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CRITICAL FACTORS IN CUSTOMER RELATIONSHIP MANAGEMENT SYSTEM IMPLEMENTATION

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ABSTRACT

The aim for this Master's Thesis was to study the critical factors in Customer Relationship Management system implementation. The significance of technology solutions in the business world has grown constantly over the past decades. CRM systems have also become standard technology solutions in many companies. Despite of this development the failure rates of CRM system implementations keep staying high. According to the previous literature on the subject, the complete implementation of CRM system demands a holistic and strategic view on the implementation process. CRM system should not be treated as a mere technological solution.

CRM system implementation can be divided into three different segments in theoretical literature: people, processes and technology. All these aspects should be taken into account when implementing a CRM system to an organization. People, both basic users and management should be won over and convinced. Processes should be designed to be customer-centric and the technology solution should be as user-friendly as possible.

A qualitative single-case study was conducted in a large manufacturing company in order to research the critical factors in CRM system implementation. CRM system implementation had taken place in the organization and resulted in an incomplete implementation and thus a failure few years ago. That provided the empirical background for this study. 46 people from different organizational levels and functions were interviewed. This empirical material was analyzed with a content analysis using the grounded theory as an analysis method.

Nine different critical factors in CRM system implementation were identified based on the empirical material. Those factors were management support, perceived usefulness, communication and training, implementation to customer-processes, co-operation challenges, lack of process definitions, system design and data management. These nine factors had all features from all of the three main segments. Out of those three main segments, the people segment had the biggest impact on the implementation success. CRM system implementation is however an entirety where all the segments are related and it should be perceived as a holistic process that engages the whole organization.

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1 INTRODUCTION

1.1 Background

Information and communication technology (ICT) has become a fundamental cornerstone of today's information society. With the help of the ICT, people can overcome several downsides and challenges associated with the traditional working methods. This saves both time and money. (Takahashi, Tatemichi, Tanaka, Nishi & Kunioka, 2004.) Appropriate IT investments have also a positive impact on company's revenue growth and profitability. According to some studies, IT expenditures have a bigger impact on firm's profitability than marketing or R&D expenses. (Mithas, Tafti, Bardhan & Goh, 2012.) Hence it is no wonder that IT-solutions are an essential part of today's business environment and companies' strategies. However, information and communication technology shouldn't be seen as an end in itself. IT-solutions should serve a clear purpose and the implementation of different ICT software's should be the results of thorough evaluations and discussions inside the company. (Avlonitis & Panagopoulos 2005.) The risks in ICT projects, both financial and operational, are often overlooked even though failed implementations can nowadays fail as much as entire companies. Especially dangerous and common are the "black swan projects" that end up costing significantly more than they had been budgeted in the beginning. (Flyvbjerg & Budzier, 2011.)

In this Master Thesis I study the critical factors in a customer relationship management (CRM) system implementation. I do this by studying the failed implementation of a CRM system in a big international manufacturing company. This particular implementation was started in 2013 and it was concluded in 2015. How can it be stated then that the implementation of this system has been a failure? According to Shum, Bove & Auh (2008), a clear and measurable indicator is the development of sales. The core purpose of CRM system is to increase sales and make the company more profitable. Another, and maybe more appropriate measurement for a failed implementation in this case is the number of regular

users in the company. (Shum & al. 2008.) I found out that less than 10 percent of possible users were using the system at the moment in my case organization. I interviewed a total of 46 people and six of them were using the CRM system regularly. Even this existing usage was very limited and inappropriate. Also the interview data I collected and analyzed showed clear signs of mostly negative attitudes towards the system. Thus, I concluded that the implementation had not been a successful one.

Customer relationship management systems, more commonly known as CRM systems are a good example on business enhancing ICT solutions. CRM systems have a special reputation on being business tools of which implementation process requires a lot of effort to succeed. Some say that as much as 70% of CRM implementations result in failure. (Reimann, Schilke & Thomas, 2010; Wu, 2010.) Some are more moderate and suggest that the rate is approximately 55% (Rigby, Reichheld & Schefter, 2002). One perceived problem in the implementations is that the positive outcomes will not show in the short term business returns. The usage of the CRM system has also been found to be inefficient if people do not know how to use the system or do not want use it. (Reimann, Schilke & Thomas, 2010; Wu, 2010.) Quite often CRM is perceived to be only an ICT system without a broader perspective (Becker, Greve & Albers, 2009). To prevent this narrow view, CRM system needs to be approached comprehensively when implemented and used in the organization.

Companies that do not take holistic or strategic view on their CRM projects, will usually settle for a partial implementation. This does not only lead to a narrow view on the customer but usually also to a distorted view on the customer relationships. This might lead to an unclear customer service and failed sales targeting. Partial integration has been argued to be the fastest way to sabotage the whole CRM project. Usually the CRM system itself, not the poor implementation is being blamed for the failure. Companies that do succeed in their CRM projects take the implementation process seriously. They do not rush into getting results before they really have the 360-degree perspective on the customer and the holistic approach to CRM usage. (Kotorov, 2003.)

In this Master's Thesis I want to study the challenges and possible pitfalls of a CRM system implementation. In order do this I need to adopt a broader, more holistic view to the

implementation project and not to treat the customer relationship management only as an ICT tool. I will not treat the CRM implementation as a one specific process with specific steps or phases but as an overall acceptance and implementation of an ICT system. With a successful implementation I mean a state where the system has been adopted as a part of the organization's processes and where it is enhancing the organization's capabilities of doing business.

The subject of customer relationship management implementation has been widely researched, especially in the beginning of the 21st century. However the implementation failure rates have not decreased, vice versa they continue to stay high. (Wu, 2010; Becker & al. 2009). And as stated already in the beginning, the significance of well-implemented ICT tools is not either decreasing in companies, quite the contrary (Mithas & al., 2012). Even though companies are still widely using these system, the lack of research in the 2010s is quite obvious when studying the existing scientific material on the subject. That is why I find the research on customer relationship management necessary and important. Also a significant part of the existing literature uses the point of view of CRM experts and professionals. I use the viewpoint of system users to bring added value to this Master's Thesis.

1.2 Research objectives and questions

The aim of this study is to explore the complexity of the CRM implementation and the challenges that it brings to the organization. This will be done by identifying the critical aspects in implementation, described as points of failure by the users. The results will not however be limited to point of failures but the respondents are also let to describe positive aspects in the implementation. Together these failures and successes formulate the first research question. The research questions are formulated as follows:

1.   What kind of critical aspects can be identified in CRM system implementation?

Most of my research material consists of the analysis of the experienced system implementation failure. That is why I concentrate more on the pitfalls of the system implementation. For this I use the second research question.

2.   What kind of pitfalls can the implementation encounter?

1.3 Structure of the study

The structure of this study consists of five main chapters. In the first, introduction chapter, I will introduce the background and purpose of my study. I will also go through the research objectives and research questions as well as the structure of the study and the limitations my study faces. In the second chapter I introduce the theoretical background of my research topic. I have divided the theoretical framework into three aspects, people, processes and technology. The research area is quite extensive but I will construct the theoretical framework with the help of my of empirical findings.

In the third chapter I will address the methodological choices I have made in my thesis. I also introduce my case organization more closely. In the fourth chapter I analyze the research findings I have made in my case study, using the same division to people, processes and technology as in my theoretical framework. I will narrow down my results to a nine different topics. In the last chapter I summarize my empirical findings and compare them to my theoretical framework and research objectives. I also propose interesting themes for a further study on this subject and evaluate the reliability of my thesis.

1.4 Limitations

This is a single-case study on a large manufacturing company that does business- to-business sales and the results cannot be generalized without consideration to any other setting. The

results would most probably differ if this study would have been conducted for example in an ICT company or in a company that has a different kind of age structure. Also it can't be generalized to B2C sales since the working methods and ways of working with the system differ quite distinctively from B2B sales.

I also concentrate on the users' point of view and do not include the ICT personnel or people behind the system implementation to my interviews. So my results will reflect greatly the honest opinions and feelings of people who do not know much of the actual implementation process. My respondents do not know how the implementation process has been planned to be conducted and what have been the planned outcomes. This study concentrates especially on the implementation of CRM system and even though I have used theoretical literature on system implementation more broadly, the results of this study cannot be extended to the implementation of other ICT systems.

1 CUSTOMER RELATIONSHIP MANAGEMENT - SYSTEM IMPLEMENTATION

2.1 Perspectives on Customer Relationship Management

Customer Relationship Management (CRM) system is one of the so called Enterprise Systems (ES) (Klaus, 2010; Hendricks, Singhal & Stratman, 2007). Enterprise systems are off-the-shelves packaged integration systems that are supposed to ensure the seamless information flow in the company. Other systems categorized as Enterprise Systems are for example ERP - (enterprise resource planning) and SCM (supply chain management) systems. These systems are bought as ready packages from suppliers outside the organization and are being configured to the organization's processes. This calls for a careful requirement mapping and parameter setting from the organization's side. Usually organization's own processes demand some re-engineering since these systems have been planned according to the best practices, not the actual processes in the particular organization. Usually there is also very limited amount of possibilities for re-programming. (Markus & Tanis, 2000.)

Customer relationship management has various academic definitions. Despite of this, it is often perceived especially in the corporate world merely as a computer software. Customer relationship management is however a combination of people, processes and technology, that helps the company to understand its customers better (Chen & Popovich, 2003). CRM can also be viewed as a holistic process that builds and maintains profitable customer relationships by delivering exceptional customer value and satisfaction. CRM strategy should thus take the whole company into account and this strategy should be revisited regularly. (Sen & Sinha, 2011.) CRM can also been seen as a customer-centered business strategy that combines sales, marketing and customer service and helps the company to create and increase their customer value (Chalmeta, 2006).

CRM as a theory and the concept of customer orientation are not new topics in the management literature or in the actual business organizations. Roots of the customer relationship management go as far back as 1960s when companies started to shift from product orientation to customer orientation, which meant that they started to fulfill needs, not just sell products. This change in perspective is widely described in Theodore Levitt's work (1960; 1969). (Boulding, Staelin, Ehret & Johnston, 2005.) The philosophical background of CRM is not in information technology, but more in theories like relationship marketing, customer profitability, customer lifetime value and customer retention. The supporting idea behind all these theories is that the maintaining of customer relationships is more profitable than making new ones. This means that the existing profitable customer relationships are worth investing in and should be regularly revisited. (Chen & Popovich, 2003.)

CRM software itself became a truly hot topic in the late 1990s when the Internet boom started. Companies started to invest in these software in a fast pace to keep up with the latest developments. However, many of these companies did not familiarize themselves with the reality of what a working CRM implementation really demanded from an organization. Due to this 55-75% of all the CRM ventures resulted in clear failures. (Kotorov, 2003.) Lately organizations have grown more displeased to different CRM systems because they are systematically falling short from the expectations and the rate of failed implementations is so remarkably high (Becker & al. 2009).

It has been emphasized that CRM cannot be seen only as a technological solution; a strategic, holistic approach is needed. Payne and Frow (2005) define three possible approaches on CRM based on how broadly it is viewed in the organization (Figure 1). In the left side of the spectrum CRM is seen very narrowly and tactically as a mere technology solution. In the middle ground are the organizations that view customer relationship management as multiple customer-related ICT solutions that work together to enhance the customer experience and firm performance. CRM is defined broadly and strategically in the right side of the spectrum. This defines how the whole organization sees the CRM; as an strategic direction that integrates processes. Companies with this broad perspective have a clear vision on the nature of the customer value. This is the direction where Payne and Frow (2005) feel that all the organizations should position themselves in.
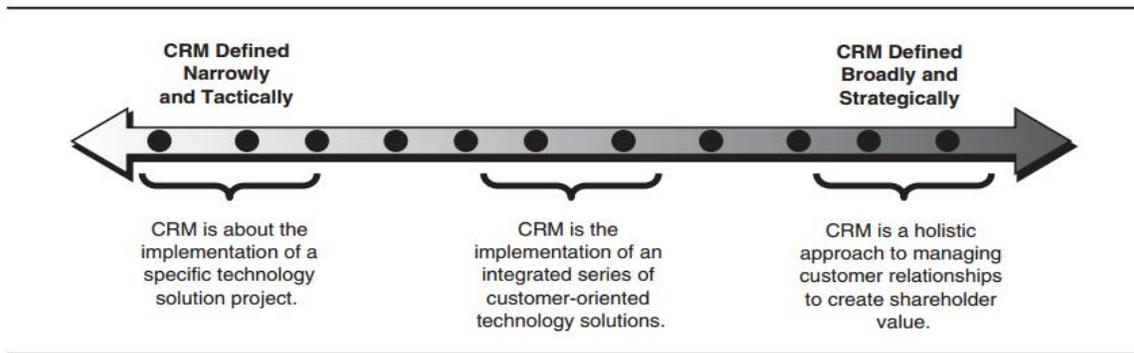
Figure 1 The CRM Continuum (Payne & Frow, 2005)

Customer relationship management can be compartmentalized in multiple theoretical ways. One popular way is to divide it into operational CRM and analytical CRM. Operational CRM consists of the actual business processes and technologies that help to improve the efficiency and accuracy of everyday customer interactions and customer relationship management. These everyday customer interactions can include sales, marketing, service automation and traditional customer service. (Iriana & Buttle, 2007.) Analytical CRM refers to the analytics that can be drawn from the system to help the customer management and top management. Analytical CRM emphasizes the effective data management. (Xu & Walton, 2005.) I address these concepts as part of my theoretical framework but do not use this division as a base for my CRM theory.

As already mentioned before, the mainstream way in theoretical literature is to divide customer relationship management into three main areas; people, technology and processes (Goldenberg, 2008). They can also be labelled a bit differently, like Raab (2008) does. He uses terms personnel, technology and organization/structure but conveys with these terms the same meanings as Goldenberg (2008) with his division. People dimension refers to the issues concerning the users and management and their commitment to the project. Technology segment covers the ICT-related topics that help companies to enhance their processes, in this case especially the customer management. Processes are the customer-centric business

models that company has to assimilate in order to have the full advantage from the CRM system. (Goldenberg, 2008.)
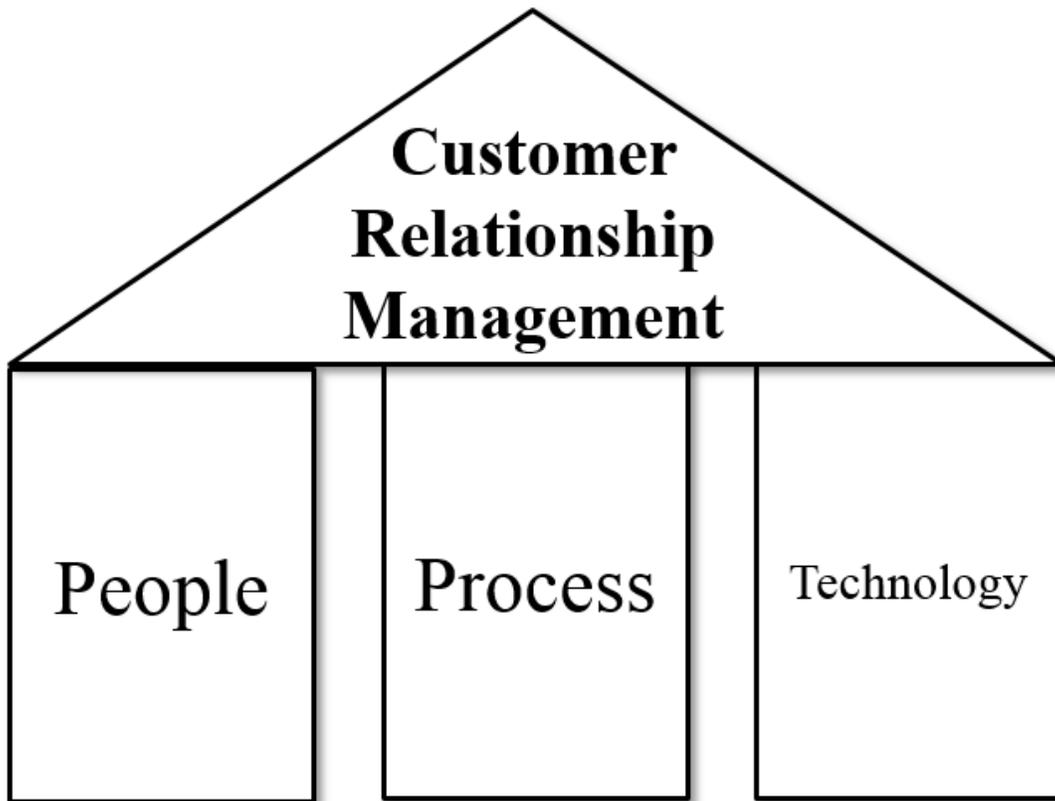

Figure 2 Theoretical division of the customer relationship management system implementation

One of the most comprehensive definition, that summarizes the definitions presented earlier, is offered by Goldenberg (2008):

> *"Customer Relationship Management (CRM) is a business approach that integrates people, process, and technology to maximize relationships with customers. CRM increasingly leverages the Internet to provide seamless coordination among all customer-facing functions."*

This quote brings into the view the strong connection to ICT and IT-solutions but recognizes how the mere technology point of view is insufficient if we want the CRM implementation

to succeed and the usage to be adequate. It also emphasizes the fact that seamless coordination is needed among all the customer-facing functions and among all these perspectives. (Goldenberg, 2008.)

In the theory chapter I will discuss all these three perspectives on customer relationship management more closely and use them as a base for my framework. Several of the themes overlap between two or even all three of these topics but I have tried to find all of them a justifiable place in this three-way division. These difficulties in the allocations of the different themes merely highlights the cross-functional and comprehensive nature of the customer relationship management.

2.2 People perspective

According to Chen & Popovich (2003) the CRM software can be introduced to the organization but if it does not have the support from the people inside the organization, this attempted implementation will most likely fail. The people in this study include the personnel and the primary users but also the management and top management. (Chen & Popovich, 2003.) Becker, Greve & Albers (2009) observe in their study the relationship between CRM success and the support the management and users give to the entire implementation project. They found out that the desired outcomes like customer retention and successful customer acquisition can be achieved only if the top management and basic users are both fully committed. CRM system cannot be just bought from the system supplier and implemented to the organization. It demands first a committed and supportive climate across the whole organization. (Becker & al., 2009.)

2.2.1 Top Management support

What is exactly top management support then? Ifinedo (2008) defines top management support as " *the extent to which top managers in the organization provide direction, authority, and resources during and after the acquisitions of IT systems*". According to Ifinedo (2008) management should support the CRM project its entire lifetime and direct the needed resources for it. Giving a mere blessing for the project is not enough but in addition to that the top management should fully commit themselves to an effective customer relationship management (Chen & Popovich, 2003). It is important that the top management supports the IT system implementation project publicly, not in the background or silently in the shadows (Ifinedo, 2008). According to Buehrer, Senecal & Pullins (2005) the users often acknowledge that management is excited about the CRM system but they don't see that excitement as a true organizational commitment. In their study on critical success factors in CRM system implementation Croteau & Li reach (2003) the conclusion that top management support is needed the most when the CRM project has already realized and the users start to use the system as a part of their daily work. Top management has to especially then give public support to encourage users to really utilize the system.

Top management support also encourages innovation and behavior associated with it. This kind of openness for innovations helps also to implement CRM system in organization. (Croteau & Li, 2003.) Also Klein & Sorra (1996) argue that the climate for innovation implementation will drastically impact the enterprise system implementation. If the climate is open for innovations it usually is also for new technologies. Innovativeness as a personal trait will help user to accept new systems more easily since it makes the person see the potential these systems possess and the different possibilities they offer (Avlonitis & Panagopoulos, 2005). The top management commitment to change management (TMCC) promotes organizational learning and makes the users more receptive to the new innovations. According to Dong (2001) the ability to manage organizational change will reduce the uncertainties and misunderstandings among users. This will in itself reduce the resistance to new innovations and through this the resistance to system implementations. (Dong, 2001.) Top management commitment to resources (TMCR) describes the management's

willingness to allocate resources for the implementation project (Dong, 2001). As also Ifinedo (2008) states, the sufficient resource allocation is a crucial part of top management support in system implementation projects. These needed resources are both financial and technological.

According to Jasperson, Carter & Zmud (2005) top management can influence the implementation process both directly and indirectly. Sponsoring, providing resources and giving mandates is thought to be direct intervening. When top management is using the IT system, directing modifications and enhancements, giving incentives and modifying work processes it is thought to be indirect intervening. (Jasperson & al., 2005.) So there are multiple ways in which management can show their support for the CRM system implementation project. According to Goodhue, Wixom & Watson (2002) the scope and the extent of these different top management support manners is related to the extent of the CRM implementation project. When the CRM implementation is done strategically and in a holistic manner that we emphasize in this study, support from the top management is crucial. If organization sees CRM only as a new technology, top management support plays a less significant role. (Goodhue & al., 2002.)

Besides the top management, also sales supervisors have a major role in the system acceptance process. They are the direct supervisors of the sales people and they set the basic working methods and rules for them. The sales supervisors should encourage and support users in CRM system usage as much as possible. (Avlonitis & Panagopoulos, 2005.) Sales supervisors do also have a direct impact on the sales person's employment and practical aspects like salary. According to Buehrer & al. (2005) this kind of close external pressure has a significant impact on the sales technology acceptance. They argue that after all, crucial reason for the CRM system usage is that the employer demands it from the users. The most significant representative of the employer for most of the users is one's direct supervisor. (Buehrer & al., 2005.)

2.2.2 Technology acceptance model

Ahearne, Srinivasan and Weinstein (2004) introduce the term IT-acceptance in their study on CRM usage among sales representatives. Term IT-acceptance describes the willingness to use the CRM software and to accept ICT software as part of the daily work routines. These researchers observed the relationship between the CRM-related IT-acceptance and the sales performance. The results clearly showed that the personnel that accepted new technologies as part of their work routines and used them regularly, benefited significantly from them. These sales representatives got to enjoy from more efficient work flow, more high-quality information and data and the improvements on their salesmanship. It is nevertheless good to bear in mind what Avlonitis & Panagopoulos (2005) point out. They remind that the sales person is CRM system's internal customer whose needs have to be addressed in the implementation project. If the sales people are not listened and understood then the performance improvements are not realized in the company. (Avlonitis & Panagopoulos, 2005.)

There are differences between the basic end-users and management in terms of the IT-acceptance. Amoako-Gyampah (2004) found out in his study on ERP (enterprise resource planning system) implementation that people in different levels of organization have very different perceptions on the implementation process. This might occur because of the greater understanding of the advantages of the new system in the management. This understanding can make them "buy-in" faster for the new technology. Management is also usually more closely related to the decision-making process and thus more ready for the new system. that The information flow to the basic end-users wasn't adequate to meet their informational needs and this reduced the IT-acceptance among them significantly. (Amoako-Gyampah, 2004.)

Technology acceptance model (Venkatesh & Bala, 2008) is a framework that predicts the individual acceptance and appropriate use of a new IT system. It consists of two main factors, the perceived usefulness and the perceived ease of use. Perceived usefulness refers to the extent in which the users believe that the new IT system will enhance their performance in their daily work. The perceived ease of use is the degree in which the users feel the use of

the system will be free of effort. Naturally the higher the degree of the perceived usefulness and the perceived ease of use is, the more likely the users are to adopt the new IT solution and use it as a part of their daily work. (Venkatesh & Bala, 2008.)

The first draft of the technical acceptance model (TAM), made in the late 1990s illustrated four factors affecting the perceived usefulness and perceived ease of use (Figure 3). Perceived usefulness and perceived ease of use indicate how the users perceive the new system and how that affects their behavioral intentions. From the four factors affecting perceived usefulness and perceived ease of use, individual differences refer to the user's personal traits and demographics and the system characteristics to the important and useful features in the system itself. Social influence is the socially constructed work environment that guides people's perceptions on ICT solutions and the facilitating conditions refer to the support people get from the organization for the system usage. (Venkatesh & Bala, 2008.)
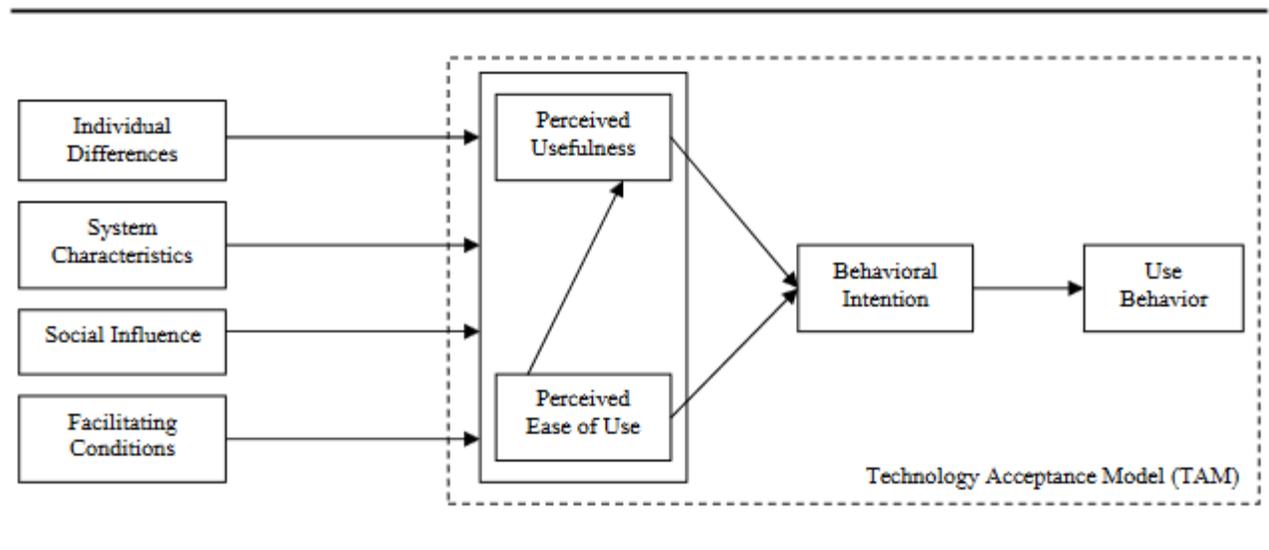

Figure 3 TAM 1 (Venkatesh & Bala, 2008)

Venkatesh and Davis (2000) revisited the TAM model in the early 2000s and divided the perceived usefulness into smaller and more in-depth factors. These factors were subjective

norm, image, job relevance, output quality and result demonstrability. Subjective norm referred to the assumption that people might act against their own preferences if they thought that important referents acted likewise. Image was the user's status in his or her reference group. That status could be achieved by performing in a certain way. Job relevance referred to the degree of compatibility between the new system and the user's actual job, how well it served him or her when performing daily routines. Output quality described how much the system improved the actual results of the individual's work efforts. Result demonstrability showed the connection between system usage and the improved results. This demonstrability had to be clear in order the user to acknowledge the usefulness of the system. (Venkatesh & Davis, 2000.)

In the second version of the technology acceptance model, there were two additional dimensions, experience and voluntariness. Voluntariness is a variable that tells us the extent in which the users feel the new system usage to be non-mandatory. Experience represents the amount the user has before directly used the system in question. Both of these dimensions affect the subjective norms. The more the user has personal usage experience the less the reference group norms affect him or her. And the less mandatory the usage is the less those norms affect the system adoption. TAM2 emphasizes the social forces behind the new system adoption more than TAM1. Voluntariness, subjective norms and image are all interrelated social powers that influence greatly the individual usage decisions. (Venkatesh & Davis, 2000.)
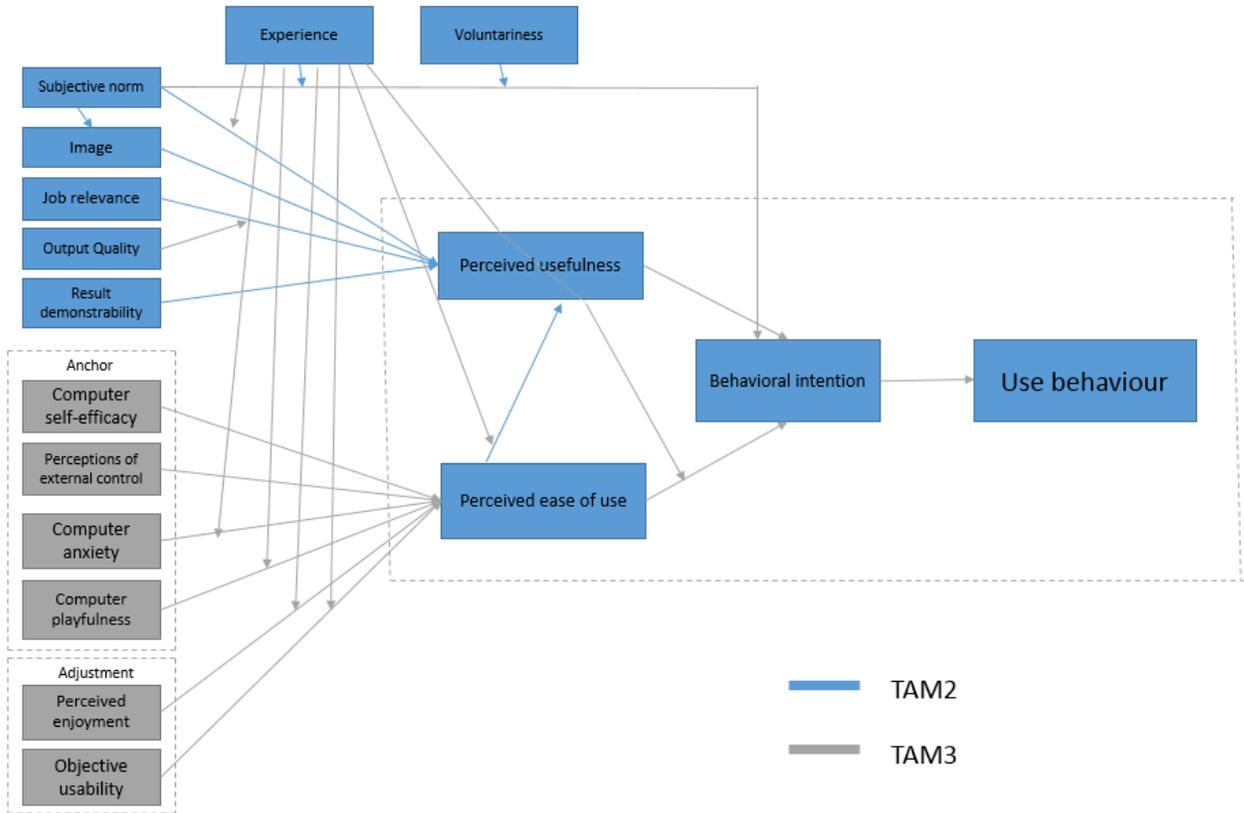
Figure 4 TAM 2&3 (Venkatesh & Bala, 2008)

In Figure 4 the grey parts of the picture are the additions made to TAM2 in the TAM3 phase. Technology acceptance model version three was created in the late 2000s partly by the same researchers as TAM2. TAM3 investigates and introduces more the factors affecting the perceived ease of use. Those factors have been divided into two categories, anchor factors and adjustment factors. Anchor factors are the general beliefs that people have rooted in them concerning computer - and technology usage. Adjustment factors affect the perceived ease of use after the user has gained real hands-on experience on the system. Those factors will adjust the initial perceptions created by anchor factors. Adjustment factors influence particularly strongly the computer anxiety and computer playfulness. Usually the role of self-efficacy and perceptions of external control remain strong despite of the adjustment factors. (Venkatesh & Bala, 2008.)

If we look more closely the determinants of perceived ease of use and their division into anchor and adjustment factors, we can see that anchor factors are related to the subjective perceptions and adjustment factors more related to the objective perceptions of people. Computer self-efficacy is the degree of which the user believes his or hers ability to perform specific task with a computer. Perceptions of external control is the perceived degree of support from the organization to help manage the computer-related tasks. Computer anxiety refers to the negative emotions associated with the technology usage. Computer playfulness on the other hand is the user's inner motivation to start using new systems and technologies. Perceived enjoyment and objective usability are determinants that surface after the actual usage of the system and they are based on the actual objective experiences, not perceptions. (Venkatesh & Bala, 2008.)

TAM3 emphasizes the role of the actual usage experience. It suggests that people's perceptions over ICT solutions may change over time. Thus usage experience affects multiple dimensions of this model. It decreases computer anxiety and increases computer playfulness. It will of course affect perceived enjoyment and objective usability since they are achieved through usage experience. Also In TAM3 model the determinants for perceived ease of use and perceived usefulness do not influence each other but are separate factors. (Venkatesh & Bala, 2008.)

Venkatesh & Bala (2008) found out in their study on TAM3 that post-implementation interventions play a significant role in technology acceptance. These are the actions that take place after the implementation and help employees to cope with the new system. According to Venkatesh & Bala (2008) these interventions can be the organizational support, peer support or training. Organizational support refers to the functions that after the implementation helps people to use the system. Through organizational support the new system is not just implemented to the organization but the users are also given support on the actual usage. Peer support refers to the activities that co-workers can perform to help the other users to effectively use the system. This is not a widely studied subject but has quite a significant impact on technology acceptance. Training is one of the most important interventions in system implementation. It can be conducted before the implementation but

usually it is needed particularly after the implementation to assure people that they can use the system. (Venkatesh & Bala, 2008.)

Wagner & Newell (2007) point out that even though the users would be genuinely interested to participate in implementation projects, human nature works in a way that it makes the interest fade quite fast if the project does not have a significant impact on people's work. User's personal workload has also an impact on the eagerness to participate in projects and learn new working methods and systems. So even though there would be good intentions, human factors have to always be taken into account when talking about these people actors. (Wagner & Newell, 2007.)

2.2.3 Training and information flow

As stated by Venkatesh & Bala (2008), training is one of the important post-implementation interventions that helps the technology acceptance in the organization. Shum & al. (2008) note that training and sufficient information flow on the CRM project to the users are one the key aspects in preparing the organization to accept the new CRM system. Training is a very efficient way to share information on the system but also on the project itself. When the project information is communicated effectively, all involved people will understand the common vision, the progress that is going on in the company and the different intended targets that the CRM implementation has. Therefore, the important landmarks and targets of the project should be communicated clearly to everyone involved in the project. Unfortunately, this is often not the case and users are often left without the information on what to expect before, during and after the CRM project and the system implementation. This weakens the user commitment significantly. (Shum & al. 2008.)

The mere training and informing of the users of a superior CRM system is not enough to make the sales people fully accept the system. If users find the system to be a redundant feature they will not accept it fully, even though they would know perfectly how to use the system and would know exactly what they could do with the system, Users should always

find the system easy to use and useful as the TAM model states earlier in this study. (Venkatesh & Bala, 2008.) Training is thus necessary but not a sufficient condition for a successful CRM implementation. (Avlonitis & Panagopoulos, 2005.) Also the sheer amount of user training does not correlate with the acceptance or sufficient usage of the system. The quality of the training however correlates strongly with the sufficient IT usage. (Gallivan, Spitler & Koufaris, 2005) So also in this matter it should be kept in mind that the quantity rarely overcomes quality.

According to Garrido-Moreno, Lockett & García-Morales (2014) company's incentives should be utilized alongside the training. Organization's reward system should be built so that it encourages to use the CRM system. Incentives will increase employees' commitment to the CRM initiative and through that they will enhance the firm's performance. (Garrido-Moreno, Lockett & García-Morales, 2014.)

According to Avlonitis & Panagopoulos (2005) it is important to satisfy the informational needs of the users in order to create positive beliefs and positive atmosphere around the implementation process. Users should have a realistic and un-exaggerated picture on how the system will work and what are the management's expectations towards the implementation. To generate realistic expectations towards the system it is beneficial to engage the users to the system design and implementation. This will also commit them to the process. (Avlonitis & Panagopoulos, 2005.)

2.3 Process perspective

The evolution from product-centricity towards customer centricity started already in the 1960s (Boulding, Staelin, Ehret & Johnston, 2005). This has meant for many companies that the organizational processes have over time shifted from product-centric to customer-centric. The customer-centric processes work also as a basis for the CRM software in the organizations. Customer-centricity means that companies have organized themselves around

the customers and their needs, not around their own products. (Chen & Popovich, 2003.) However, a company cannot just implement a CRM system to a product-centric environment and think that that will change the organization to a customer-centric one. First the company needs to adopt the customer-centric processes and after that it can really benefit from the CRM system. (Galbraith, 2011.) This is made harder by the fact that in many cases the organization management thinks that the organization is already customer-centric and working "close to the customer". Usually the case is that the organization acknowledges the importance of the customer but does not truly arrange itself around it. (Galbraith, 2011; Shah & al. 2006.) Also the companies that acquire CRM systems are usually larger companies, for who it is harder modify their customer processes due to the sheer amount and complexity of those processes (Bolton, 2004).

So when a company starts a CRM implementation project, it should evaluate its customer processes and change them to serve the CRM project and customer-centric strategy. If the entire customer process is not working, is CRM software usually unable to fix the situation. (Goldenberg, 2008.) The processes that in anyway involve interacting with the customer should be thus analyzed. These processes may vary between different organizations but according to Thompson (2000) the main processes involving the customer are sales, marketing and services. They are processes that surface when talking about CRM strategy regardless of the business activities or industry. (Mendoza & al. 2007.) Next I will define what are thought to be the important and generic customer-centric processes. After that I concentrate on describing how the organization can be made more customer-centric with customer-centric business processing.

2.3.1 Important customer processes

Payne and Frow (2005) have identified five different organizational processes that are in a key role if the organization wants to be customer-centric. They have done this by surveying number of CRM executives from large industrial companies. Emphasis is in large, industrial companies "because the size and complexity of such enterprises is likely to present the

greatest CRM challenges." Payne and Frow (2005) wanted with this framework fill the research gap in the cross-functional process-based conceptualization of CRM. These processes are quite generic and can be found in almost all large industrial companies. The challenge in managing all these processes is the cross-functional nature of them. That is found to be the problem for most of the organizations. (Payne & Frow, 2005.) These five processes are organization's strategy development process, value creation process, multichannel integration process, information management process and performance assessment process (Payne & Frow, 2005).

First process that needs to be taken into account in Payne and Frow's (2005) model is the organization's strategy-development process. This process includes the business strategy that is usually drawn up by the top management but also the customer strategy that is most commonly done by the marketing department in association with the IT. Drafting the customer strategy includes a careful assessment of the existing and potential customer base and deciding on the level of segmentation in organization. (Penny & Frow, 2005.)

 In the core of exchange process is the dual value creation process that determinates what is the value the organization brings to the customers and vice versa what value do the customers bring to the organization. The value the organization brings to the customer is of course closely linked to the value proposition the company offers. When the organization receives value from its customers we can talk about value co-creation. It needs to be researched how the profitability varies between customers and customer segments to determinate the extent of the co-creation. The connection between cross-selling, up-selling and customer advocacy and customer lifetime value has to be understood in the company. Value creation process helps the organization to convert their customer strategies to actual value propositions that lead to customer retention and value co-creation. (Penny & Frow, 2005.)

Multichannel integration processes take the customer strategies and value propositions and turn them into actual value-adding activities through successful customer touchpoint management. Companies are using multiple different channels to reach the customers. These channels include sales force, outlets, telephony, direct marketing, e-commerce and m-commerce. Customers can be contacted in multiple ways. It is essential to decide what are

the appropriate channels and how the information from these channels can be integrated so that it forms one clear picture. Every channel has to uphold the same standards on customer management so that the customer experience will be as satisfying as possible. (Penny & Frow, 2005.)

Information-management process includes effective data collection, collation and use. This should help the organization make appropriate decisions. In big role in effective information management are the data repositories that are usually data warehouses. The job of data warehouse is to form a clear customer history in the organization in question. IT systems and analytical tools are in a critical role in the information management processes. The integrations between these systems and tools have to be taken into account in organization's data modelling plan. Also the integration between organization's front office and back office systems has to be in the data modeling plan. This planning should be done keeping the customer in mind. When the information management process has been done properly it should be able to "replicate the mind of the customer" for the organizational actors. (Penny & Frow, 2005.)

Performance-assessment process can be divided into macro- and micro level performance indicators. On a macro level organization has to concentrate on shareholder results like employee value, customer value, and shareholder value. It is also important to think how the costs can be reduced. This can be achieved for example by acquiring new technologies and electronical channels. On a micro level organization should measure the CRM performance with indicators like customer retention. Even better approach would be a balanced scorecard to reflect the performance standards of all the five major processes. It is essential to ensure that the CRM activities are planned and executed effectively and that they are also measured. This way the customer relationship management processes can be always developed further. (Penny & Frow, 2005.)

Table 1 Generic customer-related processes (Penny & Frow, 2005)

Generic Customer-Related Processes	
Strategy development process	Value creation process
Multichannel integration process	Information management process
Performance assessment process	

2.3.2 Building a customer-centric organization

Seybold (1998, 2001) has created a model on how to create a working customer-centric organization of digital age. Her model is widely cited in today's research, even though it has been constructed in the early stages of digitalization and Internet boom (Galbraith, 2011; Ishii, 2015). The model includes five steps;

> *"(1) make it easy for customers to do business; (2) focus on the end customer; (3) redesign front office and examine information flows between the front and back office; (4) foster customer loyalty by becoming proactive with customers; and (5) build in measurable checks and balances to continuously improve."*

Seybold (1998) suggests that the organization desiring to become more customer-centric should start the enhancements on the customer fundamentals by making it easy for customer to do business with the organization. It is highly important not to waste customer's time and to know your customers thoroughly. The service the customers receive from the company should delight them, the mere reliability is not enough anymore. After all these basic

requirements are managed, the products and services should be customized. Customization is the key to cementing the relationship with the customer. (Seybold, 1998.)

The second step of Seybold's (1998) model describes how the organization should focus on the end customer. End customer is the entity that consumes the product or service and pays for it. Organizations should know these customers and effectively use this information to strengthen the relationship with them. The customer-facing processes should be redesigned, keeping the end customer in mind. The aim should be to make it easier for the customer to do business with the company, not just for example to make the processes more cost-efficient or leaner. Also the information processes between front and back office should be evaluated and tightly integrated. (Seybold, 1998.)

According to Seybold (1998), organizations should foster the customer loyalty in order to become customer-centric. Customer retention has a clear impact on the bottom line of the company. Companies that maintain strong and long-lasting relationships with their customers are significantly more profitable. (Seybold, 1998.) This is also one of the main fundamentals of customer relationship management (Verhoef, 2003). This acquisition of strong and long-lasting relationships is done by being proactive in all activities related to customers. Seybold (1998) also emphasis the fact that in order to follow the customer-centricity level in the organization, there should be measurable checks where processes could be evaluated and considered.

Bolton (2004) suggests in his study that everything related to customer-centric business processing starts with a culture change. This cultural change will result in changes in business-process design and organizational structure. But the culture change will always be the underlying factor. The culture in organization should manifest that every employee has his or her goal on gaining the customer's long term trust. The aim to satisfy customers should overcome even the organizational goals. (Bolton, 2004.) Organizational set of values and strategies should always be defined before re-designing any processes. If this is not done there can be enhancements to wrong processes or worse, the implementation of wrong kind of systems and due to this significant financial losses. (Bolton, 2004.)

Customer-centric business processing (CCBP) is an approach that aims in placing the customer in the core of every important business process. As we stated before, CRM is traditionally thought to impact only the processes in marketing and sales. CCBP tries to overturn this and emphasize that all the processes in an organization affect customer and should be revisited when implementing a CRM system. This takes further the Payne and Frow's (2005) model that define only certain important customer-centric processes. Usually there is a high emphasis on understanding and exploiting customer in CRM projects. CCBP takes this a step further and puts high emphasis on respecting the customer. Customer-centric organization provides high-quality experiences for the customer over a long period of time. Customer relationship management is just the result of these actions. (Bolton, 2004.)

Bolton (2004) highlights the importance of recognizing who the actual customers are and how they can be segmented. It is also important to understand the behavioral patterns of these customers and be able to forecast the needs of these segments. The seamless customer-related information flow is in a key role in CCBP. Data collected from the customer by all functions has to be utilized effectively for everybody's use. Attentive listening of customers and the storing of this information in data warehouses is crucial. (Bolton, 2004.) This emphasizes how closely all aspects of customer relationship management are linked to each other. Efficient data management is a highly important part of customer-centric business processing (Bolton, 2004).

Bolton (2004) describes how the processes and systems of different departments are often working in separate silos, not connecting with each other. He suggests that these different systems should work closely together, in order to make the business processes as customer-centric as possible. According to Chen & Popovich (2003) this kind of silo-based thinking should be replaced with customer-centricity that will promote the collaboration between different functions and organizational sectors. Different departments should not in any circumstances compete with each other but have a common goal, which is pleasing the customer. (Chen & Popovich, 2003.)

Here is a summary on the two parallel and partly overlapping ways of making the organization as customer-centric as possible (Table 2).

Table 2 Customer-centricity theories

Features	Seybold (1998;2001)	Bolton (2004)
Fundamentals	Defining the customer and serving that customer accordingly.	Culture change in the organization - respect your customer.
Different functions in organization	Co-operation between all functions	Working in separate silos should be avoided.
Execution	5 step development plan	Change in philosophy and way of thinking in the organization
Common for both	• Know your customer • Cooperate across functions and departments • Have always the customer in mind	

2.4 Technology perspective

According to Sue and Morin (2001) CRM system is in essence a technology-enabled business management tool that helps to develop and enhance customer data. (Raman, Whittmann & Rauseo, 2006.) CRM software is typically designed to be a tool set that guides sales teams and other parties involved in sales. This toolset helps sales people to develop potential customers, to create appropriate sales propositions, to overcome customer resistance and to offer post-sales support. (Stein, Smith &Lancioni, 2013.) When organization implements a CRM software, the goal is usually that it will help analyze customer data faster, improve the quality of the data, make business decisions in a faster phase, grow customer loyalty, improve customer satisfaction and reduce costs (Wu, 2010).

Ahearne & al. (2004) have developed a Technology Performance Usage Model (TPUM) that is closely related to CRM software. They have studied the CRM software usage among

salespersons and created based on that a curvilinear model on technology usage and performance. The usual expectation is that the more the personnel uses technology in their daily work the better their performance will be. However, Ahearne & al. discovered in their research that for sales there is an optimum point of technology usage. Too excessive CRM software usage won't enhance their performance but it will hinder it. (Ahearne & al., 2004.) This is related to the topic of how the use of technology should have a clear purpose, not be an end in itself (Avlonitis & Panagopoulos 2005).

2.4.1 System Design

According to Gould & Lewis (1985) It is important to design all ICT systems for people. System that is designed keeping the users in mind is easy to learn and remember. It should contain functions that help people perform their daily tasks. The usage itself should be easy and enjoyable. (Gould & Lewis, 1985.) Gould and Lewis (1985) suggest three principles on system design. These are: early focus on users and tasks, empirical measurement and iterative design. According to them, system designers should think who are the actual users and what are the tasks that are supposed to be performed with the system. Also the users should be engaged to the design process (Avlonitis & Panagopoulos, 2005). They emphasize that the system should be tested by the real users and improved according to those findings. Furthermore the design process should be iterative so that the problems could be identified, fixed and tested again. (Gould & Lewis, 1985.) These principles that have been created already in the 1980s are still used in the academic literature today (Fjermestad & Romano, 2003).

In the 1980s also a theory for user-centered design was presented by Norman & Draper (1986). Their ideas were aligned with Gould & Lewis' (1985) theory on how the user should be in the center of the design. User should be know how to use the system without extensive instructions. (Abras, Maloney-Krichmar, & Preece, 2004.) In user-centered design process it is also important to engage the user to the designing process. This can be done by interviews

and inquiries but also more extensively by participatory design and usability testing. (Abras, Maloney-Krichmar, & Preece, 2004.)

Nielsen (1992) presented his three-stage theory of system design at the early 1990s. It was largely based on Gould and Lewis' (1985) idea on how the new ICT system design is never ready on the first try. It needs prototyping and testing before it can be implemented organization-widely. This is seen extremely important since it is very expensive and difficult to do fundamental changes to fully-implemented solutions. In Nielsen's theory the system design is divided into three stages, predesign, design and post-design. (Nielsen, 1992.) Part of that design theory are so called Nielsen's heuristics (Nielsen & Molich, 1990). Heuristics are principles that guide the system design process. They are more rule of thumbs and guidelines than strict rules. Nielsen's heuristics are said to be one of the most widely accepted heuristics in the system design. They have been excessively tested and theoretically grounded and they are still used today. (Jaferian, Hawkey, Sotirakopoulos,2014; Velez-Rojas & Beznosov, 2014.)

According to Nielsen (1992), pre-design stage is devoted on knowing the user. Before we have a proper knowledge on the users and their tasks, all the design decisions for the new system are premature. System designer should know the individual user characteristics but also their exact tasks. It is important to understand the pitfalls and underlying functionalities of these tasks and how they could be enhanced. It is also important to predict how the usage will be evolved over time so that there will be flexibility in the future. Part of the predesign stage is also the competitive analysis. Competitive analysis examines the strengths and weaknesses of the existing system solutions. Current and maybe more descriptive term for this would be the benchmarking of existing solutions. The usability goals should be also set in the predesign stage. Nielsen (1992) divides these goals into five categories; *learnability, efficiency of use once the system has been learned, ability of infrequent users to return to the system without having to learn it all over again, frequency and seriousness of user errors and subjective user satisfaction.* (Nielsen, 1992.)

In the actual design stage it is important to involve the actual users to the process with test teams and prototype testing in a relatively early stage (Nielsen 1992). Also the empirical

testing should be done with the actual users as soon as there is a version that can be tested. Certain consistency should be maintained throughout the design process. Different standards and usage rules help the actual usage significantly. Design process should be as iterative as possible. Errors and usability issues should be corrected quickly when found. Figure 5 illustrates the Nielsen's heuristics (1992) mentioned earlier. The underlying idea behind most of these heuristics is the simplification of the system for the users. All the different aspects of the new system should be designed from the user's point of view. (Nielsen, 1992.) Nowadays the ICT solutions are more complicated and finetuned than in the early 1990s but it is good to remember these basic requirements. Basic users still want the systems to be simple to use and consistent in how they work. Especially today when people are forced to use multiple technology solutions every day, it is even more important that the systems follow these heuristics. (Faaborg, & Schwartz, 2010.)
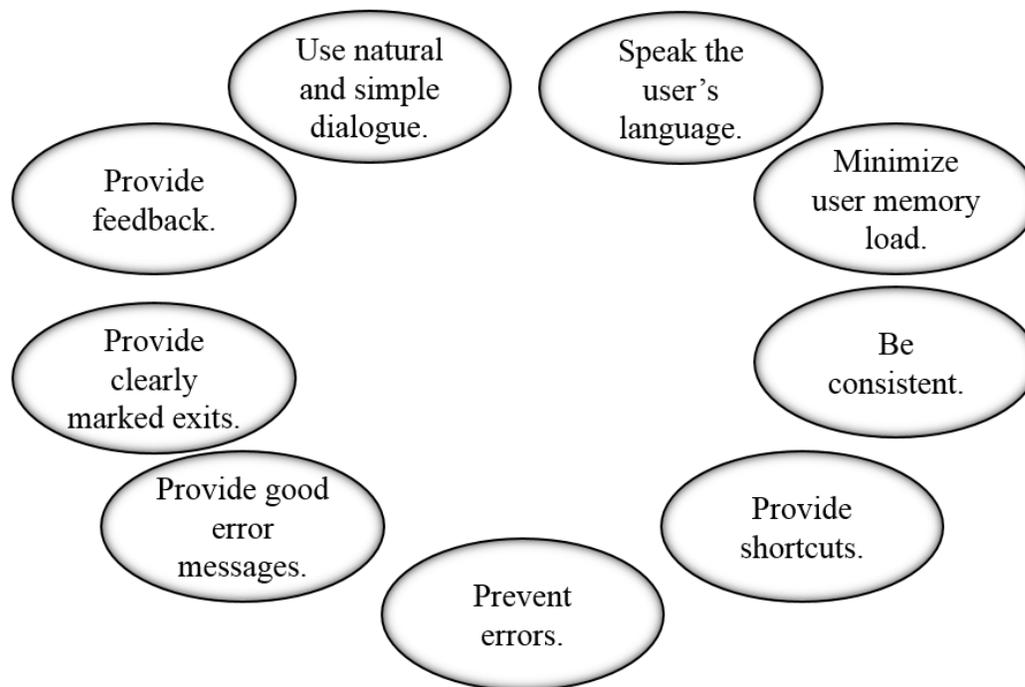

Figure 5 Nielsen's heuristics (Nielsen, 1992)

Nielsen (1992) reminds that the system design work should not end in the implementation. The usage and users should be monitored and the data for future software projects and

enhancements should be gathered. Also the financial information on the impacts of the implementation should be measured. Does the new system reduce costs or make the working enviroment more effective? (Nielsen, 1992.) It is also important to make the users to participate in the post-implementation system design. This will engage the users to the project after the implementation but also give significant insight on user needs for the use of the system enhancements and further designing. (Wagner & Newell, 2007.)

2.4.2 Data management – analytical CRM

A very important feature and aspect in the CRM system implementation is the data management. Stefanou & al. (2003) even define that the whole CRM is about "knowing your customers better and effectively using that knowledge to own their total experience with your business" (Stefanou, Sarmaniotis & Stafyla, 2003). High-quality customer data helps to foster, maintain and strengthen profitable customer relationships. (Raman, Whittmann & Rauseo, 2006.) The information the system contains on customers is not just a series of steps from customer prospecting to the after sales support. It is a living history of the relationships between organization and its customers. These relationships contain multiple webs of intercourses and different kinds of channels of official and unofficial information. These webs of intercourse help the organization to understand what makes the customer relationship successful for the organization but also for the customer. (Stein, Smith & Lancioni, 2013.) However, Davenport and Klahr (1998) argue that the customer knowledge has certain aspects in it that makes it a relatively complex data to manage. It is normally acquired from several different sources and it is not static but constantly changing over time. (Mithas, Krishnan & Fornell, 2005.)

Companies that employ CRM systems are able to record customer-related information efficiently and store it in one place where it can be converted into customer knowledge. This customer knowledge will give the framework for company policies and future interactions with customers. These companies are familiar with the data management issues that occur in different phases of customer relationships. This information will help companies to address

customer needs and customize their offerings to customers. (Mithas, Krishnan & Fornell, 2005; Xu & Walton, 2005.) This more accurate customer targeting helps organizations cut down wastage and reduce costs. The customer support efforts are usually quite expensive. Data mining helps to direct them towards the most profitable customer segments and customers. (Shum & al. 2008.)

One important aspect on efficient data management using CRM system, is the customer segmentation. According to Marcus (2001) there is four types of significant customers that can be identified through CRM data management. First are the high lifetime value customers. These customers have high value for the company now but also in the future. Their retention is usually high and they have growth potential in the future. The second group are the "benchmarkers" who adopt new products in an early stage and set trends also for others. Third group are the customers that provoke change in the supplier company. They might be very demanding and eager to complain but they also make the organization grow. Fourth group are the customers who just manage vast amount of fixed costs and make by this smaller companies more profitable. (Xu & Walton, 2005.)

Other way of doing the customer segmentation through CRM system is provided by Cunningham, Song & Chen (2004). They describe how the segmentation can be done most efficiently through data warehousing. They evaluate customers through their current value and future value. First group are the customer that have both those factors on a low level and should be eliminated. Second group are the customers that are currently not that valuable but will have potential in the future. Those customers need some re-engineering and effort from the organization to become more valuable. Third segment of customers are the ones that have high value at the moment but low future value. With those companies the organization should engage with and help them to find new opportunities. Fourth group has high value now and in the future. In those companies it is simply profitable to invest. (Cunningham, Song & Chen, 2004.)

The questions of data accuracy are undeniably crucial when talking about CRM data warehousing. The data from CRM system should be used as a base for so many decisions that it must at all times be up-to-date and accurate. Data that is not updated and accurate is

called "dirty data". Analyzing that dirty data results in unfounded decisions and wrong judgements. Thus data quality is one of the key elements on successful customer relationship management and also system implementation. (Cunningham, Song & Chen, 2004.) Gartner Group (2006) even stated that the dirty data is the biggest reason for CRM system failures (Haug & Stentoft, 2011). Data accuracy in the CRM data warehouse should be checked regularly by the whole organization, not just when put in the system (Cunningham, Song & Chen, 2004). Companies' data mining is most efficient when the CRM application is well integrated into the supply chain. This helps significantly the data management and acquisition. (Mithas, Krishnan & Fornell, 2005)

CRM system should provide information on the existing customers but also on the prospect customers. CRM is mainly associated with the customer retention and maintaining the existing customers. CRM system can however be used also in the new customer acquisition by analyzing and profiling prospect customers. This links CRM data management strongly to the acquisition of new business opportunities, not just to the storing of historical information. This demands of course that the data is being fed to the system from both internal and external sources. But this will make the CRM system a data bank for possible customers and help this way company to grow and acquire new business. (Xu & Walton, 2005.)

According to Iriana & Buttle (2007) analytical customer relationship management can be seen as part of an effective data management in an organization. Analytical CRM is the counterpart of the operational CRM that refers to the everyday actions performed with CRM systems. Analytical CRM offers analytics from the customer data usually for the management needs. It is basically the next level of data management. Analytical CRM can detect behavioral patterns and can be in used when making better business decisions. It can utilize data warehouse architecture, customer profiling and segmenting, reporting and different analytics. (Iriana & Buttle, 2007.)

Unfortunately, according to Xu & Walton (2005) the possibilities that analytical CRM possesses have not been utilized as widely as they could be. Mainly only large, established companies use the analytical CRM solutions. Xu and Walton (2005) suggest that the gaining

of customer knowledge should be regarded as important as the relationship building with customers. Well-executed analytical CRM can create a panoramic view on customers and show behavioral patterns and through this help to predict future actions. (Xu & Walton, 2005.) This is tightly knit to the concept of strategic CRM. CRM system is often thought to be merely a tool for sales and customer service and its possibilities in management and strategy creation are being overlooked. One big challenge is that the CRM information is usually very granular and scattered across the system. It does not provide that kind of longitudinal and generalizable information that is needed by the top management to make strategic decisions. (Stein, Smith & Lancioni, 2013.)

Stein & al. (2013) see that one way that the CRM data can serve organization's top management is by describing the different phases of the customer relationship. They think that it is important knowledge for management to find out which party was making the initiative in the relationship formation phase and which party in the decision phase. It is also important to see the drivers for customer relationship formation. This is how the management can evaluate the customer - and sales processes in organization. They can also categorize the relationships based on their nature by evaluating the relationship history. (Stein & al., 2013.)

2.5 Theoretical Framework

In this study, I use as a fundamental theoretical framework the customer relationship management's division to people, processes and technology (Chen & Popovich, 2003; Goldenberg, 2008). The theoretical framework for customer relationship management is quite extensive and thoroughly researched. I have narrowed down the material I use in my theoretical framework through my empirical findings and the different aspects that rose from it. I am now going to revise my theoretical framework before moving to my methodological choices.
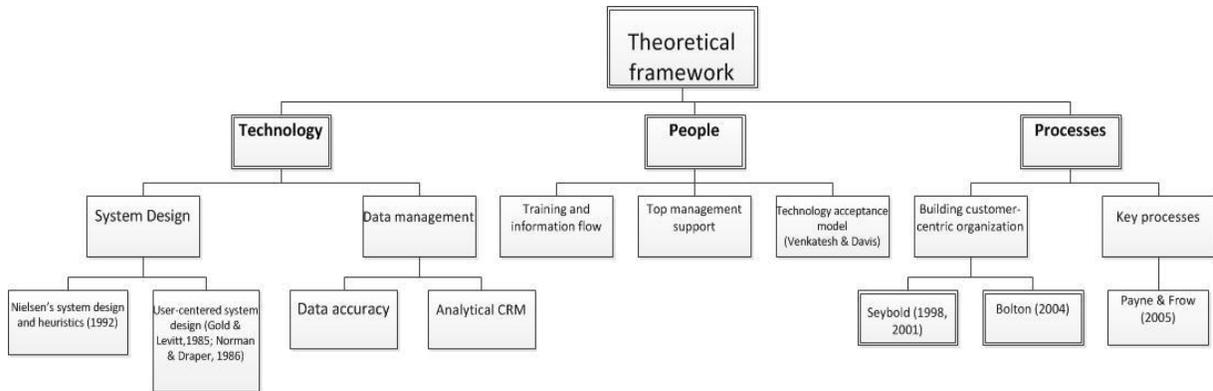
Figure 6 Theoretical Framework

The theoretical framework of people perspective is divided into three main areas, top management support, technology acceptance and training and information flow. Top management support is crucial for a system implementation project like the one investigated in this Master's Thesis (Chen & Popovich, 2003). Top management should promote the system implementation openly and provide necessary resources for it (Ifinedo, 2008). Top management should also promote innovativeness in the organization since positive climate towards innovations helps also significantly ICT implementation processes (Croteau & Li, 2003). Besides the top management, also sales supervisors and direct supervisors should support the implementation and demand the usage from their subordinates and on top of that show example by themselves (Avlonitis & Panagopoulos, 2005).

Technology acceptance model (TAM) is a model created originally by Venkatesh & Davis in the late 1990s. It describes the factors affecting employees' technology acceptance in organizations through two main concepts; perceived usefulness and perceived ease of use. There is a several different factors that have to be taken into account when implementing new technology. (Venkatesh & Bala, 2008.) According to Venkatesh & Bala (2008) one important factor in system implementations is the post-implementation interventions like the training of the users. Users should be trained appropriately and kept informed on the project developments and the expectations towards it (Gallivan, Spitler & Koufaris, 2005; Shum & al., 2008).

In order the CRM implementation to succeed, organization has to look into its processes and make sure that they all have the customer placed in the center of them. Implementing a CRM system will not automatically change the organization into a customer-centric one the processes have to be thought through first. (Goldenberg, 2008.) Payne and Frow (2005) introduce five very generic organizational processes that should be as customer-centered as possible in order the organization to be a customer-centric one. Those processes are organization's strategy development process, value creation process, multichannel integration process, information management process and performance assessment process (Payne & Frow, 2005). Bolton (2004) and Seybold (1998) on the other hand describe ways to make the organization more customer-centric. Seybold (1998) does this by developing specific steps when Bolton (2004) emphasizes a culture and attitude change in the organization and eventually a new customer philosophy. All these perceptions lean on to the ideology that all the organizational processes are important when dealing with customers also the broad strategy-creation processes. CRM thinking should not be narrowed down to the sales, customer service and marketing processes.

Technology perspective has been divided in my study into two main areas, system design and data management. Besides those areas, I introduce a TPU model created by Ahearne, Srinivasan and Weinstein (2004). According to that model there is an optimum point of usage for a CRM system among the sales people. After that optimum point the usage will not enhance their performance, it will hinder it. (Ahearne, Srinivasan & Weinstein, 2004.) I have used two main theories on ICT system design, Gould and Lewis's (1985) study and Nielsen's (1992) heuristics. Gould and Lewis (1985) have three main designing principles; early focus on users and tasks, empirical measurement and iterative design. Nielsen (1992) design stages lean also on Gould and Lewis' (1985) ideas on user participation and iterative design methods. Nielsen introduced nine heuristics that are certain kind of rule of a thumbs for system designing. They are more practical guidelines for people who do designing in organizations.

Other dimension in the technology perspective is the data management. Some even think that the CRM system is primarily a data bank that contains all the information on customers and their history. It is a comprehensive picture on customer interaction webs and should be

utilized efficiently. (Stein, Smith & Lancioni, 2013.) Customer data is however very complex data to manage because it is constantly changing (Mithas, Krishnan & Fornell, 2005). Data provided by the CRM system should always be "clean" and without errors (Cunningham, Song & Chen, 2004). It should be used to help the strategic decision-making and management. In order to succeed in this the data should be longitudinal and modified to an understandable form. Sadly, in many organizations this is not the case. Companies settle for a having just a views on singular customers. (Xu & Walton, 2005.)

3 METHODOLOGY

This study is conveyed as a qualitative single-case study. What is characteristic of a qualitative research is that it tries to understand the reality socially constructed and it aims to create a holistic view on the research topics. Qualitative research also aims to interpret and understand the research problems when quantitative research deals more with the statistics and hypothesizes. (Ericsson & Kovalainen, 2008.)

I treated my research participants as "knowledgeable agents" as Gioia & al. (2012) define the informants in a qualitative research. The participants from my case organization know the best what they are currently doing and what they are aiming to do. They are also the best experts on their experiences, thoughts and actions. I am going to work as a "glorified reporter" as Gioia & al. (2012) identify the researcher conducting qualitative research. These reporters report informants' experiences as adequately as possible and do not impose prior theories on them. This way novel concepts and point of views can be found.

3.1 A single-case based study

As my research strategy, I am using a single-case based study. I study one large international manufacturing company as my case object. Through my research questions I try to understand their specific problems on CRM usage and answer my research questions by collecting an excessive empirical data in the company and analyzing it through the existing theoretical background. As is typical of a case based research strategy, my conclusions cannot be generalized to cover for example all manufacturing companies dealing with the same issues. Researchers and managers can however hopefully learn something by visiting my research results.

I collected my empirical material from a large manufacturing company that produces technical coatings and laminates in 9 different countries. This company has an extensive

history in Finnish paper industry and about 900 employees working both as blue collar and white collar employees. CRM system had been implemented in the whole group couple of years ago but the implementation remained partial and thus resulted in failure. Now only handful of employees are using the system and the license fees are only an item of expenditure. Just recently the CRM system has again gained management's interest and they want to utilize the system efficiently to the whole group. This re-implementation project is just starting in the organization and the aim is to adopt a more holistic view on the CRM system and its integration.

Case study method is popular among researchers because it presents multifaceted and hard-to-grasp business problems in an easier-to-understand and more personal format. That is why I also chose to use this research method. It was important for me to process the issue in an accessible way that is close to the actual practical issue. (Ericsson & Kovalainen, 2008.) In my study I research quite a practical issue on the critical factors of the CRM system implementation and I wanted to handle it in a way that takes into the account the complex needs of the users in this precise business context.

It is very important to define the appropriate research questions in a dialogue with the empirical data when conducting a case study (Ericsson & Kovalainen, 2008). I have gathered some basic information and theoretical background on the customer relationship management but I did not want to research the topic too deeply before starting to collect my empirical data. As Ericsson & Kovalainen (2008) say, it will be easier to formulate the more specific research questions when one has become familiar with the uniqueness of the case. In my study, I wanted to first understand the issue inside my case company and after that formulate the accurate research questions. However, I acknowledged that my research subject has been widely studied and thus I have to be at some level familiar with the previous study before collecting my empirical research material.

3.2 Data collection and analysis

I collected my primary research material with guided - and semi structured interviews in my case organization. I tried to collect quite extensive empirical data by interviewing 46 persons from different parts of the organization and from different organizational levels. Of course some of the interviews gave me more insight on the subject and some of them were more superficial, depending on how much the participant in question had point of views on my research topic. The same basic interview structure was used for all the interviews but some slight modifications were made based on the position the interviewee held. I conducted these interviews via Skype which helped the extensive interviewing task slightly. I conducted the interviews in English or in Finnish depending on the interviewee's preferred language. I translated the Finnish interviews into English myself. I recorded and transcribed the interviews in the period of three weeks.

I held the Shum & al. (2008) definition of a failed system implementation as my starting point when I composed my interview questions. They argue that a system implementation failure can be measured with the number of regular users. So first I wanted to find out if the implementation had been a failure for the participant in question by asking if he or she used the CRM system regularly. Almost all of the participants answered that they did not use the system in their daily work. After that I started to find out reasons for this with why-questions. After I felt that I had gotten the whole picture of the non-usage I asked the participants more about what would make them to use the system. This material was used for the CRM development project but I also wanted to make the participants to see the current situation other way around for my research.

As a data collection method interviews are thought to be very flexible option. They allow the interviewer to clarify and repeat the questions and present them in the order he or she chooses. This is the opposite for example of a survey, where the question structure is settled. (Tuomi & Sarajärvi, 2009.) I had an online survey as a secondary research method and when I compared the answers from that survey to my interviews, I found that the interviews were much more fruitful source of information. I got significantly broader and more in-depth

answers with my interviews. I think that this was because the tone of the interviews was informal and also some participant needed re-phrasing and encouragement to fully answer the questions.

It was quite easy to conduct so many interviews in such a short time frame since the interviews were also a part of a development project in my case company. This project had the management's support and I also worked in the case company as an employee myself. In a qualitative research, the researcher is the creator and interpreter of the research setting (Tuomi & Sarajärvi, 2009). In a qualitative research with interviews as a data collection method researcher is very much personally involved and does form a relationship with the participants (Fink, 2000). This is why I think it is good to also analyze my double role as an employee and a researcher and the impartiality and objectivity of the research in that perspective. I had not worked on the CRM implementation project before so in that sense I was a neutral party. I had also worked quite a short time in the case company. I felt that the fact that I knew some of the participants beforehand had some effect on the interviews but mainly a positive one. Those participants were more eager to share their opinions and it did not prevent them from criticizing the project or my case company.

I divided my 46 respondents into groups according their position in the organization (Table 1). The anonymity of the respondents was a crucial demand from my case company so I tried to group them so that no-one could be identified based on the grouping. In some aspects more precise division would have been interesting but I think that the grouping provides value also as it is. I will code the answers based on this grouping so that every respondent will have their group and an individual letter (e.g. respondent *Management A* or *Supply Chain D*) after their quote.

Table 3 Interviewees by position

Position in the organization	Number of respondents
Management (GET & Upper Sales Management)	9
Sales (Sales Managers and Business Line Managers)	12
Supply Chain	10
Others (R&D, Sourcing, Quality, Marketing and Plant Managers)	14

As stated earlier in this study, my interviews were conducted as guided and semi-structured but they also had elements from structured and standardized interviews. Some of my questions were "what"-questions and I was partially interested in facts and realistic information. I wanted however to keep the questions as open as possible so that the interviewees could answer them as broadly as possible. And as I already mentioned, I also wanted to keep the tone of the interviews conversational and informal. These are the basic corner stones of the semi structured interviews. I wanted to avoid the basic problem of the structured and standardized interviews, the lack of flexibility on answering the participants concerns and adapting the interview according to the answers. I also wanted to collect more in-depth answers than just the basic yes or no responses from the participants, The purpose was not to compare the data systemically but to get each participant's personal view on the research topic. (Ericsson & Kovalainen, 2008.)

 I conducted the analysis of my interview data with a content analysis. I used as my content analysis method the grounded theory, which is an inductive analysis method that aims to

create a theoretical entity from the research data. This way the analysis moves from individual observations to theoretical themes. I have some elements from the deductive analysis in my study since I use the theoretical division to people, processes and technology for the grouping of my data. (Tuomi & Sarajärvi, 2009.) This division comes from the existing CRM literature and is not based on my empirical data or findings. Mostly the analysis process is however based on the grounded theory. According to Johnson, McGowan & Turner (2010) there is at least two different types of grounded theory; classical and constructivist. In classical grounded theory the data is supposed to speak for itself when in constructivist grounded theory the emerging results are tied to researcher's constructions. There is however some features of grounded theory that are common to all its branches: *"continual or iterative data collection (e.g., interviews, field notes) and interim analysis, memo writing, theoretical sampling, theoretical sensitivity, theoretical saturation, and constant comparison of data to the emerging theoretical categories and the developing theory during analysis and writing." (*Johnson, McGowan & Turner, 2010.) In my research especially present are the continual data collection, theoretical sampling, constant comparison of data to the theoretical categories and the developing of theory during analysis and writing.

In the first phase of analysis I followed faithfully interviewees' definitions and collected everything related to my research topic from the transcribed interviews. This is called reduction of the empirical material (Gioia & al., 2012). As a result on that I had approximately 200 different opinions on the subject. Gioia & al. (2012) state that after the first order analysis or reduction it is important to feel lost with the material. It just means that there is a lot of valuable material. However, I had to keep in mind my preliminary research questions and just collect the data related to the challenges in CRM system implementation. As Tuomi & Sarajärvi (2009) point out, there is usually lot of interesting findings in the qualitative research data but it is important to concentrate on your research problems and not to get sidetracked.

In the second order or grouping, I started to collect the different topics under larger themes. I used the division to people, processes and technology (Goldenberg 2008; Raab 2008) as a frame and grouped the topics under those three big themes. As I said before these three

themes emerged from the existing theoretical literature not from the collected data. However, when doing the grouping I felt that the themes were not forced and that they represented the material quite good. Most of the topics did overlap with two of these themes or even with all three of them but I tried to analyze the core reason for every topic and what would that be from those three themes. This grouping helped me to understand and categorize the vast amount of information (Tuomi & Sarajärvi, 2009).

After this I started to formulate smaller themes inside the three main themes. I refined these themes further and combined them to get the main themes that reflect the challenges in CRM system implementation. I ended up with nine main themes. These were the actual challenges in CRM system implementation that I will be addressing later in my thesis.

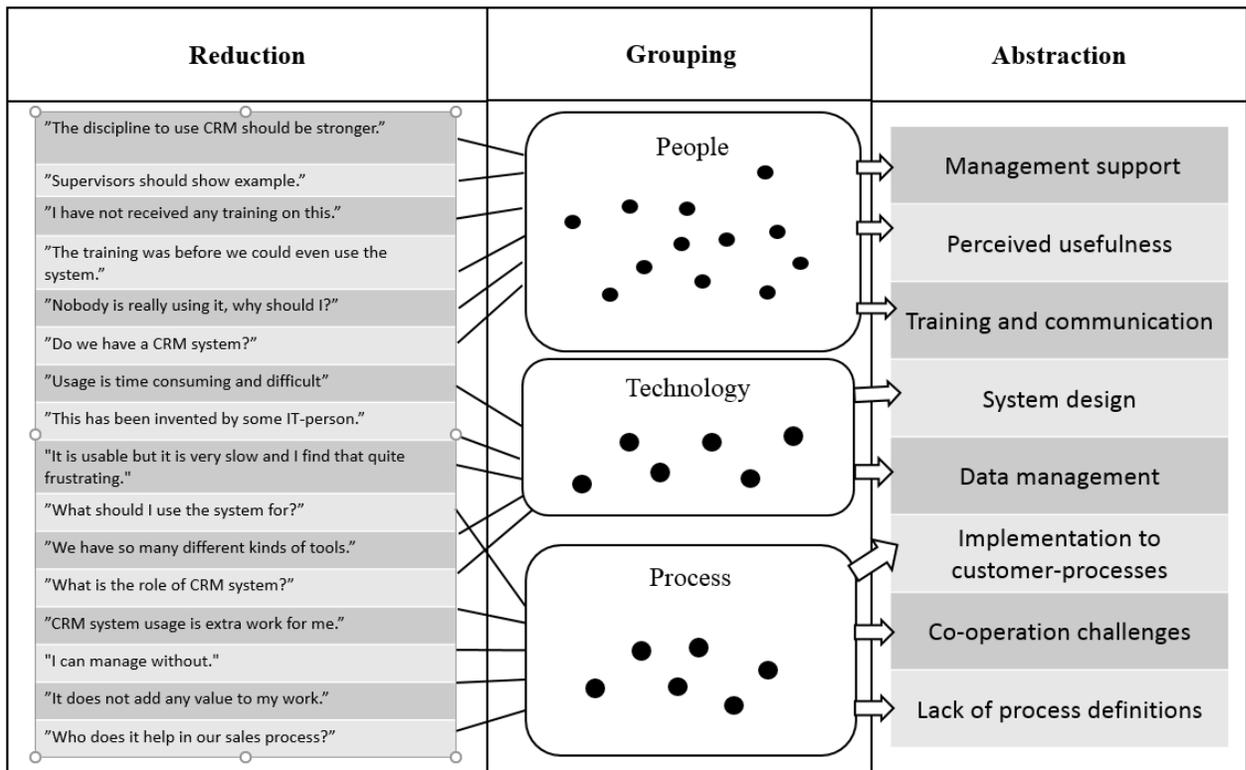The following data structure represents my analysis process graphically:

Figure 7 Analyzing the empirical data

3.3 Secondary research material

My secondary research material consisted of prior CRM project materials and the system itself. There was also an Intranet survey conducted in the organization on CRM system usage. The whole personnel were able to participate on the survey if they wished to do so. Approximately 20 people answered the survey and some of them were also my interview participants. I used the material from the survey to complete my interview data since there was no big differentiation between the survey answers and the interview answers. The survey data merely complemented the interviews by adding couple of valuable comments on the subject.

I was also able to review the original implementation plan for the CRM system. It had been classified as confidential on my case company so I was not able to present it as a research material in my thesis. That is also the reason why I am not going to do any comparisons between the original plan and the actual outcomes. That could however be a valuable subject for the further study on this area.

4 THE CRITICAL FACTORS IN CRM SYSTEM IMPLEMENTATION IN A LARGE MANUFACTURING COMPANY

4.1 People

4.1.1 Discipline and support

According to my respondents, the management support was mostly being seen as discipline and more accurately as the lack of it. The respondents viewed that the discipline and supervision coming from the management level had a great importance in order the usage of the CRM system to be sufficient. The actual management support or encouragement was not being brought up widely in the interviews. Only one respondent out of 46 felt that the top management should show an example. The example from lower organizational levels was on the other hand being seen important, especially the one coming from one's personal supervisor. Top management's influence was mainly seen as an authoritarian power on users. Respondents felt that the mere instructions or guidelines from the CEO or group executive team were not a sufficient incentives for the usage.

> *"It is not only linked to the process that is being used but also the discipline that we have in the company and the discipline we are imposing to people." (Management F)*

> *"If a salesperson gets his or her salary from customer visits, then those visits have to be documented. That can't be voluntary." (Others I)*

> *"One who does not use it is my supervisor. Even though he says that we need to write there, he himself only rarely does." (Others C)*

Respondents brought up also the fact that the discipline coming from top management is not enough to make people use the CRM system. Every supervisor in the chain of command should demand the usage of the new system from his or her subordinate and supervise that the new system is actually being used. Based on these interview, the significance of the closest superior cannot be undermined. The personal supervisor should show an example but they should also be the ones monitoring their subordinates. It was also felt that the discipline did not run consistently inside the whole company. There were quite significant variations between different facilities and managers reported.

> *"Every BA [business area] Manager and BL [business line] Manager under him or her has to demand from their subordinates in the chain of command that the reports can be found from CRM system. And if they can't be found then the explanation has to be bloody good." (Others I)*

> *"But those sales people have a better discipline there (other facility). It is a problem when the sales people are not obligated to use the system." (Others J)*

Different technical difficulties were sometimes seen only as excuses for the non-usage. This underlined the fact that even though lot of issues in the user-friendliness and functionalities were reported, people still felt that the management and supervisors should demand the usage. That was being seen as their role. This might reflect a bigger picture on how the culture in the organization is towards people management. Employees want in the end strong leaders that communicate directly what is wanted from the employees. This view was presented mostly by the management section but also some lower-level employees shared it.

> *"...and again, as I said before, all excuses, difficult to access, not correct etc. Like kids." (Mangement F)*

4.1.2 Perceived usefulness

New ICT systems like CRM system is not something that people are keen to have just for the sake of a new tool. There has to be a clear reason for the new system. Especially if one has never worked with the system before the first sentiment towards the tool is usually not a positive one. Getting to know the new system will take time and patience no matter how well the implementation process has been handled. Of course the implementation can be made as painless as possible but everything new is always scary and due to this people have to be won over. The starting point is not a neutral playing field but the implementation process starts usually below zero.

> *"And no-one wants a new system. That is true. Unless you know the system, unless you have worked with it in a good way[…] nobody is really keen to." (Sales J)*

According to my respondents it is very important that the new system has a clear advantage compared to the old ways of doing things. It makes no difference if this means old ICT systems or no systems at all. The new CRM system should bring something new to the table. This applies especially to the comparison to the other tools used in the organization. Organization's system portfolio should be clear and every solution should have a clear place and purpose. The system should also help people to go through their daily tasks and make the performing of those tasks easier and faster.

> *"It is always up to yourself... Or let me put it that way, all these new systems should have a clear advantage. Why do they exist and what does it give to me like compared to these other systems?" (Others B)*

> *" If I notice that bloody hell, this is useful, then I might get excited and want to learn how to use it." (Others C)*

In my case organization, the CRM system was seen primarily as a tool for the sales people. The new tool was desired to be a comprehensive solution for the needs of a sales person. This way the people doing sales would not have to use many different ways of working and

extensive set of tools. All the extra work besides the CRM system was seen as a clear negative factor. People wanted to have a holistic solution for the sales needs, otherwise they did not see the advantage of this new tool.

> " But if it is really wanted what was the purpose that it is a tool for sales people when they go visit the customers then it has to have all the information that is needed on a customer visit. So they do not have to have some additional notes. We do not have nothing like that in sales…" (Others I)

Many of the users had a feeling that no-one else in the organization was using the CRM system. This bad example shown by the peer users made the system seem useless for the respondents and gave them also a solid reason for not using it. This view of non-usage among peers was often based on a feeling, not on an actual knowledge. Not saying that the usage was not actually small in this case but the mere feeling was usually enough of an incentive to not use the system. Many of the recipients had a kind of a gut feeling that the usage was non-existing.

> " It has a lot of potential but it feels like no-one else uses it so it is in that way quite useless at the moment." (Supply Chain E)

> "Probably it is because I can manage with these other [tools] and then I have the perception that our sales people do not either use it actively. I look from Movex, Cubes and Operator [other ICT solutions in the company] the information that I need." (Supply Chain F)

What affected the respondent's view on CRM performance, was their earlier experiences on CRM usage. Some of the users had used CRM systems in their previous work places and benefitted from them greatly. Naturally they compared now this CRM system with their previous experiences and felt that their current employer was failing because it couldn't perform on a same level. Of course this also worked other way around. People who had worked in environments where the CRM system implementation had struggled were sympathetic and used the system despite the difficulties. They felt that these CRM system implementations never really worked out in a wanted way and that could not be expected.

Of course that kind of discouraged attitude was not helpful either since it did not encourage development or demand enhancements.

> *"But I am missing a lot of features if the system would have, I would use it much more." (Sales H)*

> *"Well I know it can be easier without a lot of clicking." (Sales J)*

> *"We had the CRM system of our own but it didn't work that well either. I think lot of companies have an issue with this kind of systems." (Supply Chain C)*

4.1.3 Training

The training and guiding of the users was seen as insufficient by most of the respondents in the previous attempt to implement the CRM system. Also the user support was not being provided as much as would have been needed after the implementation. People did not feel that they knew who to turn to when they had problems and questions about the CRM system. New employees did not receive any automatic user guidance for the usage of the CRM system. They had to seek it for themselves if they wished to have any. Naturally most of the new users did not seek it. This lack of provided training was also the case with other ICT tools in the case organization so the CRM system was not an exception in that sense. However, it made the implementation significantly more challenging.

> *"I think it [lack of usage] is because of the limited training, I haven't really received any proper training. I just know how to open it and look at the visit reports." (Supply Chain C)*

> *"To be honest, we got the two or three hours training from a guy that is not anymore working for us so if you have questions nobody is really there to help you. These things are not a good base for a successful implementation." (Sales D)*

Some people on the other hand felt that the best and most efficient way of learning new ICT tools was just to go around and try out different things by yourself. This way the user would learn through his or her mistakes and the system would be better etched into people's minds than if someone would just show how the system should be used. This learning-by-doing attitude was not widely adopted in the organization but some people felt that they had enough expertise for the sufficient usage without a training. Of course this approach results in the lack of standardization, especially if the system will not guide people to execute things in a certain way or does not make it possible to use it only one way.

> *" But you tend to learn more when you kind of play around with it rather than being taught exactly how to do it." (Others G)*

Learning by doing does take a lot of time that people don't usually have in a today's hectic work environment. All this learning and acquainting themselves with the CRM system is something that is additional to people's daily routines and workload. As said before, this lack of training could lead to the lack of standardization when people use the system in ways that are not intended.

> *"I am learning by using it but that is probably not the best way to go around and have to find your own way, I don't have time to do so. I think I'm not the only one, when you look around you have many many people." (Management F)*

Many of the respondents felt that also the timing and "momentum" of the training were important factors. The usage should be started right away after the training and if needed it should be revised. Some people waited for a while before starting the usage. This was because of factors depending both themselves and the organization. Because of the installation problems it took time to even get the system on some computers after the training. That made the taking of the first step in system usage much more demanding since those users had already forgotten most of the training. Some people just felt hesitation towards the system and they procrastinated with the usage themselves.

> *" Well maybe it is that I have thought that I don't know how to use it […] Then it was just kind of left behind. And now I don't remember nothing even on that small*

training we had, I don't have time to go around there and explore." (Supply Chain I)

"There has been some training, maybe three years ago. But then after three years we lose the momentum. I think we have to have some re-training, maybe not full training but just something to remember how to use it." (Sales I)

Some of the informants felt that the training and usage guidance should go deeper than showing where to click and what button to press and when. The logics and purpose of different functions should be explained to the users more thoroughly. It is important for the users to understand why they are doing something, not just that they have to do it. If they understand the causations behind their actions, it will make them more committed to use the new tool.

"I think the commitment from people would be much more sufficient if we think how those tools are used and how the information in those tools is used. Today we are just getting email "please feed the tool". And then we fill it. But that is not proper management to say fill it without any feedback." (Sales I)

Even though many of the respondents answered that there was not enough training, they were not ready to seek it actively themselves. They felt that it should be offered to them. There were appointed key users on plants but they were not asked to train or help with the system. Users did not feel any responsibility over their incompetence in system usage but mainly blamed it on the organization entirely.

"I worked as a key user for these sales people but I did not receive one phone call that anyone would have needed my help." (Supply Chain F)

4.1.4 Lack of communication and knowledge

Many of the respondents felt that they did not actually know what the CRM system was and what it could offer. Lack of information flow on the project is closely related to the lack of

proper training. However there should be besides the usage trainings, enough information on the implementation process itself offered for the users. Communication is an important part of the implementation project. Users wanted to be more informed on the progress in the implementation process and on the overall purpose of the CRM system.

> *"Probably I am not using CRM because I don't know how it could help our daily work, personally I don't know. I think many people are not using it because they don't know how it could be nice for them. We are using basic tools, sending emails, instant messages because we don't know what we can do with the CRM." (Sales A)*

> *"First of all, I need to get an understanding what CRM can really offer because I really even haven't gotten an overview what it can offer so I really can't comment on that [the system usage]." (Supply Chain C)*

One very important factor that came up in the interviews was that the information should be accurate, truthful and realistic. Getting the users' hopes up and then not delivering what had been promised was seen as a very negative issue in the system implementation. So even though enough communication is needed about the possibilities of the system, it has to be made sure that those possibilities are realistic and that they will be realized during the implementation.

> *" It has probably been a small challenge that it has been promised that this is going to work in a certain way but in reality it has not worked in that way. That is probably why people have not used it." (Others M)*

4.2 Customer-related processes

According to almost all respondents, the CRM system was not being used sufficiently to serve its purpose. This created kind of a vicious circle where the non-usage by some people fed the overall non-usage. In order the system to be useful and a meaningful tool for all

employees, most of the people had to use it first. Data is generated to the system mostly by the users and the lack of usage by some people made it useless to everyone. This would also work other way around, the additional usage would feed the usage. If people used the system and fed data there that would make other people use it too since it would help them to perform better in their customer-related processes.

"Well to begin with the introduction was what it was and I should fetch data from there. But there is so little data on […] customers. So it is no being fed enough data." (Others J)

"But I have never done them [reports] because everyone is not filling the data so it won't give a correct picture. It could be beneficial if I had enough time to browse and familiarize myself with it but I don't have that time. That is the biggest reason that I don't have time when I don't see the 100% benefit from it." (Others J)

4.2.1 CRM system as a part of the customer processes.

Using the CRM system was not being seen as a part of the company's customer-related processes by many respondents. It was seen as an additional work that had to be done on top of the normal customer-related activities like selling and handling customer orders, not something that supported directly those functions. New ICT system should work so that the time people spend using the system would reduce the time they spend doing other tasks. Here it comes down to the same thing as in system design, user-friendly system is a tool that does not take a lot of time to use. Good tool should shorten the process time, not lengthen it.

"This is just a fact that if you have otherwise a lot to do, then this is interfering the most important job, the selling. It is maybe a bit too rigid system for the information transferring and maybe too much developed by an IT person." (Sales G)

"So it has to be ensured that the system is not adding work but that it would make our life easier. And that is not the case for all the tools Walki is using at the moment." (Others L)

"I have no chance to learn these because my workload is so heavy and I have so much to do. I have no time to explore this system." (Sales G)

Respondents stated that the continuation and non-personalization of the information would be one of the biggest advantages of the CRM system. Lot of information was kept in emails and personal hard drives, not accessible to everyone. This created a significant problems on a holiday season or if an employee left the company unexpectedly. But because the system was not used in sufficient amounts, users felt that the information was lost in the company and the continuation of it was jeopardized. There was not enough information transparently part of the customer-related processes. On the other hand this transparency was seen as a problem by some users. They felt that if the information was there in the system openly distributed to everyone that would jeopardize confidentiality and create a possibility for a corporate espionage. That was why they did not want to use the system in its full extent.

"...now I always write down [reports]when I visit customer because I believe that if I don't write anything to CRM then all that data and information will disappear. If someone else takes your job they won't have any kind of information." (Sales G)

"Then there is the thing that when I speak about my own visit reports, then the projects we usually participate in are under non-disclosure agreements. Or there is rarely public visit reports I could do." (Others B)

4.2.2 Co-operation and information flow among different functions

According to some of the respondents, the co-operation between sales and customer service was not easy and adequately managed at the moment in the case organization. The information was not running smoothly especially from the direction of sales people to the

customer service teams in customer-related matters. Sales people might have visited customers and acquired important knowledge but the transfer of that information to customer service was not always smooth. Customer service worked also closely with the customers so it was crucial that they had all the relevant information.

> " Because it is so rare that they [sales people] tell anything even though they have visited the customer. I would probably be good to be able to go and check by yourself." (Supply Chain D)

> "The co-operation with customer service would also be a good point because they can go on read those visit reports and then they know what has been promised and what extra information would they need. Also the action points could be put there, what is whose responsibility."(Others A)

The perception of efficient communication between different functions in customer-related matters varied quite a lot among the respondents. People who worked in sales seemed to think that it is enough if they store the information to internal files and send emails. Whereas employees working in supply chain felt that they were not being fed enough important information and problems did occur when sales people were on a holiday or travelling to customers. Also when sales needed information on customers they gave calls to customer service and let the customer service do the investigation work. That was sometimes found quite irritating by the customer service personnel.

> "We store the files anyway in internal files so the workers internally have access to my mails and files and they can read the reports. So it is always something additional. That is the main reason why I do not use it." (Sales E)

> "Because it is not very agile if the sales person is travelling to say three days then you have to wait for three days to get an information on what has been agreed. And if the sales person is on a holiday to say for a month, then you are waiting for a month." (Supply Chain H)

"It would have a big advantage because it gives an overall picture on how the customer is doing and quite easily. The information flow from the sales people is a problem, we don't always know what is happening in the customer side. We use emails and always there is someone left out from the distribution. It is an eternal problem that we would have all the information in one place where everybody who were interested could go and check." (Supply Chain E)

"I feel sometimes like the central of information because I am working with Notes and with CA and not with Movex so every time they [sales people] want some information for example item structure, they give us a call and ask what the item is" (Supply Chain B).

4.2.3 Lack of clearly defined processes

Based on the opinions of some of the respondents, customer-related processes were not clearly defined in the case organization. There were makeshift solutions in use for handling customer relationships. For example whenever marketing was sending marketing materials to customers, all the contact information was being gathered from the sales people with Excel sheets instead of having an up-to-date contact register for example in CRM. That was complicating the CRM system implementation since there was not clear processes existing that could be handled with the system. The customer-related processes had obviously not been defined in the beginning of the previous implementation and it was not clear what would be the role of the new system.

"And we don't have clear processes either, customer register for example is one big thing. We are always struggling when we are sending information to customers, collecting all the email addresses is amazingly lot of work for the whole organization." (Management B)

"And then we have these parallel ways of working. We have this old and this new and then there is this transition phase and it is always hard. Some [data] is in the old system so this is kind of overlapping work." (Management D)

For most of the respondents it was unclear which systems and ways of working should be used in different situations. There was in use a reporting systems Cubes and PowerPlay, then there was the enterprise resource planning system Movex, operating systems Operator and ComActivity and an old information management system Lotus Notes. Besides those there were personal emails and hard drives and internally shared hard drives. The information was scattered to all those destinations. Employees did not know where to go and what system to use when they needed something. Because of this they had created their own methods of working that might not resemble the methods of other employees at all. This made the implementation of the new system hard since its role was found to be unclear and people used it in different, usually inadequate ways. The role of the CRM system had not been defined thoroughly or at least this information had not reached the users.

"I do not really use it. After we had these two systems, this Lotus Notes and then this CRM, I kind of got confused." (Management D)

"But I just don't know where I am supposed to take the information, from Operator [facility system], from Cubes [reporting system] or from here. Who is to decide on that? If I could look it from one place, that would make the training of summer replacements also easier. We would not need to use three-four different systems." (Supply Chain D)

"We noticed that the [data] is in three different places. It is in Lotus Notes, CRM system and then a lot of people just send emails. So this is really peculiar." (Management D)

4.3 Technology

4.3.1 System Design

Big part of the respondents pointed out that they did not find the current CRM system to be user-friendly. User-friendliness was defined as their personal perception on the ability to use the system but also as the slowness and performance capabilities of the system. If the usage took time or lot of clicking, pressing different buttons and opening multiple pages that was perceived as highly demanding. No matter how complicated the task was, the way to perform it should have been fast and straight-forward. Time consumption was seen as a clear indicator of the user-friendliness in all respondent groups. If completing a task took a lot of time then the method was not labeled user-friendly.

> *"There is a lot clicking before you actually reach what you are aiming for […] It doesn't take long to click but…Actually if you set up a new customer then it takes quite a long time as well."(Sales J)*

> *"It is usable but it is very very slow and I find that quite frustrating. It takes forever to load up and it is not instant." (Others G)*

> *"What is really essential is that the system is user-friendly, if it is complex or does not provide quick reaction to inquiries then I would probably go back to the old ways of doing things via business cards."(Others L)*

System was not found to be very consistent. It did not guide the user to perform his or her tasks and every job demanded multiple steps. One big issue was that the system was not designed to be visual enough. User could not directly see where to press and what window to open. The system had been constructed mainly on Microsoft user logics that could be changed and customized only until certain point. If user was not familiar with those logics, the usage was very unpleasant. This highlights the fact that enterprise systems are usually

off-the-shelves products that demand some amount of adaptation in the organization (Markus & Tanis, 2000).

> *"But otherwise is just click click click. There is nothing straight-forward." (Sales J)*

> *"The view is not very straight-forward… It is not very visually guiding nor clear." (Management I)*

It was the view of by many people the CRM system had been designed by these "ICT-people". By this most respondents referred to the fact that the user should be an ICT professional in order to use the system efficiently. The designers were not so to say speaking users' language and most of the respondents found that frustrating. Most of them had used an older and less-sophisticated system before and thought that they could not follow or keep up with the system development. This made users feel themselves almost stupid and did not increase the willingness to learn the system usage.

> *"It is not at all user-friendly! I am sure I would learn how to use it and then my tone would be completely different. But those who have designed and thought these through are not the real users." (Others C)*

> *"I don't even know how to use this even though I am usually OK with these IT tools. This is something I can't so much use." (Management H)*

One big issue on user-friendliness was the success of installations and system availability for all users. If a user was suffering from failed installations and not being licensed when needing the system that caused them to abandon that new system. If it was a struggle to even get the new system to the computer, it was not a good start for the usage experience. Also if there was not enough licenses that made people feel that they were less important users and not "worthy" of a license.

> *"When it started I made some recordings on emails and documents but we in […] had the problem that the CRM was not working for every team member so we didn't*

put any effort on that. We tried to get it installed and [service provider] made several attempts but without success and we forgot about CRM." (Supply Chain A)

"At least before I have heard that the reason we have not been taken along is that it is too expensive and we don't have enough licenses." (Others N)

One could think that the respondent's age would affect their views on the user-friendliness of the system. The age distribution in my study was approximately 40 years but the view on system design was quite unanimous through all age groups and organizational levels. Couple respondents appealed on their age when they talked about their capabilities of using the system effectively. But the few interviewees who found the system to be usable and easy to learn were not particularly young. According to my observations, more defining were the earlier usage experiences. People who had used effectively tools from the Microsoft product family before were more ready to use the CRM system than those who had used other systems. In my case company the Microsoft Tools had not been in effective use before. IBM's Lotus Notes system had been utilized through the organization for multiple different tasks. So more defining than respondent's age was the period of time they had spent working in my case organization. The "old school guys" one of my respondents referred to were those who had worked in the company for a long time, not necessary old in age.

" I am not a young bloke anymore. I am not able to learn these new and fancy systems, they have to be very user-friendly systems." (Others C)

"Okay, maybe the old school guys still swear for the [old system] and still want to use the [old system] to store contracts, price lists and whatever. But I think that Outlook [Microsoft system like Microsoft Dynamics] is a super system" (Management C)

Below (Table 4) are gathered the aspects affecting the user's perception on system design according to my interviews. On the left column are the factors that are directly concerned on designing the system. Aspects on the right column are indirectly related to the system design but do greatly affect the usage-experience.

Table 4 Important aspects in system design

Directly system design-related aspects	Indirectly system design-related aspects
Speed and Performance	*Prior usage experiences with the same design logics*
Speaking user's language	*Availability/Licensing*
Consistency	
Visuality	

4.3.2 Correct and up-to-date data

According to the interviews the data in CRM system has to be correct and reliable in every situation. Many of the users pointed out that they did not trust especially the customer-related figures in the system. There was basic figures on customers like open invoices, open orders and stock levels presented there but the users found that they had to cross-check those figures from somewhere else to be sure that they were correct. That made them not to use the system for data acquiring purposes because they had more reliable options. Even though those other options took more time, accurate and comprehensive data is crucial matter when handling customer relationships and it cannot be compromised.

"The data that is in there, the stock data etc. was not that reliable. But on the other hand I did not really use it. But there were some number of mistakes there." (Supply Chain E)

"But also sometimes when I look some figure that are shown in CRM, they are often really not reliable. The quality of the data is really not good so I have to always cross-check." (Supply Chain A)

According to some of the respondents, it was very important that the data in CRM system was updated regularly. Users felt that the sufficient update interval was one day. In a quickly changing business environment any kind of increase of that time interval was seen as unacceptable. In the beginning of the implementation project the plan had been to update the information every night. There had been however some problems with the integrations and data management that had caused some delays in the updates. Most of the data was still updating correctly every night but the few errors made users think that nothing really worked. So a small amount of incorrect data caused a chain reaction and made all of the data feel unreliable.

"We of course need a data that is updated and real, not to say like 5 days old or so." (Supply Chain, A)

"I think it all comes down to keeping it updated, easily accessible, if that is not happening people stop using it and it becomes a redundant feature." (Supply Chain C)

The data structure in the CRM system was a concern for many respondents. Unclear data structure would make it extremely hard to find and utilize the information in the system efficiently. CRM does harbor a lot of different kind of data and it has to be easy to update, find and report. It was planned to utilize the CRM system also for customer document handling in the future in the case organization. This to-be document structure was a particular concern for some users. Data had to be organized logically in the system and so that it would be very easy to find when needed.

"But mostly if we truly transfer everything there then we of course start to use it. But then the structure has to really be thought through…Whatever we put there it has to be clear and organized before we put huge amount of data there. That has to be decided before." (Others I).

"But as long as all the files are not there, it is difficult to use." (Others N)

Some of the respondents felt that the system was lacking information due to the slim usage. There were not enough figures and information on customers to help them perform in their daily tasks. This was seen as a chain reaction. As the data management is one of the most important aspects of a CRM system and non-sufficient usage decreases the amount of data in the system non- usage will cause non-usage also in this way.

"But there is so little data on […] customers. So it is no being fed enough data." (Others J)

"But it would be good if everybody would start to use it and we would receive training so that we could use it fast and find right information and choose right customer. That would of course be a good information for us." (Sales A)

The analytical possibilities of the CRM system were not utilized in my case organization at the moment. The system did not provide any kind of analyzed information on customers or customer groups. This made the system useless for management since they couldn't use it as a tool for the decision-making or for the sales management. The granular data from the CRM system had not been refined into a comprehensive customer knowledge.

"That kind of functionality as sales management is missing here. I do miss that kind of automatic reports where I could see sales and last year and budget and until now and products." (Management I)

4.4 Summary of empirical findings

Here is presented the summary of my findings based on my empirical material. I have used the same basic division to people, processes and technology as in the theory section. I have constructed under those segments nine smaller themes from my empirical material.
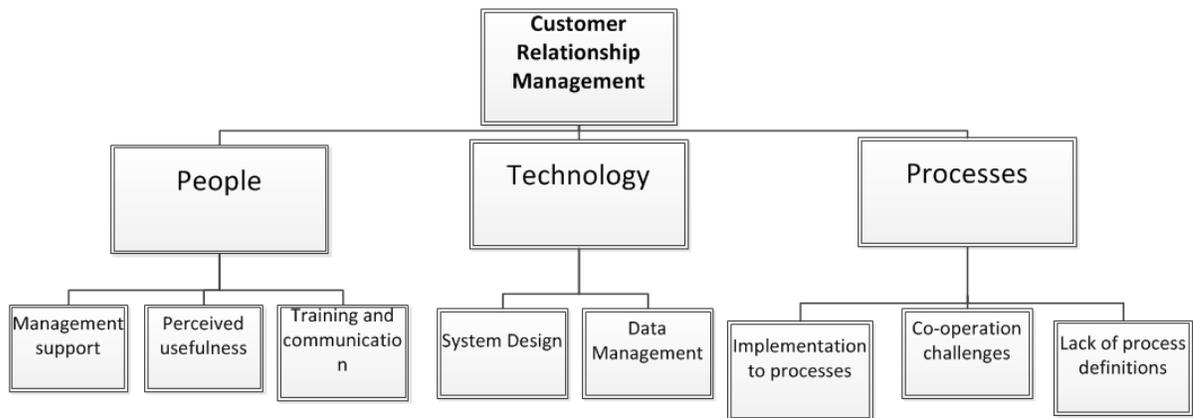

Figure 8 Summary of empirical findings

Management support was seen as a top management's involvement and personal supervisor's guidance. Management's role was seen primarily as authoritarian, not so much as guiding or example showing. Example setting was wished from the closest supervisors, not from the top management.

Perceived usefulness was given quite a significant role by the interviewees. People felt that they did not know how the system could help them in their daily work. Aspects affecting this were especially previous experiences, job relevance and peer influence.

Training and communication were lacking in my case organization. Users felt that they had not received enough training and they were unaware on the scope and extent of the CRM

implementation project. They had also had unrealistic expectations towards the system implementation.

System Design of the CRM solution was not found to be very successful in my case organization. Important aspects that rose from the interviews were the ability to speak the user's language, consistency, visuality and speed. Also licensing and previous usage experiences were indirectly affecting the usage experience. Successful system design was commonly measured by the time consumption demanded by the usage.

Data Management was associated especially with an accurate and frequently updated data. Most of the users were very skeptical towards the data accuracy. Management felt that they could benefit from analytical CRM data and now they felt that system did not at all help them in their decision-making or management processes.

System's *Implementation to Processes* was not on a good level in my case organization. CRM system was seen as something additional besides the daily tasks. It did not help sales processes or customer service processes, so it was a redundant feature for the users.

Co-operation Challenges presented themselves as a lack of co-operation between different functions. This was something that did not courage to use the CRM system since it was not helping the co-operation and information flow. Some users also felt that they could not use the tool since the information was presented too transparently there. The better information flow and co-operation was also something that was hoped to be gained if the CRM system implementation would succeed.

Clear Process Definitions were lacking in my case organization. The interviewees did not know in every situation, which system to use for what purposes and as a part of what processes. There was also some over-lapping usage of the old and the new systems. Especially the sales organization had quite freely defined their own processes that were not in-line with the company's system usage targets.

5 DISCUSSION AND CONCLUSIONS

5.1 The Critical Nine - important factors in CRM system implementation

The aim for this Master Thesis was to explore the complexity of CRM implementation and the challenges that it brings to the organization. The aim was especially to concentrate on the critical factors in getting the system fully implemented in the organization. This was done by interviewing 46 people across the case organization from all levels of hierarchy and from multiple different functions. Based on this empirical data I identified nine most critical factors in the implementation process. Those were management support, perceived usefulness, training and communication, system design, data management, implementation to customer processes, co-operation challenges and lack of clear process definitions.

My findings were mainly in line with the previous theoretical literature. I used the theoretical CRM system implementation division to people, processes and technology (Chen & Popovich, 2003) as a background for my analysis and my findings supported this three-way division. I identified factors from all these three categories and all these three categories were presented in the interviews. However there were differences in how strongly they came up in the interviews. Factors related to the people segment were mentioned almost in every interview whereas the factors in process segment were not that clearly present. This might be because the factors related to people segment (training etc.) are more practical and easier to observe by a normal user. Process-related issues are something that have to be analyzed a bit more precisely out of the material. Despite of this, I would still make a conclusion that the people-related factors have a more significant impact on system implementation than technology - and process ones. This view is supported also in the literature; *"While both technology and business processes are critical to successful CRM initiatives, it is the individual employees who are the building blocks of customer relationships"* (Chen & Popovich, 2003).

In the theoretical literature the term "top management support" is used to describe management's involvement in the system implementation. This support includes the example setting, resources and authority. (Ifinedo, 2008.) In my empirical material the authority was presented more clearly than the other aspects. People wanted a stricter attitude from their leaders and managers towards the non-usage. Avlonitis & Panagopoulos (2005) present in their study the significance of the sales supervisors for an implementation project. This was clearly noticeable in my empirical findings. All levels of management was seen having the responsibility on the CRM system implementation and usage.

In the TAM model technology acceptance has been divided into two categories, perceived usefulness and perceived ease of use (Venkatesh & Bala, 2008). Perceived ease of use is in this study closely related to the system design and the technology segment. Perceived usefulness is more related to the people segment and it was greatly emphasized in the interviews. *Peer influence, previous usage experience* and *job relevance* were especially emphasized as factors affecting the technology acceptance. They are presented in the TAM model as factors affecting the perceived usefulness (Venkatesh & Bala, 2008). Users felt that they did not know how the system could be useful for them and it did not bring anything new to the table. So it was not job relevant. I assumed that the user's age would play a role in the technology acceptance. Actually more than that influenced the previous usage experiences with the system. So the actual age was not the ruling aspect, but the amount of previous usage. Peer influence was showing in my empirical material in a form of an excuse. Since other people were not using the system people felt that they did not have to either. Peer influence affected also the amount of data in the system. CRM system was useless for the user if other people were not feeding the data there.

Training was mentioned frequently in the interviews. This might be because training is something very concrete and directly associated with a system implementation in people's minds. Users felt that they had not received enough training to be able to use the system effectively. According to the literature the quality of the training correlates strongly with the sufficient IT usage (Gallivan, Spitler & Koufaris, 2005). In my study I couldn't however evaluate the quality of the training since users felt that they had not even received it in sufficient amounts. One important aspect related to training was the overall information flow

on the project. Users had unrealistic and unclear expectations towards the system. This confusion related to both the system itself and the implementation project, was one of the most critical reasons for the dissatisfaction amongst the users. According to Avlonitis & Panagopoulos (2005) it is important to satisfy the informational needs of the users in order to create positive beliefs and positive atmosphere around the implementation process.

Almost all of the users felt that the CRM system was something additional to their daily work processes. The system had not been implemented to company's customer processes and people did not see it as a part of their customer-related activities. According to the previous theoretical literature, when a company starts a CRM implementation project, it should first evaluate its customer processes and change them to serve the CRM project and customer-centric strategy (Goldenberg, 2008). In the literature it is taken almost as a granted that the CRM system is a part of the organization's processes, at least it is not being questioned widely. In my case organization it was however a significant critical factor that the system was being seen as an additional feature on top of the daily work and selling processes. This was also related to the insufficient process definitions. It was not clear to the users what systems they should use for what and what were the current organizational practices in the company. The accurate communication and information flow influences this way also the customer processes. Efficient communication does play a significant role in all of the implementation segments.

In technology segment the biggest critical factor was probably the user-friendliness of the system. As my theoretical background for the system design I used the fundamental system design principles from Nielsen (1992) and Gould and Lewis (1985). According to my empirical material these principles are still relevant today even though technology has done significant leaps forward in the past 30 years. Especially strongly in my empirical findings were presented the consistency of the system and system's ability to speak user's language. Something that was not mentioned in the basic literature from the 1980s and 1990s was the visuality of the system. That is probably an aspect that has emerged during recent years through the technological development. It has to be however bore in mind when analyzing these system design results that my case company is a traditional manufacturing company with quite an old age structure. Results might have been different if the research would have

been conducted for example in an ICT company. It was interesting to find out that almost all of the users seemed to measure the user-friendliness with the time-consumption. If something was slow or demanded a lot of time to execute that was automatically labeled as not user-friendly and demanding.

The other critical factor in technology segment was the data management. According to the previous literature it can be even viewed that the CRM is all about knowing your customer and using that information to enhance the business (Stefanou, Sarmaniotis & Stafyla, 2003). Data management and analytical CRM is in any case a significant part of the CRM system. According to my interviews accurate and frequently updated data was also one of the most important demands for the CRM system. At the moment this was not being delivered at my case organization. Management stated also that the data from CRM system should be used for decision-making but that that could not be done at the moment since there was not enough data and it was too granular. The challenges in using CRM data analytically have been widely acknowledged in the theoretical literature. CRM data has to be first refined carefully into a form that serves the decision-making processes in the organization. (Stein, Smith & Lancioni, 2013.)

5.2 Managerial implications

This Master Thesis has a lot of practical, managerial implications. The subject is quite pragmatic and the case nature of my study makes it easily applicable to the everyday business-life. As a subject the implementation of a CRM system is something that affects many different kinds of organizations. Customers are something that is common for all companies. I think that the biggest managerial implication my thesis offers is the holistic and strategic attitude towards the CRM system implementation. The implementation in companies that view the system only as a buying of a technological solution will most likely result in a failure. All the three segments, people, processes and technology should be taken into account when implementing a CRM system. I think that is good to acknowledge that the

CRM system is not a quick fix that will make the organization more customer-centric and efficient by itself. The technological solution is a good addition to the customer-related processes for people to utilize if these processes are already working and people accept the new system.

It is important to understand how big the people's role in the implementation process is. If the people cannot be won over during the implementation project, the project will almost definitely fail. It is good to acknowledge that there is many factors affecting people's opinions. Even though the system would be a superior one and would work perfectly, if it is not adding value to people's work and integrating to the customer-related processes then it won't be utilized. Something that should also be emphasized in companies when implementing new tools is the understandable and truthful communication. The amount of dis-information and rumors will decrease and people will be more confident in the system usage when the information on the implementation process is easily accessible and truthful.

5.3 The reliability of this study and suggestions for a further research

5.3.1 The reliability of this study

Research has to be both valid and reliable. With the validity the aim is to measure how well the study answers the research questions and research objectives (Tuomi & Sarajärvi, 2009). In a qualitative research the measurements for reliability are different than in a quantitative research. In quantitative research it is important to be able to repeat the same results over and over again with the same research material. That proves the reliability of the study. However when talking about the reliability and validity of a qualitative research more suitable measures are the quality of the research material and the interpretations made from it. The analysis should also be systematically constructed in the study. This means that all the steps and phases of the analysis are clearly recorded and explained. (Ruusuvuori, J., Nikander, P., & Hyvärinen, M., 2010.)

I have tried to explain my research methods and phases of my analysis as transparently as possible especially in the methodology section. I have kept the reader in mind throughout the whole research process and tried to shed light to my choices so that they are presented in as understandable form as possible. I have also used visualization to make my process more understandable (Ruusuvuori & al. 2010). I have not left out any parts of my research process either.

I worked myself in my case organization so I cannot say that my role as a researcher would have been a hundred percent objective and neutral. However I had not worked on my research topic before I did the interviews. I had not worked or even discussed with most of the participants of my study before executing the interviews. During the interviews I tried to stay as neutral and impartial as possible. Of course when interviews are used as a research method the researcher automatically influences the interviewee and constructs the reality with the questions (Tuomi & Sarajärvi, 2009). I tried to keep my questions as open as possible and as un-leading as possible.

Atypically for a qualitative research I interviewed 46 people from my case organization. They were from different hierarchical levels and from different organizational functions. I think that this amount of material increases significantly the reliability of my study. I feel that I have gotten a broad and a diverse picture on the situation in my case organization. Of course we have to bear in mind that my case consisted of only one company so the results cannot be generalized to other organizations settings.

I used mostly peer-reviewed articles as my references and tried to keep the quality of my references as high as possible. The theoretical background focuses on the beginning of the 21st century. Most of the research was conducted then when the CRM systems became a hot topic after the Internet Boom (Kotorov, 2003). However I have tried to include also literature from 1980s and 1990s as and the most recent years to this Master Thesis in order to make it more reliable and to make the theoretical background stronger.

5.3.2 Suggestions for a further study

In this Master Thesis I address the issue of CRM system implementation quite extensively in order to get a holistic picture on the critical factors in CRM system implementation. All the three segments, people, processes and technology, should be researched individually to get a deeper view on all of them. I think that all the critical factors I discovered doing this research would be interesting topics for a further research also individually.

This study was executed as a case study and the empirical material was collected from one organization. I think it would be interesting to do a similar kind of study in a completely different industry. This way it could be studied if the results were homogenous and thus generalizable to other industries or would there be a big impact on the case organization's industry or business field. Such a comparison should also be made with a B2C business. Are the implementation logics between B2B and B2C companies different or similar?

This study concentrates on the views of the system users. I think that it would be fruitful to compare the views of the users to the views of the CRM professionals and the people responsible of the system implementation. This kind of comparison could bring interesting insight on the topic of how well the two views actually are in line with each other. CRM systems are after all usually off-the-shelves products that rely on best practices defined by CRM professionals (Markus & Tanis, 2000). It would also be of interest to do a similar kind of study on the implementation of another ICT solution, like ERP system. This way it could be studied if there is a lot of similarities between the implementation projects and critical points of different ICT systems.

There were lot of smaller topics that surfaced during my research process that would be interesting to explore more closely. One of them was the using of the time-consumption as a direct measurement for the user-friendliness of a system. This finding surfaced strongly on almost all of the interviews and could possibly be linked to the hectic working environments of today and the significance of time. It would also be interesting to compare the actual implementation plan to the realized outcomes of an implementation project. In my case organization the original project plan had been classified as confidential so I could not do

that for this Master's Thesis. But the relationship between plans and outcomes would be in general an interesting topic for a research. This kind of system implementation could work as a setting for such a study.

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APPENDICES

Appendices 1: Interview Questions

Top management

* Do you use our CRM system regularly?

* If yes, what do you do with it or how do you utilize it?

* If no, what is preventing you from using it?

* What would make you to use our CRM system as part of your day to day routines? (Features, Processes, IT-solutions?)

Managers

* Do you use our CRM system in your daily work?

* If yes, what do you do with it or how do you utilize it?

* If no, what is preventing you from using it?

* What would make you to use our CRM system as part of your day to day routines? (Features, Processes, IT-solutions?)

Sales

* Do you use CRM in your daily work?

* If no, what is preventing you from using it?

* If yes, what do you do with it or how do you utilize it?

* How could the CRM system help you in the day to day and overall sales processes?

Marketing

* Do you use our CRM system in your daily work?

* If no, what is preventing you from using it?

* If yes, what do you do with it or how do you utilize it?

* How could the CRM help you in a best way in the group marketing processes?

Others (Supply Chain, R&D, Quality, Plant Managers)

* Do you use our CRM system in your daily work?

* If yes, what do you do with it or how do you utilize it?

* If no, what is preventing you from using it?

* What would make you use the CRM system as part of your day to day routines? (Features, Processes, IT-solutions?)

Appendices 2: Intranet Survey Questions

* Name

* Position in the organization

* Do you use our CRM system in your daily work?

* If no, what is preventing you from using it?

* If yes, how do you utilize it?

* How would we need to develop the CRM system in order to create value for you?