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## **THE STRATEGIC DEVELOPMENT OF AUGUMENTA SALES PROCESS.**

From pilot projects to sustainable customer relationships.

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## **ABSTRACT**

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The fourth industrial revolution is underway as companies are seeking transformation to smart factories with new technology, such as virtual and augmented reality and IoT. While augmented reality (AR) has existed for a while, it is quite new in the contexts of manufacturing industry. Especially in big enterprises to start deploying AR, a pilot project is required to prove the benefits of such new technology or solution before long-term investments can be done.

Augumenta Ltd. is one of the pioneers in AR and holds groundbreaking patents in the industry. Going through its start-up phase Augumenta aims at growth through offering AR utilizing solutions in the manufacturing industry. In the search of sustainable customer relationships, it has been noted that the sales cycle of such solutions can be quite long and often the relationships do not evolve after pilot projects. Customers may remain not aware of the solution's benefits even though otherwise would be very satisfied. On the other hand, as a small and a young company Augumenta lacks proper customer references, mostly due to customers wanting to hide their competitive edge found with the help of AR solutions.

The aim of this thesis was to find ways to develop the sales process in a way that would encourage more customers to invest in Augumenta's offering in a long term. The thesis sought for both theoretical background and empirical evidence with qualitative methods to suggest development ideas, produce an improved sales process model and describe the customers' perceptions of Augumenta's success.

Both the current and the improved sales process models were produced, and the customers' reviews investigated in a customer research. Through these and the previous studies reviewed development suggestions were made. The achieved suggestions relate to information exchange between Augumenta and the customers as well as in the sales process' managerial viewpoint. Those and the process models can be utilized in Augumenta's internal development, in future growth and as background for future strategical intentions. Room for future development and research remains as the thesis sets a foundation for future development inside Augumenta.

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Keywords: sales process, business process management, business strategy, augmented reality, AR, business-to-business, business development

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## 1 INTRODUCTION

This master's thesis is about developing the sales process of Augumenta Ltd (later Augumenta) and its critical success factors in relation to customer insights. Augumenta operates in international business-to-business software markets, and as a small company, has not got a specifically defined sales process. The target of this development task is to find out how the process should be developed both from the customers and theory point of views.

The interest for this thesis rose from both the student's and the company's initiatives: the student and the company's Chief Operating Officer (later COO) are fellow students in the same Master's program and have studied together regarding each other's theses and other courses as well. During the studies, they worked together in one assignment that lead the student deeper into the company's operation and found the idea for developing the process. At the same time, the company acknowledged the need for development, and therefore the mutual interest was found. On a personal level, the student has interest in international business and found the industry and the solutions that the company offers, very interesting.

When this development task is finalized, the expectation is that suggestions to develop the sales process are found in a way that both shortens the sales cycle, and the customer value of the solutions will be more visible. This would expectedly lead into better customer loyalty and so forth longer customer relationships. By so doing Augumenta would be able to respond better to its customers problems and eventually increase their revenue.

The result of this thesis will be a model of how the sales process should go and theoretical reasons why it should be as presented. In order to do this, information of the business processes modelling and strategical choices that have worked in industrial contexts are needed, as well as reflecting them into the current process. Customer perspective of Augumenta's customers is needed which will bring customer orientation to the process.

Strategic point of view in the development process will occur in the background material from the ongoing strategy process in the company and found studies. However, the strategy development process will not be ready before the thesis, but the knowledge and the material acquired from the student taking part in the strategy workshops and observing the workshops, will be made use of.

In this thesis the client company is first described as well as the business environment the company works in. Following, the purpose, methods and the theoretical framework of this thesis are explained. Next, a connection between a company strategy and the sales process is sought for from previous studies reflecting to the strategy process in Augumenta. After this is done, the sales process modelling begins.

The current sales process is modelled based on discussions with the company personnel and especially with the people closely related to the customer relationships. The process is explained with observed challenges and development targets. Then, critical success factors are identified in cooperation with Augumenta personnel and with help of previous studies.

Next, the customer research implementation is described with the reasons behind the choices of the research topics. The results of the research are presented and analyzed with the viewpoint of finding relation to the critical success factors and points of development in the sales process. Then the improved process modelling is described finding the correlation between the customer research, theoretical background and the empirical material collected. Finally, the suggestions for development are described.

## **1.1 Description of the client company**

Augumenta is a small software company with its headquarters located in Oulu, Finland. The company operates in global markets and is specialized in augmented reality (later AR) solutions that utilize smart glass devices. The majority of Augumenta's customers are in the manufacturing industry sector and more precisely in the industry 4.0 sector. Industry 4.0 describes the transformation of manufacturing industries in shifting from computer assisted manufacturing into a combination of cyber-physical systems, the Internet of Things and the Internet of Systems, hence shifting into smart factories (Marr 2018). Although Augumenta operates in global markets, it has strategical priorities in certain physical areas and markets which are the Nordic Countries, Central Europe, South-East Asia and Japan (Augumenta business, markets, competitors, sales and marketing -team 2020).

Augumenta is a small enterprise going through its start-up phase employing eleven people at the moment. Most of the company's employees are located in Oulu but two of the founders live in Asia

(Taiwan and Japan) and also one technical team member lives in Kenya. Augumenta was founded in 2012 by three people of which two have a technical and research background and high-skilled expertise in augmented reality which makes them the Head of Research and Chief Technical Officer. One of the founders has a strong background in business and management in IT and therefore operates as the company CEO. The company is organized in technical team, marketing, sales and administration of which the technical team consists of eight experts of AR and software research and development. The technical team oversees technical development of the solutions and software. For marketing, sales and administration there are one person for each function, of which the sales is basically run solely by the CEO. The Head of Marketing and the Chief Operating Officer (administration) are supporting the sales function as needed, sometimes taking part in customer negotiations and performing administrative tasks, such as defining the contract details and taking care of invoicing.

Augumenta offers software products and solutions utilizing AR for its customers mainly in manufacturing industries. Augumenta's products are software solutions for smart glasses that can help improve, for example, a factory's productivity (Augumenta 2020). The solutions' main priority is to boost the efficiency of the customers' operations, and offer people tools for operating smoother, faster and in more time-saving manner through information displayed via AR. Such solutions can be utilized in manufacturing, maintenance or training activities and since the worldwide pandemic situation, it can help and boost working remotely despite a physical distance between team members. The ongoing pandemic has created new opportunities for new kind of solutions and AR utilization is one of them: the company developed a new solution during spring 2020 to tackle the obstacles of remote co-operation for example in maintenance (Augumenta Ltd 2020).

### **1.1.1 Business environment**

As Augumenta's customers are mostly in manufacturing industry, they are companies or enterprises, which means Augumenta operates in business-to-business contexts. Operating in manufacturing industry has its specialties which both create opportunities and build barriers into Augumenta's operation. The range of enterprises in manufacturing industry globally is wide: the variety of possible customers varies both in company size and expertise. Especially big enterprises create great opportunities for scalability but also are quite hard to conquer because of corporate

bureaucracy. On the other hand, selecting the target markets and companies can be challenging since there is a great number of manufacturing companies worldwide that differ from each other. Matching the differences and finding possible use cases is another task. One feature of the industry sector is that it is somewhat conservative in its development: new technological solutions may not be approved for usage due to conservative attitudes (Augumenta personnel discussions 2021). However, the chosen target markets offer interesting business opportunities as they are in industrial economies. Such economies have lots of industrial activities, a rich middle class and therefore offer interesting prospects for any goods or services (Kotler et. al 2016, 598).

Leounidou gives a good description of different aspects of industrial business-to-business in international business to be considered. The article describes quite well also the aspects and challenges Augumenta faces in its operations and therefore is used to describe the business environment reflecting to Augumenta's operation. First, the way to succeed according to Leonidou is to seek differentiation in a company's offerings and resist the efficiency trend as competition intensifies. Also the founders' entrepreneurial knowledge is an important factor. (2019, 103.) This reflects to the industry and global economy as a wide field where targeting a company's resources is crucial. As Augumenta is the case, these two can easily be agreed with: as an SME, it has limited resources and therefore lacks local representation in the most important target markets. This creates a challenge of how to be visible there when there's no local presence and how to get noticed among competitors. (Augumenta personnel discussions 2021.) Leonidou (2019, 103) suggests also that companies entering markets with competition need to be able to adapt to rapid market changes and to be able to innovate more efficiently. Reflecting to Augumenta's recent development, the odds are good, according to the new innovated solution as a response to the worldwide Covid-19 pandemic.

In export success, Leonidou also claims e-commerce and marketing capabilities to be important, together with market knowledge development and customer management skills. Knowledge and resource exchange with the importers are also mentioned. (2019, 104.) The first refers again to the challenge Augumenta faces in global business: how to be visible without local presence. An important step towards development in the second matter has been taken during the past fall when Augumenta announced a partnership with a Taiwan-based company to accelerate the adoption of AR in Taiwan's digitalizing industry (Augumenta 2020). Another partnership was later announced a couple of months later (Augumenta 2020). To avoid infidelity among business relationships Leonidou recommends not to use coercive power but instead to have a plan for resolving conflicts.

Yet another issue to consider is trust: depending on the country the customers have their own criteria of supplier's performance in terms of product and sales service quality, technical support and complaint handling service. (2019, 104.) These describe the dilemma that Augumenta faces in international business: how to guard and safekeep the knowhow (patents, software) yet build trust with customers overseas? As it will be presented later, sometimes the customers are reluctant to share information that is relevant in terms of measuring the pilot project's success which makes Augumenta's work harder. (Augumenta personnel discussions 2021.)

Another interesting aspect Leonidou (2019, 104) lists is the role of sales personnel especially between the exporters and importers: a caring, adaptive and hands-on attitude is expected from the exporters when the cultural distance is high; when low, more standardized knowledge-based selling approach. Considering the target markets chosen by Augumenta, both approaches are needed as Augumenta's customers come from different cultures that differ from one another. On the other hand, the article refers only to the relations between exporters and importers and as Augumenta does not have actual importers (excluding the partnerships mentioned earlier) in the target countries but delivers in most cases directly to the customers, this aspect may not be valid. However, any indication to the obstacles that cultural differences may create into customer relations is at this stage noteworthy.

The business model in use at Augumenta resembles mostly mass customization. The model combines both mass production and customization: simultaneously aiming at customizing each sold solution or product according to customer's individual needs while offering products that are standardized into a certain point. So being, it is possible to combine different products or solutions into varied customizations. (Gassmann, Frankenberger & Csik 2014, 222.) Even though the product variety at Augumenta is not yet very wide – while being both a start-up company and an SME –, customizing its software products for each customer's individual needs refers to usage of mass customization. For a software company that offers solutions in a fairly new technology branch AR, mass customization is a wise choice. The benefits from the business point of view come from greater customer loyalty and especially the suitability for Augumenta's target market industry: the economies of mass production are to benefit from the alliance of standardized yet customized solutions (Gassmann et. al 2014, 224).

Another possible business model for Augumenta would be licensing which is at its optimum when used to monetize a company's products or technologies without them being at the core of the

business. Licensing is best used in knowledge- and technology-intensive contexts. (Gassmann et. al 2014, 206.) Licensing already appears at some form in Augumenta as the software solutions are sold as licenses to the customers after the piloting has taken place, although those licenses differ from licensing -business model in the contents of the license: since basically each solution is customized, the product to be licensed is unique and not to be sold elsewhere, only to be used in the customer's own operation. The business model idea is to utilize the original product as it is.

### **1.1.2 A review into AR technology markets**

In general, AR as a technology is a developing business area that has had some sort of a hype around it for years, with optimistic scenarios of AR changing something essential in the way things are done. According to Blanco-Novoa, Fernández-Caramés, Fraga-Lamas, & Vilar-Montesinos, the first AR technologies were presented already in 1960's but they didn't reach traction in the markets for the next 30 years until the first application was presented in industrial environments by Boeing. Today AR applications are used in transportation, industry (Industrial AR = IAR) although the progress of IAR systems has been relatively slow. IAR applications are most popular especially in the assembly processes where AR solutions have been proven to for example reduce the number of errors significantly. (2018, 8201–8202.)

As technology evolves, so do the industries utilizing technology. According to Rossit, Tohmé, and Frutos a fourth industrial revolution has emerged during the past few years. The revolution is called Industry 4.0 and the concept defines as follows:

Industry 4.0 is a collective term for technologies and concepts of value chain organization. Within the modular structured Smart Factories of Industry 4.0, Cyber-Physical Systems (CPS) monitor physical processes, create a virtual copy of the physical world and make decentralized decisions. Over the Internet of Things (IoT), CPS communicate and cooperate with each other and humans in real time. Via the Internet of Services (IoS), both internal and cross organizational services are offered and utilized by participants of the value chain. (2018, 3802.)

As the change happens, Augmented Reality (AR) technology is in the core of it. AR as a technology provides an interface for people to interact with the digital world for example in a smart factory. AR is not in use in every area in industrial deployment, but it is in use in some already. (Egger & Masood 2019, 1.) Some forecast AR to have the possibility to boost worldwide GDP with over a trillion dollars by the year 2030 (PwC 2019). According to EU classification AR is one of the main

technologies leading the way into smart factories (Egger et al. 2019, 1). In addition, Egger et al. (2019, 19) firmly believe into wide spreading of AR technology in form of variable applications in the near future.

Not only do the researchers of the field believe in the possibilities of AR technology but so do many companies as well:

- - the companies serving the enterprise market are growing in number and size, including public companies like Microsoft and PTC, the large consultancies like Deloitte, Accenture, and McKinsey, and startups with their own AR development and delivery platforms like REFLEKT, Ubimax, Scope AR, Atheer, and Upskill. They work as both consultants and vendors, guiding clients in implementation and leaving them with proprietary tools (a source of recurring revenue) so they can update their AR apps themselves without having to do coding." (Fink, 2019.)

Some of the above-mentioned companies have been identified as competitors by Augumenta as well where for example Ubimax, Upskill and Atheer provide competitive solutions to Augumenta's products. The markets consist of a variety of competition to Augumenta where Augumenta has also products and solutions in AR technology areas where competition not yet exists or is small. (Augumenta strategy analysis 2020).

During the time of making the thesis, the world is hit by a pandemic called Covid-19 which has brought numerous problems into people's lives while close human contacts are avoided. This leads into remote working and reduced face-to-face meetings in all areas of human life. The pandemic has also created new opportunities for new technologies of which one is AR. For example, Toyota has discovered the possibilities of using AR both in manufacturing and in marketing, reducing time consuming in certain tasks and cost reduction in printed materials (The Augmented Reality for Enterprise Alliance (AREA), 2020). As mentioned in the previous chapter, Augumenta has also created a new solution for tackling the problems remote working is creating.

A recent study indicates also to the development and need of AR technologies in the future as it claims not only AR but also VR and XR technologies to develop substantially in the 2020s. According to the study these technologies' applications become a part of the operations of companies and public administration, and the usage of them becomes more common both at work and in leisure time. The study also claims the global market to grow significantly forecasting even growth into hundreds of billions of euros annually. (Jauhainen 2021, 28.)

This short glimpse into AR markets reveals great opportunities for AR companies to build up their businesses, even though competition already exists. However, AR as a technology might not be that new but the applications are not widely known yet. This creates room for finding new use cases largely in different sectors, and in manufacturing industries as well but simultaneously creates challenges regarding marketing and convincing the markets to use AR as a solution.

## **1.2 The purpose of the development task**

At Augumenta, the sales cycle of the company products is somewhat long: it may take up to two years from the first customer contact to finalizing a license purchase with a customer. Basically, all the software solutions are customized at some level for each customer depending on the solution and the customer needs. Very often there will first be a pilot project in some customer facility to see possible outcomes and benefits of the software, and after the pilot project has ended, the licence purchase would take place. In the current situation the percentage of the pilot projects continuing into a licence purchase is quite low. According to Augumenta, one of the reasons for the customer not to commit in a license is that the customer can't really describe the benefits the pilot project has brought to them, even though they would be very satisfied with the solution itself. This would assume that by making the value of the Augumenta solutions visible to the customer during the pilot project, would, in fact, encourage the customer to commit with the licence. The question here then would be how to develop the sales process in a way that encourages the customer to commit with purchasing a license, instead of just taking part in a pilot project. Hence, this is the main task of this master thesis.

According to the preliminary background discussions with Augumenta's COO and CEO, it has become quite clear that there is not much happening between the company and the customer while the pilot process is ongoing. Currently there are some actions that customer support is producing, but that process has not been defined or planned specifically. Now, when assuming that making the customer value visible during the pilot project, it would mean that development needs to take place in this part of the process, while the pilot project is happening. This leads into an assumption that it is the customer support that must be developed. Thus, this thesis will try to find evidence to support this assumption/hypothesis and to determine, what kind of actions need to take place in the customer support to make the customer value visible and by so doing, encourage customers

to purchase the software licence after the pilot project. In other words, the thesis will try to find ways to develop customer relationships into long-term relationships.

The purpose of this development task is to produce an improved sales process model for Augumenta sales and marketing personnel. The improved model includes ideas on how to develop the process itself and what actions to take or practices to implement in the sales process. So being, the main goals of this development task are:

- 1.) to find out the reasons why the customer is not purchasing the licence
- 2.) to find out how the process should be developed according to the findings of the customer aspect and researches made
- 3.) to produce an improved process model and ideas on how to develop the process

### **1.3 Research questions**

When the task is to find out how to develop the sales process in a way that encourages the customer to commit with purchasing a licence, it is essential to ask what are the factors in the current process that inhibit the customers from proceeding from pilot project into a license purchase and into a long-term relationship with the products and services. It is also essential to ask are the factors, in fact, the kind that can be influenced by developing the process, and how should the process be developed or what kind of factors should be included in the process to make purchasing easier.

The questions to be asked and tasks to be done are:

What is the current sales process like?

- modelling the current sales process
- defining the critical success factors and
- defining the customer journey map

What do the customers think about the success factors?

Has Augumenta succeeded in positioning the factors correctly in relation to customers?

- research of the customer aspect of the critical success factors

How should the sales process be developed in relation to the customer aspects?

What needs to be changed or added or removed in the process?

→ modelling the improved sales process

→ customer data in the sales process: what data forms in the process / what data needs to be formed in the process?

#### **1.4 Approach and methods used**

When development task wants to solve the problem by producing a concrete output, such as process modeling, constructive approach is a suitable approach to implement. This approach aims at the most practical problem-solving possible, creating a new structure based on development work on both existing theory and new empirically produced knowledge. Constructive approach seeks a new and theoretically grounded solution that adds value to business, as well as new knowledge to the scientific community. What is essential for constructive approach is precisely the discovery of a new kind of structure, which is clearly a better solution to an actual real-life-problem than before. This approach seeks to change an organization's operations and practices. Constructive approach is a suitable approach especially when theoretical knowledge is necessary for problem solving. (Ojasalo ym. 2014, 65-66.)

Constructive approach is very similar in approach to the creation of new innovations and service design, but it cannot be linked to the above alone, as not all new outputs resulting from development work are innovations or are related to service production. Therefore, in constructive approach, it is essential to link the practical problem and its solution to theoretical knowledge and to take care of the interaction and communication between the users and implementers of the research. (Ojasalo ym. 2014, 65.)

Constructive approach is therefore a suitable approach to this development task, as the development is to be carried out in collaboration with Augumenta's personnel (mostly the CEO and the Chief Operating Officer) and takes advantage of the insight gained from customers. Currently, the problem with the sales process is that the customer journey often ends after the pilot project, and the task of the thesis is to find out why it happens and how the process should be changed so that the customer journey continues even after the pilot project.

In order to find out the reasons why the customer journey often ends after the pilot project, the customer perspective must be considered through customer surveys and interviews. However, theoretical knowledge is needed for defining the process as well as for identifying the right steps in the process. The company also employs technological leaders in their field who are accustomed to scientific research and approach, which is why utilizing and presenting existing theoretical knowledge could evoke a new kind of thinking and ideas for increasing customer-oriented thinking also within the organization.

In constructive approach, it is also important that the client commits to development and that the development task is not just an idea of one key person or manager. (Ojasalo ym. 2014, 66). In this development task, this was not an issue as the client is very committed to the development task. First, the development task aims to develop the sales process in a way that increases the revenue from the sale of the company's licenses, which means better success for the company. Secondly, the client company has stated such a development task will not be undertaken in the company unless it is based on a firm intention to utilize the results of the development task. In other words, the company does not want to waste the work that both the author of the thesis and the participating employees of the company give to the development task. Third, the initiative for the development task came from both the company and the author of the thesis, without the author of the thesis having an employment relationship with the client. The idea for the development task came from both the CEO and the chief operating officer, as well as the author of the thesis, so it is conceived by more than one person together.

Ojasalo and others state that there is a very pragmatic conception of truth in constructive approach, that is, what works is true. Constructive research in a company, for example, answers the question of whether something that has been done so far can be done better, or whether something can be changed to better serve the needs of the company. (2014, 66). In this case, constructive approach would seek to answer the questions: Can a company's sales process be improved to encourage customers to have long-term customer relationships with the company's services and products? And what needs to be changed or developed in the sales process to make this happen? These questions correspond to a very pragmatic problem of seeking an answer to what works.

Other possible approach for the thesis could be service design. Service design refers to the utilization of processes and methods familiar from design in the development of intangible services. Service design has become a popular method in the development of companies and organizations,

while customer orientation has become an increasingly common value premise. The goal of service design is to develop service experiences that are easy to use, useful and desirable for the user, as well as effective and efficient and, above all, distinctive service concepts from the perspective of the service organization. (Ojasalo ym. 2014, 71–72.) In the light of these principles, service design would be a valuable approach to the thesis in question, as the aim of the thesis is to make the sales process more desirable for customers and more profitable for the organization (more license sales). However, any particular service design methods were not used in the thesis despite the early plans of the thesis. A customer research was conducted which included similar methods to service design methods but so far remain the only recognizable connection to that approach. Therefore, service design was not chosen as approach to this thesis but instead, the thesis methods may have similarities to service design methods.

## 1.5 Theoretical framework

The theoretical foundation will be formed both from existing study material and empirical research. Existing studies will be sought for to show proven-to-work evidence on how a sales process should be developed, what can be achieved by developing the process and possible ready-made process model suggestions. Empirical side will focus on people: both in the company (personnel) and out (the customers). This information will be gathered to find ideas on how to develop the sales process and what actions are needed for improvement.

The theoretical foundation will be based on earlier studies and scientific articles made among the subject. The topics that will be investigated especially are business processes and continuing with process thinking, process management and process development. Sales process development will be investigated as well. As customer orientation is another point of view in the research topic, it will be among the subjects of information acquisition. Within that concept there will be searches of studies concerning customer relationship management, customer loyalty, customer winback, customer value creation, sustainable customer relationships and customer behaviour. While the subject of this thesis relates to strategy, it is essential to investigate that as well, and search for applicable theories or models about business strategy and strategic planning. As B2B sales is a wider concept in the thesis, the theoretical foundation is to include also theory background about sales in business-to-business. From the business point of view, it would be relevant to look into

software business as a business as well, to find existing and proved-to-work models on managing and developing the sales process.

## 1.6 The credibility of the customer research on the development task

When assessing scientific information, reliability of the research methods, process and results plays a central role. When it comes to quantitative research, reliability and validity are the usual terms, but in the case of qualitative research, persuasiveness is the keyword. The usability of the results is more important in development tasks: in addition to the truthfulness, the formed information of the development task must also be useful. (Rantanen et. al. 2009, 121–122.)

Although the concepts of reliability and validity are more related to quantitative research, they can also be used in development activities insofar as the work includes research elements. Validity refers to the validity of a study: whether it is measured for what it is intended to measure. From the point of view of validity, it is also important to look at the initial assumptions of the study so that they do not contradict each other (internal side of validity) and the relationship between conclusions and external phenomena, ie whether the interpretations made correspond to the material (external side of validity). (Rantanen et. al. 2009, 122.)

The key reliability factors for this thesis are the usability of the results and the description of the process, in other words, making the process open. Since the thesis is related to the development of the sales process, which results in an improved sales process model including development proposals, it is essential to pay attention to whether the improved process model obtained by the development work is useful and usable in the client company. This aspect must therefore be borne in mind throughout the development process and it must be considered whether these proposed measures can be carried out in the company, taking into account the context of the case in question. This involves very essentially making all the choices made during the process visible, that is, describing them in the final thesis report as transparently as possible. The involvement of the people taking part in the development work should also be described in detail and, in particular, the stages in which the people do not participate in the development, should be described.

In this thesis, the purpose is also to conduct a customer survey, which aims to find out the critical success factors related to the sales process. Even if it is a qualitative study, it is still worth paying

attention to, for example, the validity of the questions in the customer questionnaire: whether what is to be studied is actually examined. Also in the conclusion section and when producing development ideas, special attention must be paid to the fact that the conclusions and ideas made correlate with the results of the customer survey.

### **1.7 Methodological and ontological questions**

Reviewing the concept of reality is not as essential in development as it is in science, but still the reality can be viewed from both the perspectives of realism and constructionism. The basis of realism is in reality, which is an objective reality independent of man and human action. In constructionism, on the other hand, reality is constructed socially, where reality is the result of a system of meaning created by people. (Rantanen et al. 2019, 35–36.)

The nature of reality in this thesis is strongly on the side of constructionism, as the sales process described in the development task is based on the views of the company's personnel about the sales process. The perception of reality about the sales process is thus shaped socially, being the sum up of the perceptions of the people involved in modeling the process. The perception of reality places emphasis on the CEO's view, as he oversees the overall sales of the company, in this case the CEO's actions and way of managing customers are the same as the company's sales process. In addition, the description given by other people in the company of how they perceive the current state of the sales process and what perhaps should be improved or developed in it, is related to the reality perception as well.

When the development task reaches the stage where customer research is done, constructionism is very clearly visible. This gives customers the opportunity to share their views on the critical success factors in the sales process and how the success factors are positioned in the process in relation to customers. Thus, the information received from customers is a sum of the interpretation given by each respondent from their own point of view. Those and the personnel's perspectives actually form the core of this thesis: what is now thought to be (modeling of the current sales process), but what in reality (in customer perceptions) should be?

From the perspective of the development task, the concept of reality can also be viewed from the factual or interpretive perspective. From a factual point of view, the aim of development activities

is to change the reality in a concrete way, for example, the goal may be to improve the financial result or a certain number of customer visits. From an interpretive point of view, measuring the goals achieved can be challenging, as the object of the activity may not be visible: for example, changing the organization culture of the work community, in which case the challenge is to find an indicator for measuring the organization culture. (Rantanen et al. 2009, 37–38.) This thesis focuses on both a factual perspective and an interpretive perspective: the aim is to change the concrete form of operations, the sales process, but it is done from an interpretive point of view, based on customer experiences and personnel views. When customer research seeks to find out the customer experience and reflect it on the current sales process, it is not necessarily clear to achieve the objectives and therefore also requires an interpretive perspective. In addition, there is a theoretical presupposition in the situation: the answer to the development of the sales process is assumed to be found in customer interpretations, which assumes that by improving the sales process, the company's turnover increases. Whether this can be measured and shown – to increase turnover in this way – is difficult to verify and yet requires an interpretative perspective.

As development activities have become more widespread, the concept of knowledge has changed so that knowledge is now thought to consist of many different sources instead of just thinking about traditional scientific knowledge formation. In other words, information that has been produced in practice and found to be good (useful) is also thought to be accepted, valid information. For example, new knowledge is mainly generated in the environments in which it takes place, and the starting point for knowledge is real practical action as well as the need to solve practical problems. (Rantanen et al. 2009, 42–44.)

Thus, in this thesis, the information obtained from customers can be considered as valid information: the aim is to get customer feedback from customers who have bought a license, but also from those who did not, and thus to find out the reason why some buy and some do not, and what needs to be changed / developed in the sales process to get more customers to purchase. At the same time, evidence is sought for good practice in the theoretical framework, in other words, previous research related to the development of the sales process. In this case the previous could be identified as the so-called good practice, which allows experts – in this case those of the client company who carry out the sales process now and, in the future, – to be recommended of good and researched practices. (Rantanen et al. 2009, 40).

## **2 STRATEGIC PLANNING IN DEVELOPING THE SALES PROCESS**

This part discusses how customer relationship management, services and value creation are related to strategic planning. First strategy and different strategical choices in international business are briefly explained leaning on the literature and previous studies upon the topic. Then the above-mentioned topics are addressed with main points of each from the viewpoint of the topic being a strategical choice. Finally the strategy work of Augumenta is described trying to find connections with the presented customer relationship management, services and value creation.

Theoretical background was sought for in the topics with a viewpoint of business-to-business contexts. Also, the strategy work by Augumenta that started in the spring of 2020 and still continues is utilized in formation of this chapter. Background from the discussions with Augumenta personnel is also included.

### **2.1 Strategy in theory**

Strategy is a complex concept to be defined in one sentence. Kamensky uses three sentences to describe the essence of strategy and its meaning to a business or a company. First, strategy is a company's conscious choice of its essential goals and guidelines in a changing world. Second, a company can manage its business environment through a strategy. Third, with help of a strategy, a company consciously manages external and internal factors and the interrelationships between them so that the profitability, continuity, and development goals set for the company can be achieved. (2014, 18.) On the other hand, Hiltunen (2012, 165) simplifies strategy into one single sentence: a strategy is a path to company's vision.

Some examples of strategies for an internationally operating company offer Johnson, Whittington, Scholes, Angwin & Regnér when describing four typical strategies for international business. Export strategy advantages of a company's home country capabilities, innovations and products in different foreign countries. Following this kind of strategy may require a steady reputation and a strong brand to succeed. Multi-domestic strategy is based on different product or service offerings and operations in each country, depending on their markets' specific features and customer needs. This strategy is the most probable to succeed when there are strong benefits from adapting to local

needs and limited efficiency gains from integration. Global strategy sees the world as one marketplace and utilizes strong integration. The biggest benefits are gained from such strategy when customer needs are relatively homogeneous across countries and there are substantial cost or quality efficiency benefits from standardization. Transnational strategy tries to unite the key advantages from responsiveness (such as multi-domestic strategy) and integration (e.g. global strategy) and simultaneously minimize their disadvantages. This strategy supports efficiency and effectiveness while simultaneously can serve local needs and leverage knowledge flow between units. (2015, 167–168.)

### **2.1.1 Customer Relationship Management as a strategical choice**

As the subject of this thesis is to find ways how to ensure more sustainable customer relationships, theoretical background was sought for. To create long-term relationships with customers, Mendoza, Marius, Pérez. & Grimán suggest implementing Customer Relationship Management, hence CRM, as a strategy for the entire company. When implemented fully, CRM works as a cross-functional, customer-driven, technology-integrated business strategy that guides the entire organization and maximizes customer relationships. Although normally CRM may be understood only as a technology to benefit marketing, sales and service departments, in this context CRM is referred to a strategy that passes the entire organization: (in addition to earlier mentioned) human resources, R&D and finance, information technology and the Internet to maximize the profitability of customer interactions. From the customer point of view, such strategy enables customization, simplicity, and convenience for completing transactions, regardless of the channel used. (2007, 915.)

For achieving the goals of a CRM strategy, there are three main aspects to focus on. First, the processes where interaction with customers take place; second, the human factor including the people with a key role within the CRM strategy; and third, the technology the CRM strategy is implemented with. To implement CRM as a strategy, one central factor of the previous is to analyze each process that includes interaction with customers (Mendoza et al. 2007, 915.). So being, the task of this thesis is aligned with the principles of a CRM strategy. However, the most important aspect is that all the levels of the organization cooperate towards favoring the relationship with customers, considering all connections to this objective (Mendoza et al. 2007, 917).

### **2.1.2 Services and service quality in relation to strategy**

Another possible strategical choice for a software company to support creating sustainable customer relationships may be adding services into product offering. According to Suarez, Cusumano & Kahl, services may influence the success of a new product or technology even though adding services into the offering may worsen overall margins at first. Services can have an impact for a company's success especially soon after their establishment since existing services may help to reduce reluctance of customers from buying their products. In addition, through offering services a company may learn more about its customers' needs as well as contribute useful information back to customers about its products. According to Suarez et al., one should not only look into the service margins versus product margins alone but to review the relationship and dynamics between the two as well. (2013, 433–434.)

When building up sustainable customer relationships, an interesting point to look at is service quality. According to Lee, Kang & Kang (2019, 232–233), service quality seems to have positive relations to customer satisfaction, and customer satisfaction to customer loyalty especially in business-to-business concepts. Mendoza et al. (2007, 917) suggest the same when stating that satisfied customers are the key to long-term customer relationships since the satisfaction will turn into retention and loyalty. Reflecting to Augumenta, it is important to be aware and think about what service quality is for different people inside the customer companies. Since the buyer is usually a different person than the user of the solution, their perceptions of service quality may differ from each other. Therefore, it would be important to consider the perceptions of not only the buying person(s) but also the perceptions of the end users as well when developing the sales process.

### **2.1.3 Value creation as a part of strategy**

Yet another point of interest would be value creation which often is thought to be included somehow in products and services designed by the supplier and then transacted to the customers. This is of course true, but in contexts where relationships count, value creation takes place more broadly. Especially in business-to-business, the value forms interactively between the customer and the supplier when value formation depends for example on performance, quality and assortment of products that are taken for granted. There are also several other aspects to influence the customer-supplier relationship, for instance delivery cost and quality of delivery, servicing, administrative

routines and processes and communication flows. For both parties the value generates through solutions in different relationship dimensions, which are usually developed between the customer and supplier business instead of being one-sidedly designed by the supplier. (La Rocca 2014, 2–3.)

When organizing the sales function to optimize value creation, there are three essential points to consider:

The need to involve a variety of actors to access elements of effective customer value solutions; the need to support and orchestrate the interaction processes among those involved; and the need to differentiate the customer interface and sales approach to match the substantial differences in customer relationships. (La Rocca 2014, 3.)

The concept of value is widely used as a reference for management choices and is quite appealing but is not always easy to translate it into business practices. To make sensible decisions related to value creation it is essential to understand the value concept and the factors that converge in value formation. (La Rocca 2014, 3.)

Considering strategical choices in value creation concepts, an interesting point of view was found especially for small and medium enterprises (later SMEs) by Pérez and Cambra-Fierro. It was found that growth-oriented and ambitious SMEs not always settle for a defensive position but learn to collaborate with larger partners and demonstrate a proactive attitude towards relationship management. Such SMEs understand the importance of creating social ties and fostering informal communication with their customers to exchange information to develop shared plans and goals. (2015, 297.) In addition to fostering the relationships with customers, Pérez et al. suggest an SME to view business relationships as a strategical mean to create value. In today's vast competition it is difficult for firms to compete alone but instead they must find a balance between developing unique expertise and forming alliances that complement their knowledge and improve their competitive positions. For this and to remain competitive, an SME needs to develop a thorough comprehension of its own knowledge and of all its internal processes. Through that, an SME can identify the processes that have a potential to generate value in an integrative manner and find and determine the kind and number of business relationships to maintain that is sensible considering their limited resources. (2015, 309.)

## 2.2 Strategy process in Augumenta

Augumenta's strategy process in its current form started as structured strategy work in spring of 2020 and is currently ongoing and continuing. The strategy work includes the entire personnel which is one of the strategic choices of Augumenta. (Augumenta personnel discussions 2021.) According to Laine and Vaara (2012, 30–31), this is new kind of strategy work that they call dialogic: in such a strategy work the strategy belongs to everyone in the organization and not only belong but is everybody's responsibility as well. Before and during the construction of this thesis, the strategy work has had following steps:

- planning and agreeing on the method of strategy work
- kick-off meeting with the entire staff
- strategy work in teams based on similar guidelines
- a joint workshop to share each teams' insights and find convergences
- establishment of team to work on further formation of strategy → to be continued (Augumenta personnel discussions 2021.)

To guide the strategy work, a guideline was constructed that included a list of questions that needed to be answered by each team. The guideline included aspects related to market segments, product development, competition positioning and objectives in the short and long runs. The guidelines included also questions that could be connected to value creation: reflection to the problems Augumenta products solve and what makes Augumenta better than its competitors. (Augumenta team strategy meeting June 2020.) However, these guidelines alone don't correlate completely with the theoretical background presented in the previous chapter and so being are focused on in this thesis especially in the improved sales process modelling.

After the workshop in the fall 2020, there were many guidelines found that the personnel mutually agreed on. There were some points that the views differed from each other, but the differences were not drastic. It is merely about finding a mutual viewpoint in some details, but still the strategy work is not done yet and needs more effort. The aspects that were agreed on in general related to the way Augumenta is perceived as a company: a vision of a company offering AR software products was somewhat mutual. Through this agreement it is possible to go forth towards strategical planning of value creation in developing operations and customer relationship management. Another agreement was reached about the product offering: it became clear that no

efforts should be aimed at developing new products but instead develop the existing ones into as ready products as possible and to hold on to customization ability in the boundaries of the existing products. To complete this, it was also clear what problems the firm's products solve for its customer. (Augumenta Ltd. strategy workshop 2020.) Here is yet another important touchpoint into the concept of value creation. Yet the strategy is missing the points on how the value is created in other convergences, outside the actual product and services, but the discussion overall to the direction of what differentiates Augumenta from its competitors, is very welcome considering the theoretical background presented in the previous chapter. To complement the discussion of problems that the products solve, a topic of device usage in the product offering was agreed on as well (Augumenta Ltd. strategy workshop 2020). This also adds up with the idea of value creation and creates a good starting point for it. Geographical market segments were also agreed on although slight differences in opinions occurred (Augumenta Ltd. strategy workshop 2020).

Reflecting to the theoretical background of CRM as a strategy, services and service quality and value creation, the Augumenta strategy work has taken steps towards right direction. As mentioned before, yet a lot of development needs to be done and the strategy work continues after this thesis is finalized. While forming the strategy, Augumenta has recognized that strategy work is a continuing process and a process that should never be considered as completely ready, but as a continuum of something that evolves as the circumstances and business environment evolve as well (Augumenta personnel discussions 2021).

Outside of the actual strategy work Augumenta has taken steps also into strengthening its competitive position by establishing new business relationships by partnering up with two companies recently, as mentioned in the chapter of describing the business environment. Also, the decision to develop the sales process through this thesis is a strategical decision which reflects to achieving a thorough comprehension of Augumenta's own internal processes. Since this thesis will not investigate the processes of product development, there remains development to take place. So being, it is noteworthy that the R&D team established an initiative during their strategy work to develop such comprehension for future development in their own processes.

### 3 MODELLING AND ANALYZING THE CURRENT PROCESS

This chapter explains why process modelling is useful for a business according to theoretical framework and how the processes can be modelled. When discussing process modelling and development, it is necessary to aim for describing the phenomena to achieve mutual understanding of what the concept is about.

According to von Rosing, von Scheel & Scheer, processes are something that are occurring around us all the time. The word process originates from Latin, describing what is been done and how. von Rosing et al. describe a process as: “- - a collection of interrelated tasks and activities that are initiated in response to an event which aims to achieve a specific result for the consumer of the process.” Business processes differ from this description in a sense of the purpose the process is created for: to design, create and deliver a product for a customer. Business processes consist of different kind of tasks and activities interacting with employees, materials, machines, systems, and methods. (2014, 106.)

However, if one is to accept the basic idea of process being a chain of events that aims at generating value for the customer, it is clear what needs to be done: to recognize the chain, model it and set objectives for its implementation and development. In this context the concept process management is used. (Laamanen & Tinnilä 2009, 10.)

Another concept rising from the theoretical background is Business Process Management (BPM) which slightly differs from the previous concepts by its nature and purpose. According to von Rosing et al. (2014, 87), BPM can be described as follows:

Business process management (BPM) is a discipline involving any combination of modeling, automation, execution, control, measurement, and optimization of business activity flows in applicable combination to support enterprise goals, spanning organizational and system boundaries, and involving employees, customers, and partners within and beyond the enterprise boundaries.

What is noteworthy here is the difference in the nature of action compared to the concept of process modeling, business process and process development: the management aims at controlling all the action related to the process, hence the making and implementing various processes itself, the

everyday life of an organization. This thesis may discuss about BPM principles in practice to show the importance of the process management itself and use concepts such as business processes, but they should not be confused with BPM itself. Therefore, it is necessary to outline that this thesis focuses strictly on mapping the one process in question and finding development ideas for a single process even though concepts related to BPM may be used.

### **3.1 Business processes as a factor in company success**

To succeed a company needs a purpose and a mutual state of mind to achieve this purpose. But only the people's awareness of such purpose and their best actions to achieve the purpose is not enough. A system for operation is needed as well as means that support people's action towards the organization's success. Success, however, cannot be copied: each organization needs to find its own path. Process management and its different varieties create a way of thinking that an organization can utilize to achieve its goals. (Laamanen et al., 2009, 7.)

The goals of process management are not that different from the goals of management in general: good financial result, customer satisfaction, high productivity and the activity, high motivation, and discipline of the personnel. The means process management offers are quite much different from the ones that were used earlier in time: in the past the focus was more on cost efficiency instead of leanness and flexibility nowadays, or on hard personal goals instead of cooperation that passes the entire organization and team development, and on considering customers as the necessary evil instead of considering customers as partners in a network creating value. Perhaps the biggest change has taken place in the way of thinking: earlier organizations worked from divisions point of view but nowadays companies focus on outlining organizational borderlines crossing chains, processes. (Laamanen et al. 2009, 7.)

Process management is based on an idea that as an organization creates value sufficiently to the customer in relation to the costs, a chance for economic success is created. Departmental or even personal sub-optimization due to functional activity makes value creation complicated and sometimes even prevents it altogether. Usually this appears as problems in information flow or knowledge exchange in organizations. Functional problems are structural and cannot be fixed by for example organizing more but instead, new approach towards value creation is needed. (Laamanen et al. 2009, 10–11.)

However, it is not efficient to approach the value customers perceive directly, but to first review the value creation related action by modelling it, hence describing the processes. An understanding of what is critical action from the value creation point of view is sought for through modelling. If the modelling is successful, the following benefits usually can be seen:

- |   |
|---|
| The customer experiences better service which encourages to buy the services in future as well  |
| People understand the overall entity and their role in the value creation chain better which improves their motivation and cooperation through the entire organization                          |
| The customer needs are understood better and their emphasis in development decisions strengthens which enables better product, service, and delivery production. (Laamanen et al. 2009, 10–11.) |

*Figure 1: Benefits of successful process modelling*

As this may sound simple enough, the reality usually is more complex. Many business systems alone are complex not to mention the fact that human possesses only bounded rationality which makes comprehending a system in its entirety somewhat impossible. Two different approaches cannot even solve the issue: the reductions approach claims that all phenomena can be cut down into sub-systems, and the holistic approach claims that systems can only be understood as undivided entities. Real life situations are different and neither of the approaches can fully understand their behavior or enable improvement, hence models are needed to take a process view. (Barber, Dewhurst, Burns & Rogers 2003, 528.)

Generally, process models are either static, describing the situation “as is”, or dynamic, describing the situation “what if”. Static models are not as complex as the dynamic models that offer richer obtained information, but both can be used simultaneously even for example to benchmark “as is” models against “what if” models to scenario evaluation. (Barber et al. 2003, 528.) This thesis aims to produce both models to describe what can be done and what kind of actions it would require for each actor in the process.

When discussing process modelling in terms of modelling the sales process, defining the sales process seems to be a critical success factor for a business. According to a Harvard Business Review article, a clearly defined sales process is to increase a company’s sales revenue: defining

the process may have a drastic impact on sales performance. Yet just defining the process does not do the trick: the process needs to be attended to as well and the attention to be focused on right tasks, for example focusing on where in the sales process are the points of affecting to the customer's willingness to buy and how to increase it, instead of just creating forecasts or probable deals. (Jordan & Kelly 2015.)

In addition to only defining the sales process, paying attention to making the process visible inside the organization is as important. According to Rubanovitsch, each member of the sales team or actor related to sales functions need to know their role as part of the customer's value chain. Rubanovitsch suggests that the value chain should be modelled and made visible for each team member in the organization. (2019.)

### **3.2 Augumenta process map: current situation**

The following modellings have been made in close cooperation with Augumenta team members: mostly with the company COO and CEO but with impressions of other team members in marketing and technical team. The discussions with the COO and CEO have been held on a regular basis in order to maintain the overall development task of this thesis. The discussions were held on a weekly or bi-weekly basis consisting of changing ideas and reflecting the constructed concepts so far. In addition, there has been a couple of discussions with some of the members of the technical team, and discussions with the Head of Marketing.

This modelling also utilizes a joint task completed with the COO within a course about developing business processes during the fall period of 2020 and a course about strategic management accounting during spring period of 2020. Both courses gave a good aspect to the process and the company's operation and revealed some objects to develop. Those objects will be considered later in this development task when defining critical success factors. The comprehension reached during these courses has completed during the discussions with the Augumenta personnel. The modellings have been formed based on the knowledge that has been acquired from both the discussions and the courses.

In the center of process development are different templates that are used for documenting processes; hence the templates are documents of processes. Such templates can be process

maps, process matrixes or process models. (von Rosing et al. 2014, 175.) This chapter presents a process map and process models in relation to the operation of Augumenta.

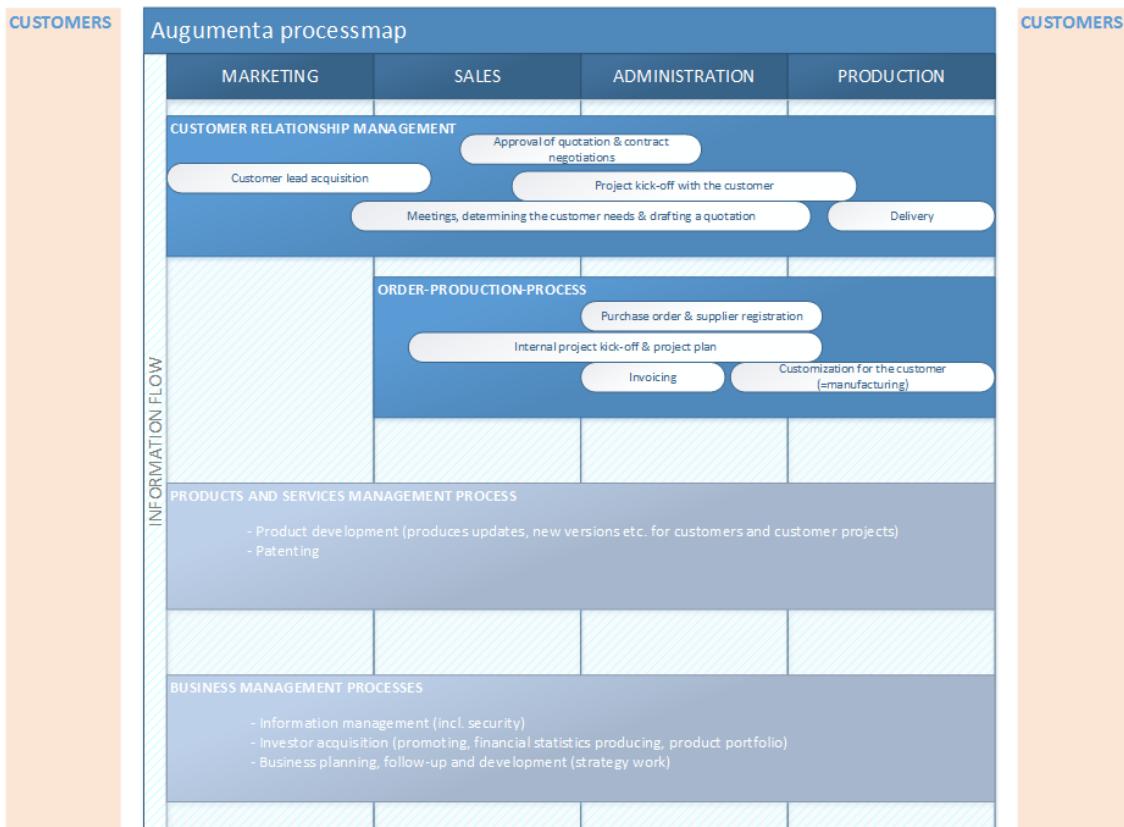
The templates' purpose is to capture each of their specific view with relative stakeholder concerns in order to make process identification, creation, and realization of the outlined needs and wishes possible. Therefore, the process templates aim at identifying the relevant stakeholders, their roles, requirements and concerns as well as the process descriptions and the corresponding tasks to the specific views and viewpoints. (von Rosing 2014, 181.)

A process map is what the name describes: a map of each process related to an organization's operation with the purpose of making an inventory and create a list of them. It is supposed to be an accurate list of and representation of a set of processes and their objects. (von Rosing et al. 2014, 175.) In the following process map (figure 1) the functions of the company have been presented as follows: marketing, sales, administration, production, and information flow. The administration includes departments such as HR, financial management and procurement, the production both R&D and customer projects. Production is the department that "manufactures" the products: software tailored to each customer at time, to function in the intended hardware. Information flow plays such an important role in the company that it has been described as a function going through the entire operation. Information flow has also been paid attention to a lot lately in the company's operation. Processes have been modelled in the process map in a way that visualizes how each process uses the mentioned resources and the process map describes the current situation.

When modelling processes, one method to use in classification and dividing the processes, is to separate main, management or supportive processes. Management processes are related to accountability and decision about how different activities are designed and implemented. They usually are connected to planning, budgeting, control, oversight and monitoring the main or supporting processes. Main processes deliver the output and appear within another process as the supporting processes are necessary in relation to the implementation of a main process. (von Rosing et al. 2014, 146, 162.) There are several other viewpoints for process classification as well, but since the nature of this thesis is to make the structures of a single process visible, it is logical to use this classification in question. However, as mentioned above, the idea of using process templates is to describe a specific situation of process elements, the description of course is related to the situation. This gives process description freedom to describe processes as they appear in

organizations. Within the following process templates, the concepts used are core process, supportive process and subprocess as the modellings are

- a holistic process map of Augumenta's overall operation,
- a swim lane type of a modelling of customer relationship management process referring to sales process and within that process
- a subprocess called delivery.



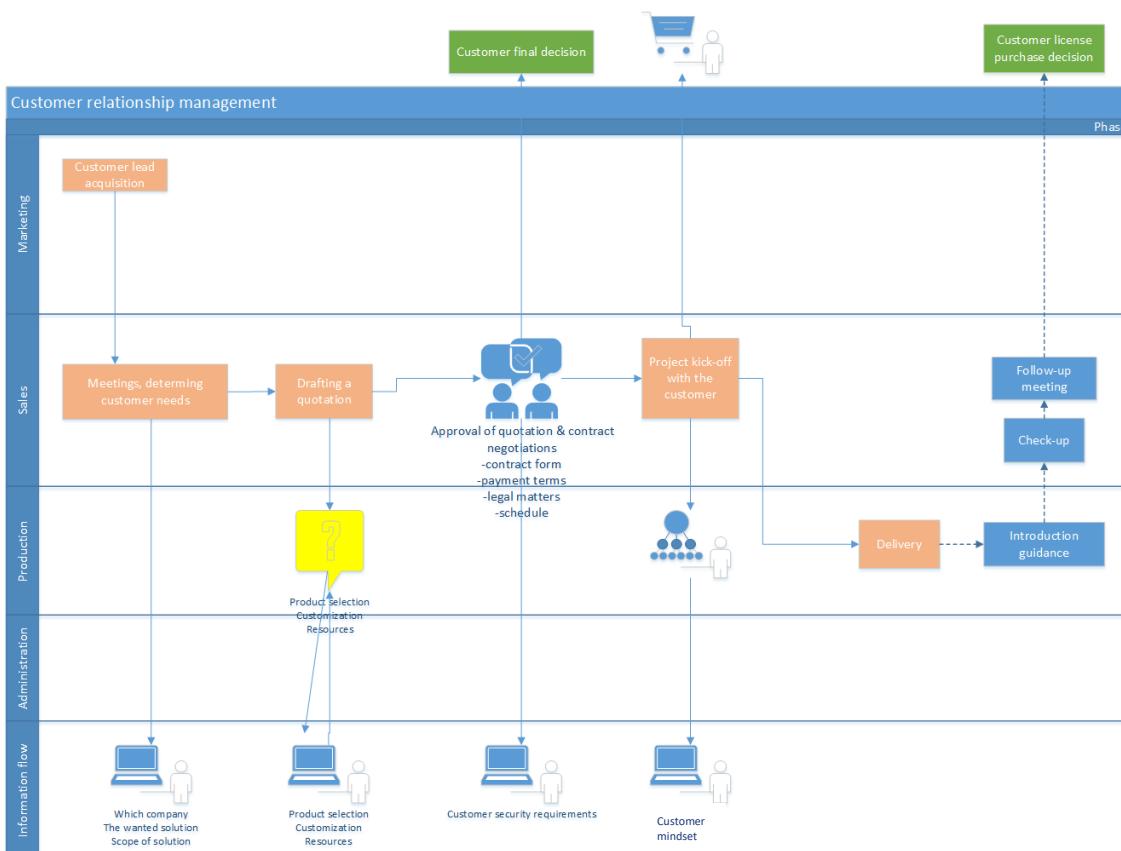
*FIGURE 2: Augumenta process map.*

The process map shows two core processes (the two upper processes in figure) and two supportive processes (the two lower processes in figure). The two core processes have been defined as strategically most important during the modelling phase of this thesis and from these two the process of Customer relationship management has been chosen to be the one that will be developed. Now, the thesis is about developing the sales process of Augumenta but there is no such process visible in the process map. During the formation of the process map it became clear that 'sales process' would be a too narrow concept to describe all the actions done during the process and therefore it was decided to name the process as 'Customer relationship management'. This thesis will investigate the process in a holistic way and aim to find critical success factors within

this process that may have impact on the success of sales actions. Even though both of the core processes are critical to the company's success, the Order-production-process is limited out of the development task at this point since the main development task is to develop the sales process, which in this case defines as the Customer relationship management process. This choice is supported also by the strategic development the company has chosen to do: to develop the license sales through continuing the pilot projects into license purchase by the customer.

### 3.2.1 Core process: Customer relationship management

The following process description is based on discussions with the company COO and CEO held during spring and fall periods of 2020. The process description utilizes a swim lane modelling. The swim lane modelling is a way to describe a process and its issues horizontally with each function in its own lane (Malik 2013, 31.)



*FIGURE 3: Customer relationship management process*

The process begins with customer lead acquisition that is conducted by five people alongside of their other tasks. New customer leads are usually acquired from different kind of events (exhibitions

etc.) and through different projects or contests. Recently (since the COVID-19 pandemic) the company has invested also in digital marketing to acquire new customer leads. The second phase – meetings and determining the customer needs – is almost completely conducted by the company CEO, until the discussion go deeper into the technical details when one or more people from technical team (production) may join in.

The third phase is drafting a quotation in which the technical team (production) is an important role supporting the CEO to draw a quotation that meets the customer needs and is also viable. This phase requires consideration of not only the customer needs but also allocating the company's resources and the products to be used. This and the former phase may take up to 3-12 months of time and may not necessarily end up in a deal, which in optimal situation would be the next phase, approval of the quotation and contract negotiations. In this phase the customer accepts the drafted quotation, which may still require several modifications until it is completely finalized, depending on the customer needs and their organizational structure. Within these negotiations the parties agree on payment terms, contract form (whose form is chosen to be used), legal issues and schedule. These negotiations are mostly taken care of by the CEO, supported by the COO.

The next, fifth, phase consists of the project kick-off with the customer, in which the CEO and the technical team members that are assigned to the customer project in hand take part. The customer kick-off is not necessarily held each time a pilot project is done but depends on how deeply the customer needs have discovered during earlier phases of the process. Usually customer kick-off is held to summarize what has been agreed on and to do a schedule check-up. In most cases there is personnel (end-user/s) present from the customer company as well.

The sixth phase consists of delivery of the product to the customer and the introduction guidance. If the customer is in Finland, the delivery is conducted by a technical team member (production) but if they are located outside of Finland, the CEO steps in. If the customer is located in quite a distance, the delivery and the guidance can be conducted remotely.

The delivery is included in the customer relationship management also as a subprocess as the following chapter describes it.

### 3.2.2 Subprocess: Delivery

The following process modelling has been made upon the discussions with the company CEO and the Customer success specialist. This modelling does not follow any pre-assigned or recommended process modelling but has been formed to describe the process as a circle where the process goes clockwise. To understand the process details, it is essential to be able to describe each of the process action points in such a model which is why the process modelling is drawn this way. This drawing refers also to a mind map which is a tool often utilized by the thesis worker to form a perception of an issue. So being it was a useful way of forming a perception of the process in case. Later it is possible to reform the process into a linear process model. In the modelling possible objects for developing have been described with red exclamation marks and yellow post-its.

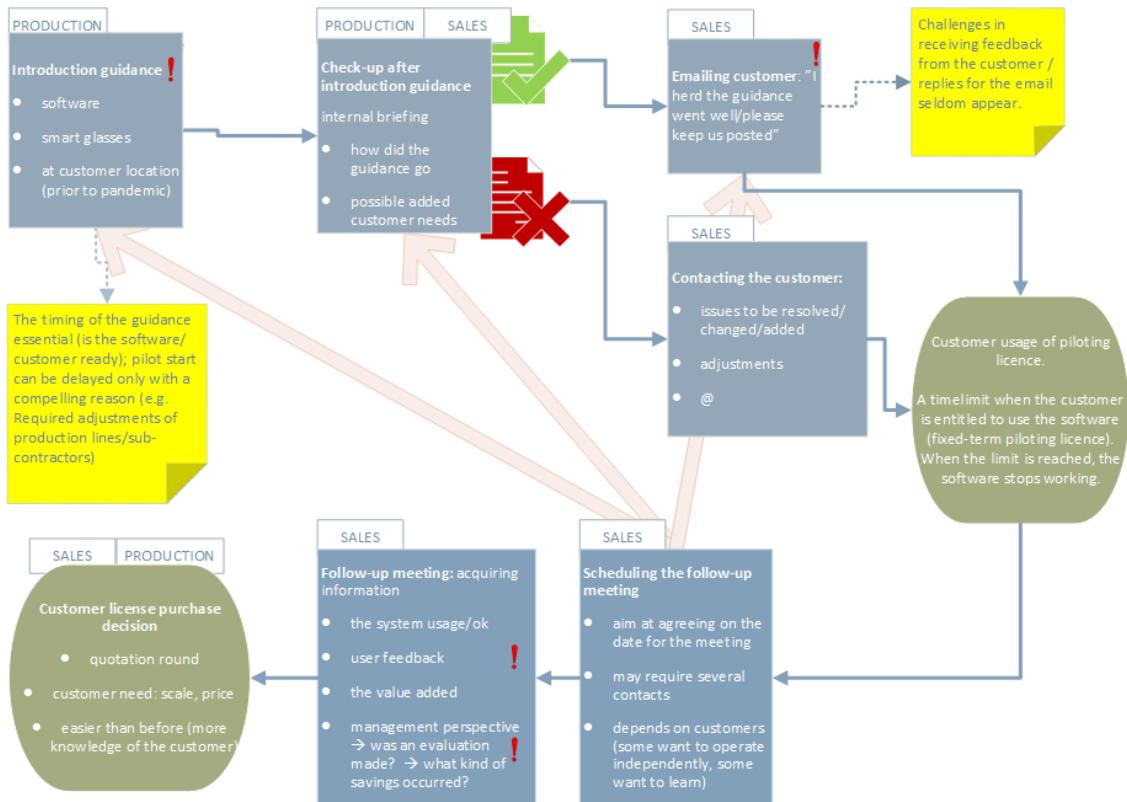


FIGURE 4: Delivery process

The first phase of the customer support process is the introduction guidance which consists of guidance on how to use both the software and the AR glasses. Usually one person from Augumenta is responsible for this phase, and there are people/end-users present from the customer company too. Sometimes the end-users shift work brings challenges for guiding as many people at the same time as possible. If this is the case, the guidance is held only one time for each customer. The

guidance is the first time a customer gets to experience the solution and the customization that was made specifically for their needs, and normally the guidance is held at the customer's premises (due to the pandemic situation this is not possible at the moment). There might be some characteristics that the customer does not like about the solution or their demands or they've had a change of hearts since the customer needs were found out in the beginning of the sales process. In this case, the person in charge of the guidance has an essential role in solving this kind of problems.

The second phase is when the person in charge of introduction guidance briefs the CEO (the salesperson) about the guidance and the possible occurred problems. If there are any conflicts, the CEO will contact the customer to solve them. If no conflicts arise, there will be a generic email sent to the customer (the customer's contact person in buying the solution) including a request that if any problems occur, the customer would let Augumenta know and otherwise keep Augumenta posted of how things go. The problem here is, according to the CEO, that usually there are no replies to such email and that getting feedback from the customer is difficult. Sometimes it may even take a month after the introduction guidance before the customer actually does anything with the sold solution/pilot project (Augumenta personnel discussions 2021). On the other hand, the customer success specialist pointed out that especially negative feedback from the customer has been received as in one case the solution's hardware couldn't fulfill the criteria that the customer had (Augumenta personnel discussions 2021).

If no feedback has occurred, the third phase is to schedule an after-pilot-meeting with the customer. At this point another email is sent to schedule the meeting and re-send if no replies have occurred. Unless the customer is reached, the CEO will try reaching with phone calls as well. Usually at some point, the meeting will be scheduled.

So being the fourth phase is the meeting itself and the meaning for it is to discover as much information from the client as possible. Questions to be answered are:

- is the solution being used?
- is the solution working as intended?
- preliminary user feedback?
- is the solution producing value to the customer?
- the management perspective: has the use of the solution been measured and if so, how much savings/productivity has occurred during the pilot project?

The problem here is that there have not been any answers yet to the latter question at all. This is also the point when discussions on purchasing the license begin.

After the meeting there is usually another round of quotations made upon the requests of the customer. If everything is settled and agreed, the license purchase would take place, and if not, the customer case will be lost.

The reasons customers are withdrawn from the license purchase are usually related to the customers not liking the smart glasses or to the fact that the customer cannot tell the value or benefits the solution would bring them. These are the two main reasons Augumenta has identified among their customers. (Augumenta personnel discussions 2021.) Since this thesis will not try to solve the dislike of smart glasses, that question will be limited out of this thesis. Hence, this thesis will focus on the question of helping the customer see the benefits of the solution.

One of the reasons why a customer cannot tell the benefits of the solution is that the customer is not tracking the activity of the pilot project or the activity before the pilot project. So being, the customer has no data to compare the performance between the time before the pilot project and during/after it. (Augumenta personnel discussions 2021.) This arouses a question if helping the customer to track their performance – possibly even before the piloting but also – during it would make the benefits visible for the customer and so being help the sales of the license. Currently during the sales process the customer is requested to track their performance several times but as it seems, this is not enough to encourage the customer to act for tracking (Augumenta personnel discussions 2021). This topic will be discussed more further in this thesis.

### **3.3 Defining the critical success factors**

The critical success factors in this thesis have been identified with close cooperation with Augumenta personnel, and the cooperation is more specifically described later in this chapter. Some theoretical background is presented through Mendoza et al.'s (2007, 921) article, in which the critical success factors are described as “- - the limited number of areas in which results, if satisfactory, will ensure a successful competitive behavior for the organizations”.

Mendoza et al. list thirteen critical success factors in relation to the customer relationship management as a strategy. In the list the thirteen factors in hand are presented as such where a factor's existence is thought to be critical in implementing and success of the strategy. It is recommended taking the thirteen factors into account if a company is for example in a situation that it's defining its CRM strategy. (2007, 921.) The following figure presents the factors:

*CSFs classification according to human factor, processes and technology*

ID	CSF	Human factor	Processes	Technology
1	Senior management commitment	X		
2	Creation of a multidisciplinary team	X	X	
3	Objectives definition	X		
4	Inter-departmental integration	X	X	
5	Communication of the CRM strategy to the staff	X	X	
6	Staff commitment	X		
7	Customer information management			X
8	Customer service		X	X
9	Sales automation		X	X
10	Marketing automation		X	X
11	Support for operational management	X	X	X
12	Customers contacts management	X		X
13	Information systems integration			X

*Figure 5: Thirteen critical success factors according to Mendoza et al. (2007, 921).*

There are three aspects the proposed list considers: processes, human factor, and technology. These aspects are required for a successful CRM as a strategy. The processes introduce the action that is related to the relationship with the customer (for example sales, marketing, and services) and their interrelations, definition and documentation. The human factor categorizes the factors that have a human, and therefore, an organizational component. The technology presents all the factors that are dependent on technology and that must be present in an organization before it can implement a CRM strategy. (2007, 921.)

However, the list Mendoza et al. (2007, 936) suggest is not necessarily applicable to Augmenta directly but may offer good implications towards defining suitable and measurable critical success

factors, as the writers themselves imply. For example, Augumenta represents a small (if not micro) enterprise with limited resources. The implementation of each success factor discussed above may not be possible in Augumenta due to the fact of simply insufficient resources. Second, the list refers strongly to a company aiming at a CRM strategy and the list's viewpoint is the operation of an entire company. Augumenta has not yet chosen a CRM strategy which is the starting point of the article and in addition, this thesis focuses on a single process within the company and not the entire company. The list, however, has been a source of inspiration and implications towards the aspects to focus on when defining the critical success factors. Especially the division of aspects affecting to CRM as a strategy – human factor, processes, technology – has helped in forming the idea of the critical factors to be chosen.

When defining the critical success factors for the processes modelled, there are several points to consider in 1) the customer relationship management process and in that process 2) the subprocess delivery. The factors are chosen on the basis whether it can be affected by the actions done by the personnel working in the customer interface. There are points in the process identified where the process continues fluently or faces issues that somehow disconnect the communication and information transfer between the customer and Augumenta.

The critical success factors have been identified based on the discussions with the CEO, COO, the Head of Marketing and a few other members of the personnel, for example the Customer success specialist. The choices of critical success factors were made upon the analysis on which points of the sales process the personnel working in the customer interface have the biggest impact on, or the points their action can actually make a difference. When the development task is about finding ways to develop the sales process in order to increase the revenue on a long term, it is relevant to focus on the points where changes in the way of working can be made and the operation improved.

There is a total of five critical success factors identified and chosen under reviewing in this thesis, and the critical factors are

1. Customer acquisition
2. Meetings, determining customer needs
3. Introduction guidance
4. Follow-up meetings
5. Customer/user feedback

The two first success factors are from the very beginning of the customer relationship management process and the three latter are points of action in the delivery subprocess. Special attention will be paid into the success factors 2–5.

The customer acquisition phase is critical to any company. It determines whether the marketing has reached the target audience in a way that attracts a sufficient amount of leads for the sales department to work on. In this case the customer acquisition would be its own sub process in the customer relationship management process, but it has not been modelled. Even though it is a critical success factor, it is such a wide concept to investigate and would make a thesis subject on its own, which is why the customer acquisition has been given less emphasis in the thesis. Also, the assumption of this thesis is that the development targets in the process are to be found from the customer support. However, customer acquisition will be considered as a part of the customer research with a goal to produce material for further development in the company. It may also reveal essential aspects that could benefit the remodeling of the chosen processes and producing the development ideas. There will possibly be development ideas presented also for the customer acquisition in the conclusions.

Customer meetings and determining the customer needs has been identified as another critical success factor in the process. A lot of communication occurs in this phase with the customer which is critical for building trust between the company and the customer (Augumenta personnel discussions 2021). There was a discussion held with the CEO of one of the recent successful customer cases in order to acquire information about the critical success factors reflecting to recent and real-life events. The perspective in this discussion was on how much the activity taking place in customer interface can affect on the result and aimed at analyzing what in this particular customer case was the critical factor in the CEO's opinion.

The discussion revealed that in general, Augumenta's strength is in its ability to customize its solutions to match with the customer needs and it was also the critical success factor in the particular customer case, according to the CEO. There were multiple providers offering their solutions but Augumenta was chosen over others due to the willingness to customize. (Augumenta personnel discussions 2021.) This is a strong indication of a critical success factor. During the phase of finding out customer needs, several hours were invested by the CEO to listen carefully what the customer has to say (Augumenta personnel discussions 2021). The customization takes

place in the middle phase of the process when the product i.e. software is produced, according to each, unique customer needs.

For some reason customization has not always been enough to win over the customers each time which is why this success factor is given more emphasis. The aim is to produce development ideas based on analyzing the process holistically and researching the customer aspects on the matter.

The third identified critical success factor is the introduction guidance held simultaneously when the delivery takes place. During the guidance, important information will be provided for the customer which is the basis on how the customer utilizes the provided solution. It is also the point when the customer sees their purchased solution for the first time and gets their first impression on it. (Augumenta personnel discussions 2021.) So being, it is possible to acquire crucial information from the client at this point, for example their actions in practice and possible added needs. The contents and success of the guidance play an important role in the usage of the solution during the pilot project since it is the sole point when the usage of the solution can be affected by the personnel working with the customer interface. According to Egger et al. (2019, 18), AR is the kind of technology that changes work processes and therefore affects an organization as a whole, but also on an individual level and can eventually affect even the company culture. This adds an interesting point to investigating the introduction guidance as a critical success factor and from that point of view, refers to it as being a crucial part of the success of the adoption of AR solutions in customer companies.

Next identified critical success factor is the follow-up meeting held usually after the pilot project. As the process description shows, there are usually grave difficulties to have the meeting scheduled and trying to schedule the meeting is also very time-consuming for the CEO. This would be yet another point of acquiring crucial information from the client about the pilot project and its benefits for the client, in which the personnel working with the customer interface could have an impact. Once the meeting has been scheduled and held, there usually is no information available by the customer about the benefits they have experienced using the solution which would argue on behalf of purchasing the license. (Augumenta personnel discussions 2021.) Which leads into the critical success factor number five, customer / user feedback.

Without any or only a little feedback it is difficult to argue why the license should be purchased, on behalf of both the provider and the customer. On the other hand, when the feedback has been

available (provided by the customer), the success rate of a license sales has been greater. There have also been cases where the solution has not been working in a way it was supposed to be during the pilot, but the customer has never brought it up to Augumenta for correction moves. (Augumenta personnel discussions 2021.) So being, the feedback plays an essential role in the sales process success and is therefore a critical success factor.

### **3.4 Definition of the customer journey map**

The original plan for this thesis was to define the customer journey map in addition to the sales process modelling with the idea the customer journey map would give further insights for developing the sales process. In general, a customer journey map describes the path of the customer in provided services and the touch points between the customer and the service (Tuulaniemi 2011, 78). At this point this part will be limited out due to the schedule overdue and lack of resources. Although defining the customer journey map would bring another point of view for the development of the sales process, it has been decided to rule out of this thesis. In addition to lack of time and resources, the company has plans for further development after this thesis is finalized to define and develop the customer journey and therefore the customer journey map will not be needed to be included in this thesis.

## 4 CUSTOMER INSIGHT AND RESEARCH

The chosen methods for gathering information from customers in this thesis were an online survey and an online video interview. This chapter explains the methods used and describes how the information was gathered. In this chapter the results of the customer research are also presented and analyzed.

When researching with qualitative methods the observation focus is on the entity of significance that exists both between people and socially. Those entities, in turn, appear in events both deriving from and ending up in people such as action, thoughts, setting up goals and for example as societal structures and administrative power. Qualitative research aims at reaching people's own descriptions of their perceived reality and enables reaching of people's significant life courses or life events extending over a long period of time. (Vilkka 2015, 75.)

In qualitative research the most common methods for gathering information are interview, survey, observation, and information compiled from various documents. These methods can be used either alternatively, side-by-side or with various combinations, according to the research task and resources in question. (Tuomi & Sarajärvi 2018, 62.) Especially in constructive research the variety of methods used can be versatile since the approach itself sets no limits for methods used whatsoever. Moreover, since the constructive research aims at clearly developing something new for a company or an organization, the needed material should be collected with many ways. (Ojasalo et al. 2014, 68.)

A survey is one of the most used methods of information acquisition usually in social science while one of its benefits is to collect a wide material with many questions asked from a big group of people. Thus, a survey as a method is fairly quick and effective and usually produces information based on numbers to be statistically processed. The most relevant weakness, though, for a survey is the one-dimensional information it provides. With a survey it is also difficult if not impossible to evaluate the respondents understanding of the topic and their level of seriousness in relation to submitting their insights. However, a survey can be used in various ways of which the online survey has become one of the most popular ways of collecting information fast and cost-effective. (Ojasalo et al. 2014, 121.) As this thesis recognizes as a combination of constructive and qualitative researches with confluences to service design, it is clear that no statistical processing of the survey

results is not relevant to plan. As the main idea for the customer research is to seek deeper understanding of the customer's perspectives, it is not appropriate to even seek such statistical proof. Moreover, the survey is used as a tool to quickly gather opinions and insights from the customers related to the critical success factors.

Interview as a method perfectly suits many development tasks and is one of the most used methods both in research and development. Interview enables collecting deep understanding in a relatively short period of time. It is a good choice as a method for collecting information when the emphasis is on an individual as a subject of the research situation or as an individual with a possibility to freely express issues concerning themselves. In cases when the development target is not widely investigated, an interview is a way to collect information that would broaden the viewpoints on the matter. In research the interview method should be combined with other methods to support each other: an interview can be used for example to generate deeper clarification or understanding. (Ojasalo et al. 2014, 106.) This was exactly the case in this thesis – to use the interview method as a tool to deepen the understanding of the customer insight.

#### **4.1 Selection of target group**

When planning a qualitative study, the most common question concerns the size of the research material and how big the sample should be. The answer would be that in qualitative research the size doesn't matter – instead the quality of the material does, and in qualitative research a sample is seldom taken. When quantitative research seeks generalizability, qualitative research aims at understanding the study subject and so being the research material acts as a tool in gaining the comprehension of the subject. Instead of statistical generalizations the aim is more to question existing thinking processes and to explain the phenomenon in a way that provides a chance to think otherwise. This goal is reachable when the analysis is made thoroughly. So being, the more appropriate question in qualitative research would be about the quality of the study material for reaching a comprehensive description of the research question. (Vilkka 2015, 97.)

Based on the previous, the target group in this study was relatively small. This choice was made with the fact that the client company itself is a start-up which means it does not have a wide range of customers yet to acquire for the research. So being, it was considered valid to conduct the study with the target group that is available. The target group was chosen in cooperation with the

company CEO and the head of Marketing while they are the most qualified to point into the direction of suitable customers to survey and interview, based on their history and positions in the company. As described previously, the attention was directed to the quality of the material and the aim is to look for the kind of customers that will provide the adequate possible insights. With this, the help and perspective of Augumenta personnel that are in touch with the customers, is crucial. Another reason for the chosen size of the study material was the lack of time and resources. In order to maintain the schedule, it was not possible to analyze too wide of a material. Targeting the participants with careful consideration in cooperation with Augumenta personnel was considered to guarantee the quality of the research material.

The target group consists of three different kind of customers:

- 1) Smart glass manufacturers
- 2) System integrators / software developers
- 3) Final customers

These groups were chosen based on the types of customers Augumenta has mainly had so far. The choice was made in cooperation with the CEO, who has the strongest vision of the clientele as mainly in charge of working in the customer interface. The customers differ from each other in a way they consume Augumenta products (mainly smart glass manufacturers from the two latter groups) which is why these groups' representatives will be asked slightly differing questions (depending on the perspective of their usage of the product).

The quality of the research material in this context refers to the combination of the size of the material, the prosperity of the analysis and interpretation, and the research text. It is recommended to make interpretations not only based on interviews or documents but to combine different kinds of materials to find new leads and clues to solve the riddle. In the end it is the researcher's call to determine what is actually relevant for the study and what relevance means in the study. The choice of target group and the suitability and scope of the materials are always evaluated by reflecting the research question (the development task in this case) and the goals of the study. (Vilkka 2015, 97–98.)

The relevance of researchable topics in this thesis determines through the critical success factors defined in the earlier phase when modelling the sales process. As the research goes on, other relevant topics may emerge, and their relevance will be evaluated upon the emergence.

## 4.2 Implementation & Methods

The customer survey consisted of two parts: an online survey with structured questions and an online video interview with open discussion and themed questions if needed. The target group was first sent an invitation to submit in an online survey and in that survey, each respondent was inquired for their willingness to take part in an online video interview. If the respondent expressed their willingness, they were then contacted to schedule the interview, which was held over a video call software at a certain time.

The goal for the survey was agreed in cooperation with the company CEO, and it was to reach 10 replies in total to the first phase (an online survey) and to acquire 5 contacts in total for conducting further interviews. Considering the size and history of the company, this was found a suitable result to acquire information for the research questions.

The invitation to take part in the survey was finally sent to total of 18 contacts found from the register of Augumenta. The target group consisted of 13 final customers (customers who have completed, agreed on completing a pilot project or planning on executing a pilot project) and 5 system integrators / software developers who have purchased an SDK (Software Development Kit) license trial (correspondent to the end customer pilot project) and continued or not continued purchasing the license for it. The group 1, smart glass manufacturers was decided to be excluded from the target group due to irrelevance of the development task: AR glass manufacturers is not the primary target group for Augumenta and therefore were not considered as relevant research objects.

	End customers	SDK = pilot / licensing of SDK	Total
<b>Invitations sent</b>	13	5	18
<b>Online survey submits</b>	6	3	9
<b>Interviews</b>	2	1	3
<b>Response rate (online survey)</b>	46 %	60 %	50 %

Figure 6: The number of responses in the customer survey

As seen in figure six, the goals set up for the customer survey were not reached as the number of online survey submits fell behind the goal by one, and the number of interviews by two. Considering the nature of the target group's positions in work, this was at some level expected: the target group's contacts were the buying executives of businesses and with this premise, the general setting is usually very busy. So being, the result is considered good as the aim of the research was to acquire understanding of the target group.

#### 4.2.1 The online survey

To help forming the questions, the perspective was in the chosen critical success factors. When forming and planning the research, the viewpoint presented in the chapter 3.2.2 about helping the customer to make the benefits of the solution visible, was considered as well. First, for each factor, a guiding question was formed to describe the essential relevance of the information that was desired to reach. The guiding questions are presented in the following figure:

CRITICAL SUCCESS FACTOR	GUIDING QUESTION
1. Customer acquisition	What is the trigger to consider AR / Augumenta?
2. Meetings, determining customer needs	Is there some unknown perspective to consider which is crucial for the customer?
3. Introduction guidance	If this included more guidance on a practical level (why use the solution and the meaning of project goals), would it end up generating more value to the customer?
4. Follow-up meetings	During the pilot project = is there something that would improve the rate of purchased licenses?
5. Customer/user feedback	During the pilot project = is there something that would improve the rate of purchased licenses?

Figure 7: Guiding questions to help to design the survey questions

After designing the guiding questions, it became clear that a separate questionnaire form was needed for the SDK customers. The process in purchasing Augumenta solutions is different for the SDK customers than for the end customers: the SDK customers are not the end users of the solution but they offer the SDK as a part of their own offering forward to their own customers (Augumenta personnel discussions 2021). So being, the CSFs may not be suitable as such for both

target groups. Therefore, the introduction guidance, follow-up meetings and customer / user feedback were decided to exclude from the SDK customer survey and include them only in the end customer survey. To replace the excluded CSFs a separate section to acquire information of the SDK trial period was formed. Realizing this created a little disturbance to the original idea of the CFSs and building the survey around them. For that reason, the viewpoint of the entire survey was broadened into not only acquiring information of the CFSs but to also acquire such information that would benefit the entire sales and marketing purposes of Augumenta and acquire information that might help in producing development ideas for the sales process. In forming the questions, the emphasis in the end user survey was appointed more to the determining customer needs, and the CFS follow-up meeting and customer / user feedback were merged in the questionnaire under the concept “during the pilot project”.

In addition to the CFSs, a section of goal setting as part of the sales process was added to the end customer survey. The idea of focusing on the goal setting together with the customer during the sales process came up in the early discussions of the sales process development with both the CEO and COO (Augumenta personnel discussions 2021). So being, it seemed logical to include a question of setting clear goals for the pilot project and its influence on the pilot project success.

Another viewpoint that was added to the survey (for both customer groups) was the overall insight of Augumenta as a service / solution provider. At very early stage of this development task a discussion of the CEO's wishes for the task was held. One of the things noted then was that this thesis would give something for the credibility of Augumenta as a service provider: similar to proofs of concept (PoC) or public customer references (Augumenta personnel discussions 2021). Since these are hard to acquire because of the nature of the business (business-to-business, customers considering Augumenta's role as a provider a business secret), a more delicate way to acquire such information was tried to be found. An idea of a rate of the customer satisfaction to present for the possible new customers came up. This rating or measured customer satisfaction could give credibility for Augumenta and its solutions and would help assuring the potential customers in the sales process. A metric that would be internationally well-known was sought for and the Net promoter score (later NPS) was found. Fisher & Kordupleski describe NPS with the following:

After an interaction with a company's products or services, people are asked “How likely is it that you would recommend our company to a friend or colleague?” Based on their responses on a 0-to-10 rating scale, group the respondents into “promoters” (9-10 rating—extremely likely to recommend), “passively satisfied” (7-8 rating), and “detractors” (0-6 rating—extremely

unlikely to recommend). Then, subtract the percentage of detractors from the percentage of promoters. (2019, 138).

According to Fisher et al., this rating has been in use since 2003 and is promoted as the one and only thing a company needs to know about its customers. NPS has then been used in a variety of settings but despite of its popularity, the usage of the score should be considered carefully especially in the decision-making processes of a company. As Fisher et al. criticize, there are many aspects why NPS should not be used as a determinant in strategic decision-making, of which one of them is NPS being quite unilateral in the information it provides and not actually revealing the reasons behind a customer choosing or not choosing to recommend the company. (2019, 138–139.) So being, it is very important to understand deeply what the NPS score is about when deciding upon it. Instead, NPS score could be very useful in communicating the loyalty rate of a company's clientele (Fisher et al. 2019, 139). NPS was included in the survey as an indicator of the satisfaction within Augumenta's customers and aiming at collecting proof of it to utilize in future marketing and sales communications. Once NPS score tracking has been established through this research, it is possible to continue tracking in the future as well and following the rate in a longer perspective.

Once the frame for the questionnaire was designed, some ideas were sought for from previous studies. Mendoza et al.'s (2007, 922–923) suggestions of 13 critical success factors for a company to plan CRM as a strategy were utilized as an inspiration for the questionnaire but as previously described, not followed precisely. The online survey questions are presented in the appendix 1.

Based on these aspects, the whole customer survey questions were formed. The final aim was

- A) to acquire relevant and quality information in a way that does not scare the recipient away (not too many questions). Considering the positions of the recipients, the time needed to reply on a survey is a very essential part when deciding on whether to reply or not.
- B) to acquire information that is easily analyzable due to the fact of schedule
- C) to acquire information that would benefit the sales process holistically and create material to utilize for example in marketing

#### **4.2.2 The online video interviews**

The interviews conducted resemble several different kind of interview models as they could be described as semi-structured interviews, open interviews or in-depth interviews (Ojasalo et al. 108). Having facets from all of the mentioned, themed questions were planned according to the previous CFSs presented. This resembles a semi-structured interview as the questions were planned ahead, but planned in a matter that there was room left for altering the words or order of each question, or even leaving out irrelevant questions during the interview (Ojasalo et al. 108). Before the interviews, the results of the online survey were quickly scanned in order to plan ahead the precise viewpoints that were wanted to be clarified. To both keep the schedule (the time reserved for each interview) and make sure relevant information was gathered, goals for each interview were formed in advance.

The interview situations followed mainly the basic idea of open interview: the aim was to create an open and free-and-easy-kind-of-situation that the interviewee would feel comfortable enough to share their insights in a spontaneous manner. The idea was to hear the interviewees express their insights in their own words without a predetermined, stiff setting that would possibly create obstacles into the interviewees' thinking. As Ojasalo et al. (2014, 109) describe, in an open interview both the interviewer and the interviewee discuss the topic in general while both parties actively and equally contribute to the discussion. The predefined goals and questions were presented only if the wanted information did not appear from the discussion itself. In an in-depth interview the discussion is confidentially held and the interviewees are encouraged to share all the essential details of the matter while the interviewer has a list of themes prepared in advance to make sure all the necessary issues will be discussed (Ojasalo et al. 2014, 109).

In the beginning of each interview session, the interviewee's schedule was confirmed. In cases where time was limited (the interviewee had only 30 minutes), the emphasis was on their story by their own words and the predetermined viewpoints kept in mind but suited for each occasion in hand. When scheduling the interviews, the respondents were inquired of their time available, and if it seemed little, they were given a suggestion of approximately 30 minutes. Especially in business-to-business, it is important to respect the other party's time and stick to the time frame that has been mutually agreed. The time limitations also limited the topics that were discussed in the interviews which may narrow down the results of the research. This was, however, a known premise

before the interviews were held and therefore, they were planned accordingly considering each interviewee case-by-case.

A structured list of CFSs and questions related to them was used in each interview to help the interviewer to stay focused and to record notes. The notes were written simultaneously as the interviews were held and completed immediately after the interview was over.

#### 4.3 Analysis of the results according to the critical success factors

The analysis was executed following a guideline by researcher Timo Laine, in which he suggests a following structure for analysis execution in qualitative research:

1. Decide, what in the material is interesting and make a STRONG DECISION
2 a. Go through the material and separate and mark down the findings that are included in your interest
2 b. Everything else is left out of the research!
2 c. Collect marked findings together and separate from the other material
3. Classify, theme or type the material
4. Write a summary

*Figure 8: A guideline for qualitative research analysis*

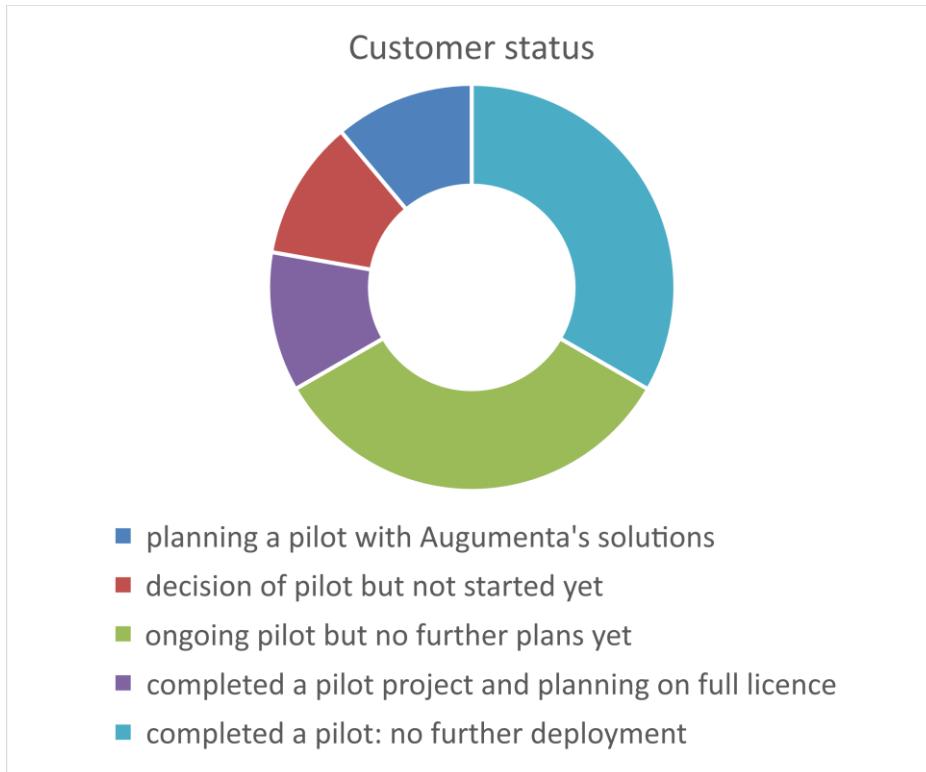
This guideline is not totally problem-free: it has been criticized for example for the strong decision because many interesting points may be discovered only during or after conducting the research. This may cause confusion and a conflict while trying to seek understanding in a qualitative research, one should be limiting out many interesting findings that would actually increase the understanding. (Tuomi et al. 2018, 104–105.) Keeping these points in mind, the aim of the analysis was mostly to produce a summary of the results for making conclusions. During the research, the emphasis was on finding out the opinions of Augumenta's customers in order to reflect whether the intended development suggestions would resonate at all with the clientele.

In the following analysis the findings have been grouped according to the previously chosen critical success factors which are viewed with the aim to form an overall picture of the customer's views

and also to find themes or topics that emerge from the material. Then, these findings were reflected to the process models described previously.

Since the chosen group represents the most important customers for Augumenta, and since Augumenta aims to acquire more customers such the respondents represent, the results are valid in the sense of finding understanding or customer behavior and reasons behind that. Due to the size of the target group, the results should not be considered as the absolute truth but more as indicators of the direction of the future actions and development decisions. All in all, the results give a good picture of the views of the participants in the study.

Before diving deeper to analyzing the customer research results, the customer status of respondents is viewed to describe the background effect the results in overall. The majority of respondents had either an ongoing pilot project but no further deployment plans yet (3 respondents) or they had completed a pilot project or an SDK trial period (3 respondents) and chose not to continue the project into further deployment as in a license purchase. The other respondents either were planning a pilot project, had decided about the pilot project but it had not started yet or had completed a pilot project and were planning on purchasing the full solution license (1 respondent each). The following figure shows the customer status of the respondents, showing both the end-customer and the SDK-customer results:



*Figure 9: The respondents' customer status*

The question of the customer status was the first in the online survey, and to those who responded completing a pilot project but not deploying further an open question was presented about the reason for not continuing to the full solution license. The following figure presents the reasons discovered:

Reason for not deploying further		
	End-customer	SDK-customer
<b>Respondent 1</b>	Stopped the project after the pilot phase as the smart glasses couldn't fulfil our safety criteria.	
<b>Respondent 2</b>		We use the HoloLens HMI interaction.
<b>Respondent 3</b>		The pilot project didn't meet our customer's needs.

*Figure 10: Reasons behind not continuing the pilot project with a license purchase*

The discovered reasons did not reveal any new information that would have not been discovered from the discussions with the Augumenta personnel earlier. Moreover, the results confirm the reasons especially with the hardware problems and those reasons being out of Augumenta's reach. However, the question was relevant for reflecting the latter results into the customer status and to reach a deeper understanding of the customer's insights.

#### 4.3.1 Customer acquisition

Customer acquisition focused on how customers a) find information about Augumenta, b) knew AR before the first contact with Augumenta, c) found Augumenta as a provider and d) think about digitalization. The results indicating to A and C are presented first through the online survey results, which gave information to be utilized in marketing and further designing of strategy. After that, B and D are presented through the interview results as appropriate.

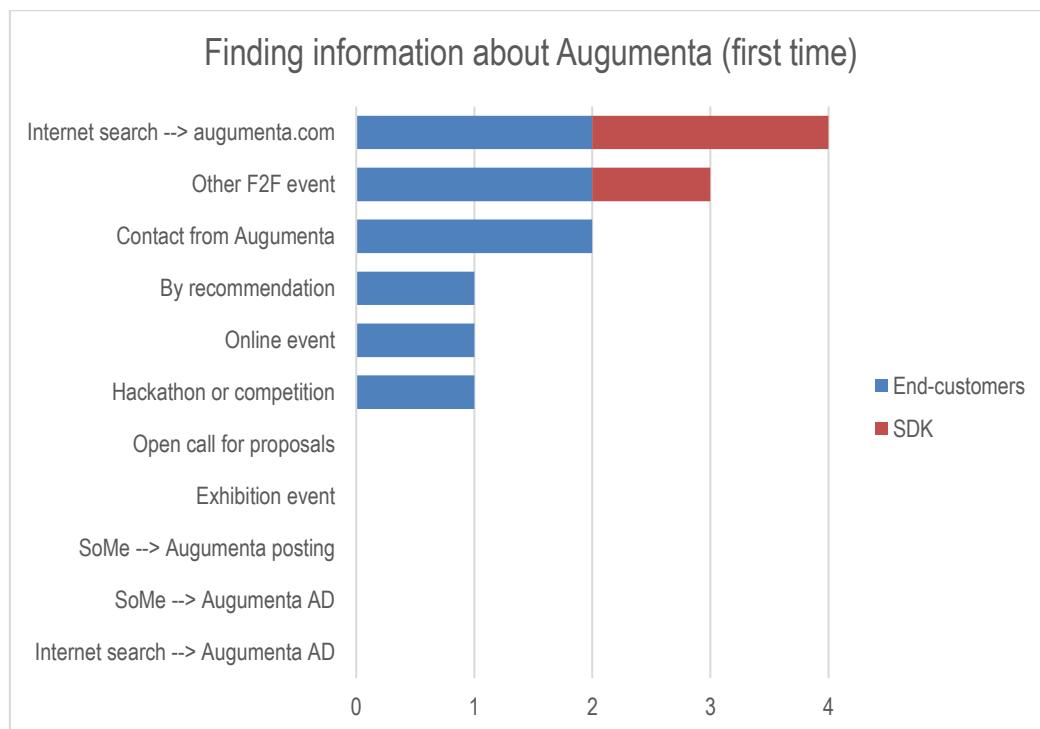


Figure 11: Finding information about Augumenta (online survey)

As it is shown in the above figure, the results clearly state the importance of the company website and its discoverability among the customers this survey reached. The logical way of increasing incoming leads would be by increasing the traffic to the website and by optimizing the website as good as possible. So being, investing in marketing actions would be strategically wise.

However, the question in the survey included multiple choices that the respondents were asked to choose from, and they could choose several for the same question. The options included the choice “other” which gave the second most responses and were grouped together under “Other F2F events”. Grouping was made by the nature of the event where the first information of Augumenta was received: an event where both the respondent and the representative of Augumenta has been physically present (seminar etc.). With these results it is noteworthy that being present in such occasions is important in customer acquisition beside the company website, especially for the end customers. However, when looking at the results, it should be noted that the respondents may have been familiarized themselves with Augumenta prior to the global pandemic that has forced people into remote collaborating and such F2F events have radically reduced. So far it is unknown how the global situation will evolve and how willing people are to attend in F2F events in the future so it might be considerable to plan ahead for both investing in the website marketing (especially increasing the traffic to the website) and the F2F events and planning how these events could be replaced with remote interaction. Also notable is that none of the respondents had seen Augumenta at an exhibition event even though – prior to Covid-19 – it has been one of the most important channels for Augumenta to acquire leads from (Augumenta personnel discussions 2021). On the basis of this, the F2F interaction could be targeted more precisely to the events where the threshold for the customer contact would be as low as possible. On the other hand, in business-to-business marketing events (such as exhibitions) may not realize in revenue until after many years and so being, the presence in different exhibitions can be an important channel to reach new leads.

Another interesting point with it is that none of the respondents had seen any activity in the social media channels. The question here is why: is it so that the respondents do not search for information in social media or is it so that such information does/has not existed? Either way, social media presence nowadays is important for every business and should be something to develop at Augumenta as well.

Indications of Augumenta’s competitive advantages can be seen from figure 12 as the respondents were asked why they chose Augumenta as a provider to negotiate with. As the discussions with the Augumenta personnel (2021) during the thesis project have shown, Augumenta’s customization ability is in the core of competition. The customers seem to agree on this, but their views differ from each other depending on which customer group they represent. The end customers clearly value the customization ability as a reason to even start quoting from Augumenta, as the SDK customers

value the solution's features higher. As the end customers are chosen to be invested more in the future, the logical suggestion for Augumenta would be to strengthen the customization even more and focus on that in marketing communication as well. The total votes go for the both attributes discussed which leads into a recommendation to invest on the solution features in the future as well.

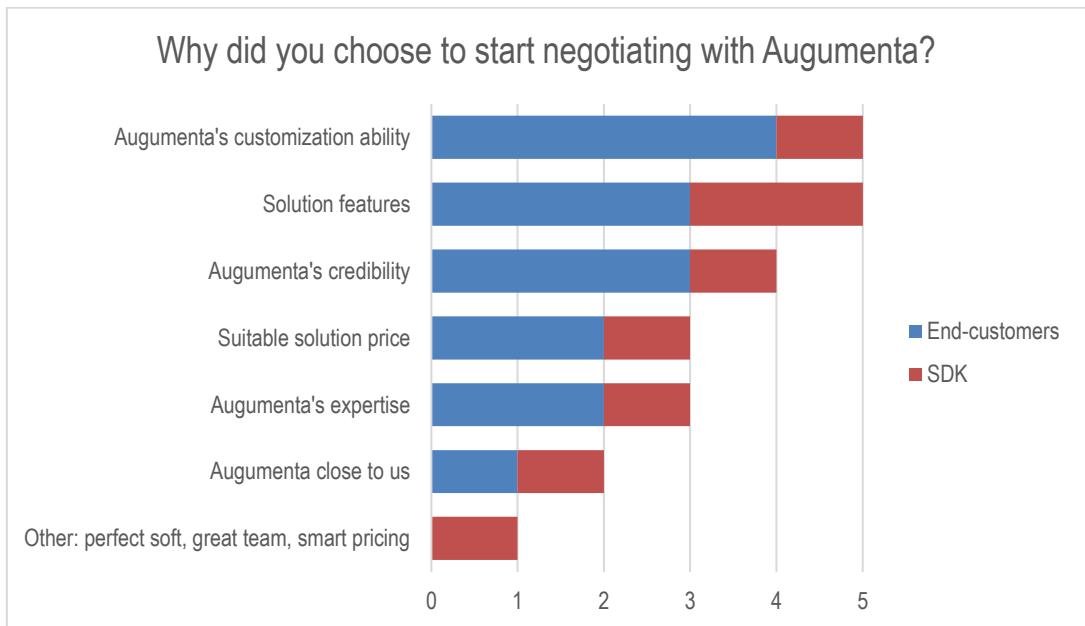


Figure 12: The reason to start negotiating with Augumenta (online survey)

The results from the interviews gave a deeper understanding of for example the reasons behind of a company choosing AR as a solution. The topic was discussed in two of the interviews (end customers) that clarified the decision-making process in industrial enterprises to be complex especially when it comes to new innovations and technologies. When discussed for example about reasons why AR has not been used before the pilot even though awareness of AR had risen in the company, the two discussions revealed subjects related to both company bureaucracy and people's attitudes. The subjects have been listed as follows:

<b>Reasons for not to use AR before</b>
People's attitude: People not in a right mood for AR
Financial risks: AR the kind of concept that without outside funding we wouldn't have experimented
Financial regulations inside the company: proven business cases required before any new investments can be made

Renown of AR: awareness of AR but not seen as something to consider
People's attitude: People not willing to experiment new technologies (operating level of organization)
Peoples' attitudes: conservative thinking
Complexity of investment calculations: business case calculations are not simple especially with a new concept such as AR in industry is

*Figure 13: List of subjects related to AR usage according to the interviews*

As the reasons show, the concept is complex and include both structural and human obstacles. Not only does the AR provider need to overcome the financial regulations of each company in case but a way to overcome people's attitudes as well. As one of the interviewees said, AR as a concept can be compared to, for example, people starting to use cars instead of horses: the car seller first had to convince people of the superiority of a car over a horse before the concept really broke through. AR in industrial use is going through the same.

Since the reasons for not choosing AR was discussed, it was logical to discuss also about digitalization in general and what would help companies to overcome the obstacles of digitalization. As the previous, so too was this discussed only with the two interviewees representing the end customer group. The one interviewee representing SDK customers is a provider of services and solutions enhancing digitalization outside of industry sector and so being the topic was left out of the discussion. The following list presents findings of the topic:

<b>What would help your company thrive in digitalizing operations?</b>
Peoples' attitudes & courageousness to start using new technologies
Awareness of different solutions and the possibilities those create
Use-cases and proofs of concept
Language versions in solutions: we operate in 40 different language areas

*Figure 14: List of subjects related to digitalization according to the interviews*

#### 4.3.2 Meetings, determining customer needs

This section focused on how customers found the negotiating phase with Augumenta: how was it to interact with Augumenta and how the customers found Augumenta's approach towards their specific needs. Concerning the following online survey results it is noteworthy that there were no results in the SDK customer group: the questions regarding Augumenta's approach in the negotiation phase (meetings, customer needs) did not reach any submits from the participants.

##### 7. Do you agree or disagree with the following sentences?

[Lisätietoja](#)

■ Agree completely ■ Agree partially ■ Don't agree or disagree ■ Disagree partially ■ Disagree completely  
■ Does not apply

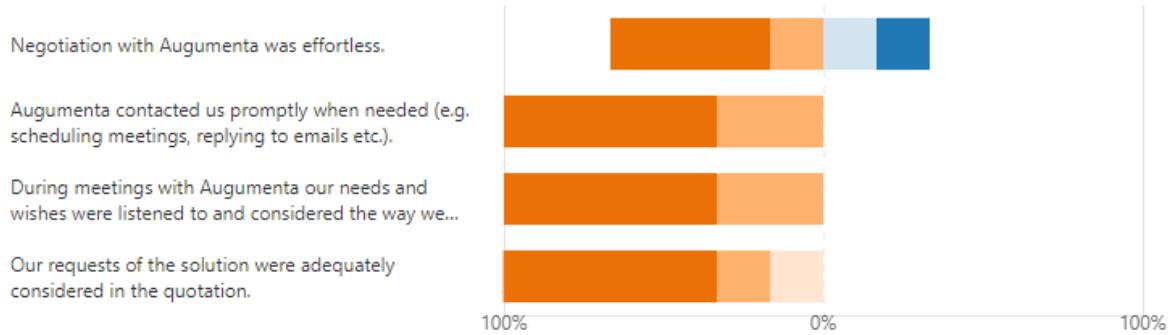


Figure 15: Arguments about meetings and customer needs according to end customers (online survey)

As the figure 15 shows, the majority of the respondents were satisfied with Augumenta's interaction during meetings and finding out about customer needs. There is only one respondent who has disagreed partially when asked whether negotiation with Augumenta was or was not effortless. All the other aspects have either been agreed completely or partially, except for the last question of the requests considered in the quotation where one respondent has not agreed nor disagreed. From the development point of view, this leaves quite few aspects to focus on other than giving strong implications to what are Augumenta's strengths in relation to determining customer needs.

In addition to the previous, open comments in the survey from provided more proof of Augumenta's great performance:

Comments
Happy about open discussion
I was happy to see how well Augumenta people were trying to resolve our needs and issues.
Technical knowledge was very good. Limitations of the solution were also discussed and noted.

Figure 16: Open comments regarding determining customer needs

The interviewing part provided more understanding mostly by one interview as the interviewee was the only one that had enough time for a proper interview. However, subjects that occurred during the discussions have been analyzed according to the CSFs if possible. The following list sums up the subjects that appeared regarding the meetings and determining customer needs.

How did you find Augumenta's approach to your needs during negotiations?
I wasn't directly in contact with Augumenta in the beginning, but as feedback inside our company I heard that Augumenta was the first to listen to our needs: other providers presented their products but didn't listen to our specific needs
Negotiations with pricing etc. have gone really well: our needs and wishes have been listened
We have gotten answers to each question we've had

Figure 17: Subjects related to finding out customer needs according to the interviews

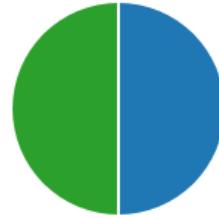
Prior experiences with some other providers that the interviewee would have had were also discussed with two interviewees with the intention to search for reasons an interaction by a provider is found good or bad. These discussions were short and didn't reveal anything essential or deeper understanding of the issues. The topic would've required more thorough instructions for the interviewee to fully open up and so being the interviews were led forward into other topics.

In addition to the CSFs presented for the thesis, a section of customers setting a goal for the pilot project was added to the themes of the survey. The questions about setting a goal for the pilot process wanted to address the importance of goal setting in the success of the project. The goal setting section was presented only for the end customer group. During the making of the thesis, the idea of developing the concept of setting up the goals in pilot projects has risen and therefore it was chosen among one of the areas to focus on in the survey. With the questions the aim was to find out whether customers set the goals and if so, have they been helpful considering the project.

10. Did you set a measurable goal (inside your organization) for the pilot project?

[Lisätietoja](#)

Yes	3
No	0
I couldn't say	3



11. If yes, do you agree or disagree with the following?

[Lisätietoja](#)

■ Agree completely ■ Agree partially ■ Don't agree or disagree ■ Disagree partially ■ Disagree completely  
■ Does not apply

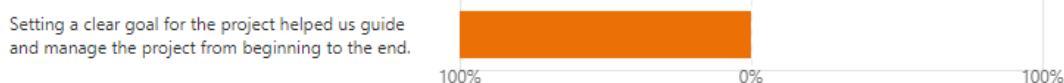


Figure 18: Goal setting for the pilot (online survey)

The interesting part was that all of the respondents admitting having set the goal recognized the importance of the goals, yet half of the respondents couldn't say for a reason or another whether a goal was set or not. From development point of view, the questioning was not the best possible and could have needed more designing on trying to find out more precisely about the goal setting among customers. The option "I couldn't say" could have been understood at least two different ways: either the respondent didn't know if such a goal was set or they were not allowed to reveal such information. More or less, the original plan with the research was to find out about the goal setting through the interviews, which it did.

Possible reasons for the customer not setting up a goal or such concept is not valid in the customer cases is the complexity of the entire concept, including the solution and the environment the customers operate. First of all, as AR solutions are new to industry and not that known yet, setting a goal for such a project is not very easy. There are several aspects that no one has experience of, which makes the goal setting difficult. Also AR in industry requires changes in the working culture – what to do, why and how. As these are not known, setting up a goal is difficult. Second, calculating the investment finance is another, not so very easy task to do. Another aspect that came up in the interviews is the payback time of the solution investment that is unknown due to the newness of AR solutions in industry. Two of the interviewees talked about very strict policy among their organization concerning investments: often clear business cases or calculations of the

profitability/payback time are required and when such don't exist, it makes the investment into a large-scale solution very difficult if not impossible. In addition to the interview result, such hypothesis has been identified among Augumenta earlier (Augumenta personnel discussions 2021). According to this finding, a solution to tackle this obstacle would be to develop a formula or a model that the customers could be able to calculate the payback time, and it would be even better if Augumenta could do it for the customer. Certain key performance indicators would need to be set up in the beginning of the project (during the negotiations already) to measure during the pilot whether the solution is helpful or not.

The idea with the goal setting question was also to find out possible metrics to use more widely in the sales process or find ideas to develop such metrics. A good and practical example of a metric was found as one of the interviewees explained their metrics for the specific case. In that company there is a system in use that measures the time consumed for doing a specific task which helped in forming the goals for the pilot project: lessen the time consumed for the task with x percent. Another aspect with the goal setting and the metrics was related to travel time consuming and meeting customers: how much time can be saved from traveling (percent) and how many customers (amount) can be met. Through these aspects one of the goals was to reduce the time used for traveling for 10 percent at least, which would make the pilot profitable.

This customer goal setting and metrics were possible in this case because of existing measurements in the company's operations. The metrics explained can be used with other customers as well, as long as they are aware of such figures beforehand. Problems occur when the customer has not tracked their activity before the consideration of AR as a solution for industry. However, the interview brought deeper understanding of the possible goal setting and the metrics that can be used. The results are in fact encouraging and can inspire new ideas for applying the metrics in the sales process in the future.

#### **4.3.3 Introduction guidance**

This part of the survey and interviews sought for deeper understanding about how the customers had found the introduction guidance (who had had it already) and what the customers expect from the guidance. One viewpoint was also to find out about the customer wishes for the introduction guidance to be: what kind of approach the customers are looking for and what would help them to

succeed on the solution usage. The results from the online survey are presented first and after that, the results from the interviews. This section was included only in the end user questionnaire, due to the fact of the different characteristics of the customer groups: SDK-customers submitted to a separate questionnaire about the SDK trial period and its features.

#### 14. Do you agree or disagree with the following?

[Lisätietoja](#)

■ Agree completely ■ Agree partially ■ Don't agree or disagree ■ Disagree partially ■ Disagree completely  
 ■ Does not apply



Figure 19: Arguments about the introduction guidance according to end customers (online survey)

There were total of three respondents who had had the introduction guidance and sharing their views about it, as is shown in figure 17. The overall analysis by a quick glance over the results show the respondents' satisfaction in general, as they mostly had agreed positively with the arguments measuring their satisfaction. The interest here focuses on the two latter arguments that were trying to find out whether the received guidance was adequate and targeted correctly to the right people regarding the pilot project. The two latter arguments are presented in the following table with possible notions of the participants in the guidance (if the respondent shared this information, asked with a separate, open question). Also the customer status is shown in order to find possible relations to the reasons why a pilot license was or was not deployed:

	<b>Everyone related to the usage of the solution got enough information and guidance to use the system fluently.</b>	<b>More guidance for further personnel would have been helpful.</b>	<b>Who attended the guidance?</b>	<b>Customer status</b>
<b>Respondent 1</b>	Agree completely	Does not apply	Project worker	Ongoing pilot but no further plans yet
<b>Respondent 2</b>	Agree completely	Agree completely	-	Planning to deploy a pilot
<b>Respondent 3</b>	Disagree partially	Agree partially	Operators, engineers, project manager	Completed a pilot but no further deployment

*Figure 20: Arguments of the introduction guidance's sufficiency and targeting*

When the results are viewed one by one respondent, the first one seems to be completely satisfied with the guidance received. The question of further guidance need did not apply to this customer's situation where the participant of the guidance was the project worker. So being, this particular customer would not benefit from further guidance by their own evaluation. The second respondent agreed completely to each argument, therefore stating that the guidance was sufficient yet more guidance would've been helpful. The last respondent disagreed partially to the argument of the sufficiency of the guidance and partially agreed with more guidance would've been helpful. According to these results the customers would have benefit of further and possibly wider guidance. So being, these results are encouraging and pointing towards the development needed within the introduction guidance. On the other hand, whether further guidance would have been the crucial factor in leading into a license purchase remains still a mystery since the respondent three had

stated the reason for not continuing the pilot into a license to have been the hardware failing their safety criteria. Further analysis of the particular customer case should be done in Augumenta, if possible, to recognize the customer cases where the license was not purchased due to the safety criteria failure and whether such factor would have been possible to notice and been influenced on in the earlier sales process phases.

Another interesting viewpoint related to guidance in general was found through the online survey while the respondents were asked whether receiving additional information as in tips and ideas during the pilot project would have been helpful. As the following figure shows, 2 of the respondents agreed either completely or partially while one stated the question not applying to their situation. Now, even though this is not directly a part of the CSFs presented in this thesis, this encourages towards adding value to the process by providing the customer directive content of how to utilize the solution even after the introduction guidance and before the final negotiations of the license purchase.

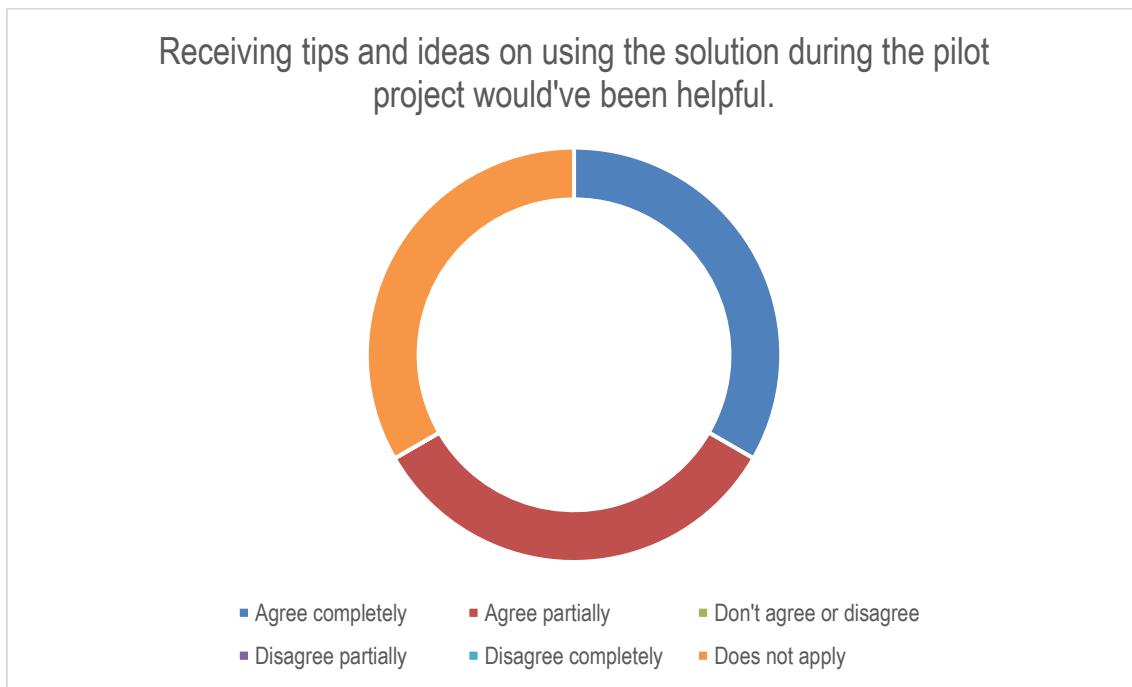


Figure 21: Argument about receiving tips and ideas during the pilot project (online survey)

What it comes to the interviews, the viewpoint was a little different from the survey questionnaire. First of all, the end customers attending to the interview had not had their introduction guidance yet

and therefore they could not answer from the point of view presented above. Second, the introduction guidance did not apply for the SDK customer as such: instead the SDK customer had a trial for their customer, taking care of the guidance for their customer themselves. So being, the focus on the interviews was turned into what Augumenta could do or could have done during the pilot or the SDK trial.

The SDK customer clearly stated throughout the interview that the trial/pilot project failure (the trial not proceeding to a license) had absolutely nothing to do with Augumenta's activity but instead the hardware (smart glasses) was the weak point. The SDK customer mentioned more than once that if they will have another need for such service or software, they will definitely buy from Augumenta. So being, considering the development task of this thesis, this information is irrelevant but of course is very supporting and motivating feedback for Augumenta and therefore reviewed.

With the two end customers the questions of the introduction guidance were reviewed in the time frame available and so being, discussed with only one end customer. Since the status of this customer was the soon upcoming pilot, the focus was more on the customer's requests and wishes for the upcoming guidance. The discussion brought up the need or wish for a face-to-face guidance if the pandemic situation allows and if not, a videocall introduction guidance must be done. Other than that, the customer expects Augumenta to provide the kind of guidance that a mutual understanding of the solution usage is reached sufficiently but there were no other requests at that time.

As a conclusion of the results it may be presented that planning the introduction guidance must be thoroughly emphasized during the process and to develop practices to ensure the guidance's sufficiency regarding both the contents and the audience. Process-wise, they both can be enhanced by improving the information flow of each customer needs inside Augumenta, hence making sure the person in charge of the customer relationship and the provider of the introduction guidance realize to provide relevant information to each other and utilize it when planning the guidance.

#### 4.3.4 Follow-up meetings

This chapter presents results found regarding follow-up meetings, their need and content as adding value to the customer. Information was sought for from both the online survey and the interviews for which the online survey results are first reviewed. In the online survey the respondents were first asked whether they had had the follow-up meeting and if they responded positively, they were asked how they had found the follow-up meetings.

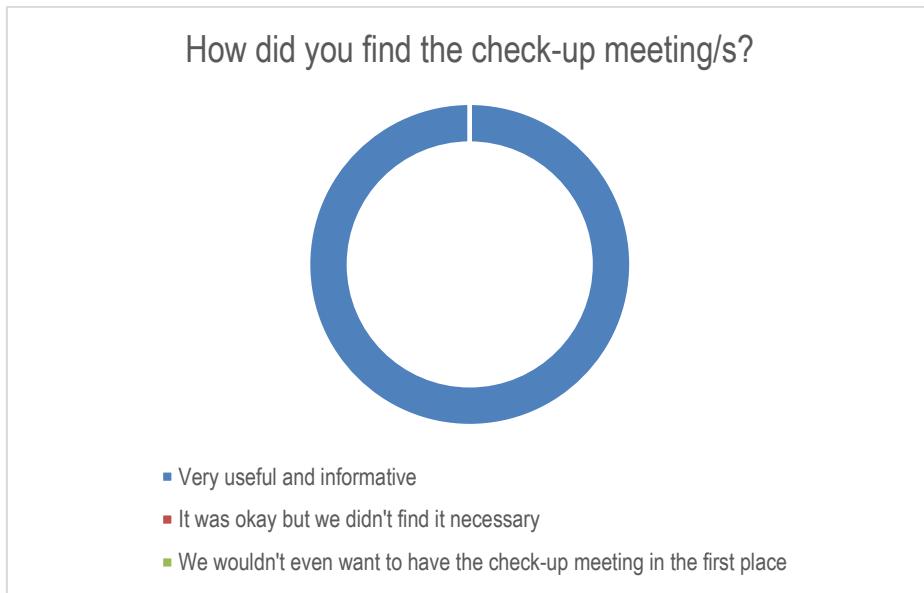


Figure 22: Follow-up meetings in the pilot project (online survey)

There were three respondents in total to answer to the questions about the follow-up meetings. During modelling the sales process in chapter three, it became clear that the follow-up meetings are difficult to schedule with the client which led into an assumption of perhaps the customers not finding the follow-up meetings necessary. With the question presented the aim was to see if the check-up meetings are found useful at all or not and to justify their need. As the figure above presents, the results prove the need quite clear, although they do not give any indication to the reason why many of the customers are reluctant to schedule the meetings. Neither did the interviews but gave promising indication to the hypothesis that the follow-up meetings are actually important and through developing scheduling practices in the sales process, it would improve the customer satisfaction (or at least create better circumstances to reach more license customers).

The limited time for the interviews was present in this section of the research again as this topic was discussed with only one customer. Since the customer in question was again the one who had not had their pilot start yet, the discussion was led into what the customer is expecting from Augumenta once the time of the pilot finally comes. A very interesting point came up as the customer was asked that what Augumenta could do during the pilot project to ensure from its perspectives that the customer succeeds in the pilot project. The customer hoped for Augumenta to show active attitude towards the customer's actions and to be active in organizing follow-up meetings and in addition, wanted Augumenta to actively require feedback from the customer about what they have done with the solution and if they came up with any malfunctions et cetera. The interviewee actually used the word pressure when describing how they expect Augumenta to act towards their direction.

Although this is only one customer's viewpoint, it is once again encouraging feedback towards developing the follow-up meeting practices within the sales process. The value of this finding grows even bigger when reflecting to the fact that the customer in case was not implied of the viewpoint of the follow-up meetings at any point of the customer survey but the initiative came directly from the customer's direction. Combined with the results from the online survey, it seems that developing the practices would add more value to the customer and therefore enhance the odds of pilot projects turning into a license purchase.

#### **4.3.5 Customer/user feedback**

This section in the customer research looked for information of the role of customer or end-user feedback that the customer acquired during their pilot project. Following the path the previous sections had resulted in, this section had three respondents as well in the online survey and three interviewees, of which only one had time to discuss the topic. The interview part again produced deeper understanding over the topic although the gathered data was not very wide. In the online survey the question about feedback was under a heading "during the pilot project" which included also questions about support provided by Augumenta during the pilot and support if problems occurred. These questions were included in the survey with the idea of producing wider information about customer satisfaction and possibly finding more reasons why a pilot project had not realized in a license purchase.

We received adequate end-user feedback after the pilot inside our company.

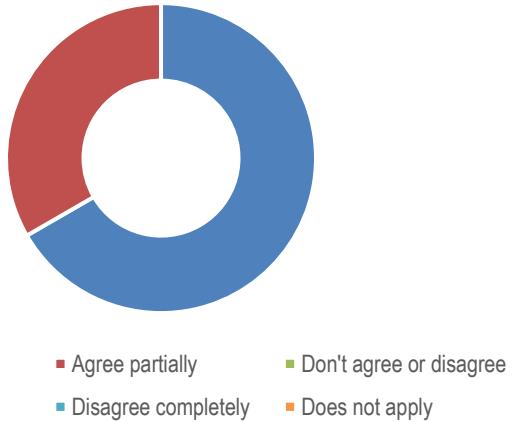


Figure 23: Receiving end-user feedback after a pilot (online survey)

As it is shown in the figure above, the three respondents reported receiving feedback inside their own company adequately after the pilot project: one respondent agreed partially when two completely. Since the question includes the words “inside our company”, it would mean the customers have actively collected and received feedback from the end-users inside their organization during the pilot project. The discussions with Augumenta personnel (2021) have revealed that often after a pilot project the customer cannot tell whether the solution was useful or not and that it relates to the customer not collecting information of the usage. According to these results the problem lies somewhere else than actually gathering the information inside a customer company, although it is important to remember this result represents a limited group of customers. On the other hand, one respondent agreed to the argument only partially which leaves room for also disagreeing partially hence more feedback would have been needed. More or less, the question here may be in the quality of the feedback: what is collected and does it tell anything about the benefits of the solution.

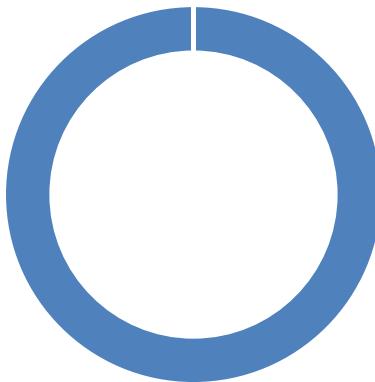
The questionnaire did not include viewpoints on how the customers would have wanted Augumenta to act regarding collecting feedback. Yet again the interviewing part brought more understanding to this viewpoint as the topic was discussed with the one interviewee with time and a pilot project coming ahead. The discussion presented in the previous chapter revealed the customer hoping for an active approach from Augumenta as in actively requesting the customer's feedback on how everything has worked and if there have been any malfunctions et cetera. This again came up

without any implications towards the customer about collecting feedback during a pilot project. However, the mode of feedback collecting was not discussed and so being leaves open space for interpretations of the matter.

Concerning the end-user feedback collection, an interesting point outside this customer research has come up during the making of the thesis. An upcoming customer case including a pilot project shows encouraging notions in the customer's wishes regarding Augumenta's activity. The customer in question has requested Augumenta to be the responsible party of designing the key performance indicators (KPIs) together with the customer and collecting the end-user feedback according to them during the pilot project and reporting back to the customer after the pilot project is completed (Augumenta personnel discussions 2021). Considering the principles of qualitative research, including this development into the material of this thesis would be very much relevant as it would be strengthening the background for both the CSF reviewed in this chapter and the CSFs reviewed previously. The interesting part here is that this indication from the customer came up coincidentally a few months later after the idea of setting up a goal came up in developing the sales process. Combining these materials, a strong indication towards the need of developing a practice of collecting end-user feedback would be very much in place.

The survey results regarding the support during a pilot project are presented in the following two figures. The results are showing great satisfaction from the customers towards Augumenta's activity on the matter, and therefore did not provide new information about the pilot not realizing into a license purchase. However, it should again be noted that the results represent a limited group of customers. In the question of receiving support when needed the respondents were unanimous and in the question of receiving support when problems occurred two respondents agreed completely while one agreed partially. This leaves a slight chance for interpretation for the need to enhance the support but as the questions were quite similar, the overall result indicates towards great satisfaction, as mentioned before.

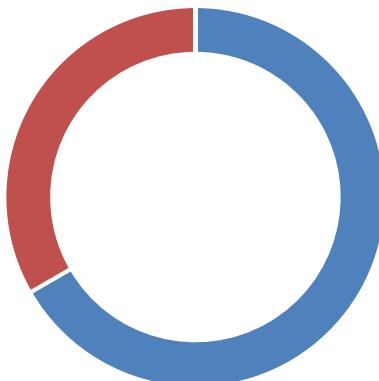
We received support when needed from Augumenta during the pilot project.



- Agree completely
- Agree partially
- Don't agree or disagree
- Disagree partially
- Disagree completely
- Does not apply

Figure 24: Receiving support during a pilot project (online survey)

If there were any problems during the pilot project, we always got support from Augumenta immediately and adequately.



- Agree completely
- Agree partially
- Don't agree or disagree
- Disagree partially
- Disagree completely
- Does not apply

Figure 25: Receiving support if problems occurred during a pilot project (online survey)

#### 4.3.6 Other findings

As the chapter of planning the online survey presented, a question of Net Promoter Score (NPS) was decided to be implemented in the customer survey as in to provide content to use in Augumenta marketing and future sales activities. The Augumenta NPS according to this survey is presented in the following figure, including the combined results of both customer groups: the end-customers and the SDK-customers.

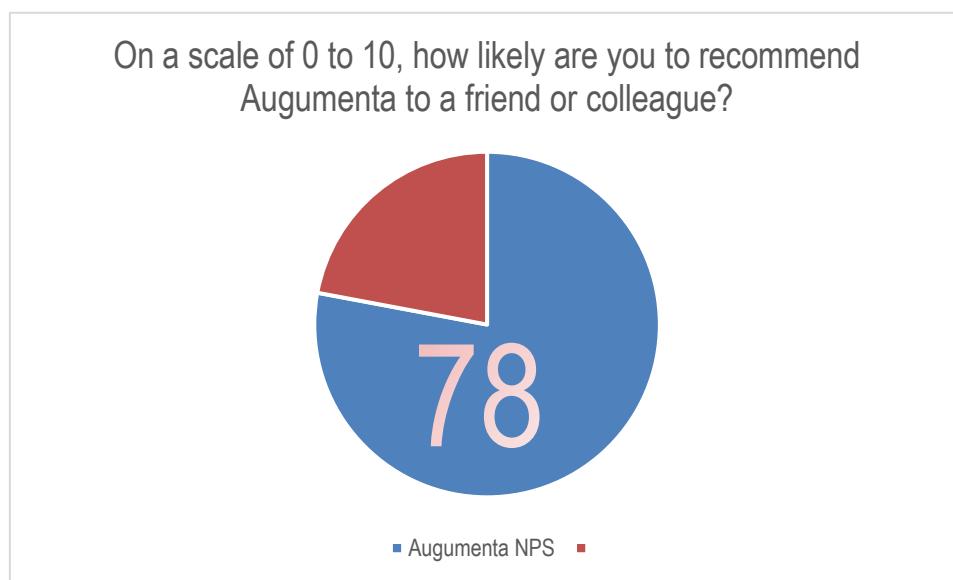


Figure 26: Augumenta NPS (online survey)

In addition to the overall NPS rating the respondents were asked also about the value Augumenta solution had provided them, and what was the final reason to choose Augumenta as a provider. Another question utilizing the NPS scale was used to find out about the purchasing process and the customers opinion. Since these aspects were not in the actual focus point of this thesis (developing the sales process according to the chosen CSFs) but more to provide contents to utilize in future sales and marketing activities, the results are not presented here but in the appendix 2. So too are the results of the questions targeted to SDK customers presented in the appendix 2.

Outside the chosen CFSs in the interviews the respondents were asked what would help them to thrive in digitalizing operations and asked to give suggestions for Augumenta to grow. The following chart summarizes found results from these viewpoints:

What would help your company thrive in digitalizing operations?	Peoples' attitudes & courageousness to start using new technologies
	Awareness of different solutions and the possibilities those create
	Use-cases and proofs of concept
	Language versions in solutions: we operate in 40 different language areas
Reasons for not continuing SDK trial → what Augumenta could have done differently?	"Was totally up to the device: Augumenta could've done nothing → if future needs appear, we will definitely buy from Augumenta"
Is there something you recommend for Augumenta to do in the future / what could help Augumenta to grow?	If an interested customer suddenly loses interest → send in "a flying squad" to see what's the problem (not many providers bother to ask) and respond to it  Proven use-cases (find a way to generate them)

Figure 27: Outcomes from the interviews

The respondents were also asked for their opinion of whether tracking the NPS would help Augumenta in creating credibility or to communicate its success to new customer leads. The SDK customer stated NPS not being very valid in the target market of SDK since the motive for purchasing SDK is mostly only about the software features and the opinion of other customers is not that important. Instead, the interviewed two end customers both agreed that the NPS might create extra value for Augumenta's future customers if not replacing the need for POCs but giving confirmation of a reliable actor. Both respondents recognized the NPS themselves and stated to paying attention to it when for example buying online.

## **5 RE-MODELLING THE SALES PROCESS**

The following presents the improved process modellings for both earlier presented modellings covering the customer relationship management and the delivery process. First, the improved process modellings are presented, following descriptions of what has changed and why. Later on, a description of the observed information flow needed is shown, and after that each critical success factor is addressed in accordance to further describe the suggested development. Finally, a compilation of other development and further research ideas is presented to conclude the chapter.

The improved process modellings utilize the discussions held with Augumenta CEO, COO and Head of marketing as well as the joint task completed with the COO within a course about developing business processes during the fall period of 2020. The improvements have been discussed during the thesis project with Augumenta CEO, COO, the Head of Marketing and the Customer Success specialist to test the modellings suggestions. In addition, regular meetings with the CEO and the COO have been conducted during the entire thesis project to reflect the proceeding of the thesis and the ideas found. The modellings also consider the results of the customer survey presented in the previous chapter.

## 5.1 Improved model of customer relationship management process [Otsikko]

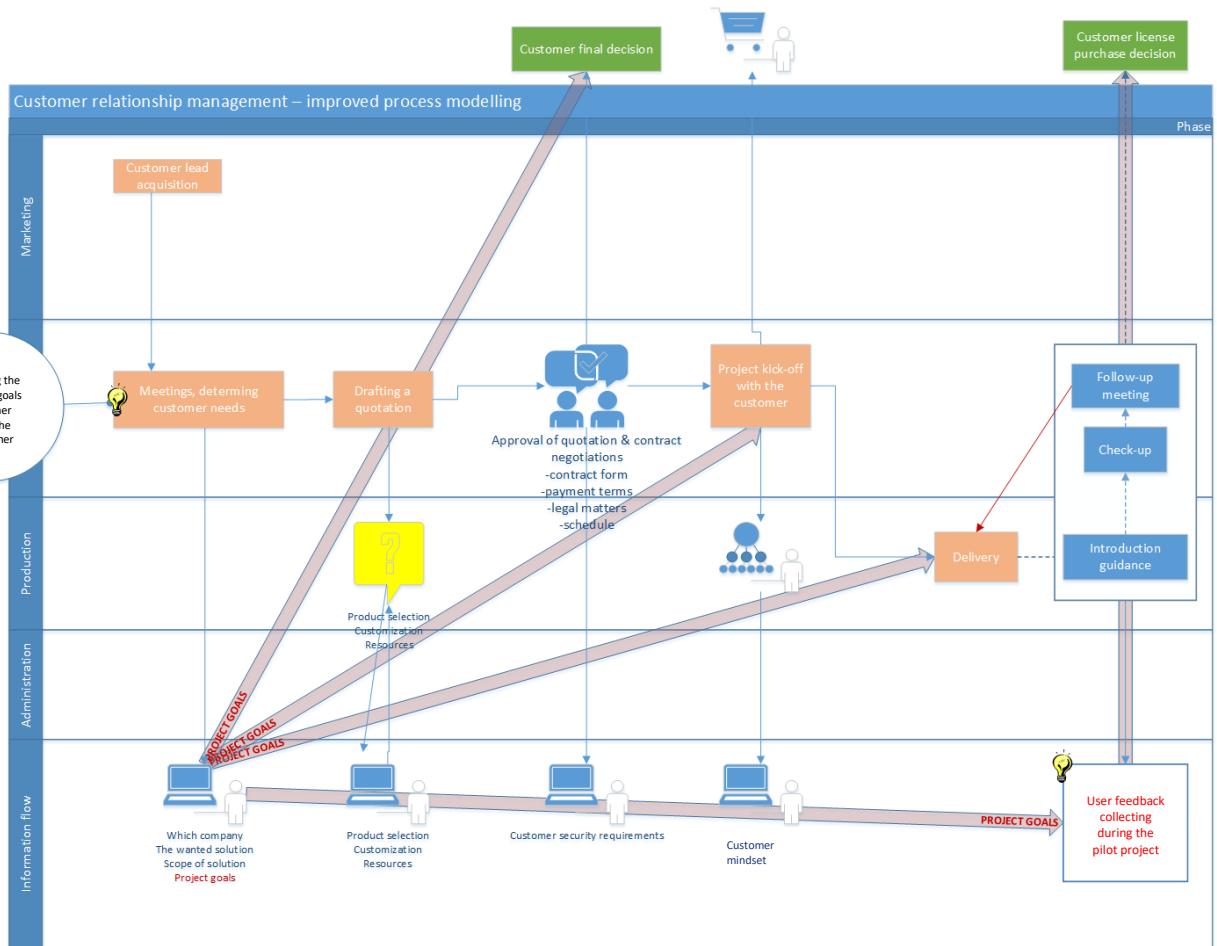


Figure 28: Improved customer relationship management process

The improved modelling differs from the current process mostly in the early stages of the process where the goal setting together with the customer has been added in the phase of meetings and determining the customer needs. The improved parts in the process are described with lightbulbs as in ideas sprung and also with wide arrows. As it has been pointed out in the chapter 4.3.2., setting up a clear goal with key performance indicators clearly determined makes a great difference whether the project is found to be successful or not. The question is mostly about the initiative of setting the goals or finding suitable metrics to be applied in the project. Therefore, taking the control of setting up the goals from the seller's point of view would be justified as in it would improve the project results for the customer as well. Including discussions of the goals and determining them together with the customer directs the entire project towards acknowledging the benefits of the solution. As the goals and the metrics of the project are agreed in cooperation with the customer in the early phase of the process, the basis for continuing the pilot into a full solution license is build. By setting up the goals together with the customer and measuring the results, arguments for

negotiation in the latter phases are created as well. Thus, by adding the goal setting into the process, the value of the solution is made visible for the customer. In the improved modelling the goals have been visualized with arrows referring to the goals being included in every phase of the process (quotation, project kick-off and delivery). In practice, the goals are kept up in discussions in every phase of the process.

Another difference in the process is related to the delivery process where collecting feedback from the end-users is added to the process. Referring to the findings presented in the chapter 4.3.5 the end-user feedback would help solving the problem of the customer not knowing the benefits of the solution after the pilot project has been completed. The idea is to develop a questionnaire for collecting feedback from the users during the pilot. The questions collecting the feedback from the end-users would need to be designed clear and easy-to-answer and would gather information on how the users are finding the benefits of the solution. The gathered information would be collected to help the parties responsible of the solution purchase/project coordinators inside the customer company and Augumenta. The end-users would evaluate the benefits of the solution in relation to their tasks and daily operation. For each project, the topics of feedback would be customized to meet the goals of the project so that the benefits can be verified. So being, collecting the end-user feedback would also be a part of the goal setting in the early stage of the process. In addition, collecting the feedback would be a logical development step as the customers often want to know whether smart glasses is a suitable device to be used and so being the end-users may be asked to provide feedback on the use of the smart glasses (Augumenta personnel discussions 2021). Another difference in the end phases of the process can be found from the delivery subprocess. The following figure describes the improvements suggested for the project.

## 5.2 Improved model of delivery process

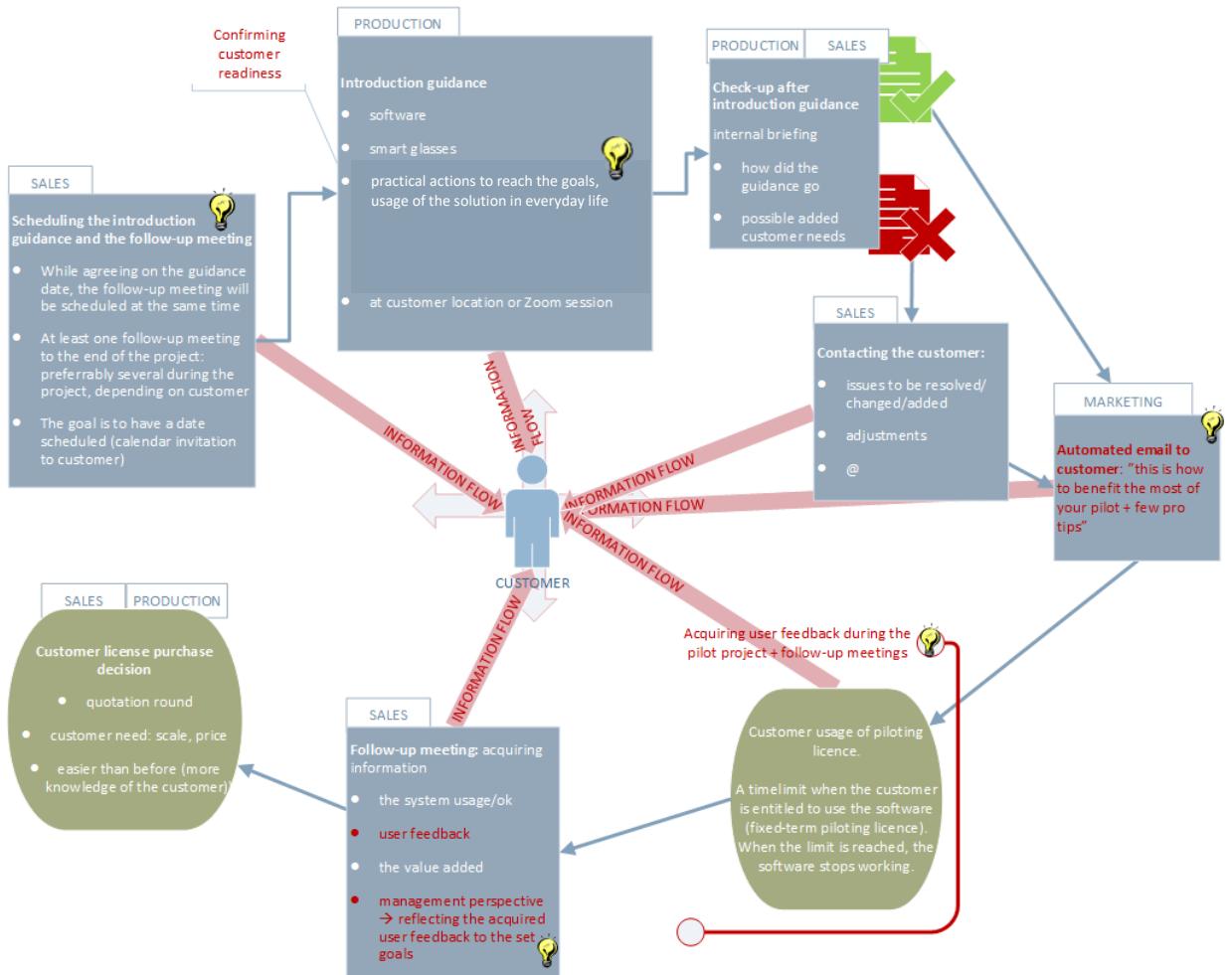


Figure 29: Improved delivery process

As is described in the chapter 3.2.2, the biggest problems in the current situation relate to almost non-existing feedback from the customer and scheduling the follow-up meeting after the pilot project has been completed. When no feedback or information of the pilot project occurs, arguing the benefits to the customer becomes challenging. An important channel for receiving feedback from the customer would be the follow-up meeting. In the improved process modelling the solution for the problem is sought from repositioning the follow-up meeting scheduling into the early stages of the entire process, together with the introduction guidance scheduling. As the introduction guidance date is scheduled, the follow-up meeting or meetings can be agreed at one time. The idea is to include the follow-up meeting or meetings into the process and present them as a part of the process. The improved sales process model presents the follow-up meetings as a part of the

service as a logical element following the introduction guidance and once it is included in the early stage of the delivery process, it reduces the workload from the sales to be targeted into more productive actions.

The next improved part in the process model is related to the introduction guidance in which the contents of the guidance are broadened from including only the technological aspects of the solution usage into guiding the participants into the practicalities that enable the pilot project success and reaching the goals set for the project. The practicalities include for example topics of the importance of the feedback providing and why the solution needs to be used in relation to the goals of the project. Discussion of the benefits the solution brings to the end-users will be held as well. This guides the end-user to think about using the product in terms of benefits.

As it was presented in the chapter 3.2.2, the current state in the process includes a generic email sent to the customer right after the introduction guidance briefing. As the scheduling of the follow-up meetings is repositioned in the improved model, the email sent to the customer right after the introduction guidance becomes unnecessary or at least the email does not need to address the scheduling of the follow up meetings no longer. So being, the pressure for receiving replies for that email no longer exists and the email may have another purpose and content. In the improved model the email is considered to be a part of automated email marketing, including content of how to make the most of the solution in the customer's environment and other useful tips on the solution that can be recognized to repeat in customer cases in general. By receiving the email, the customer becomes reminded of the pilot project and supported in managing the project.

From the Augumenta's internal operation point of view it is important that everything related to the customer's needs and wishes is documented accurately for example as in a form of a check-up list in the introduction guidance. So too the marketing communication needs to be planned in accordance not to overwhelm the customer but offer useful information at the right time.

The feedback collection during the process and guiding the customer's attention to the goals and their measuring create more valuable arguments to the negotiation phase of the full solution license. As there is feedback collected from the end-users the benefits of the solution become visible for the customer which contributes to the managerial point of view. When developing the feedback, the emphasis should be in the question framework and the questions designed again in a way that they serve the purpose and goals of the project.

The improved delivery process model positions the customer in the center of the process and information flow which is described with arrows pointing both towards the customer and the process itself. In the improved model the information flow increases and becomes wider as both parties will have better opportunities to observe and argument the benefits once the pilot project is completed.

### 5.3 Suggestions for developing

To contribute to the research question of the customer data needed in the process, the following chart summarizes the findings throughout the thesis process. The focus in the chart is in the customer data and describing the needed data to be formed.

CFS	The customer data needed to be formed in the process
Customer acquisition	Towards the process: who is the customer that finds interest in AR solutions Towards the customer: the connection between AR solutions and industrial use
Meetings, determining customer needs	Towards the customer: What is the pilot process like – the steps from first contact to finalizing a license purchase Information that make the benefits of the solution visible Towards the process: the customer's goals for the project
Introduction guidance	Towards the process: how the users react to the usage and what obstacles they may confront Towards the customer: Inspirational and encouraging information of how and why to use the solution to as many people as possible
Follow-up meetings	Towards the process: information of the solution usage, the perceived benefits Towards the customer: the value for the customer
Customer/user feedback	Towards the process: how the end users evaluate the benefits the solution is bringing Towards the customer: the benefits and value found of the solution pilot

Figure 30: The customer data needed

As one of the purposes of this thesis was to produce the improved sales model and suggestions on how to develop the process in the future, the following describes found ideas in relation to each critical success factor shall there be any: the follow-up meetings described in chapter 5.2 are therefore left out of the listing. The development ideas have been produced along the way of the thesis project as the student became more familiar with the special features of Augumenta's operation, the business environment, and the overall concept of AR. Some of the ideas have come up from inside Augumenta, some from the customer research and some along the way of the thesis process. The following is to sum up and collect as many points as possible in one place utilizing variable sources for Augumenta to choose from in the future of what to develop and what not. The viewpoint of such list is to give the perspective of an outsider of the company: someone who is looking in at Augumenta with fresh eyes and with no strings attached to the company, the industry, and the existing practicalities. The role of the student has also been to question the existing ways of producing the sales process and so being the ideas seek change in that sense of development as well.

### **5.3.1 Customer acquisition**

#### Development suggestions

- The viewpoint of the marketing communication
  - o Targeted more precisely to the target groups
- Utilizing the conducted customer research results in marketing and lead acquisition
  - o The Net Promoter Score (NPS)
  - o Found Augumenta's strengths

Even though customer acquisition was not put that much emphasis on in the thesis, the customer research results (especially interviews) revealed the process should produce information more precisely targeted to the target groups. Developing the marketing message more precisely to respond to the target groups' needs could help drawing the attention of future customers. Egger et al. (2019, 15–16) compile a literature review of AR usage in intelligent manufacturing and list for example results found in field experiments with AR solutions. The article offers researched information on the topic and would be a good source to find inspiration for example on the vocabulary to use.

As it came up along the thesis, one of the purposes found for the development task was to produce content to utilize in future marketing and sales activity. A Net Promoter Score tracking routine was launched within the customer research which can be already utilized in marketing but in the sales actions as well. The outcome was considered good and the results created a good base to continue tracking the NPS in future customer cases as well. From the practical point of view, the method for tracking needs to be developed though, since the tracking was done as a part of a larger research and implemented with survey tools provided by the student's university. These tools naturally cannot be used in the future but the results and the tracking question of course.

The customer research produced other results that can be utilized in the customer acquisition phase regarding marketing communication and sales activity. For example, the value of the Augumenta solutions that the customers found can and should be utilized to again produce the kind of content that discusses the practical, real life solutions in the end customers' environments. These findings can also be used as arguments in negotiations with the customers while they require references. As it is shown, the references are hard to acquire due to customers not wanting to reveal their providers as they are considered business secrets.

Other than that, the customer research conducted can be used in the future to develop a routine of tracking customer satisfaction for strategical decisions, development purposes but for marketing purposes as well. The formed questionnaire can be used as a basis to develop a static research model for long-term measurement and comparison and in finding the best working form for Augumenta's purposes.

### **5.3.2 Meetings, determining customer needs**

Development suggestions

- Focusing on the goal of a single project
  - o defining the goal together with the customer
    - helping customer making a business case
  - o emphasis in communication with the client on the importance of goal setting
    - discussion of how adopting AR is affecting not only to a single task but also for the entire company culture
- Enhance internal information flow

- what to record of customers and where to record it
- develop a practice of someone of the tech team is always being on call for the sales teams needs while negotiating with the customer (for future sales team)
- Customer interaction
  - process description of the interaction with Augumenta during the pilot project
    - steps and phases
    - communication channels
- Strengthening the credibility of Augumenta solution benefits
  - Utilizing Net Promoter Score

The goal setting in the pilot project was discussed in the earlier chapters as something to benefit both the customer and Augumenta in succeeding the pilot project. To understand the customer in a deeper way, an article of business process management suggests an approach that considers the customer's point of view. According to Trkman et al., a company should not only focus on their internal and customer-facing processes but to try to understand the customer's processes as well. Through that the provider may then suggest appropriate solutions for the customer to adapt into their own processes. The described approach is desirable in cases where a long-term relationship is sought for by both parties, but like any other factor, includes both advantages and risks. A big advantage is of course the deep understanding of one another's processes enabling a firm-specific resource that influences the process performance and giving competitive edge to the provider as such approach is hard to imitate. On the other hand, the risk of knowledge leak exists which is why it is suggested emphasizing only when seeking a long-term relationship. (2014, 251, 262.) Backing up the meaning of deeper understanding of the customer, Mendoza et al. also point out its importance while suggesting following when defining CRM strategy and its implementation:

In order to have a stable relationship with the client, the company must be aware of three key aspects. First, it must know how the client defines value. Then, it must provide satisfaction according to the needs and value standards of the client. Finally, it must work toward retention and loyalty from the customer. (2007, 916.)

The suggested approach would help in understanding the customer's perspective on value creation. This would guide the discussion more into the perspective of Augumenta being more of a partner for the client than just a provider, which is one of the topics discussed among the strategy work of Augumenta (Augumenta personnel discussions 2021). Sharma and Syam (2018, 133)

suggest to the similar approach as they describe the business-to-business sales work being shifting more into a salesperson being a customer expert rather than an expert in persuading the customer.

The chapter 4.3.2 suggested also developing a tool or a model to help the customers to form a business case. If such could be developed, it would add value to the customer and make the purchase process easier. However, the business case creation tool is such a wide concept that it is impossible to develop within time frame of this thesis and therefore brought up only as a suggestion of further development. In addition, the suggestions of the goal setting and the end-user feedback collecting may produce further ideas for the business case creation.

Not only the goal setting is the factor thought to improve the visibility of the benefits but the overall enhancing of the goals being a part of the interaction with customer. Making the goal setting as a natural part of the interaction among the pilot process guides the mindset into the direction where continuing into a license purchase is a logical step forward. At the same time, the sales process would benefit from interaction and communication about the other effects that implementing AR has on company and its working culture. As Egger et al. (2019, 17–18) state, there are aspects in the usage of AR in organizational level that would need to be investigated wider, such as the change in work processes that alter and effect also the working culture of an organization.

From Augumenta's internal point of view, an important aspect is the information flow about the customer between different functions of the company. Successful customer relationship management includes the information gathering and flow, as it was presented in the CSF's by Mendoza et al (2007, 921) while stating customer information management and customer contacts management as part of the list also discussed in the chapter 3.3. As in the current situation Augumenta sales is handled by one salesperson, it is vital to develop the working processes into a direction where sufficient amount of information of the customer will be recorded regularly and is available for all the people in the company's future responsible for managing the customer relationships. The workflow of recording the information about the customer case needs to be determined thinking of the goal of Augumenta's growth and the obvious need for further sales team. This requires also change in internal mindset of recording information and the need to do so but also the mindset of utilizing such information and learning to look for it. Not only the workflow alone needs to be developed but also choosing a suitable CRM system and enabling access to the vital information to all related people is needed.

Aside of the recording of the customer information, a practical idea was produced for the future sales team usage. If possible, an internal practice of inner technical team support for the sales team could be developed with the idea of someone of the technical team to always be on call for sales team's needs. This might be handy and enable faster quotation drafting for example in situations when a customer has a special need and the sales team is not able to give a direct answer during an online negotiation. Taking a member of the tech team into a meeting with the customer would bring more value also for the customer, to get to know further people by face in Augumenta not to mention the value for the members of the sales team not having the expertise on the technical sides.

To guide the interaction with the customer in the sales process another process modelling is suggested to be developed. According to few early stage customer meetings the student attended there was no figure or document to visualize the customer how the sales process of Augumenta flows from the customer's point of view. Such a process description would draw a clear picture for customer to know what step follows after another and gives an indication of the timeline of the process but also the required bits of information that are needed to acquire from the customer in order to make the project. Also channels for communication can be added and agreed while the process steps are discussed. By presenting such process flow creates a sense of the process being managed for the customer which strengthens the image of Augumenta being a credible provider with high expertise. As the phase of determining customer needs is mostly conducted remotely over online meetings and emails, visualizing as much the abstract process as possible enhances the communication and interaction with the customer not to mention reduces misunderstandings due to possible language and cultural barriers.

As it was described in the chapter 5.2.1, utilizing the tracked NPS is a valuable asset for the sales purposes as well. Especially the results from the end customer interviews in chapter 4.3.6 are encouraging towards this development. How and when to use it is up to the salesperson in situation but might need a unanimous agreement internally at Augumenta before implementing.

Still the use cases and POCs are needed, as the results show in chapter 4.3.6. Egger et al. (2019, 19) suggest that by conducting case studies in industry, new indicators where AR is improving performance, can be found. This would not only benefit the sales activities but the marketing communication as well.

### 5.3.3 Introduction guidance

#### Development suggestions

- Broaden the content into considering the user experience as a whole instead of technological aspects only
  - o Solution usage in daily tasks: the goal of the pilot project (why to use it and provide feedback)
  - o Expected experiences and overcoming obstacles
  - o Support practices
- Providing the customer additional content to utilize during the pilot project
  - o automated email to customer after the introduction guidance

It has been showed in previous chapters that there is room for improving the introduction guidance in the form of broadening the content, duration and scale of the guidance. As it was discussed in the chapter 4.3.3, emphasis should be placed on the planning of each guidance and internal information flow. The suggested developments in the previous process phase will benefit planning the guidance content as well and further suggestions are presented following. From a process development perspective, it is also important to extend the view to customer processes as well. As Trkman et al. (2014, 253) already pointed out, not only the internal process development ensures the better outcome in customer relationships, but the company should always include the customer's process perspective and the company's strategic intention, customer value creation into its own process development. So being, developing the introduction guidance contents would be in line with the strategical intentions of Augumenta.

The topics covered in the developed contents would include the practical effects of the solution usage to the daily tasks, the reason to use the solution (the pilot project goal) and the importance of providing feedback when asked, discussion of the typical experiences the AR users have and how to overcome them, and also the practices for receiving support from inside the customer company or Augumenta shall any problems occur. The content creation needs more thorough planning and developing though and may come up with other needs as well. However, with these topics the guidance would try to create a positive atmosphere among the end users and a space for asking questions which again helps resolving new upcoming issues. For example, it is very important to discuss about providing feedback of the usage of the solution to avoid misunderstandings that may prohibit the end-users from using the solution.

An article about strategies for improving new product adoption in uncertain environments discusses the importance of customer education. According to Eng and Quaia (2008, 277–278), previous research shows an important connection between customer education and a new product success, and the requirement of close collaboration with the company and the customers to reduce the risk of rejection. Although the article's viewpoint is in business-to-customer contexts and in new product development, there are still similarities between that scenario and the situation discussed in the Augumenta pilot project: the product is a new innovation to the end-users regarding their work, and they would need to learn to use it as part of their everyday life. The article also suggests building trust and commitment among the users by communication and customer education, and that the perceived resistance and risks for failing with the new product can therefore be moderated (Eng et al. 2008, 278). This is an important evidence for paying attention to the development of the introduction guidance.

In addition, a review to AR related studies of different use cases in industry, warehouse and manufacturing sectors reveals there are some side effects that the users face when utilizing AR. As AR enhances many tasks, it can also create defects that can bring other challenges to the users which can create user resistance: visual fatigue, weight of head-mounted devices and ergonomics, or usage of the system can decrease errors but increase the time consumed to perform the task. (Egger et al. 2019, 15–16.) Based on this, the introduction guidance could also include discussion of the possibility of these kinds of “side-effects”. As referred to Eng et al. in the previous chapter, customer education can be used to build trust and commitment in the users. When possibility of such effects is made known and notified in advance, the users may accept the system better, knowing there might be some defects also even though the system is to make their lives easier otherwise. Pointing to this direction as well, one of the respondents of the customer research found Augumenta also discussing the limitations of the solution positive which resulted in customer satisfaction.

If such topics are to be included, it is important to place emphasis also on what to do when problems occur: not only technological problems but also user-centric problems, such as the smart glasses are not feeling good and are creating fatigue et cetera. Covering these topics would be to prevent bigger disasters and to anticipate what may lay ahead and to make corrections when needed. This point should also be considered in the goal setting with the customers in the beginning of the sales process: for what purpose the solution is designed for and what the intent of the usage. The

previously suggested modellings would cover these aspects as well and so being benefit one another. So forth those need to be considered in the customization phase as well.

One important factor in the pilot project is of course the support and as the customer research resulted, the customers were quite satisfied with the support Augumenta has been offering. However, the personnel discussions (2021) revealed that the information may not always reach Augumenta on time, which is why it would be important for the guidance to cover the support requesting practices as well. Clearly instructing the channels the support is available in would be in place. It would also be important to consider the customer's inner support practices: who is the contact person inside the company and how to contact them. This in turn requires that all the people having effect on any of the participants' workflow (for example work management) should attend the guidance in order to become aware of the side effects the AR usage may bring. For example, if the operator starts to feel fatigue, it is important that there is a practice ensuring the operator can take a break without interrupting the process. This requires work management approach to plan this kind of situations in advance which is why the work management needs to be aware of such.

As the improved delivery process described, the generic email that has been sent to the customer after the introduction guidance is not needed in the new model and has been replaced with an automated email with content of how to make the most of the solution. This creates other possibilities for the marketing to cover further topics as well and to add more value to the customer's experience.

#### **5.3.4 Customer feedback**

As the previous chapters state, there is a need to enhance the flow of customer feedback. Especially the customer case that requests Augumenta to be the responsible party to collect the feedback is very encouraging. This would increase Augumenta's proactivity in the sales process and once again, guide the customer to think about the goals of the pilot project. With the goals in mind, the focus is on the benefits of the solution rather than in technological aspects.

Through collecting the end-user feedback, it is possible to produce information that is informative and useful for the customer that makes the value visible. This information would then make the

value of the solution visible for the customer and for Augumenta, make the future negotiations a tad easier with authentic end-user feedback results to show.

### 5.3.5 Further development or research ideas

Here are some other ideas listed to consider in further development and research. The listing is a compilation of found previous research or other resources of which ideas have been sought for. The following suggestions relate more into the managerial point of view of the sales process or are related to other than the chosen critical success factors and therefore left out from the previous chapters.

One way to increase the license sales could be through deepening the cooperation with the customers. According to Fink, a lot of big enterprises employ a Chief Innovation Officer who oversees discovering and inventing new methods to improve the business processes. Basically, they have an innovation team to stay up to date of recent development and while piloting, closely monitor the projects to evaluate whether to scale it or not. When adopting AR, it is suggested to pay close attention to the operating personnel who know the best what is inefficient and not, and to start small. (2019.) Finding a way to engage the CIOs could help in enhancing customer relationship management. Also Eng et al. (277–278) state customer cooperation to be worth considering when seeking to adopt new products in the markets. One considerable method for customer cooperation could be service design as the principal idea of the method is to improve the service in cooperation with the customer to gain better customer value and also better business outcome (Ojasalo et al. 2014, 71–72). Further research and development of service design usage in Augumenta's case would be in place.

Another idea for developing has the perspective of managing the sales process itself. The strategy work of Augumenta during the thesis process has discussed about the customer selection and the need to determine segmentation more thoroughly. To guide the strategic selection of customers of who to invest on and who not to, keeping a track and analyzing each customer potential could be an option. Holopainen suggests one way of classifying customers in business-to-business context while instructing to “- - think relatively low customer acquisition costs, relatively high customer lifetime value, and high growth potential” (Holopainen, 2020). Developing a classification to use in the company's CRM software and implementing the classification whenever a new contact occurs

would guide the sales actions and help planning the future strategies with customers. However, finding the attributes and defining the questions to use from the customer require further development and research.

Also further research is needed about the business case formation and how to best help the customers in forming one. Helping customer also aside from the original problem (providing the solution) by offering tools, the customer's experience of Augumenta's provided service can be enhanced. As Fisher et al. (2019, 141) point out, serving the customer the best possible way is the key to success and companies should aim at serving instead of pursuing money. Methods and studies of the business case calculations should be reviewed in order to learn and find ideas to help the customers.

## 6 CONCLUSION AND DISCUSSION

The main contributions of this thesis are related to improving the sales process of Augumenta and are based on both qualitative research and previous research reviewed. The contributions also consider a wide range of discussions inside Augumenta personnel and especially the people closely related to the sales process. There was a customer research which aimed at reaching a deep understanding of the customers' perceptions and experiences with Augumenta. The contributions also utilize at least one emerged customer case during the making of the thesis where appropriate.

The main purpose of the thesis is reached as the improved sales process modelling is produced and described in the thesis. The model can be used as a guide in the client company to further develop the interaction with the customer. The biggest contributions are related to enhancing the information acquiring and flow between Augumenta and its customers in different phases of the sales process, relating to the determining of customer needs and responding to those in accordance. Also the information flow of the pilot project success benefits from the contributions of this thesis and so forth enhances the chances of increasing the license sales of Augumenta's products. The customers benefit the improvements in the sales process as well as the information flow towards the customer will be broadened.

Furthermore, contributions from the customer research will benefit the sales process as information of the customers' perceptions and experienced value was documented. As such documentation did not exist prior to the thesis, the value of documented customer experience increases. The customer research results confirm Augumenta's competitive edges and strengthen the strategic alignments both already made and the ones yet to come. Reviewing of previous studies and articles related to strategy and composing the main attributes of those into a guideline serve the future strategy work of Augumenta. However, there is always room for future research, and such are presented along the way in the thesis.

Suggestions to develop the sales process in the future were made. The suggestions together with the sales process modellings will serve as guidelines to follow in Augumenta's future development but also to plan future development tasks. So being, it can be concluded that the purpose of the thesis was fulfilled, and the research questions answered.

During the thesis project a few ideas were developed that the client company considers as business secrets and wants to keep them classified. Therefore, the client company has received a version of this thesis that includes both the contents of this report and the development ideas considered as business secrets as well. The client company's version, where the classified development ideas are visible, is available by request and according to the client company's consideration.

The topic of the thesis was quite large and could have been limited more, and on the other hand, could have been investigated deeper and more thoroughly. In turn, that would have required more time resource for completing the thesis. The thesis project took about nine months in total where the degree programme of the student recommends the time frame of two years to be reserved for a Master's thesis. The circumstances this time did not enable longer timeframe and as this is the situation, adaptation must be done. Beside the development results, one of the purposes of this thesis was to employ the student into the client company and hopefully that will take place after the thesis presentation seminar. There is a lot of work to do among the sales process and this thesis works as a good foundation for it.

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## SURVEY QUESTIONNAIRE

## APPENDIX 1 (1/2)

SURVEY		
CRITICAL SUCCESS FACTOR	QUESTION	OPTIONS TO ANSWER
Customer status	How do you know Augumenta? Please choose the correct one.	We are planning to deploy a pilot project with Augumenta's solutions We have decided to deploy a pilot project but it's not started yet we have an ongoing pilot project as we speak but no further plans yet we have completed a pilot project and planning on deploying the full solution licence we have completed a pilot project but will not be deploying further --> why?
Customer acquisition	Where did you find information of Augumenta?	I made a search engine search (Google etc.) and found augumenta.com I made a search engine search and saw an Augumenta ad I saw an Augumenta ad in social media I spotted Augumenta from an exhibition event I spotted Augumenta from an online event I spotted Augumenta from a hackathon/competition I found Augumenta from an open call for proposals I was contacted by Augumenta directly Someone recommended me Augumenta Other, what?
	Were you aware of the concept AR or AR in Industry before your first contact with Augumenta?	I was completely not aware of AR I had heard of AR in general but not to be used in industry I had tested AR solutions in another context Our company had already deployed AR before Augumenta I have quite a wide knowledge of AR solutions in general I had a problem I knew AR could solve and googling led me to Augumenta Other, what?
	Why did you choose to start negotiating with Augumenta?	We were convinced by Augumenta's expertise We found Augumenta as a credible provider Augumenta's solution price was suitable for us Augumenta's solution features were what we were looking for Augumenta was able to customize its solution for our needs Augumenta's physical location near to ours Other, what?
	How would you describe your company in the sense of digitalization?	Zero - no digitalization at any level yet We have made some changes but are not actively promoting digitalization We have digitalized our operations for many years and aim to do so in future as well We are constantly looking for new innovations to boost our efficiency Other, what?
Customer needs	Negotiation with Augumenta was effortless.  Augumenta contacted me promptly when needed (e.g. scheduling meetings, replying to emails etc.)  During meetings with Augumenta our needs and wishes were listened and considered the way we required.  Our requests of the solution were adequately considered in the quotation.  Who were included in the negotiation phase from your side? Please describe the positions related to the Augumenta solution (no names, please).  During the negotiations, was there something you were especially happy about or something you wish was done different?	Selection accordingly for each sentence: Agree completely, Agree partially, Don't agree or disagree, Disagree partially, Disagree completely, Does not apply  Open question  Open question
Goal setting	Did you set a measurable goal (inside your organisation) for the pilot project?  If yes, do you agree with: Setting a clear goal for the project helped us guide and manage the project from beginning to the end.  Please describe why you did not set up a measurable goal for the pilot project.	Yes/No/I couldn't say  Selection accordingly for each sentence: Agree completely, Agree partially, Don't agree or disagree, Disagree partially, Disagree completely, Does not apply  Open question
Delivery / Introduction guidance	Have you yet been delivered the solution?  Scheduling the delivery and introduction guidance with Augumenta was effortless. The introduction guidance overall was good and helpful. The introduction guidance paid attention to our specific needs sufficiently. Everyone related to the usage of the solution got enough information and guidance to use the system fluently. More guidance for further personnel would have been helpful.	Yes and we've had the guidance as well (pilot completed or ongoing) Yes but we haven't yet had the introduction guidance No, it's not time for the delivery yet (pilot not started yet) --> If either of two latter, continues to Overall experience  Selection accordingly for each sentence: Agree completely, Agree partially, Don't agree or disagree, Disagree partially, Disagree completely, Does not apply
During the pilot project	Who attended the guidance on your side?  We received support when needed from Augumenta during the pilot project. Receiving tips and ideas on using the solution during the pilot project would've been We received adequate end-user feedback after the pilot inside our company. If there were any problems during the pilot project, we always got support from Augumenta immediately and adequately.  At least one check-up meeting was held during or right after the pilot project with If yes to the previous: How did you find the check-up meeting/s?	Open question  Selection accordingly for each sentence: Agree completely, Agree partially, Don't agree or disagree, Disagree partially, Disagree completely, Does not apply  Yes/No/The pilot is still ongoing so it has not been scheduled yet Very useful and informative It was okay but we didn't find it necessary We wouldn't even want to have the check-up meeting in the first place --> If either of two latter, why?

Figure 31: Questions of CFSs 1–5 for end customers 1(2)

## SURVEY QUESTIONNAIRE

## APPENDIX 1 (2/2)

SURVEY	
Overall experience	
	On a scale of 0 to 10, how likely are you to recommend Augumenta to a friend or colleague?
	What was the value of the Augumenta solution for you? You may choose several.
	<p>Time saving in a process</p> <p>Better productivity</p> <p>Better safety record</p> <p>Downtime reduction</p> <p>Faster production alerts</p> <p>Remote support ability</p> <p>Quality improvement</p> <p>Better operation guidance</p> <p>Employee satisfaction</p> <p>Employer brand improvement (modern tools for working)</p> <p>Other, what?</p>
	A scale of 0-10 where 0=not likely at all, and 10=very likely (NPS scoring)
	How did you find the purchasing process of Augumenta solution from finding information to finishing up the pilot/solution license?
	Open question
	Please describe further
	<p>Once the purchase decision was made, why did you choose Augumenta? You may choose several.</p> <p>We appreciated Augumenta's ability to customize its solutions for our needs</p> <p>Augumenta was physically close to us</p> <p>The price of Augumenta's solutions was suitable for us</p> <p>We found Augumenta reliable</p> <p>Augumenta's expertise was convincing</p> <p>We liked Augumenta's service spirit</p> <p>Our needs and wishes were listened to carefully</p> <p>Augumenta reacted fast to any issues or requests</p> <p>Augumenta really understood our perspective</p> <p>We liked the quality of the products/solutions</p> <p>Other, what?</p>

Figure 32: Questions of CFSs 1–5 for end customers 2(2)

SURVEY	
Questions for SDK customers	
	Signing up for a free SDK trial was easy
	SDK documentation and examples were easy to find
	SDK documentation and examples were useful and helped me in understanding how the SDK should be used
	Augumenta's technical support services were valuable to me and they helped me solve my problems
	The free SDK trial period (3 months) was long enough for me to understand SDK's
	The SDK met my expectations
	We are still using the SDK in our projects
	If no to the previous, please describe why.
	Selection accordingly for each sentence: Agree completely, Agree partially, Don't agree or disagree, Disagree partially, Disagree completely, Does not apply
	Yes, still going strong
	Yes, but we've come up with other needs
	No, the SDK did not meet our expectations and we've stopped using it
	Open question

Figure 33: Questions of SDK trial for SDK customers

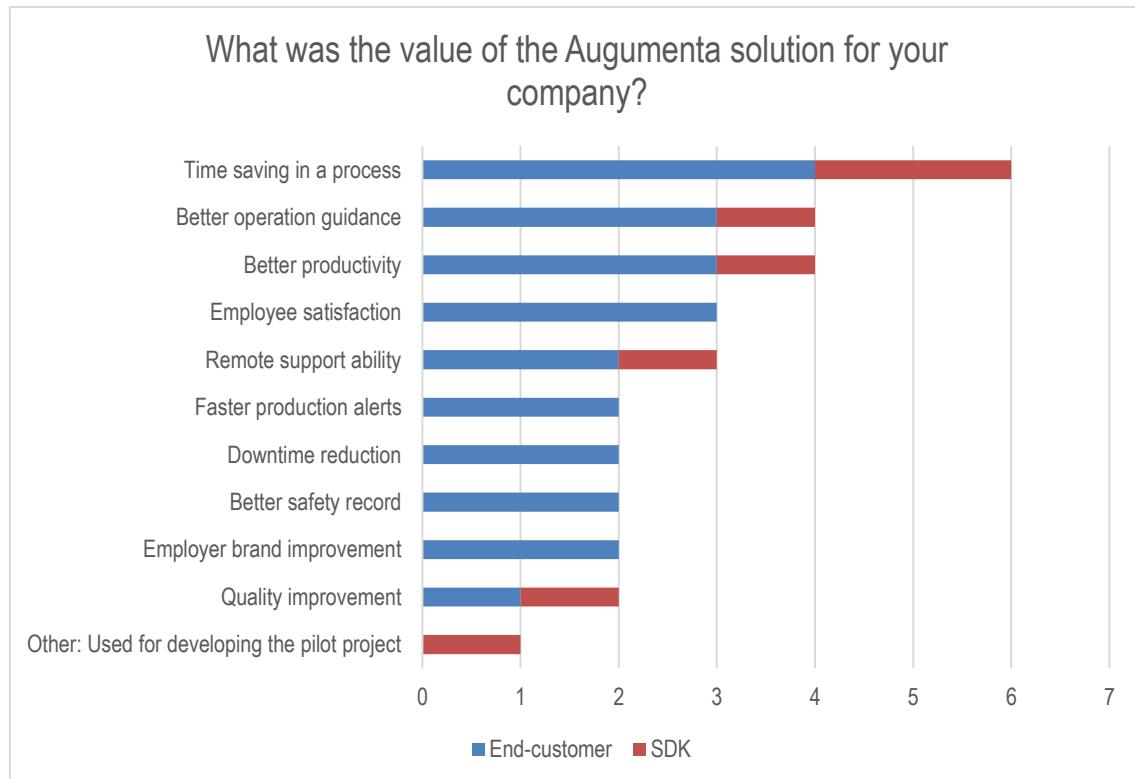


Figure 34: Experienced customer value

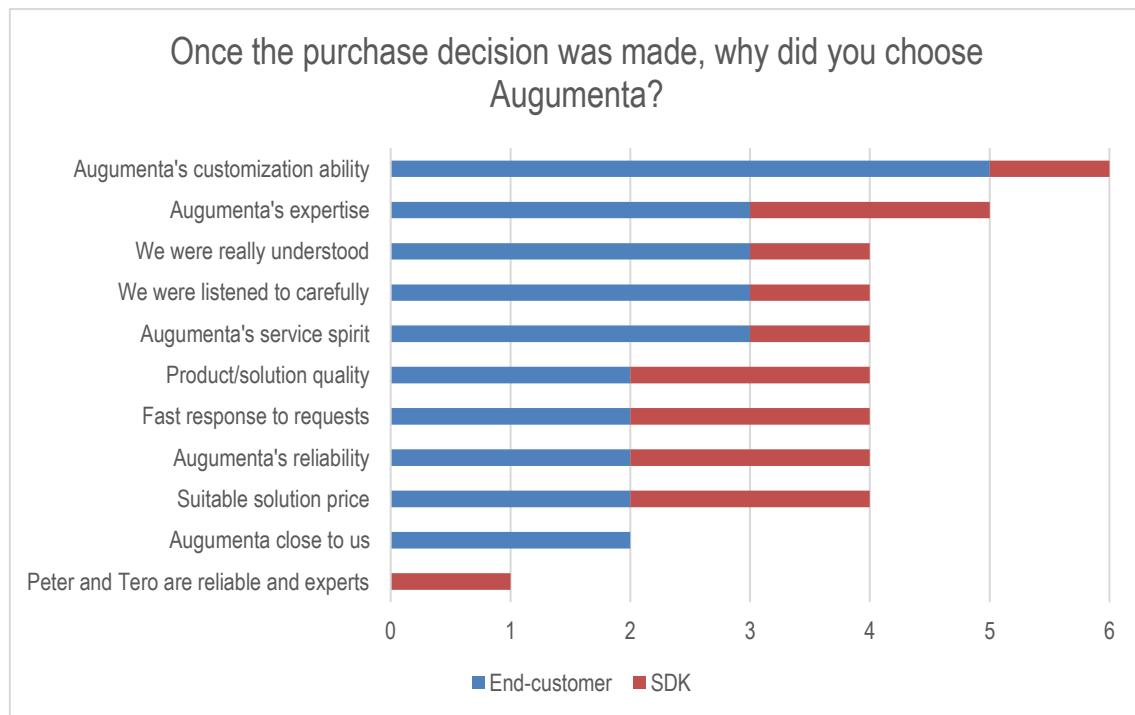
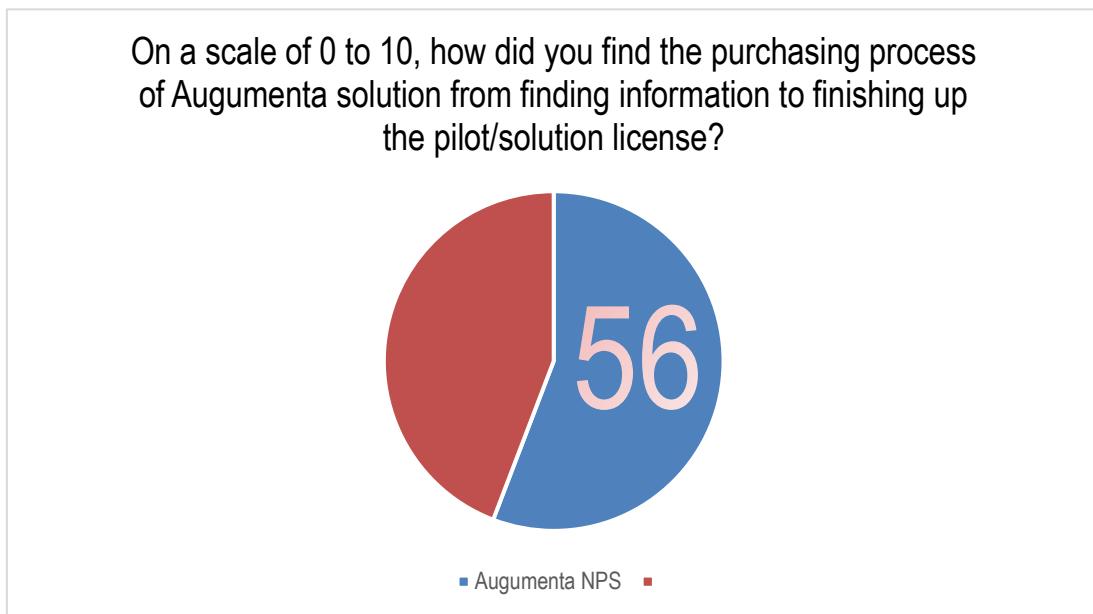


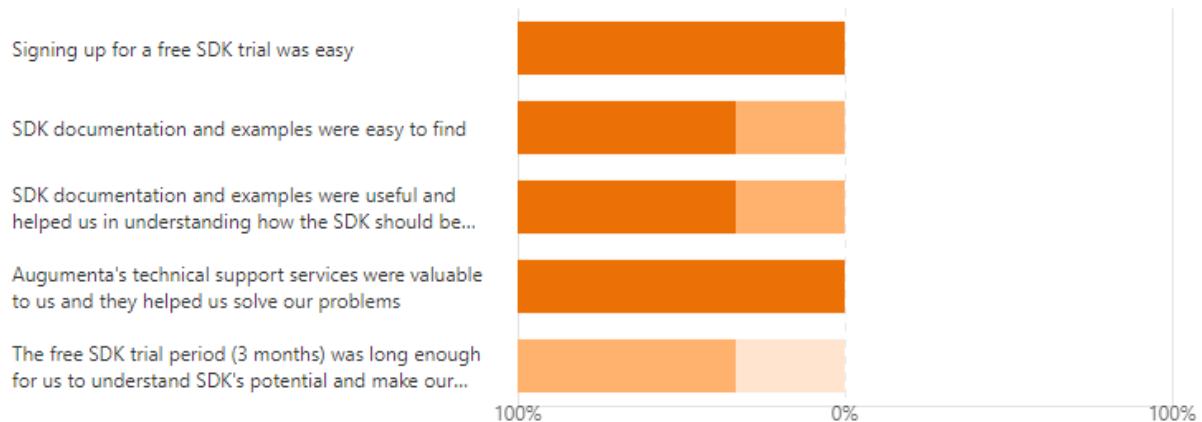
Figure 35: Why choose Augumenta



*Figure 36: The purchase process experience*

Do you agree or disagree with the following?

■ Agree completely    ■ Agree partially    ■ Don't agree or disagree    ■ Disagree partially    ■ Disagree completely  
■ Does not apply



*Figure 37: The SDK trial experience*