit in industrial purchasing

In this chapter the risk that industrial buyer has to deal with is focused on. Also different aspects related to decision making unit in industrial purchasing are discussed. Here the focus is on the individuals who are responsible of the buying process. The last part of the chapter is about the specific aspects of buying software related to industrial production.

3.1 Perceived risk regarding industrial purchasing and relationship with supplier

According to the embeddedness theory, economic action is embedded in structures of social relations and concrete personal relations and structures have major role in generating trust and discouraging malfeasance. Three important concepts in describing industrial customer-supplier relationships are *relationship stability*, *trust*, and *risk*. (Liu et al. 2007, 435). Their sub-components are shown in figure 1.

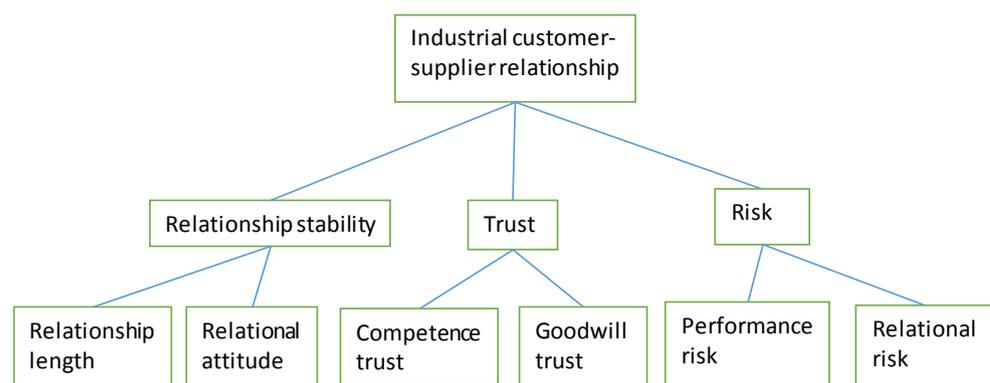


Figure 1. Key concepts of industrial customer-supplier relationship

Relationship stability measures how long-term oriented the relationship is. Long-term orientation is more than just evaluating the other party based on estimations of current benefits and costs associated with the relationship. From the buyer's

perspective two components can be seen in relationship stability, these are *relationship length* and *relational attitude*. First one is the duration of customer-supplier collaboration and the second one is the supplier's attitude about investing in and continuing the exchange relationship with this customer. In relationship stability a key point is whether the dyads in the relationship agree on the most important issues. "Dyad" is a group of two people and "dyadic" describes their interaction. (Liu et al. 2007, 433).

Trust measures how strongly a firm believes that its exchange partner is honest and/or benevolent. It can be divided into *competence trust* and *goodwill trust*. First one focuses on how strongly a firm believes that the exchange partner has the professional competence to perform the required mission effectively and to achieve relationship benefits. Goodwill trust means trusting in that the partner has "moral obligations and responsibility to show effort for the other partner's interests above its own". Based on transaction theory it's practically impossible for dyadic members to anticipate all uncertainties to include them in a written contract. (Liu et al. 2007, 434).

Risks can be divided into performance risk and relational risk, formed being connected to competence trust and the latter to goodwill trust. Risk of failed performance can be due to for example market dynamics or lack of competitive capability. (Liu et al. 2007, 434). This risk has a major role when high technology (high tech) offerings are bought. This is caused by two phenomena: 1. Lot of uncertainty exists in high tech markets partly because of heterogeneous technologies that change rapidly and 2. Previous commitments to certain technologies and suppliers cause high switching costs for the buyer. (Salminen & Möller, 2006, 21). Relational risk arises from the chance of unsatisfactory cooperation or opportunistic behavior by the partner. It has been stated that typically relational risk comes from "withholding or distorting information, shirking or failing to fulfill promises or obligations, appropriation of the partner firm's technology or key personnel" and so on. Relational risk is the greatest in long-run cooperative relationships. This is also the case in stable channel relationship. Seven

different sources of relational risk have been identified in the literature: (Liu et al. 2007, p. 434).

- 1) The perception of flexibility
- 2) Power and dependence
- 3) Possible defection of partner
- 4) Conflict
- 5) Non-learning of competences
- 6) The loss of core proprietary capabilities
- 7) Encroachment

The main tendency in industrial buying is risk aversion. Based on the definition of Puto, Patton, and King (1985), risk aversion is “a preference for an alternative whose outcome is known with certainty over one having an equal or more favorable expected value but whose outcomes are probabilistic”. Probabilistic means that the subject is influenced by the theory of probability and chance variation. It also seems that avoiding risk is typical to managers in many different corporate positions. (Puto et al. 1985, 90).

Puto et al. identify three risk handling strategies: reducing uncertainty, playing the odds, and spreading the risk. Uncertainty can be reduced by gathering more information and choosing the supplier which seems to offer the most certain outcome with least variation. Playing the odds can be done through more sophisticated and quantitative methods for vendor selection process, in which both probability and magnitude of each consequence is taken into account. Risk can be spread by dividing the purchase among multiple vendors. (Puto et al. 1985, 90) Anderson, Kumar, and Narus (2007) in their part mention that business buyers have two methods to avoid risk: following established procedures and using proven vendors as much as possible. As a consequence a new vendor needs to offer a significantly lower price than proven vendors to be considered by the customer. (Anderson et al. 2007, 100).

It has been argued that when trust is evaluated, three stages need to be considered.

First come the antecedents of trust which include evaluations of the trustworthiness of the other party with regard to its integrity, ability, and benevolence towards the trusting party. Second one is trust itself, meaning the trusting party's willingness to take risks in the relationship. Third one are the actual risk-taking actions. These include for example the exchange of knowledge between alliance partners. (Becerra, Lunnan, and Huemer, 2008, 708).

Concepts of tacit and explicit knowledge are worth noting when talking about risk of the buyer. By definition tacit knowledge is non-verbalized, intuitive and unarticulated. According to the resource-based view of the firm tacit knowledge is typically seen as important for competitive advantage. Explicit knowledge can be coded and articulated and as a result is often easier to transfer. (Becerra et al. 2008, 707). Next the findings about risk and trustworthiness in business alliances are discussed. Even though this thesis is about supplier-customer relationships instead of business alliances, it can be assumed that similar attitudes and behavior about sharing knowledge exist in both cases.

Based on the results reached by Becerra et al. the transfer of explicit knowledge inside business alliance has a strong connection with willingness to take risks. On the other hand the transfer of tacit knowledge is closely associated to the perceptions of the partner's trustworthiness. Also the transfer of tacit knowledge is more closely associated with alliance performance than is the case with explicit knowledge. The positive effect of explicit knowledge transfer on the success of the alliance is actually negligible. Despite this the explicit knowledge is the one most carefully guarded by managers. It can be said that many companies have the strategy to actively participate in alliances to exchange tacit knowledge and at the same time use great effort to protect their explicit knowledge from spreading. Becerra et al. suggest that the greater observability and replicability of explicit knowledge causes the illusion of great risk compared to tacit one. (Becerra et al. 2008, 707).

3.2 Decision making unit in industrial purchasing

In industrial purchasing decision making unit means the individuals in the customer organization who have influence in the buying process. The members who comprise DMU have several roles like influencers, buyers, and deciders. Several members may share the same role but on the other hand one person may have multiple roles. Most empirical studies about DMU have not focused on these roles but rather on the different functional units to which the members of the buying center belong. Purchasing, engineering and manufacturing are usually most strongly presented functional units in the buying center. Their position may be most central or they may be most influential otherwise. The main roles are presented in figure 2 along with main functional units and the responsibilities of the three most important units in purchasing. We know that managers inside DMU from different functional areas often use different sources of information. (Homburg & Rudolf, 1999, 19).

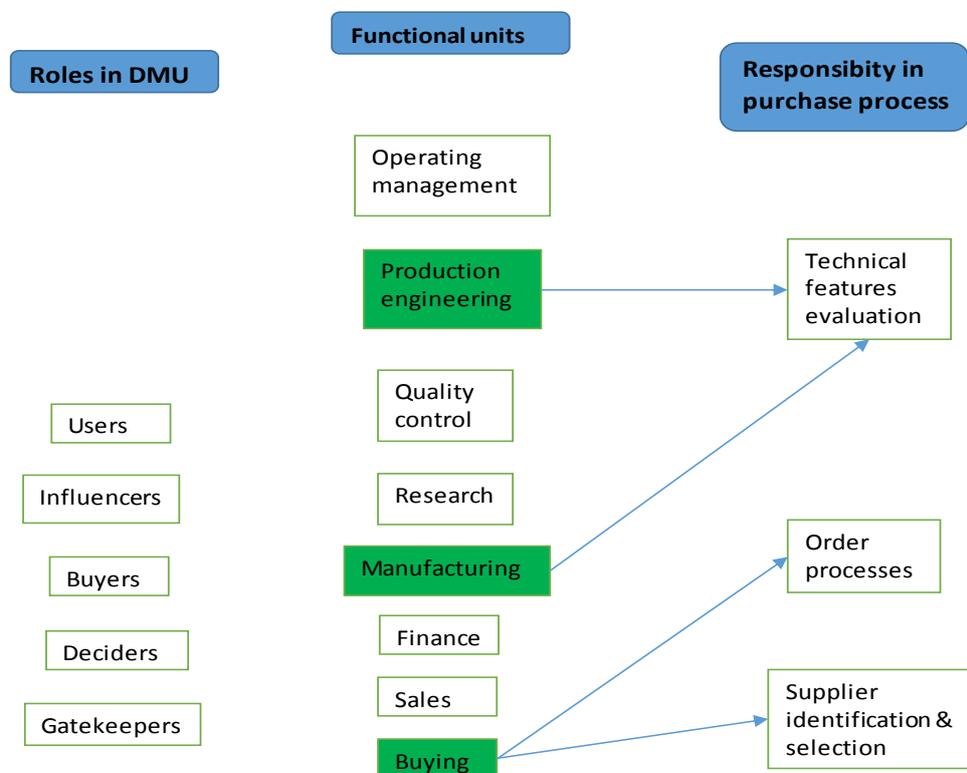


Figure 2. DMU in industrial purchasing

Purchasing managers often handle tasks that are connected to order processes, and supplier identification and selection. Previous studies have shown that supplier's order handling is very important for purchasing managers. Typically they have the strongest contact with supplier's salespeople. Engineers naturally consider very different aspects of products than purchasing people. For them the technical features are the first priority. The technical decisions made by engineers are vulnerable to criticism from other actors inside the company. This is why they are interested about how supplier deals with complaints. The manufacturing employees are also focused on the technical aspects of the product. They might need detailed technical information on regular basis that is more than just the standardized written product-related information. This information can come from supplier's salespeople if they know well the product they are selling. (Homburg & Rudolf, 1999, 19). Sheth (1973, 52) has named five processes which create differential expectations among the individuals involved in the purchasing process:

1. Background of the individuals
2. Information sources
3. Active search
4. Perceptual distortion
5. Satisfaction with past purchases

Background and task orientation of the individuals in DMU are likely the most influential factors affecting the purchase. Different educational backgrounds can create very different professional goals and values. Task orientation refers to the idea that an individual has about the task he has in the buying process. Conflict may arise when other members don't agree on this role. It is important to consider also which type of information and from which source each decision maker receives and how actively he searches information. Purchasing agents get disproportionately large amount of their info from commercial sources and it is typically biased in the favor of the supplier. On the other hand they also see active info search as a part of their job. Engineering and production personnel typically have access to fever information and it is mainly from professional meetings, trade reports or even word-of-mouth. (Sheth, 1973, 53).

Perceptual distortion means that individuals have the tendency to adjust objective information in line with their own previous knowledge and expectations by distorting it systematically. It is known that purchasing agents, engineers, and production personnel have clear differences in their goals and values, so different interpretations of the same information can be expected. Satisfaction with past purchases may also vary between different functional units because they value different things. The purchasing agent evaluates how economical the acquisition was, engineer how good the quality control was, and production personnel how efficient was the scheduling. (Sheth, 1973, 53). The most effective sales strategy is to adapt the communicated information according to the individual interest of each important buying center member (Salminen & Möller, 2006, 23).

Lewin & Donthu (2004) divide the variables regarding DMU in industrial purchase into two categories: 1) *antecedent variables*, meaning purchase situation and 2) *outcome variables*, meaning buying center structure and involvement. The subcomponents of antecedent variables are presented in figure 3. (Lewin & Donthu, 2004, 1382).

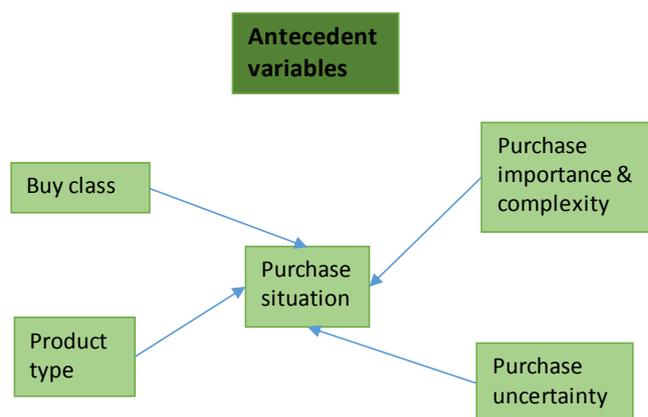


Figure 3. Antecedent variables of industrial purchase

Buy class refers to the type of purchase and can be a new task, modified rebuy or straight rebuy. It has been suggested in several studies that organizational buyers regard new tasks as important, complex, and high risk ones compared to rebuy.

Product type can range from major capital equipment to business services. Purchase importance has been defined in many cases as the relative importance of the current purchase to other purchases of similar type and/or the current purchase's perceived impact on the organization and its objectives. (Lewin & Donthu, 2004, 1382–1383). The significance of the purchase can be a result of both financial and strategic factors (Cannon & Perreault JR. 1999, 444). Purchase complexity can be translated as the technical complexity of the product and/or the complexity of the buying situation or task under consideration (Lewin & Donthu, 2004, 1382–1383). High complexity makes it harder to evaluate offerings beforehand and sometimes even to determine afterwards how well the chosen offering met the expectations (Cannon & Perreault JR. 1999, 444).

Purchase uncertainty can be described as the uncertainty regarding the information available to make the best decision and/or the ultimate positive (negative) outcome of the purchase decision (Lewin & Donthu, 2004, 1382–1383). High complexity increases ambiguity and risk of the purchase and this way affects the uncertainty as well (Cannon & Perreault JR. 1999, 444). Purchase situation is an interactive/combined construct that summarizes the other antecedent variables. The subcomponents of outcome variables are presented in figure 4. (Lewin & Donthu, 2004, 1382–1383).

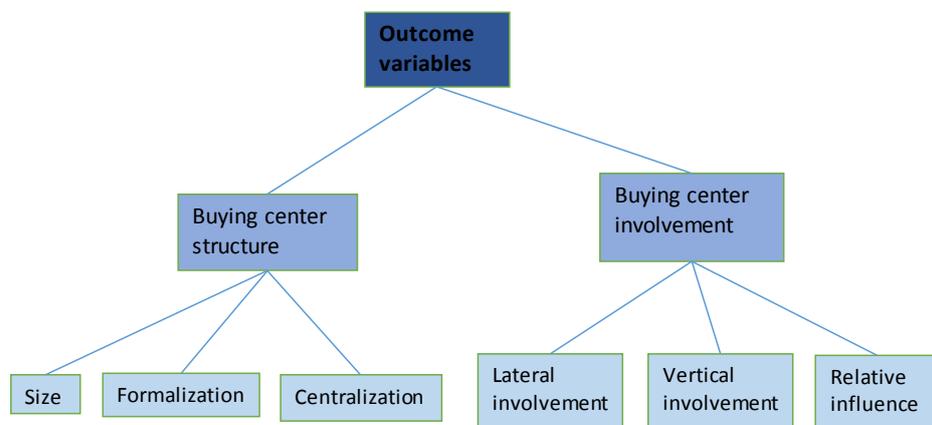


Figure 4. Outcome variables of industrial purchase

Buying center size means the number of people actively involved in a purchase situation across the various stages of the decision process. General rule is that buying centers are larger when the purchase has major importance or the purchase situation is unfamiliar or complex. *Formalization* measures how big emphasis buying center participants place on formal rules and procedures in the buying process. If formalization is high, understanding the guidelines placed on the vendor is crucial for successful selling. (Lewin & Donthu, 2004, 1383).

Centralization measures how focused the power is inside the buying center. It's possible that there are a lot of people involved in the purchase but only few participants have true power. In this case the vendor needs to find the key decision makers and focus sales efforts on them. In opposite case the vendor naturally has more people to convince. (Lewin & Donthu, 2004, 1383). According to Kotteagu, Laios, and Moschuris (1994) centralization means "the extent to which purchasing units and tasks are dispersed as well as responsibilities delegated among several lower managerial levels". It also includes geographic dispersion, the location of managerial authority and even that how involved different hierarchical levels are in the buying process. Defining centralization this way makes it overlap with vertical involvement. General view is that DMUs are more flexible and apt to adapt to changing requirements if they have low levels of structure. On the other hand DMUs with high structure levels are more effective in handling routine situations owing to lower costs of transactions. (Kotteagu et al. 1994, p. 30).

Kotteagu et al. also introduce two new purchase structure parameters to those presented by Lewin & Donthu. First one is *articulation*, which focuses on what level purchasing activities are conducted by specialized departments, committees and skilled personnel and the existence of discrete purchasing tasks performed in a routine manner. The second parameter is the *depth of analysis*, measuring how sophisticated the purchasing records are and how intensively technical and financial analytical tools are used to enhance purchasing tasks. (Kotteagu et al. 1994, 30).

Lateral involvement means the number of departments or other work-related groups

that have presentation in the buying center or have some other connection to the decision of buying. Being aware of lateral involvement is important for vendors because different groups consider different factors when deciding whether to buy and from whom. Vertical involvement focuses on how many different levels of management are included in purchase decision. Usually if there is high vertical involvement the level of centralization is low. Vendor should be aware of vertical involvement so it can target its sales efforts to the right people. It should also find out the relative influence of each actor in the purchase center. (Lewin & Donthu, 2004, 1383–1384)

Kotteagu et al. have identified four stages in industrial buying presented in figure 5. First one, **initiation**, refers to issuing of purchase requisitions, design of specifications, price and lead time estimations, and purchasing planning. Second one is **search** which means screening of potential suppliers, revision of approved supplier lists, and supplier surveys. Third is **selection**: selecting of pricing methods, setting of source selection criteria, application of competitive bidding, evaluation of suppliers, and issuing of purchase orders. Last comes **completion** meaning order expediting, contract administration, receiving and inspection, warehousing and auditing, and issuing to users. (Kotteagu et al. 1994, 30–31).



Figure 5. Stages of industrial buying

3.3 Special characteristics of purchasing industrial software

One thing which needs to be considered when buying software products for production plant is the true cost of investment. Actually the implementation of enterprise management systems can often cost several times the amount of the software itself. (Koelsch 2014). The initial costs of integrating the new system to the existing ones come from materials, software licenses, travel, installation, and

various sorts of technical labor (McCarthy 2013). In addition to installing and configuring the software to the manufacturing process in question it may also need customization. This alone might cost more than the price of the software. Periodic updates to the software and changes to the production process consume money long after the investment. The first step of finding out the lifecycle cost is quantifying the engineering effort, meaning the cost of implementation. In the best case this is “only” 20-100 % of the software price. This means that simply loading, slight configuring, and maybe installing some hardware is necessary. But it’s also possible that this part of the investment is five times the software price when for example reengineering work processes are necessary. (Koelsch 2014).

The lifecycle cost of any software project can be calculated by summing up the initial purchase price, implementation cost, training cost, maintenance expense, opportunity cost, and risk. Opportunity cost is the difference between the price of developing software inside your company and buying it. Big risk in developing software in-house is that the project is more complicated and takes much more time than expected. The main cost variable in most software projects is the number of discrete and analog I/O points. Some system integrators estimate the cost to customer by multiplying the number of these by their hourly rate and the estimated number of hours that they expect to spend on the average I/O point. (Koelsch 2014).

According to software development lifecycle (SDLC) model software project can be divided into five or six stages (Koelsch 2014; ISTQB Exam Certification 2014). In the five stage model the project is first defined which results to user requirements specification. That quantifies for example production volumes and quality parameters. Specifications usually come straight from the user, so the software supplier typically doesn’t use much effort for this stage. The next stage is building a functional requirement specification, a document which details the functions of each unit and control module. This stage often includes interviewing all those who are parties of the project when the whole lifecycle of the software is considered. (Koelsch 2014).

The third stage is code writing. The fourth one is factory acceptance testing or simulation. Here the supplier's engineers simulate the system to test each function. The last stage is the commissioning of the project. The cost of this depends on the customer's ability to plan, manage and staff the construction. This is often the most underestimated cost factor of software project. The costs of maintenance, training, and risk are also typically underestimated. Often it takes unexpectedly long to train people to become fully productive. (Koelsch 2014). On the other hand, high turnover among the operations and maintenance personnel means that it may pay off to invest more to advanced visualization products which make the training of staff easier (McCarthy 2013).

The six stage lifecycle model practically corresponds to the five stage model. First step is requirement gathering and analysis which results in Requirement Specification document. Next step is system and software design based on the requirement specifications. These two steps basically include the same things as the stages one and two presented by Koelsch. The third stage is implementation/coding like in the five-stage model. Also the fourth step, testing, is the same in both models. The fifth stage is deployment. This corresponds to the commissioning of the project presented by Koelsch. The sixth stage is maintenance, which of course has to be considered also in the five-stage model, although it is not stated. (ISTQB Exam Certification 2014)

Industrial company needs to decide which one is greater: the cost of waste due to variance in a process or the total cost of controlling the process within a certain limit. Manufacturing analytics tools can give a deep insight on how a processing system or production line is behaving, which can bring significant return on investment when the whole lifecycle of the system is considered. In some cases one hour of downtime in production can cost more than the whole implementation of software. (McCarthy 2013).

4 Value to customer

In this chapter the concept of customer value and its components as well as different ways to present value are under investigation. Value is an important concept in marketing research because it is formed from two central dimensions of consumer behavior: the economic dimension and the psychological dimension. In the former one value is connected to perceived price by transaction value. (Gallarza, Gil-Saura, and Holbrook, 2011, 179–181). This is demonstrated in the equation 4.1. Value_a and Price_a are connected to certain market offering. Value_b and Price_b are connected to the next best alternative offering. So the value of the first offering compared to its price is higher than in the case of the second offering. (Anderson et al. 2007, 25) In the psychological dimension value is connected to cognitive and affective influences on buying product and choosing brand. (Gallarza et al. 2011, 179–181).

$$(\text{Value}_a - \text{Price}_a) > (\text{Value}_b - \text{Price}_b) \quad (4.1)$$

Value is closely related to concepts of quality and satisfaction. Connection between service quality and customer satisfaction has been studied on a great extend compared to perceived value. Gallarza et al. consider these three concepts as “hybrid constructs” because one is typically conceptualized with reference to the others. Quality and satisfaction are not always connected because quality does not factually depend on customer experience but satisfaction is always post-consumption and experience-based. Also, quality is formed of quite specific and usually cognitive components. Satisfaction on the other hand has a large amount of both cognitive and affective dimensions, usually key ones still relating to quality. (Gallarza et al. 2011, 184–185). Some say that it’s more difficult to estimate the quality of services than goods in industrial purchase, because services are not the same when the time, organizations, and people change (Salminen & Möller, 2006, 20).

Quality is an absolute measure, meaning that the quality of an offering is the same for every customer. Value is more relativistic and individualistic and for this

explains better changes in the behavior of customers. (Gallarza et al. 2011, 185). Quality is comprised of several dimensions. On one hand it can be divided to process and outcome dimensions. On the other hand service quality can be divided to technical and functional dimensions, first one referring to what customers get out of the service, and second one focusing on how the service is delivered to them. (Heinonen 2004, 206). Many authors see value as an encounter-specific input to satisfaction. Nowadays value is often divided into *pre-purchase* and *post-purchase* components. (Gallarza et al. 2011, 185).

4.1 Components of customer value

According to Töytäri et al. (2011), a division can be made into desired and perceived value. Desired value is the thing that customer wants to have from a product/service in a certain use situation for achieving defined goals. They define customer perceived value as “the difference between customer’s desired value and the customer’s total cost of ownership” (see equation 4.2). The total cost of ownership are the sacrifices for customer related to searching, purchasing and using the offering. (Töytäri et al. 2011, 494).

$$\text{Customer perceived value} = \text{customer's desired value} - \text{customer's total cost of ownership} \quad (4.2)$$

Heinonen has given four dimensions to the value of service, which are technical, functional, temporal, and spatial (see figure 6). Technical dimension has been viewed as the core service, the outcome of the service interaction. (Heinonen, 2004, 207; Heinonen, 2007, 41). Technical value also comes from the facilitating and supporting service that is meant for differentiating separate service alternatives (Heinonen, 2007, 41). The functional dimension denotes how the service interaction process occurs, so it relates to the function of service delivery process (Heinonen, 2004, 207; Heinonen, 2007, 41). Functional dimension also includes how customers see their own input in the service process instead of the interaction with the service employee. This employee may be replaced by a technological interface for example.

(Heinonen, 2007, 41). Following stages can be seen in the service delivery process: self-service, joint production and full service. Another way to identify three types of service delivery is the division to automatic, self-service and human service. (Heinonen, 2004, 207).

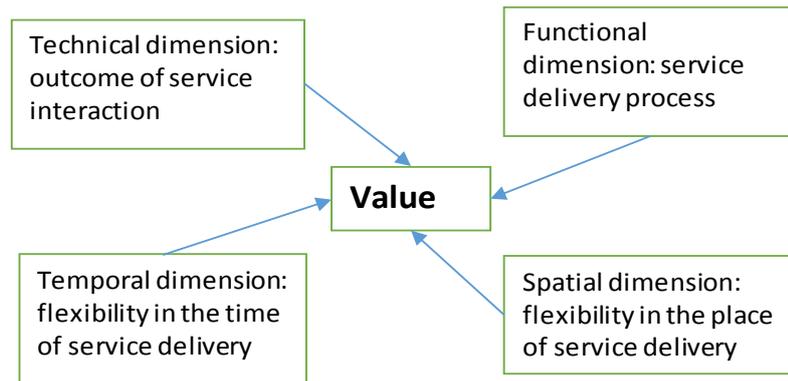


Figure 6. Dimensions of service value

The temporal dimension is concerned how the customer views the flexibility in the time of service interaction. This result of flexibility in activities is called *temporal latitude*. (Heinonen, 2004, 208; Heinonen, 2007, 41) It includes time allocations, time availability, time orientations, opening hours, and punctuality. (Heinonen, 2007, 41) Spatial value dimension examines how the customer perceives the flexibility in the location of the service interaction. So the value of right when and where is delivering the service at the right time to the right location. (Heinonen 2004, p. 208).

Typically the technical and functional elements have been seen as the most important ones, but in her study Heinonen showed that the time and location of service delivery affect the customer perceived value the most. Actually time and location are hygiene factors, which means that if there are low levels of flexibility in these, the customer perception is strongly negative. On the other hand very high levels of flexibility do not make the customer view the service particularly positively. Customer has certain expectation level and it is very important for the service supplier to fulfill that but no more. Nevertheless, technical and functional

elements are the ones that bring extra value for customer. (Heinonen, 2004, 211). Similar results were obtained when online banking services were studied (Heinonen, 2007, 48). The relationship between value and its dimensions can be summarized in a following way: “Value is related to some specific offering (technical value dimension), created in a wanted way (functional value dimension) and that is perceived as relevant in a specific time (temporal value dimension) and location (spatial value dimension)” (Heinonen, 2004, 212).

4.2 Different value propositions

Based on the study of Ballantyne et al. (2010), value proposition as a concept ranges from the value that supplier has calculated independently beforehand to the creation of generic firm-level strategies. All these value propositions have a common goal of providing experiences valued by customer and act as a starting point for the process of creating mutual benefit. Writers state that a potential value proposition can be created by any actor in a business relationship before introducing it to other partners. In fact, traditional supplier-initiator roles only stand in the way of innovation. These propositions can also be co-created or co-evolved, in which case the actual value realizes during use. Even though any actor in a collaborative relationship has the possibility to proactively initiate reciprocal promises of value, other parties always have the right to determine what this value means to them. (Ballantyne et al. 2010, 204–205). Terho et al. (2011, 181) on their part define value proposition building process in a following manner: It is “salesperson building up quantified evidence about the size of the market offering's value opportunity in terms of its impact on the customer's business”.

Anderson, Narus, and Rossum (2006) identified three customer value propositions in business markets. The first one is **all benefits**. This means listing all business benefits that customer may get from the offering. This way the supplier hopes to answer the question “Why should our firm purchase your offering?” Doing this doesn't require much knowledge about either customers or competitors. The bad

side is that some advantages listed by the salesperson may not actually bring any value to the customer. The mistake of not realizing this is called *benefit assertion*. The second customer value proposition is called **favorable points of difference**. With this proposition the supplier tries to answer the question “Why should our firm purchase your offering instead of your competitor’s?” Here the main focus is differentiating the offering from the second best alternative. The supplier should also highlight the most beneficial differentiated features from customer perspective. (Anderson et al. 2006, 2–3). It may be that the next-best alternative shares certain features but their quality is inferior. These features are also favorable points of difference for the best offering. (Anderson et al. 2007, 28).

The third and most advanced customer value proposition is named **resonating focus**. It goes the furthest in trying to understand the customer’s point of view. Sales effort is focused on the couple of elements of the offering that matter the most to the potential customer. Preferably the focus is only on one or two points of difference from the next best competing offering. This proposition tries to answer the question: “What is the most worthwhile for our firm to keep in mind about your offering?” This can require letting go some favorable features that customer values the least. (Anderson et al. 2006, 3). Successful value-based selling requires an approach where both the salesperson and customer are truly active in trying to achieve the best results (Terho et al. 2011, 178). The presented three propositions can also be found from figure 7.

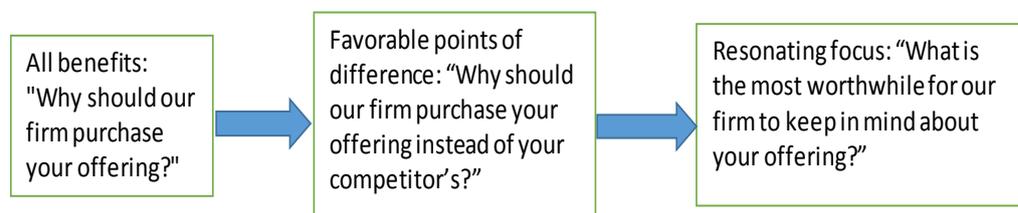


Figure 7. Three customer value propositions

Resonating focus proposition may also contain a point of parity (Anderson et al. 2006, 3). Point of parity is a value element that has about the same performance or functionality as the corresponding element of the next-best alternative (Anderson et al. 2007, 28). There are two possible reasons for including a point of parity. First one is that this point of parity is required by the target customer for even holding the supplier's offering worth considering. The second option is that supplier wants to correct customers' wrong perception that a certain value element is a point of difference in favor of a competitor's offering. In this case supplier proves that, contrary to what customers believe, the competitor's offering is not superior based on empirical evidence. Using resonating value proposition requires comprehensive customer value research. (Anderson et al. 2006, 3–4).

It is not always crucial to be able to tell exactly how much value the customer will get from an offering. In many cases it's enough to give an idea about the value opportunity. One reason for this is that the customer's consumption in the end realizes the value-in-use potential of the offering. (Terho et al. 2011, 180). Value-in-use potential means that the value is expected to eventually reflect to customer's financial profits (Terho et al. 2011, 178).

According to Anderson, Thomson, and Wynstra (2000, 309) purchasing managers see value from a different perspective than price. Typical purchasing manager considers product offering as a combination of gain and loss, value representing gain and price representing loss. However, they tend to have more knowledge about price-based than value-based product selection, partly because price is usually easier to determine than value. This phenomenon of giving more weight to price than to value is known as *value ambiguity*. So in most cases value and price are not simply added together to make a decision based on the combined utility function. (Anderson et al. 2000, 310).

One company, Sonoco, has decided that every value proposition must fulfill three conditions. Firstly it has to be distinctive, meaning superior to all offerings of the competitors. Secondly it needs to be measurable, meaning it is based on tangible

points of difference which are quantifiable in monetary terms. Thirdly it needs to be sustainable. This allows the company to utilize the value proposition for long enough period of time. (Anderson et al. 2006, 8).

According to Kotler (2011, 132) the thinking of firms and consumers has changed from the days when sustainability was not an issue worth considering. Nowadays many actors have the following principles:

1. Wants are culturally influenced and strongly shaped by marketing and other forces.
2. The earth's resources are finite and fragile.
3. The earth's carrying capacity for waste and pollution is very limited.
4. Quality of life and personal happiness do not always increase with more consumption and want satisfaction.

Actors who think this way do not respond well to marketing which is based on principles from era when sustainability was not a significant issue. Companies that are sustainability-driven need to explain exactly how their goals and operations line up with this principle. They need to include this thinking in the criteria they place for new product development, make investments in reuse and recycling, and convince all their stakeholders to accept numerous difficult changes. These stakeholders are employees, channels, suppliers, and investors. (Kotler 2011, 133). This standpoint is supported by a statement that the traditional marketing concept needs to be changed to a larger system perspective that considers increasing communication, growing awareness of environmental issues, and global consequences of ignoring marketing externalities. (Frow & Payne, 2011, 231).

5 External reference marketing

In business-to-business (B-to-B) marketing there are several concepts which often overlap. These include “customer advocacy marketing”, “customer evidence marketing”, “customer testimonial marketing” and finally “customer reference marketing” or simply reference marketing. They refer to the phenomenon of leveraging existing customers and delivered customer solutions in the company’s marketing activities. (Jalkala & Salminen, 2010, 976). According to Salminen (1997, 311) a reference is the relationship that a supplier has with either its existing or former customer that allows this customer to evaluate the supplier’s product/service, management and cooperation performance. Reference marketing can be either external or internal. In the external case supplier communicates customer references to potential buyers and other groups outside the company in stakeholder position. In the internal case supplier uses these references for its own purposes such as case studies and customer reference database inside the company. (Jalkala & Salminen, 2010, 976). This thesis focuses on the external component of reference marketing (see table 2).

Table 2. Categories of reference marketing and the focus of this research

Customer reference marketing	Relationship level	Delivery level
Internal		
External		X

In reference marketing there are two different levels: the relationship level and the delivery level. On relationship level the supplier focuses on being associated with certain customer, because the customer’s name and brand are efficient sales arguments. On the delivery level the supplier focuses on the actual value that the reference customer has received. This is evaluated by looking at “reference projects” or “delivered customer solutions” which can be one or many for certain customer. This past performance gives indication for potential buyers about the

supplier's future performance. (Jalkala & Salminen, 2010, 976). In this research we focus on the delivery level of reference marketing (see table 2). Based on the results of Salminen (1997, 315) customer references have four roles in industrial international marketing. Their task is to improve the following things:

1. Efficiency of sales and sales management
2. Efficiency of the business
3. Effectiveness of the marketing activities
4. Effectiveness of establishing, maintaining, and enhancing customer relationships

Customer reference marketing and word-of-mouth (WOM) are two different concepts and they should not be confused. WOM is the term used to describe the informal interaction between customers which is mainly not possible to control by marketers. Reference marketing is actively initiated by the supplier and may of course also result in positive word-of-mouth. (Jalkala & Salminen, 2010, 976). Some results from previous decades have indicated that product and supplier specifications are the most important tool of persuasion in industrial marketing, followed by personal selling and peer recommendations from other firms on par. So the significance of WOM is by no means minor. (Salminen & Möller, 2006, 23).

Customer references can be utilized from many perspectives. We are interested in using them as a sales and promotional tool and as a basis for building credible value propositions. As already mentioned, on sales and promotion we focus on the delivery level of reference marketing. Key part of co-creating value with customers is carefully documenting previous cases and benefits delivered in them. This can be done efficiently by re-organizing knowledge-management systems around customers rather than products. (Jalkala & Salminen, 2010, 982). How the supplier uses its references is sometimes affected by hierarchical conditions which include contextual supplier characteristics, reference characteristics, contextual market characteristics, environmental characteristics, and situational purchase problem characteristics (Salminen, 1997, 321). Reference marketing is not always initiated by the supplier, sometimes it can be done also by the reference customer. This often

happens when an innovative value proposition gives motivation to third parties to act as a source of reference. Indeed, vendors often don't pay enough attention to the sub-system of reference customers. (Frow & Payne, 2011, 229).

Finally, if a company utilizes customer references to document and quantify the supplied value, it has the best chance to receive an equitable return on it (Jalkala & Salminen, 2010, 982). This is also confirmed by the results of Anderson & Wynstra (2010, 51) who state that if suppliers would use effort to demonstrate and document the value of their offerings relative to the next-best alternatives, they could avoid giving value away without decreasing sales to their customers. As Salminen & Möller (2006, 21) put it, references need to be convincing enough so that customers are ready to accept the high switching costs of changing supplier. According to them the key here is proving capability and commitment to the technology used by the customer.

5.1 Different channels of reference marketing

Marketing channel can be defined as “a set interdependent organizations involved in the process of making a product or service available for use or consumption”. It has been argued that marketing channels have an increasing role in creating competitive differentiation since core products and services become more commodity-like. One key concept here is total customer experience (TCE). It includes everything related to the initial encounter between the business customer and the vendor. Anderson et al. have pointed out six steps of designing superior value-adding marketing channels. These steps are presented in figure 8. (Anderson, Narus, and Arayandas, 2009, 279–282).

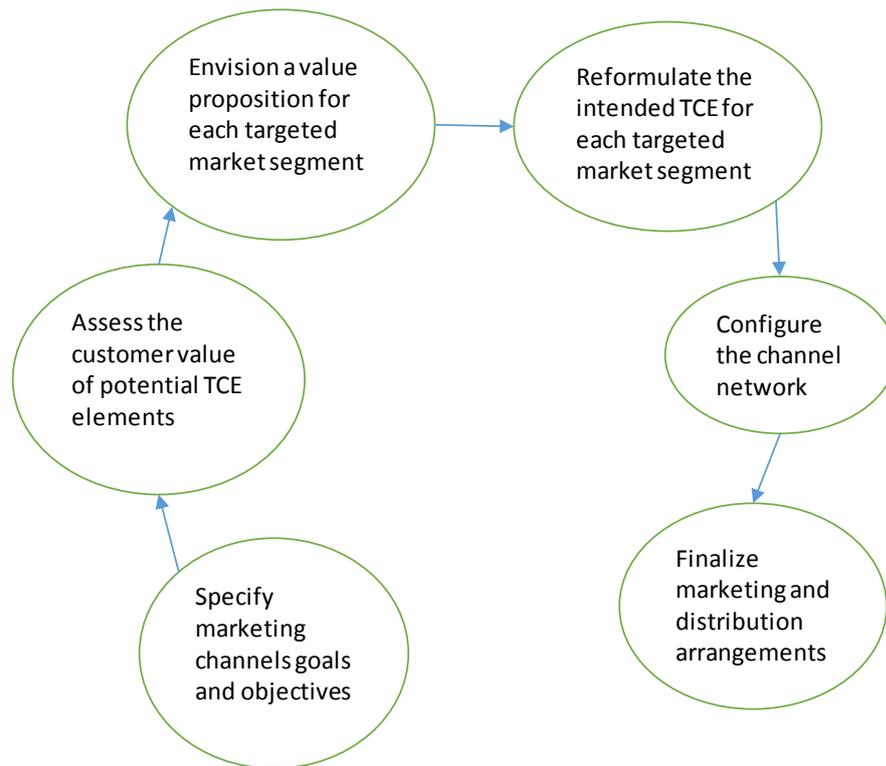


Figure 8. Designing superior value-adding marketing channels

Customer references can be presented in many different ways that vary in their efficiency. These include reference lists, success stories, press releases, reference calls, and visits to the reference customer's sites. The reference customer has different roles in these communication methods. In simple cases they give permission to use their company name and logo and in more deep collaboration they can participate in material production and media activities and engage in personal interaction with other customers. (Jalkala & Salminen, 2010, 980).

Web-based reference communication has been growing in significance for a long time already. The main difficulty in web pages is that they attract a large amount of potential customers but making them actual customers requires much more effort. The information found in companies' Web pages can be separated in three categories. First one is commercial information about company background, second is commercial product-specific information and third one is non-commercial information. Sometimes a list of important customers and an overview of completed

projects may be found from company background section. In a same way a detailed product description section may refer to certain customers who are using the product. (Jalkala & Salminen, 2008, 827).

The main features of online communication are 24-hour availability, ubiquity, global and local reach, digitalization of information, multimedia, interactivity, network effects, and information integration. These features also have an effect on the nature of reference marketing. One major difference of Web compared to other reference communication channels is the customers' power to choose and process information. (Jalkala & Salminen, 2008, 827).

5.2 Suggestions to improve reference selling in literature

Three different levels of selling can be identified. First one is product and services selling which addresses customer needs and should be viewed in parallel to the customer purchasing process. Second level is solution selling which focuses on customer challenges and goes hand in hand with customer use process. Third level is value-based selling and is defined as understanding and improving the customer's business in a proactive manner. Whether this selling type works depends firstly on the customer's willingness to partner and secondly the value of the relationship. For value-based selling the supplier requires a reactive attitude to help the customer in responding to environmental changes and to point out how the adapted offering can help them in creating value. (Töytäri et al. 2011, 494–495). One feature of value-based selling is that it changes the focus from customer's expressed needs and customer satisfaction to the offering's implications for the customer's business (Terho et al. 2011, 178). When vendor tries to communicate value, open dialogue and transparency are vital for convincing the customer that the vendor is truly long-term orientated (Terho et al. 2011, 181).

Töytäri et al. (2011, 501) pointed out in their study eight main elements and activities of a successful value-based sales effort, which can be found also from

figure 9 presented in seven steps. The eight elements are:

1. identifying suitable customers
2. understanding the customer's business and the positioning of the firm's own offering to deliver business impact
3. involving the customer in the value assessment process and setting mutual targets
4. quantifying business impact in cooperation with the customer
5. tying price to realized value
6. verifying and documenting realized value post-purchase
7. the importance of reference cases
8. the expertise-based skill-set required from "value-based sales forces".

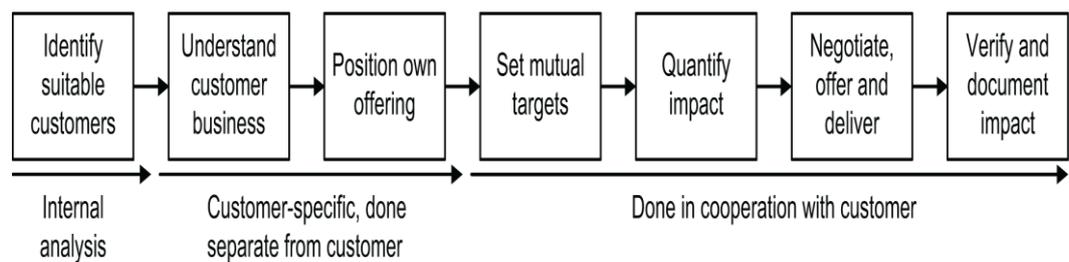


Figure 9. Process framework for a value-based sales process (Töytäri et al. 2011, p. 501)

The eight point, expertise-based skill-set required from "value-based sales forces", means that the salesperson is able to notice when a completely new solution should be developed. The need for this may be answering to the problem, developing an existing solution further, or reflecting on in which stages the offering creates value and where can the largest value-sources be found. Customer compares this value to the next best alternative and also the salesperson should evaluate how these alternative options perform. (Töytäri et al. 2011, 499). The idea of Töytäri et al. is in line with Terho et al. (2011, 178) who identify three core elements in value-based selling. First is understanding the customer's business model, second is crafting the value proposition and the final step is naturally communicating the value. It can be seen that both the first and second element presented by Terho correspond to Töytäri's point number two and the second element corresponds also to point three.

Third element corresponds to Töytäri's point four. However, because the model of Terho doesn't discuss specifically selling by using references, it doesn't include the points six, seven and eight of Töytäri's model. Also, Terho does not focus on the pricing of the offering.

Terho et al. state that the possible outcomes of value-based selling affect the seller, customer, and/or their relationship and can be realized at personal as well as organizational level. The effect on salesperson performance can show in the amount sold, revenue generated, deals closed, and profit made. On customer side, it can be expected to help them in achieving business goals and performance. Relationship outcomes deal with matters such as satisfaction, loyalty and relationships. In the end the goal is to have a share of the customer's wallet together with reduced price sensitivity on the customer's part. (Terho et al. 2011, 182–183).

Customer's business model comprises of four main dimensions, which are customer value proposition, profit formula, key resources, and key processes. Without understanding these the supplier can't be efficiently proactive and answer to the unstated needs of the customer. When the vendor crafts a value proposition, it has to be mutually valuable because otherwise the vendor is simply giving value away. (Terho et al. 2011, 180). Also, if the vendor makes a proposition that clearly brings insufficient income to it, vendor's credibility suffers from it. In this situation the customer has little reason to believe that it receives as much value as promised. According to Terho et al. (2011, 180) sellers have several ways to quantify the value for customer. These include customer specific value calculations, value studies, simulations, return-on-investment studies, and lifecycle calculations. The tool that this research is interested about is using the value that reference customers have received.

Reference customers are sometimes called *customer advocates*. In his blog Bill Lee named ten principles for creating customer advocates, found from figure 10. He starts with the most simple: Deliver what you promise and promptly fix what goes wrong. Supplier can't come up with convincing advocates or create a customer-

based sales force without ongoing, responsive delivery and service relationship. Second principle is to know your customer's problems. One option to achieve this is that reference program managers invest in or some other way get access to their firm's market research about key-customer references. (Lee, 2013).

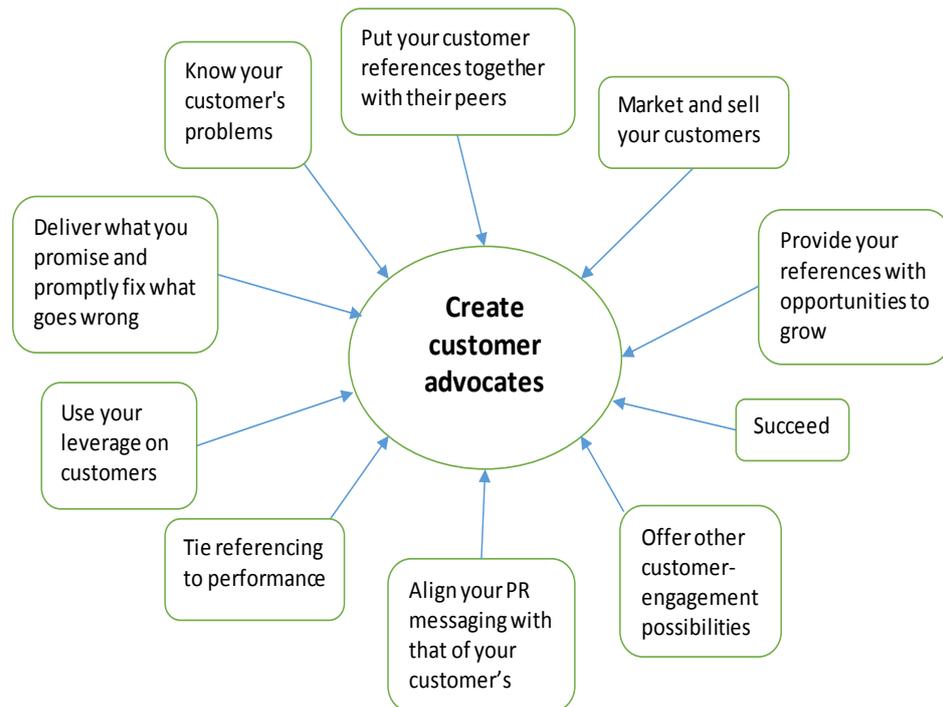


Figure 10. Principles of creating customer advocates

Third principle is to put your customer references together with their peers, meaning other executives or managers who deal with similar issues. The idea is to bring your customers together to interact and innovate. Fourth one is marketing and selling your customers. The key point is highlighting their achievements at least as much as your own. Fifth one is providing your references with opportunities to grow. Most dynamic customers tend to be eager for personal and professional growth, which you can provide through for example speaking opportunities and interviews with media. Sixth point is to remember to use your leverage on customers. Usually customers want to help their smaller vendors to grow and get established. (Lee, 2013).

Seventh principle is to tie referencing to performance. This can be done by initiating a quarterly review process to firstly review performance metrics and secondly identify and document what kind of benefit the customer is getting from your offering. When both the vendor and the customer have enough goodwill it's time to start talking about your prospects dealing with similar challenges as this customer. (Lee, 2013). According to Salminen & Möller, special effort should be used to ensure the credibility of both the reference itself and the channel of communicating it. They argue that those media seen as neutral such as scientific seminars/conferences, journals, and magazines can achieve higher credibility than advertising or sales representatives. (Salminen & Möller, 2006, 23).

Message similar to Lee comes from Anderson and Wynstra. Their idea is conducting pilot programs with customers and this way get better view of the value delivered by new or enhanced offerings. With the results of these programs the supplier can document the actual value in monetary terms. The reasons that make customers willing to work together in documenting the cost savings or greater value can be supplier assistance in gathering and analyzing data and also giving customers earlier access to these offerings. Cooperative customers may also get exclusivity for a limited period or even preferential pricing. Preferential pricing means that they pay less than other customers. This kind of pilot programs not only help the supplier in selling to the customers who participate in them but also to other companies. In fact, reference lists of respected customers and results from pilot programs are equally effective sales tools. (Anderson & Wynstra, 2010, 51).

Eight point of Lee is aligning your PR (public relations) messaging with that of your customer's. This requires understanding what kind of message the customer's PR is trying to signal to the world about their company. Ninth tip is offering other customer-engagement possibilities. This is even more important when the question is about your higher-level key customers, because they might want to take part in your product or solutions development, or even your strategic direction. This kind of customers can be offered positions on your advisory boards or executive forums. The last principle is one that all vendors try to fulfill intuitively, and that is

succeeding. If the vendor is small, the customers want it to succeed because then it's more likely to survive. On the other hand if a large vendor succeeds it's more likely to invest in research and product development which in turn improves the solutions it's offering. (Lee, 2013).

6 Methodology

This chapter describes how the empirical information was gathered and which methods were used to analyze it. First there's information about the calculated customer savings and conducted interviews. After that the sales argument hypothesis is discussed. Then the principles of case study and the use of it in this research are looked into. Finally it is explained how the empirical material was analyzed and the flow of the research process is summarized.

6.1 Calculating time and material saved by customers

During the study it was calculated how much benefit certain customers have received from using ATA during the last years. These customers operate in forest industry. Benefits were savings in wasted material and time during grade changes, which happen in production process. Wasted material is called broke. Significant amount of this waste is often generated when grade is being changed. Usually there's a certain amount of production that does not qualify either as the grade before the change or the one after that. The amount of wasted production gets bigger as the difference between the old and new grade increases. With five machines inside customers' factories, savings were calculated by comparing the achieved grade change speed to a standard grade change speed from a chosen year. The latter was seen as the original grade change speed before ATA was introduced. Each machine had its own individual base level for grade change speed and also broke index derived from it.

It is important to be aware of the background variables which can have an impact on the efficiency of grade changes. ATA measures this efficiency continuously, but some background variables cannot be affected with this system. These include process changes, replacing equipment with never one, taking new grades to manufacturing program, putting new instructions to place etc. Nonetheless, ATA shows the impact of these actions to efficiency, even though those actions are not

measurable with ATA.

6.2 Interviews

A number of interviews were conducted as part of this study to get direct information from current customers of how they view the value received. Also power plants seen as potential customers were interviewed to discover what kind of value generation potential ATA has for them. The goal was also to find out if our hypothesis about different sales arguments has any ground. The interviewees were mainly people in close contact with their company's production processes and included in DMU because of that. While this gave the best insight to the everyday functioning of their value-producing activities, it also limited the questions that could be asked. Questions regarding the strategy of the firm did not make sense because the interviewees didn't work with such high level matters. The interviews were confidential and the current customer representatives agreed that discussion is recorded and they had the opportunity to check the collected material. The interviews of potential customers were not recorded and the interview text was not sent to them. The number and position of interviewed people are presented in table 3.

Table 3. Conducted interviews

Current customers	Position when ATA was acquired	Number
	Operations manager	5
	Production manager	1
Potential customers	Position at the time of the interview	Number
	Production manager	4
	Power plant manager	3
	Operations manager	3
	Energy manager	2

There were slight changes to questions as the interviews proceeded. It was seen that certain questions were overlapping, didn't produce useful answers or were seen strange or too difficult by respondents. These questions were either reformed or removed. Also some new questions were introduced. However, the amount of questions remained almost the same in all interviews.

6.3 The comparison of different sales arguments

One of the contributions of this thesis is to examine what kind of results would two different kind of sales arguments result in. So far Vipetec has been selling ATA to customers mainly with figures of how much time they can save and how much product waste they can reduce in production. The potential new argument under investigation would be based on comparison to competitors and how the customer can improve its ranking inside the industry. We are also interested in the effectiveness of this sales method when comparing production units inside one company. Main drawback is that this research doesn't last long enough to make any experiment to test this hypothesis. For this reason we need to settle on the information that interviewees provide.

During the process it was also studied if there is difference about how well the old sales arguments work for current and potential customers. If they seem to work at least as well for potential as for current customers, it is reasonable to start the actual selling by using them. If this old argumentation based on numerical improvements on customers' operation does not appear efficient, it is worth considering to use selling based on comparison to competitors of these potential customers. This of course requires indication from the potential customers that this competitor based argumentation has some chance to succeed.

6.4 Case study as a research method

Case study has been defined as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”. This study method tries to answer to questions “how” and “why”. It suits especially well for understanding the interaction between people and technology in natural social setting. Both quantitative and qualitative case studies are possible. When the study is qualitative or interpretive, the researcher personally collects and analyses the data. Both these methods share a holistic approach to the research subject (Johansson, 2003, 3). Holism is a philosophical theory according to which “certain wholes are greater than the sum of their parts” (Colley & Diment, 2001, 4). An interpretive study documents the participant’s point of view and aims to translate it to readers in as intelligible form as possible. (Diaz-Andrade, 2009, 44–45).

Case study can be used in both social sciences and practice-oriented fields. It needs to have a clear object of study, meaning the “case”. This case should be a contemporary, complex, and functioning unit that is investigated in its natural context. One definition of case study is that it is not interested about the inquiry methods used, but of the individual cases themselves. (Johansson, 2003, 2). The widest definition of a case is that it’s situated in certain time and space. Case study can be called a meta-method since it combines other research strategies. It is typical to case method that the focus of the study may change during the research process. (Johansson, 2003, 5).

There are two approaches for choosing a case to study. One is intrinsic interest in a specific case with no intention to generalize the results. It can be also chosen purposefully or analytically, which means that the researcher also attempts to generalize the results. The case can be chosen because it’s information-rich, critical, revelatory, unique or extreme among other things. (Johansson, 2003, 5) In this study the interest is intrinsic and the aim is not to generalize the results.

6.5 Case study on existing customer

In order to get information about the current performance of ATA and its selling process a case study was conducted on one of the current customers of Vipetec, Stora Enso, in the field of forest industry. The company was chosen based on its significance and also the amount of information available. The calculated results about how much benefit this specific customer has received by using ATA is not presented inside the case study, so that there's not too much information revealed. For this reason interviews were the main source of information.

6.6 Analysis of the data

The interviews provided mainly qualitative material and they were also too few to give reliable quantitative results. With current customers this kind of approach was out of question from the beginning because of their small number. Since very high portion of these customers were interviewed, the results of the value offered by ATA can be viewed as very representative and reliable. Similar production processes to forest industry exist also in certain other sectors such as food industry. The results from current customer benefit calculations and interviews can be argued to have certain level of relevance also for these industries. The information obtained from power plant interviews is applicable only to their industry.

6.7 The research process

This thesis was initiated by drawing a project plan and presenting it to the instructors. At first the topic was reference marketing as a whole. Based on the feedback from instructors the focus was placed on value-based reference marketing. It means that the references focus on that part of the value which is easiest to quantify, the economic dimension. In the selling process it can be then presented that this customer realized this and this kind of benefit from our offering. Value-based reference marketing can be explained in the following way: marketing based

on the knowledge about the economic value that customers have realized from the product. The reason for the focus of this thesis was that in reference marketing as a whole there are many aspects that have no real relevance for Vipetec.

Research process started by acquiring the needed information about Vipetec. At the beginning existing numerical data from customers' production sites was analyzed to answer the second research question: How the realized customer value can be quantified? In this case that meant the amount of saved time and material in grade changes. Certain other things in the data were also looked into. It was possible to answer to second research question before the first because Vipetec already had a clear idea about some part of the realized value. Next became the interviews of current customers followed by the interviews of potential customers. The answers from all these interviews were used to answer the first and third research questions: What kind of value existing customers have realized from ATA? What is the most effective way for presenting the realized value to current and potential customers? The results from empirical material were summarized and compared to the findings of previous research literature in the conclusion part.

7 Realized value for current customers

In this chapter the interview results from existing customers are presented along with some of the savings they have achieved by using ATA. The savings were calculated from five machines located in customers' factories and they focused on grade changes. Interviews can be considered a prelude for understanding the importance of data about savings.

7.1 Value of ATA based on interviews

Benefits other than saving percentages were estimated based on interview results. The interview questions for current customers changed more than for potential ones, partly because there were more questions to begin with and the answers were more complex. Some of the changes were quite cosmetic but often changed the way respondent understood them. That is why certain old and new questions seem to be almost the same. Even though terms like "the first interviewee" and "the second interviewee" are used, they don't indicate that these were the people interviewed first and second. They are only used to give to make the replies easier to sum up. "The first interviewee" is often different person for different questions. This is not the case, however, when it is stated that certain question was made to the first three interviewees, for example. Seven questions remained the same during the whole process and their results are discussed first.

First question was "In which part of process is ATA most useful: starts, breaks, grade changes, or product changes?" Five out of six interviewees replied grade changes and one said product changes. Two who replied grade changes also noted the importance of ATA in product changes. Two people also mentioned its usefulness in starts and one person in breaks. So the result was: 1. grade changes, 2. product changes, 3. starts and, 4. breaks with the importance of grade changes being superior to other functions.

The second common question was “Has ATA fulfilled the expectations that you placed on it? Can you think of something to improve?” This was the question that was intended to reveal any points of criticism, but in fact the respondents didn’t identify any faults that were due to Vipetec. Two people said ATA has not fulfilled its potential even close because they simply haven’t utilized it enough. One wondered if buying the Pro-version of ATA would have made it easier for production personnel to take the system into efficient use. Two underlined that the development project is still not finished. It can be seen that most customers did receive the value that they expected. All criticism was towards themselves for being too passive. The third question was “Did ATA bring benefits that you did not expect?” Four interviewees said no and two yes. First of the latter noted that unexpected benefits were because development of the system continued also after purchase. Second one said that it unexpectedly replaced the previous system to some extent.

The fourth question was “Is your goal to increase the use rate of ATA?” Only one person responded that not at the moment. Another one said yes, if good applications can be found. Two respondents said clear yes and two others that the goal is 100 % use rate among the production personnel. So most wanted to increase the use rate. The fifth question was “Was the decision to buy ATA easy to make?” Three interviewees said yes. Fourth one said that regarding product changes it was easy but considering grade changes it was not because in this latter case it was quite complicated collaboration project. Fifth replied that on scale 1–5 (1 is easy and 5 is difficult) the decision was 3. The sixth respondent noted that the investment had to be considered several times because the economic situation is so tough. That’s why the benefits had to be made clear not only to himself but also to senior management. So half of the interviewees considered the purchase decision easy.

The sixth common question was “Have you managed to make batch sizes smaller and/or achieve faster delivery to customers since ATA was taken to use?” One person had no information about this. The second interviewee said that this has happened to certain scale, mainly because it’s easier to stay in schedule when

efficiency in production is according to defined targets. On the other hand the third interviewee noted that although product quality is reached faster, it hasn't affected the speed of delivery. Two other people said that they haven't even aimed for these changes, partly because they are seen as too risky. One of these two mentioned that even though the supply chain would like to see his company increase production cycles, it hasn't decreased batch sizes. The sixth respondent said that the amount of batch sizes does not determine the speed of customer delivery.

The last common question was "How long was the payback time of ATA in your opinion?" First person did not want to determine this but said that it was profitable. Second one noted that no required payback time was determined with this purchase because it was not seen as an investment but a development tool. Two others replied that in less than a year. Two last respondents said that they haven't reached the state where this can be determined. These results don't give very reliable basis to make judgments about the payback time. Information from Vipetec was that at least in forest industry companies usually require a payback time of less than a year for this type of investment. This gives good reason to assume that this was the case also for the first interviewee. Hence it is reasonable to think that half of the respondents could determine the payback time as less than a year.

Next the results from questions that changed are discussed. From the first three interviewed persons it was asked "How great value do you give for the standardization of operation methods that ATA is meant for on scale 1–5?" The first respondent gave 4–5 for grade changes. The second one said Vipetec hasn't managed to convince all production personnel despite training sessions. For the value of standardization as such he gave 4. The third person replied 5. For the three last interviewees the question was changed as "How high do you value the standardization of operation methods as a goal?" Two of them gave the value as 4 and one as 5. One noted that in addition to decrease in broke also quality is better when production personnel use standardized methods. So all gave values between 4 and 5 which means that standardizing operation methods is valued very high.

The first three interviewees were also asked “How great value do you give for improved control of drive situation on scale 1–5?” The results were 3, 4, and can’t say. First one said that this control has been improved by force. Second one answered that ATA is not useful when they drive in standard situation and this is not even monitored. The positive effect has been in grade/product change situations. He also said that ATA has been of little use for machine starts. With the three last respondents the question was reframed “How high do you value improved change situations in production as a goal?” Two people valued it as 4 and the third person as 1. This last respondent noted that the reason for low value are the bigger problems that they have in factory. It must be noted that the former form of question can be understood in different ways and the replies for that are comparable to the latter question form.

From the last three interviewees it was also asked, related to one previous question “If your goal is to increase the use rate of ATA, what are the biggest difficulties in achieving this?” First respondent replied that inside the factory there’s a certain threshold to make a separate reporting system and they already have two systems which are viewed to have the potential to get the same information as with ATA. The second one replied that the main challenge is training because the production personnel has very different levels of IT skills. Third person said that bigger issues need to be solved before focusing on this use rate. For these last three interviewees the following question was also added “How did you find out about ATA?” First one had heard from the person responsible of development systems inside their factory. Second person got recommendation from another person. Interestingly only one person got the info directly from Vipetec.

In the first three interviews a question “Did the sales arguments for ATA describe best the benefit of the product?” was presented. First respondent said that yes if only grade changes are looked at. But for product changes true sales arguments were missing because the system had not been used for this purpose before. Second person could not think of any other possible arguments. Third one stated that the mentioned benefits were found from the product and mentioned that replacement

of existing systems was an unexpected plus. In the three other interviews the question was “Were the benefits of ATA presented clearly and realistically enough?” All replied yes. From the answers we see that Vipetec has managed to communicate the value of ATA very successfully and nobody said that the promised benefits were not realized.

In the first interview it was asked “If the decision to buy ATA was not easy, what determined your mind?” The answer was that good experiences from grade changes gave confidence also for product changes. In the first three interviews the following question was presented: “Which was the most important sales argument that affected your purchase decision?” First response was less time on grade changes. Second one was less broke during grade changes because their customers have extremely tight grade standards. Broke level has major influence on prime cost since the energy and material that was used on broke has to be used again. Reduction of production breaks was not that relevant argument for this person. Third response was “What can be measured can be controlled.” This question was also changed so it would be more from the viewpoint of the customer. New question was “What was the single most important need that you based your purchase decision on?” Two replied improving grade changes and third person said that it’s improving machine efficiency and the financial result of the company in the end. So for most interviewees the expected improvement in grade changes was the main factor that lead to purchase decision.

Three last interviews included the question “Have you told about/recommended ATA to your colleagues?” First one had told that it’s a good system for well specified tasks. Second one had had some discussions but felt that the system was not good for those actors. Certain question changed a bit but the meaning remained the same. It was “Do you feel that ATA has given you competitive advantage/enhanced your position compared to competitors?” Two respondents could not estimate this and two others said that less wasted production means better result, more money and of course advantage in competition. The remaining two stated that the benefits of ATA are not really related to this matter. Based on these it cannot be actually claimed

that the product gives competitive advantage.

The last question that was only in the first three interviews was “What would you think about sales arguments that focus on how ATA could help you to improve your position compared to competitors?” First individual replied that he would be very interested if he worked on graphical machine because there are so many grade changes. Second person had a positive attitude towards these new kind of sales arguments, but the third one saw current arguments as the best ones. Third one felt that he doesn't need vendor's help to estimate how much competitive advantage they get from this kind of investment. This question was changed for the last three respondents to “How important role improving competitive status had when ATA was acquired?” First one replied that it didn't have any role. Another interviewee said that competitive status is always considered when something is done, but he also said that no attention was given to competitors. The competing units inside the company were on the other hand taken into consideration. Third person gave roughly this same answer but didn't mention internal competition.

One of the most important findings of the interviews was that the biggest value of ATA is related to grade changes. Improved grade changes were also the main reason why the purchase decision was made. Generally customers have received what they expected from the product and vast majority of them want to increase its use rate among personnel. Current sales arguments used by Vipetec are working well and seen as realistic by customers. Standardization of operation methods was valued very high. Based on the last two questions it is clear that sales arguments which concentrate on competitive advantage are not among the most convincing ones. The interview results are also presented in table 4.

Table 4. Interviews of current customers

IDEA OF THE QUESTION					
Most benefit from ATA	5 people: grade changes	1 person: product changes			
Value of standardized operation methods on scale 1-5 (5 = highest value)	2 people: 4-5	Value of standardization as a goal: 4 people, average 4.5			
Value of improved change situations on scale 1-5	2 people: 3 and 4	Value of improvement as a goal: 2 people gave 4, 1 person gave 1			
Has ATA achieved expectations?	2 people: no due to low utilization	2 people: development project is still not finished	2 people: basically yes		
Unexpected benefits?	4 people: no	2 people: yes			
Higher use of ATA as goal?	2 people: goal is 100 % use rate	3 people: yes	1 person: no		
Smaller batch sizes/faster delivery achieved?	2 people: no, and this is not the aim	1 person: yes, on certain scale	1 person: no	1 person: batch sizes not related to delivery speed	1 person: no information
Benefits presented clearly and realistically?	All said yes				
Most important need that caused to buy	4 people: less broke and time on grade changes	1 person: improved machine efficiency and financial result	1 person: "What can be measured can be controlled"		
Payback time	2 people: less than a year	2 people: can't say yet	1 person: investment was profitable	1 person: determining is not the aim	
Advantage in competition due to ATA?	2 people: benefits not really about this	2 people: more efficiency ultimately leads to that	2 people: cannot say		
Role of improved competition in purchase/connected sales arguments	1 person: this is thought more in graphical machine	1 person: positive view on these kind of sales arguments	1 person: he can evaluate effect on competition without vendor	2 people: This had no role in purchase	1 person: only internal competition was considered

7.2 Achieved savings

Three of the machines under investigation, Machine 1 (M-1), Machine 2 (M-2) and Machine 3 (M-3), are using full scale version of ATA with periodic reporting. In the fourth one, Machine 4 (M-4), ATA has been taken in use during development project. It is using a basic version of the system and real time monitoring of production process is not possible. Also there's no efficiency reporting at the moment. In the fifth one, Machine 5 (M-5), there's the basic version without real time monitoring of production process. System is used as a tracking tool and includes efficiency reporting. No special grade change development project has been made until this and production personnel are seldom utilizing the product in their work. Results show that grade change speed has been continuously higher after installing ATA. Because we knew how much broke was generated in each grade change, we could calculate how much broke would have been made with old grade change speed. The results showed that the amount of saved broke was very significant on a yearly level. These numbers can be found from table 5.

Table 5. Saved broke by current customers

Year	M-1 (full scale ATA)	M-2 (full scale ATA, 2012 from 6 months)	M-3 (full scale ATA, 2010 from 6 months)	M-4 (no real time monitoring or efficiency report)	M-5 (no real time monitoring, low utilization level, 2011 from 6 months)
2009				15,93 %	
2010			15,76 %	20,10 %	
2011			29,93 %	20,04 %	3,74 %
2012	15,05 %	9,31 %	30,42 %	18,12 %	2,41 %
2013	14,89 %	8,30 %	20,70 %	13,08 %	8,80 %

In addition the amount of saved time in grade changes was calculated for four machines. The saving percentage was quite similar with broke. For M-1 statistics of time savings were available for longer period than for broke savings. For machine

3 there were no data available from time savings. The numbers are shown in table 6.

Table 6. Saved time by current customers

Year	M-1 (2010 from 6 months)	M-2 (2012 from 6 months)	M-4	M-5 (2011 from 6 months)
2009			14,30 %	
2010	6,40 %		18,70 %	
2011	13,17 %		18,35 %	2,45 %
2012	14,93 %	9,12 %	16,02 %	2,06 %
2013	12,41 %	8,03 %	11,82 %	9,14 %

From the results we can see that the three machines using full ATA service have been usually able to cut down their broke levels more effectively than the machines that use only some features of ATA. For some reason the machine 5, where production personnel is not really utilizing the product, has been doing clearly better in year 2013. That year it actually saved broke more successfully than M-2 using full ATA service, but this might be just temporary. Interesting is that M-4 using only limited version of ATA has had on average the second highest reduction rate in broke. In saved time it had the best results, but we need to consider that the results from M-3 were not available. On the other hand M-4 (together with M-3) is the one with clearly declining save percentages in year 2013, which could indicate that it can't sustain the achieved results without efficiency reporting and real time monitoring feature of ATA.

In general some machines can keep up quite good efficiency ratings for a rather long period of time if there have been some development measures but there's no follow-up through efficiency reporting. These measures can be for example tuning of automatics. It is also possible that efficiency ratings get better for other actions related to machine which are not classified as actual development measures. The effect of these actions can be seen through efficiency reporting.

For M-1 and M-2 it was examined what is the influence on savings in broke and time if all grade changes are done in multiple steps. This procedure is called floating change and the purpose is to stay inside grade quality specifications as long as possible. That is to say, inside the specifications of the old grade initially and then the new grade. This is possible if the difference between these grades is not too big. The calculations were based on four months in 2013. In this examination two specific grade change types were included because there had been sufficient amount of these done both with several steps and with single step. The result was that in M-1 there would be 70 % less wasted time and 69 % less broke if all grade changes of the first type were done in several steps. Regarding the second grade change type the benefits would be significantly smaller, only about 15 % in both time and broke. With M-2 calculation could be made only with the first type of grade change. The result was quite shocking: 93 % less time wasted and broke generated. Based on this finding it can be strongly recommended for current customers to do at least the first type of grade change with multiple steps.

One interesting thing to study was the amount of breaks during grade changes in each machine on a yearly basis. This is significant because usually these breaks are unnecessary and result from some failure in the process. In product changes there are more changing parameters than in grade changes where the product still remains the same. When product is being changed to completely new product there are some times breaks that can't be avoided so looking at product changes is not that beneficial. Studying grade changes didn't give real information about the benefit to customers, because there was no trend in time or between the machines using full ATA and the ones using it only partially.

Results indicate that machines which use full version of ATA typically manage to decrease the amount of broke and time during grade changes more than machines which use only partial version of the product or the production personnel is not utilizing it very actively. One machine without efficiency reporting and real time monitoring has featured nevertheless quite good results. The reason can be

development measures inside the machine such as tuning of automatics. Also, if certain grade changes are done with multiple steps, quite dramatic changes are sometimes possible. The information of this chapter was provided by Vipetec.

8 Reference selling for current customer company, Stora Enso

This chapter describes the current procedures of reference selling for Stora Enso, a significant customer of Vipetec. The interview results from the representatives of this company are summarized and special focus is on how they viewed the two alternative models of sales argumentation. The number of interviewees and their detailed answers are not however described. These interviews were part of those which were discussed in chapter 7.1.

8.1 Introduction of the company

Stora Enso is a major company operating in paper, biomaterials, wood products and packaging industry. It is listed in Helsinki and Stockholm, operates in more 35 countries and has about 28 000 employees. The customers include publishers, printing houses and paper merchants and also packaging, joinery and construction industries. Company's annual production capacity is 5.4 million tonnes of chemical pulp, 11.7 million tonnes of paper and board, 1.3 billion square metres of corrugated packaging and 5.6 million cubic metres of sawn wood products, including 2.9 million cubic metres of value-added products. Their sales in 2013 were EUR 10.5 billion, with an operational EBIT of EUR 578 million. It aims to focus on renewable materials to build competitive edge based on small carbon footprint. (Stora Enso, 2014a)

Company's production capacity and personnel is mainly in Europe where most of its sales also go to. There it is also the leading producer of pulp, paper and board. Interestingly they have had structural challenges in Europe because of paper production overcapacity. That's why they are investing selectively in mills with long-term potential in order to secure a competitive cost structure and renewable materials. (Stora Enso, 2014a) Paper is the main source of revenue for Stora Enso (Stora Enso, 2014b).

There are three divisions inside the company: 1. Printing and Living 2. Renewable Packaging and 3. Biomaterials. Renewable Packaging is expanding in growth markets such as China, India and Pakistan. Renewable Packaging production sites in Europe are located in Finland, Sweden, Spain and Eastern and Central Europe. Biomaterials offers a variety of pulp grades to meet the demands of paper, board and tissue producers. The mission of Biomaterials is to find new, innovative ways to utilize the valuable raw material wood, while simultaneously running existing pulp and by-product businesses as efficiently as possible, based on the needs of its customers. Biomaterials operates the Nordic stand-alone pulp mills Enocell and Sunila in Finland, and Skutskär in Sweden, as well as the joint ventures Veracel in Brazil and Montes del Plata in Uruguay with corresponding plantations. (Stora Enso, 2014c)

8.2 DMU in the case of ATA

In this company the DMU has two or three vertical levels when purchasing offering like ATA. Purchase decision is typically made by operations manager with strong influence from production manager. Also the possible production engineer and/or process engineer on the line can have a saying on the matter. The IT (information technology) department of the buying organization can also have big impact on the decision made, because they know if ATA is compatible with their existing IT systems. If it's not, extra investments may be necessary and the company is not always ready for that. Information about this specific DMU was provided by Vipetec.

8.3 Achieved customer benefits

Stora Enso like other customers has managed to decrease the material and time used in their production based on calculations which were discussed in chapter 7.2. In

addition interview results in chapter 7.1 indicate that its production personnel have now more understanding about the best practices regarding production line. This brings them monetary savings but also lowers the amount of waste and emissions produced. This has some significance from the marketing point of view because the company aims for competitive edge based on small carbon footprint (see chapter 8.1). As it was stated in chapter 4.2, Vipetec should know how to align its communication with this PR message that Stora Enso wants to spread to the world.

Based on the results of interviews we can see the main value that Stora Enso has received from ATA. It has been most useful in grade changes, then product changes, starts and least useful in breaks so far. In general they have received the value they expected and it was seen that also unexpected benefit can come out of the system. In most factories they want to increase its use rate. Decreasing batch sizes or achieving faster delivery to customers was not among the improvements offered by ATA or even desired by customer. Standardizing driving methods in production is part of the key value provided by the system. The improved control of normal drive situation is clearly less relevant. Normal drive situation is when there is no change, break or start taking place.

8.4 Vipetec's reference selling from the viewpoint of the company

The representatives of Stora Enso seem to keep current sales arguments for ATA very good. The time and material savings in grade changes can be identified as the most efficient argument. Also the arguments of controlling the production process and working efficiently are useful. Sales arguments that focus on how ATA could help customers to improve their competitive position evoke somewhat mixed reactions. They are definitely not useless in forest industry but they should not be used to replace current arguments as the key sales tool. The main focus should stay on numerical improvements in production and arguments about improved competitiveness can be used as support when dealing with demanding buyers.

9 Expanding to new industry

In this chapter it is explored how Vipetec can utilize reference marketing in selling ATA service to power plants. Targets are plants which operate by bio fuels because for them ATA is seen to have the biggest value potential. These power plants are sometimes owned by the same companies which already have customer relationship with Vipetec in forest industry. However, separate units inside these companies make independent decisions about investments. Of course if a company has sold to one Stora Enso paper factory, this makes it easier to sell to their other paper factories as well. Finnish factories owned by one company and doing the same thing exchange knowledge about investments, and positive word-of-mouth helps significantly in successful selling.

9.1 Value potential of ATA based on interviews

Twelve power plants that operate by bio fuels were interviewed during this research. The positions of the interviewed people are found from table 3 in chapter 6.2. The results were mainly similar to each other but there were also notable exceptions. At the end the interviewees were asked if they wanted Vipetec to make an actual sales contact to them. As a result both Vipetec and the potential customers got information of how useful ATA would be for these plants.

The interviews began in most cases with a very general question “Do you think that your production process could be developed better compared to current state?” The expectation was that all respondents would say yes and this was indeed the case but some saw surprisingly little improvement potential. One respondent said that production is 90 % under control. Based on the experiences from forest industry this is very optimistic estimation. Another one replied that there’s always room for trimming but no real development targets exist. Nevertheless nine respondents clearly said that there is definitely room for development.

The second question was “Do you feel that you have need for more uniform modes of operation among production personnel?” Again the expectation was that most would reply yes because that is usually the case in forest industry. In reality seven respondents said that there is no need and one said that of course you can always enhance, but this is not a big issue for them. So only a third of interviewees feel true need for more uniform working methods in production.

The third question was “Do you find challenging to implement the best working methods in production?” The answers were quite diverse, six answered yes, four answered no, and in two interviews the question was not asked. One topic that came up repeatedly was the resistance to change. Four respondents noted that overcoming this requires significant effort. Two respondents mentioned that workers performing the same task get equal salary regardless of their skills and motivation. Only one person said that they have no resistance to change and there’s no difference in how shifts and individuals do their work. This person also mentioned that their plant is very much automated, so this may be the main reason for uniform production. One respondent underlined the importance of explaining the staff why they should step out of their comfort zone, and stated that using force has never good result. So roughly half of the respondents saw implementing the best working methods as challenging.

The fourth question was “Do you have irregular driving situations in the production line and what is causing them?” Some responded that the situation is changing all the time, so the whole operation is irregular. Three people said that irregularities are mainly caused by different fault situations like electricity and machine breaks. The question was continued by asking if the composition of fuel and the operational load varies. Everyone answered that operational load varies and some said that it changes constantly. In three plants the composition of fuel was pretty constant. The last part of this question was whether the solid fuel boiler takes part in power control. Everyone replied yes, except one person who said that they don’t have this kind of boiler. The high amount of irregular driving situations, changing composition of fuel and operational load, and solid fuel boiler taking part in power

control all increase the value potential of ATA. Clear majority of respondents experienced all of these in their operation.

The fifth question was “How great value would you give for faster recovery from irregular driving situations in the production line on scale 1-5, and is it possible to calculate the economic benefits of this?” Nine respondents gave numerical value estimation and the average was 3.28. One of them said that they don’t always need to recover because these irregularities are part of production plan. Two individuals didn’t identify irregular situations, and one said that faster recovery from them is not possible by optimizing driving methods in production. Only three interviewees said that the economic benefits can be calculated with reasonable effort.

The sixth question was “How great value would you give for improved control of standard driving situation in the production line on scale 1-5, and is it possible to calculate the economic benefits of this?” Again nine respondents gave numerical value estimation and the average was 2.94. One interviewee said that nowadays standard situation is so well under control that it’s difficult to come up with something new to make it better. Another one said that the most important thing is to have the right fuel in every situation. So the predictability of fuel quality is what matters. ATA can’t help with this in its current form, but it could be possibly developed to give guidance for managing the fuel composition. Five respondents said that the economic benefits can certainly be calculated, primarily through improved efficiency. One continued that efficiency in Finnish power plants is where it’s supposed to be. Two said that the economic benefits can be calculated to certain extent. One said that in theory they can be calculated but in practice it’s difficult. So the value of improved control of standard production phase was seen as medium, and roughly half of the people indicated that the economic benefits of this can be calculated.

The seventh question was “When you consider an investment which enhances the production process, do you estimate how much it improves your position compared to competitors?” The results were quite clear: only one respondent said that they

actually do this. Another one said that they do it in theory, while the third one said they take outside competition into consideration regarding these investments, but don't calculate anything in this field. Fourth interviewee said that there's not much competition in the markets. Fifth person said that they consider only internal competition. Two respondents mentioned other electricity producers in Nordic countries and other forms of producing energy as their competitors. As a whole the main consideration when making production improvement investments is in enhancing profitability and efficiency. Vast majority of interviewees don't make estimations related to competition.

The eighth question was changed after eight interviews because it was not seen useful for this study. The original question was "Would you be willing to buy a system that pays itself back quickly and helps to make the payback time of other investments shorter?" As could be expected, nobody replied no. Five said simply yes, one said that it depends on the need, one that there needs to be guarantee that it really performs as promised, and one noted that the payback time must be determined. These answers didn't really give useful information, so the question was changed to "What kind of payback time do you expect for an investment of less than 100 000 €?" One replied less than year, second one said two to three years, and third one said three years. The fourth one noted that it depends whether we are talking of a simple monetary investment or if it's connected to work safety for example. For simple monetary investment the answer was three years.

The last question of the interview was "Have you heard of Vipetec's ATA service concept before and would you be interested to hear more?" Only one person said that he might have heard about it, and another one said that has heard about similar offerings. Third one said that a certain system they have does the same thing. Here it must be noted that based on short interview a person can't get a real picture of the value that ATA provides, so it is easy to think that there's not much difference to some better known products owned by major companies. So none could say for sure that has heard about this product before. Eight interviewees, two thirds of all, were nevertheless willing to hear more about it.

10 Conclusions

In this chapter the three research questions are answered based on the achieved results and the findings are also compared to the literature presented in the theoretical part. Concrete managerial suggestions are presented and summarized based on the answers. The reliability and validity of the results is also evaluated and in the last part suggestions for further research are given.

10.1 Type and quantity of realized value from ATA

Interviews of the current customers answered the first research question: What kind of value existing customers have realized from ATA? They also gave valuable information regarding the second question: How the realized customer value can be quantified? The answers showed that the biggest benefit is related to grade changes, then product changes, starts, and to least extent breaks. In product changes there are more changing parameters than in grade changes where the product still remains the same. No major criticism towards ATA came up and it had fulfilled the respondents' expectations. Also some unexpected benefits were mentioned, partly because the development of the product continued also after it was acquired. A solid proof of the value provided is that almost all respondents wanted to increase the use rate of ATA. The perceived value was strongly connected with the use rate of the product. Even if it takes unexpected high amount of effort to make the production personnel effectively utilize the product, the final result is usually positive.

Smaller batch sizes and faster delivery to customers was not a significant part of the value created, unlike the standardization of operation methods. Both the standardization as a general goal and the improvement in this provided by ATA got very high ranking. In one case this was also seen to increase the quality of products in addition to lowering production waste. The answers did not indicate that better control of standard drive (production) situation is an important part of the offering. Improved grade and product changes had a lot more significance. One comment,

“What can be measured can be controlled”, demonstrated how much value simply getting fast and reliable measurements can have.

The respondents did not give much consideration for value related to improved competitive status. Some noted that more efficient production means of course better financial result and advantage in both internal and external competition. Internal competition refers to the rivalry between different production units of the same company, while external competition takes place between companies. It seems that taking competition into account when making investment decisions is so deeply rooted in this industry that the vendor can't really improve sales results by using arguments related to competitive status.

Environmental arguments have also some level of value for the customers in forest industry at least in the case of Stora Enso. This value comes from the need to give a message that sustainability is also considered when doing business. Efficient production with minimum amount of waste and emissions is one component in this. ATA helps in achieving more environmentally-friendly business by reducing these and also the resources that are needed by the production. The reason is that less time and material is consumed when a certain amount of industrial output is produced.

Based on the value calculations among existing customers it was noted that the ones who use all the components of ATA usually receive the greatest benefit. On the other hand it is clear that a machine can do rather well even without real time monitoring and efficiency reporting, but another question is how long such results can be sustained. In this research decreasing performance could be already seen with these results. The calculations concentrated on how much material and time certain machines have been able to save when doing grade changes compared to an individual base level from one previous year. This base level for material and time used on grade changes had been measured before ATA was taken to use. The biggest decrease in wasted material during grade changes was around 30 % and it was achieved on two following years by a machine using a full version of ATA. The statistics about wasted time during changes did not exist for this machine, so the

biggest decrease in time was by a machine with no real time monitoring and low utilization level of ATA. On two following years it reached a level of 18–19 % in time savings. This machine was surpassed in 2013 by one machine using full scale ATA.

Many type of valuable information about grade changes can be found with ATA. One that was discovered during this research process was the great benefit of doing certain changes in multiple steps, also known as floating change. The calculations showed that machines can save up to 70–90 % of material and time in grade changes by splitting the process to more than one steps. But savings of this magnitude are achievable only in certain grade changes. It could not be shown in this study how many grade changes belong to this category. Nevertheless as a whole there is a significant save potential in floating change.

10.2 Best ways to present customer value references

The interviews of both existing and new target customers formed the basis of answering the third research question: What is the most effective way for presenting the realized value to current and potential customers? The ultimate goal is to communicate the value that a target customer can expect from ATA. Results show that current sales arguments are indeed very suitable and can be expected to work well also when product is sold to power plants. Very strong proof of this is that all customers using ATA said that the benefits were presented clearly and realistically enough when the deal was made. Sales arguments about improving competitive status can be utilized in some cases, but clearly they don't have the same impact as already used points in selling. In the case of power plants there's not even very intense competition present, but they also value efficiency and profitability greatly.

Among energy business the required payback time for an investment like ATA was between one and three years, which gives one more tool for using references. Those present customers who gave an estimate of the realized payback time said that it

was less than a year. For a small company like Vipetec the best marketing channels would be success stories, reference calls, and visits to the reference customers' sites (see chapter 5.1). The most effective way to present customer success stories is most likely web-based, mainly in home pages of Vipetec. Detailed product description section referring to certain customers who are using ATA would be a good solution, possibly with statement about the benefits received by each customer or at least from some of them. It would be very beneficial if Vipetec could show some best practices how to overcome resistance to change among production personnel, because this was seen as a major challenge in power plants. These best practices should be based on customer reference cases, since this kind of resistance is most likely similar in forest industry also.

The interviews of customers from forest industry showed that most value from ATA comes from irregular driving situations. Also in energy business faster recovery from these is considered to have moderate value. In certain power plants it seems that it's difficult to identify a regular drive situation, because changes are constantly happening as part of the production plan. But in some plants they are mainly caused by fault situations like machine and electricity breaks. Marketing by using current references should be easier for the latter ones, as ATA can point out the best ways to restart production after these situations. It is more difficult to estimate its value in constantly changing production, and most likely the product needs some development to be suitable for that kind of environment. Extra challenge comes from that most respondents in energy business don't see that the economic benefits of faster recovery from irregular driving situations can be calculated with reasonable effort. This is why customer references seem to be the only viable way of demonstrating customer value.

Changes in the composition of fuel and operational load in power plants both increase the value potential of ATA, but demonstrating this with existing references is not very straightforward, since current customers don't have to deal with those type of changes. If the product can be developed to give guidance for having the optimal fuel composition in each situation, the value proposition for these target

customers becomes more convincing. Also the fact that solid fuel boiler takes part in power control in large majority of plants increases the potential to provide value. Because the target customers did not view improving the control of standard production situation as very important, and also people in forest industry did not feel that ATA has been so useful in this area of operation, it should not have a major role as a sales argument.

The reference practices of the company can be also compared to the ten principles for creating customer references presented by Bill Lee in chapter 5.2. Vipetec does well in the first one so it delivers what it promises and promptly fixes what goes wrong. Actually customers haven't really identified things that have gone wrong. Second principle, knowing the customer's problems, is the cornerstone of Vipetec's business model of pointing out the weaknesses in the customer's production via measurements. Third principle is to put your customer references together with their peers, meaning other executives or managers who deal with similar issues, for interacting and innovating. This is definitely one field of potential improvement. Fourth recommendation of marketing and selling the achievements of your customers is something that becomes more efficient with the value results of this study.

Fifth principle, providing reference customers opportunities to grow, is not relevant in this case because they are already much bigger than Vipetec, which cannot make such an impact. Also sixth point of using leverage on the customers is not in the focus of this research. Seventh recommendation of tying referencing to performance is on the other hand in the very heart of this study. Pilot programs in order to get more understanding about the value delivered by new/enhanced features of ATA offering is an approach worth trying with power plants. The gathering and analyzing of data would be naturally done jointly by Vipetec and the customer. These programs would support references from forest industry.

Eight element of aligning the PR message with that of the customers is mainly connected to green image that companies want to spread about themselves. Vipetec

can do this by creating an image as an actor that helps to minimize the environmental effects of consumption. Ninth principle is offering other customer-engagement possibilities such as including customers in your product and solutions development. This is already happening to some extent due to constant interaction with customers regarding ATA and its functionality. The tenth element is succeeding as a company. The customers also almost certainly want Vipetec to be successful because then it can also offer more value.

10.3 The findings in the light of previous research

The findings of this study help Vipetec to further improve two of the four activities which utilize customer references listed by Salminen in chapter 5, first being efficiency of sales and sales management, and second being effectiveness of the marketing activities. The results of this study are concentrated on the economic dimension of value and the psychological dimension doesn't have a major role. This is because the latter is much harder to quantify. Both these components of value were presented in chapter 4. The findings indicate that there have been no major positive or negative surprises for the customers and they have been quite satisfied.

Since ATA has paid itself back in less than a year in those cases where the payback time is known, it has a good value-in-use potential (see chapter 4.2). This implies that it's expected to increase the customer's financial profits after a short time. Salminen & Möller pointed out in chapter 5 that references need to be convincing enough so that customers are ready to accept the high switching costs of changing supplier. In the case of ATA convincing target customers to change supplier is not part of the strategy. The reason is that the offerings of perceived competitors are, according to Vipetec, much larger and are meant for many different things that ATA does not focus on. The conclusions presented here are based on the interviews of the customers and this study did not deal with the costs of acquiring, implementing and using ATA. Also the cost of building a similar system inside the company was not explored in this thesis. All these costs are discussed in chapter 3.3.

We can also make statements about the quality of the offering (see chapter 4) based on the value results. These are mainly connected to technical quality so what the customer gets out of the service. This kind of quality was ranked very high among the interviewed users of ATA. The functional dimension of quality, meaning how the service is delivered to customers, was not in the focus of this study because it wasn't expected to give much useful information. Also out of the four dimensions of service value presented by Heinonen in chapter 4.1, only the technical one was studied in this thesis. For this reason nothing can be said about Heinonen's argument that the time and location of service delivery are more crucial for customer perceived value than its technical and functional dimensions. As Terho et al. states in chapter 4.2, it's not always necessary to give an exact estimate of future value as long as the vendor can give an idea about the value opportunity. This is the situation that Vipetec has with potential customers in energy business.

The best way to do reference marketing as discussed in chapter 10.2 is to use resonating focus (see chapter 4.2). The sales effort will be focused on the couple of elements of ATA service concept that matter the most to the potential customer. These elements were highlighted in chapters 10.1 and 10.2. One of the most important things is to help the customer to understand why the competitors' offerings that seem to do the same thing are actually, according to Vipetec, very different in their functionality and require much more effort and resources from the customer. One of the key points of the marketing message is the answer to customer's question "What is the most worthwhile for our firm to keep in mind about your offering?"

ATA fulfills all three conditions for value proposition mentioned in chapter 4.2 in connection to Sonoco. In a way it is superior to all the offerings of the competitors since they are meant for different purposes and acquiring and using those takes a lot more resources from the customer. The value of ATA is also measurable, as this study has shown. Finally it is clearly sustainable for both the customer and from an environmental point of view, because customer gets continuous profits while using

it and reduces the environmental load at the same time.

All the persons interviewed in this study were managers inside the functional unit of manufacturing. These were also the people who made the purchase decision inside current customer companies sometimes with the help of production engineer and/or process engineer. This is in line with the ideas about DMU presented by Homburg & Rudolf in chapter 3.2. The role of purchasing department was not clarified in this research. One potentially influential functional unit in the case of ATA is the customer's IT department, which interestingly was not mentioned by Homburg & Rudolf. One obvious reason is that the role of information technology was significantly smaller in the year 1999. In the same chapter it was stated that the people in manufacturing might need detailed technical information on regular basis which is more than just the standardized written product-related information. In the case of ATA this is a standard way of handling the relationship with customers. Vipetec should take into consideration in its marketing strategy that engineering and production personnel often don't have access to many types of information, which increases the role of convincing references even more.

The buy class of ATA is new task (see chapter 3.2) which means that the customer most likely sees the purchase as reasonably important, complex, and high risk one. It can indeed be described as a technically quite complex product, but the buying situation is not very complex because the investment is rather small and is mainly decided inside the manufacturing department. For the same reason the size of the DMU is limited and the level of centralization is high since two people have the main responsibility. This naturally means low vertical involvement where few vertical levels of management are included in the decision-making. The key purpose of this research was to give tools to overcome purchase uncertainty by creating solid information about the value potential of ATA.

Next the strategy of selling ATA is compared to the eight main elements and activities of successful value-based sales effort according to Töytäri et al. in chapter 5.2. The first one is identifying suitable customers, which Vipetec is doing right

now with the power plants in Finland. The next element is understanding the customer's business and the positioning of the firm's own offering to deliver business impact. The interviews among these plants were the start to achieve this, and the experience gained while dealing with existing customers gives working guidelines how to proceed further. The third element is involving the customer in the value assessment process and setting mutual targets. This is a standard procedure for Vipetec with all new customer relationships as is also the fourth activity, quantifying business impact in cooperation with the customer.

Fifth one is tying price to realized value. Results of this study help to find the most appropriate price for all parties. Sixth one is verifying and documenting realized value post-purchase, which the company already has experience as was demonstrated in chapter 7. Seventh element is understanding the value of reference cases, and this is definitely one of the strong points of Vipetec. The last thing is having expertise-based skill-set required from "value-based sales forces". This is also one of the key objectives of this research. It refers to salespeople who are able to notice when a completely new solution should be developed and evaluate how the alternative offerings perform.

10.4 Evaluation of the results

The calculated savings to customers are based on the indicators which were measured by ATA and accepted together with the customers. The results of calculations were looked through with the personnel of Vipetec and were seen as credible. This suggests good reliability. The interview answers are in line with what was aimed to find out with the questions, which indicates good validity. The aim with those questions which changed was to clearly separate answers to old and new questions. Because the answers were sent to the current customer interviewees in a written form and they agreed with them, we know that they were understood correctly by both parties. Also one person from Vipetec was present during these interviews and he could correct mistakes and give extra comments. This kind of

confirmation was not available in the case of potential customers so the author had full responsibility to record answers correctly. The answers were not very complex however so the risk of misunderstandings was quite small.

The information obtained from the interviews of current customers did not include many surprises and mainly highlighted the things that were going well already. In this way they encouraged Vipetec to continue in the same line as before. It also proves how well the company knows its customers and the challenges they deal with. The interviews of potential customers were more surprising and for that reason provided very important information. The interviewees were the ones who will have key position when the decision about the purchase of ATA is made, and this makes the results highly relevant. In a way the relevance and validity of these questions was confirmed by the fact that nearly all respondents wanted to hear more about the product based on the interview. If they had viewed the questions as unimportant, they most likely would not have been interested to hear more. In the case study all the material was acquired from either the home pages of Stora Enso, interviews from its representatives, or personnel of Vipetec. While the results and conclusions are reliable, they are not meant to be generalized outside the case company.

10.5 Managerial implications

The main finding is that the sales arguments used at the moment are efficient also in the future for both current and new customers. Sales arguments which focus on improved competitive status of customers should be used only to support this traditional way of selling. It is worth mentioning that the payback time of ATA can be expected to be less than one year. Good channels for value-based reference marketing would be reference calls, success stories, and visits to the reference customer's sites. The company should aim to present best practices how to overcome resistance to change among production personnel based on experiences from forest industry. Based on the value results we can say that Vipetec should

signal to new customers that it's very beneficial for them to use the effort for convincing the production personnel to actually utilize ATA very actively. The findings about saved time and material also back up the argument that customers who buy full version likely get the most benefit. Floating grade change when possible should definitely be recommended to customers from forest industry.

The realized value of the product especially in irregular driving situations should be highlighted. In the case of the new industry this has more significance when dealing with those power plants which are able to clearly identify the difference between regular and irregular drive situation in their production. In the case of old industry the irregularities which should be focused on in the marketing are mainly grade changes and to a lesser extent product changes. Improved standard production situation is not expected to be a very efficient sales argument. Considering the requirements of energy business it would be beneficial to develop ATA to give guidance for having the optimal fuel composition in each situation. It is important to help customers to understand why the competitors' offerings that seem to do the same thing actually are very different in their functionality and require much more effort.

In the ten principles of creating reference customers presented by Bill Lee there are certain points of development which could be useful for Vipetec. One is putting your customer references together with their peers for interacting and innovating. Another one is using pilot programs in order to get more understanding about the value delivered by new/enhanced features of ATA offering. Also aligning the PR message of the company with that of the customers has certain potential to improve sales results. In addition the level of customer-engagement possibilities can be developed even further for example in the research and development of the product. These managerial implications are summarized in table 7.

Table 7. Reference marketing concept for Vipetec

	Forest industry	Energy production
Old aspects of marketing	<p>1. Focus arguments on achieved numerical savings.</p> <p>2. Highlight the value in irregular production, especially grade changes.</p>	<p>1. Focus arguments on expected numerical savings</p> <p>2. Highlight the value in irregular production.</p>
New/enhanced aspects of marketing, common to both groups	<p>3. Present best practices for overcoming resistance to change among production personnel.</p> <p>4. Get more accurate information about the payback time.</p> <p>5. Signal and quantify the benefits of using the full version of ATA.</p> <p>6. Align PR message with the customer.</p>	<p>3. a. Signal the benefits of convincing the production personnel to use ATA effectively.</p> <p>b. Present best practices for overcoming resistance to change based on forest industry references.</p> <p>4. Signal the relatively short payback time.</p> <p>5. Signal and quantify the benefits of using the full version of ATA.</p> <p>6. Align PR message with the customer.</p>
New/enhanced aspects of marketing, different to both groups	<p>7. Recommend using floating grade change.</p> <p>8. Put references together with their peers.</p> <p>9. Engage customers even more.</p>	<p>7. Develop ATA to give guidance for having the optimal fuel composition.</p> <p>8. Help to understand why those offerings seen as competing ones are very different.</p> <p>9. Use pilot programs.</p> <p>10. Use reference calls, success stories, and visits to reference sites.</p>

10.6 Further research

It would be interesting to test the effectiveness of competitor-comparison based sales arguments with experimental research. This would allow us to see if the behavior of industrial buyers is in line with their interviews responses. It is also worth studying what kind of value references are formed from the new customers in energy industry. Of course this requires long enough business relationship with them. In addition, there could be research about how much resources it takes for a company to develop similar product as ATA in-house. It should be also remembered that ATA is not the only offering that Vipetec has. Research about value-based reference marketing can be made also for their other product concepts.

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Appendices

Appendix 1: Latest interview questions for current customers

Appendix 2: Latest interview questions for potential customers

Appendix 1

Latest interview questions for current customers

1. In which part of process is ATA most useful: starts, breaks, grade changes, or product changes?
2. How high do you value the standardization of operation methods as a goal?
3. How high do you value improved change situations in production as a goal?
4. Has ATA fulfilled the expectations that you placed on it?
5. Did ATA bring benefits that you did not expect?
6. Is your goal to increase the use rate of ATA?
7. If your goal is to increase the use rate of ATA, what are the biggest difficulties in achieving this?
8. How did you find out about ATA?
9. Was the decision to buy ATA easy to make?
10. Have you managed to make batch sizes smaller and/or achieve faster delivery to customers since ATA was taken to use?
11. Were the benefits of ATA presented clearly and realistically enough?
12. What was the single most important need on which you based your purchase decision on?
13. How long was the payback time of ATA in your opinion?
14. Have you told about/recommended ATA to your colleagues?
15. Do you feel that ATA has given you competitive advantage/enhanced your position compared to competitors?
16. How important role improving competitive status had when ATA was acquired?

Appendix 2

Latest interview questions for potential customers

1. Do you think that your production process could be developed better compared to current state?
2. Do you feel that you have the need for more uniform modes of operation by production personnel?
3. Do you find challenging to implement the best working methods in production?
4. Do you have irregular driving situations in the production line and what is causing them?
5. How great value would you give for faster recovery from irregular driving situations in the production line in scale 1-5, and is it possible to calculate the economic benefits of this?
6. How great value would you give for improved control of standard driving situation in the production line on scale 1-5, and is it possible to calculate the economic benefits of this?
7. When you consider an investment which improves production process, do you estimate how much it improves your position compared to competitors?
8. What kind of payback time do you expect for an investment of less than 100 000 €?
9. Have you heard of Vipetec's ATA service concept before and would you be interested to hear more?