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Mobile Customer Relationship Management

A study of barriers and facilitators to mCRM adoption

Bachelor's Thesis within Informatics

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Title:	**Mobile Customer Relationship Management – A Study of mCRM adoption in the Swedish Market**
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Abstract

Managing customer relations had become a necessity for companies who want to succeed in today's customer oriented market. New systems are developed that allow firms to manage and govern their relationships to the customers. These applications are called Customer Relationship Management (CRM) Systems and have become one of the most widely adopted business solution in the private sector. In the mean time, mobile internet and mobile marketing have become two of the most popular subjects mentioned in business literature today.

A new system that combines CRM and mobile technologies has recently been developed: mobile CRM (mCRM). This type of system will allow companies to enhance their way of working with customer relations and enables new ways of offering value to customers. The market size of mCRM systems has grown from a $120 million industry in 2001 to a $1, 7 billion industries in 2005. The combination of the growing trend of customer focus, mobile technologies and mCRM systems will most likely lead to more companies investing in mCRM solutions. Still an interesting question of the reasons behind mCRM adoption remains unanswered. The main focus of this thesis is to find out why companies chose to adopt or not adopt mCRM systems.

Theories about CRM, mCRM and the spreading of technology (The Technology Acceptance Model) have been gathered and examined in order to support the research. After a gained insight of the subject matter, a methodology is discussed explaining research approach. A qualitative approach is used and interviews are conducted in order to find barriers and facilitators to mCRM adoption. Four companies from different industry sectors where interviewed, answering to questions concerning their level of IT adoption, CRM strategy and perception of mCRM.

The research resulted in several reasons for mCRM acceptance and rejection. The primary reason for investing mCRM, or considering investing in mCRM, was found to be the need to reach customers and sales force anytime and anywhere. Also, current IT adoption and IT dependency, as well as industry sector, are found to influence attitude towards mCRM. Factors that are found not to affect mCRM adoption are size of the firm and external pressure from the market. The overall perception of mCRM is positive among the respondents and all believe that the mobility aspect of CRM will become increasingly popular.

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1 Introduction

The following sections aim to explain the background of the subject matter, as well as the purpose, delimitations, interested parties and the disposition of the research paper.

1.1 Background

Customer Relationship Management and Mobile Marketing are two areas of business that have been given considerable attention in recent years. For companies that strive to succeed in today's customer oriented marked it has become a necessity to manage customer relations through the use of Customer Relationship Management (CRM) systems. Research by Varian, Elder and Shutter (2006) shows that CRM applications are among the most widely adopted business solutions in the private sector. In the mean time, mobile business and mobile marketing are two of the most used terms in business literature today (Lehner & Watson, 2006).

Among the variety of mobile services available, a new breed of mobile business services are emerging that combine the ideas of CRM systems with the mobility of wireless networks. These mobile services are called Mobile Customer Relationship Management (henceforth referred to as mCRM) services. mCRM services play an important role in a new trend which aims to create and manage personalized customer relationships (Gebert, Gieb, Kolbe & Brenner, 2003). The mCRM market is very popular today and has grown substantially in recent years from a $120 million industry in 2001 to a $1, 7 billion industries in 2005 (Research and Markets, 2006). Camponovo, Pignuer, Rangone and Renga (2006) offer an example of why CRM through mobile mediums have gained popularity:

"In particular, mobile phones have shown to be very personal devices which may provide firms with a large reach, low cost, rapid feedback, constant reachability and localization possibilities."

The characteristics of mobile mediums that Componovo et. al. (2006) describe are well suited to enhance traditional CRM due to its personal character, reachability and interactivity. This allows corporations to build very desirable relationships with their customers. Intimate and personalized relationships with the customers are of great importance for companies since it is proved to decrease turnover rate, keep customers and thereby increase profitability. It is therefore of great importance for companies to understand and apply CRM solutions.

Mobile technologies offer unique and interesting business opportunities for corporations. However, the fact that mobile business and mCRM are still relatively new raises some problems for companies. According to CRM today (2005), skepticism towards new technologies is a major barrier against adoption which poses a problem for the adoption of mCRM technologies.

Theories concerning the spread of new technologies (so called technology diffusion theories) have a consensus that perceived usefulness and perceived ease of use are the two main factors that determines the acceptance of rejection of a technology. Using these theories as part of this thesis will allow for a clarification of the factors that lead to the rejection or acceptance mCRM technologies.

1.2 Problem Discussion

Mobile Customer Relationship Management (mCRM) is a relatively new area of research. The empirical studies that have been made within this field are merely focused on defining mCRM and finding its benefits (for example Research & Markets (2006) and Sinisalo, Salo, Karjaluoto & Leppäniemi, 2006). There are also numerous studies that aim to evaluate current mCRM systems and offer areas of improvement in their usability (Heinze, Jansen, Rummert & Sasaran, 2004). The authors of this thesis were not able to find any empirical studies that focus on users and/or potential users of mCRM systems.

Since research has shown that the use of mobile technology and CRM systems is increasing, and that the market for mCRM is growing rapidly (Research and Markets, 2006), it is fair to assume that the use of mobile services such as mCRM will increase further in the future. As more companies are likely to invest in mCRM technologies there is no study found by the authors of this thesis that shows what affects the adoption or rejection of the particular technology. The question therefore still remains why companies choose to use or not to use mCRM as part of their CRM strategy.

Also, since customer relations is getting more important in contemporary business it would be interesting to study current attitudes of corporations to invest in system that would improve such relations. CRM is gaining widespread popularity and more companies are realizing the benefits of CRM systems. The mobile aspect of CRM is seen as an expansion of already existing CRM, this type of expansion is predicted to be important for companies that intent to improve their customer relations.

Even though CRM, and especially mCRM, is said to be essential for maintaining important customer relations we still find a knowledge gap between the available information about mCRM and CRM-users' attitude towards it. We have not found any studies that show how mCRM is currently perceived by Swedish customer oriented companies. This knowledge is useful since it might contribute to the development of mCRM and increase the rate of its acceptance.

The following research questions will be addressed in order to investigate the adoption of mCRM technologies in the Swedish market:

- What are the facilitators and barriers to using mCRM in Swedish customer oriented companies?
- What are the needs of Swedish customer oriented companies concerning mCRM technologies?

1.3 Purpose

The purpose of this thesis is to identify and examine barriers and facilitators of adopting Mobile Customer Relationship Management as part of an already existing CRM strategy.

1.4 Delimitations

Our research will focus on businesses that have adopted CRM and use CRM systems to foster customer relationships. Companies that do not have any experience in using CRM systems will not be considered since the adoption of mCRM requires a customer information that have been strategically collected using a CRM strategy. A company

without a CRM strategy will not benefit from a CRM-system and would therefore not benefit from mCRM services either.

The technological aspects behind mCRM will not be examined thoroughly. Aspects such as attitudes and perception will be considered instead.

Further, the research will be limited to the Swedish market and Swedish companies. This delimitation is made because of restraints in resources needed to conduct a worldwide study. Also, the factors of mCRM adoption or rejection might or might not be different between countries, and the comparisons of markets are not of interest in this thesis.

1.5 Interested Parties

Interested parties for this thesis are mainly developers of CRM systems and services. The aim of this thesis is to generate knowledge regarding factors that contribute to the acceptance or rejection of CRM solutions. The research will focus on companies that have a well established CRM strategy and use CRM-system to maintain customer relations. In other words, the companies that are examined in this thesis are customers to CRM-system suppliers. Therefore, developers and suppliers of CRM systems would find the information valuable as they could use it to produce systems that are better incorporated to customers need.

Companies that highly emphasize customer relations would also benefit from this study. As the thesis aims to contribute knowledge about new ways to maintain and improve customer relations through mCRM, those companies would find information in the thesis that could be applied to their specific situation.

1.6 Disposition of Thesis

Introduction – This chapter presents the reader with background of mCRM as well as problem discussion, purpose, interested parties and delimitations of the thesis.

Theoretical framework – Phenomena such as CRM, mCRM and eCRM are clarified in this chapter in order to increase the understanding of the chosen field. Knowledge about benefits and problems with mCRM is presented and would assist the authors to present respondents with accurate questions and thereby collect useful responses.

Method – Appropriate selection of method will be discussed after a deeper understanding of CRM, mCRM and technology diffusion. The reason for the chosen structure is that the authors of this thesis could not find any previous studies about mCRM adoption in the Swedish market. Therefore, structuring the theoretical framework before the method section is a more appropriate choice in order to gain a deeper understanding of the subject.

A definition of methodological approaches, followed by a description of chosen approach is presented in this chapter. These will be based on the research questions, purpose and the knowledge derived from the theoretical framework. This is followed by a discussion of why this approach was chosen. Further, a description of how the empirical data will be collected is described.

mCRM – Results and Analysis of Empirical Study – This section includes the findings of the empirical study. The findings are analyzed by using theories and models brought up in the frame of reference.

Conclusions – Barriers and facilitators of adopting mCRM are presented in this chapter, as well an outline of companies needs concerning mCRM.

Final discussion – This section will cover a reflection of the results as well as reflection of chosen method. Further, the experiences gained of the study will be described and recommendations for further studies will be given.

2 Theoretical framework

In the theoretical framework theories concerning customer relation ship management (CRM), electronic CRM (eCRM) and mobile CRM (mCRM) are presented. A chapter regarding the spreading of technology is also included, where a discussion regarding a technology diffusion model (The Technology Acceptance Model) can be found. These theories were chosen in order to support the research process.

2.1 CRM

According to Buttle (2003), customer relationship management stands for different things for different people and different situations. The three letters, CRM are mostly referred by people as customer relationship management. Others refer CRM as customer relationship marketing. Buttle (2003) continues with the statement, whatever it is called, CRM is clearly a business practice focused on customers. Meanwhile, Kerr and Anderson (2001) see CRM as a strategy, a tool or even a weapon that keeps the company on course and to be able to anticipate the changing landscape of the marketplace. According to these authors, CRM is a comprehensive approach for creating, maintaining and expanding customer relationships. Another author who views CRM as a strategy is Deans (2004), who states that CRM is a strategy for companies to build and manage long-term relationships with their customers. According to the researchers, by implementing CRM, better customer service, as well as improvement and management of customer expectations and loyalty can be provided. CRM can also be seen as a way to present a company's products, quality and services to its customers. Companies expect to improve profitability by gaining customer loyalty, customizing offerings, and lowering costs by implementing CRM solutions (Deans, 2004).

Authors Sinisalo, Salo, Karjaluoto and Leppäniemi (2006) view CRM as a strategy for companies to become familiar with its customers, having the objective to build and maintain long-term relationships. For that reason, companies should provide differentiated relationship value and communicate continuously and consistently with each of their customers. This way allows companies to interact, respond, and communicate more effectively with their customers. Data about customer's demographics, psychographics, buying behavior and history can be facilitated by advanced technologies. This data would only be useful for companies if it is turned into customer information, and know how to utilize this information for CRM purposes. The authors mean that, CRM is about how customer information is used to create more personal interaction with the customers by taking advantage of technology (Sinisalo et. al., 2006). Customer differentiation allows companies to offer service that match different customer needs and customer values (Deans, 2004). Because CRM has lately become popular in many disciplines and industries, new digital marketing channels, such as the internet and mobile phones are considered powerful. These channels reach customers in a way, which allow personalization and interactivity of the content and the context of the message (Sinisalo & Salo, 2006).

Finally the key to establish customer relationships is to identify customer satisfaction. According to Winer's model (Deans, 2004) customer loyalty, customization, community building, and unique services with branding contribute to high customer satisfaction and retention. Delivering a higher level of customer satisfaction that exceeds customer expectation will increase profitability, which is a key objective of the relationship management strategy (Deans, 2004).

After an analysis of many definitions of CRM, the authors of this thesis could not find a single definition that is suitable for this thesis. The authors of this thesis have therefore

defined CRM as: *a business strategy which is integrated with technology to be able to create and maintain long-term customer relationships.* This definition is a combination of all the essential key point from the above, which the authors of this thesis believe characterize CRM. Therefore, hereafter CRM will be referred to this stipulated definition.

2.1.1 Objectives of CRM

As many authors have pointed out, CRM is implemented to achieve value for the company. The following figure, according to Heinze et. al. (2004), explains the value creation.

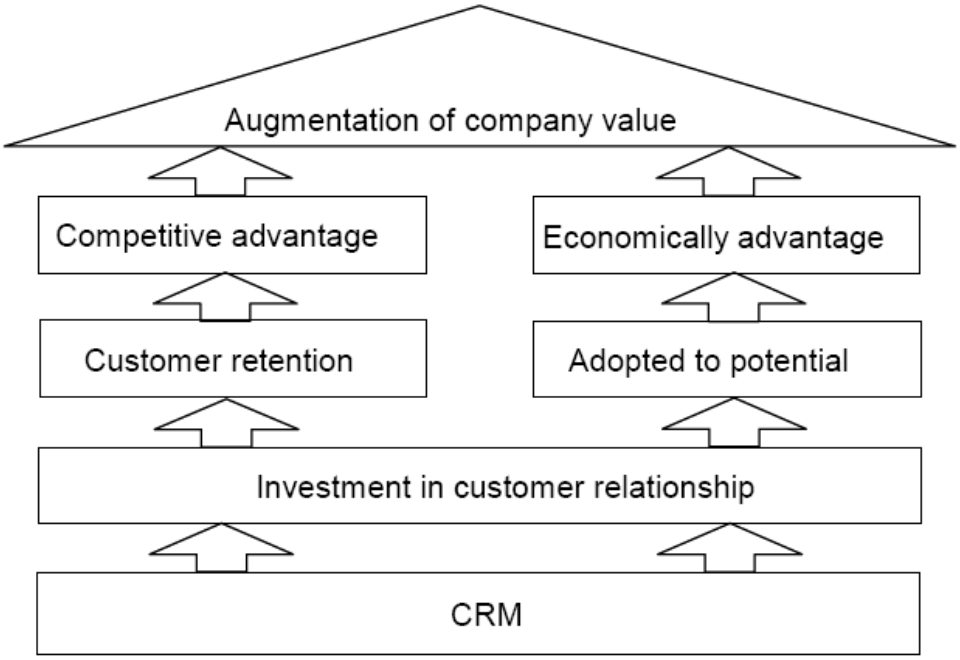

Figure 2-1 Company value through CRM (Heinze et. al. 2004, pp 4)

According to the authors to this model, CRM starts of as an investment into customer relationships. As the process carries on, two paths can be identified to enhance the company's value. The path on the left (see figure 2-2) will lead the company to an improved binding with the customers. This is however due to high probability that the customer choose to approach the affiliated company and due to the invested competitive advantage done by confident partners. The right path will however lead the company to be better informed about potential customers which can selectively be addressed, issues like customer demands and requirements. The company will then have an economically advantage and act more efficiently as a result of this. The authors continues with, both the competitive advantage and the economically advantage enhance the company value compared to competitors (Heinze et al., 2004).

2.1.2 The IS development process for adopting CRM system

The development of an information system (IS), are composed of several important process factors and the figure below shows how these are connected, according to Kim (2004). The process factors, defined by the author are *organizational commitment*, *project management*, *strategy and process*, *technology*, which will determine the *consequences* of an IS development.

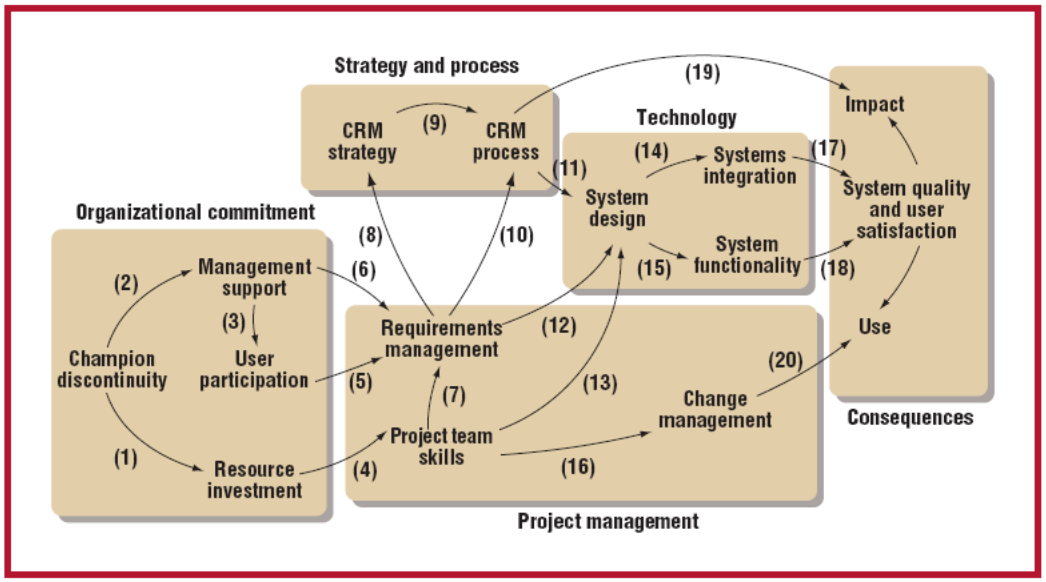

Figure 2-2 A process model for IS development (Kim, 2004, pp 26)

2.1.3 Organizational commitment

The process of IS development begins with commitment from the organization, with an executive-level "champion" (Kim, 2004). As shown in the model, this person has the role to initiate the two first process factors. These are the adequate (1) investment on both financial and human resources, and (2) the influence on the stakeholders from a managerial-level. Management support is critical for the project to succeed, but also to (3) encourage the participation of the users. Encouragement is shown through top-level support, and through selecting and assigning skilled personnel to the project (Kim, 2004).

2.1.4 Project management

A settled commitment from the organization with invested resources to the project ensures a high level of variety of (4) skilled team members (Kim, 2004). To effectively balance the IT and business skills, a cross-functional project team is made. The team should be sufficiently skilful to manage requirements for this project, which are CRM process and functions, goals and directions, as well as IT user's technological requirements. This management of requirements are therefore influenced by (5) user participation, (6) management support, and (7) project team skills.

2.1.5 Strategy and process

In order for the project team to design (9) CRM processes, a clear (8) CRM strategy must be defined, which in turn is influenced by the management requirements, regarding CRM goals and directions. That is the CRM strategy guides the CRM process development. Detailed requirements from users will however complete the CRM process by defining necessary process and functional issues. Therefore, (10) the requirements from users also influence the CRM process development (Kim, 2004).

2.1.6 Technology

Both (11) the CRM process which is a sequence of the CRM activities across functional areas, and (12) the technological requirements influence the system design. Because (13) the project team should have sufficient skills to design the IS, the team also influence the system design. This is made by reflecting the requirements in the design effectively. System design will then in turn influence both (14) system integration and (15) system functionality. The system integration includes source systems integration, channel integrations, and the integration between new and legacy systems. The system's functionality includes both specific functions it provides and how well it executes them.

Implementing CRM system will have major effect and changes on the company (Kim, 2004), in process, technology, and people and their roles. The project team has therefore an important role in managing these changes, both during the project's duration and after its implementation. As such, the (16) project team skills also influence change management.

2.1.7 Consequences

As shown in the model, both (17) system integration and (18) system functionality have an influence of the quality of the IS. The system functionality influence the IS quality, by determining the usefulness of the system and how well the system performs. According to Kim (2004), a higher user satisfaction depends on how high information and system quality are. A system with high information and system quality will ensure a positive impact on the organization. (19) The impact on the organization will therefore be determined based on how well the CRM process was conducted. (20) Change management and the IS quality have also an influence for the use of the new system.

The author also said that a high IS quality alone does not motivate users to adopt the system. Users need to understand the need of the new system and the new processes. Effective change management along with high IS quality can lower users' resistance and motivate them to use the new system (Kim, 2004).

2.2 eCRM

2.2.1 Definition

eCRM (electronic customer relationship management) does not fundamentally differ from CRM (Friedlein, 2001). Development in information and communication technology has facilitated the scale and scope of CRM, leading to the growing use of eCRM. By integrating and simplifying the customer-related processes through the internet, eCRM helps improve customer acquisition, customer development and customer retention (Chang, Liao & Hsiao, 2005).

Below is an illustration of an eCRM model, showing the different and the abilities gained.

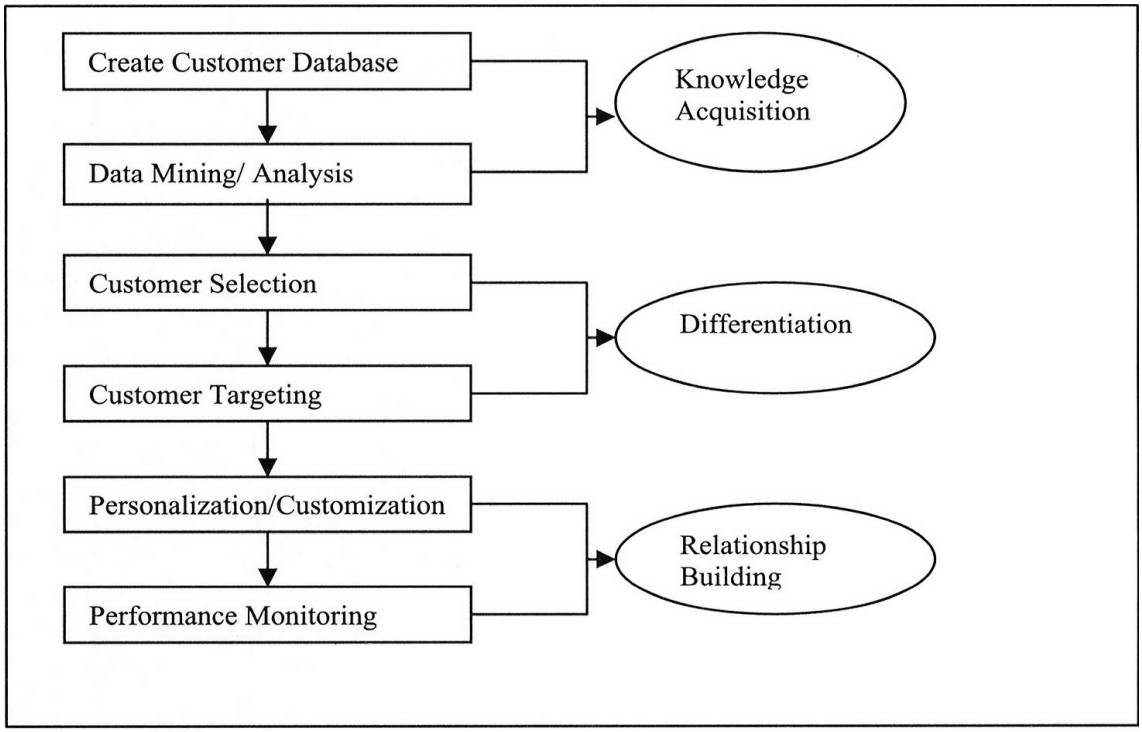

Figure 2-3 An eCRM model (Ab Hamid, 2005, pp 51-57)

Creating a customer database.

Creating a database is fundamental for any CRM activity (Winer, 2001). Doing so gives the company an understanding of its customer's preferences and past activities. The database also enables the company to segment the customer based on various criteria in order to easily retrieve and trace customers (Ab Hamid, 2005). By implementing data warehousing, large amount of data can quickly be retrieved for analysis and reporting (Anton, 2000). The use of data mining enables the company to gain knowledge of customers and predict future behavior of its customers.

Customer selection and targeting

By using data warehousing and data mining the company can strategize their marketing activities to target selective customers (Ab Hamid, 2005). The customer insight that is attained enables the company to segment its customers based on need instead of demographics, gaining an understanding for what works and what does not work with certain customers (Friedlein, 2001).

Personalization

eCRM also has the ability to personalize information that is available to the customer (Friedlein, 2001). By doing so, the customer has the ability to filter the information based on his or her preference, giving the customer personalized information at all time (Fienberg & Kadam, 2001).

Performance monitoring

Accountability is improved with eCRM. The company has the ability to track against a variety of metrics; for example page impressions, repeat visits, loyalty, in order to ensure high performance (Friedlien, 2001).

2.2.2 eCRM tools and benefits

Some important eCRM tools and their benefits include;

- E-mail and automated response

  E-mail being the dominant way of communication between the company and the customer, it is an important part for maintaining customer relationships. Instant feedback to customers is an importance consideration. Customers expect feedback response to be quick. Automating of e-mail reply based on key words and common queries in one way of speeding up the company's feedback response (Ab Hamid, 2005).

- Web chat & electronic bulletin board

  Web chats and electronic bulletin boards enable the customer to receive prompt feedback from service personnel and other customers (Fienberg & Kadam, 2001).

- Order tracking

  Order tracking gives the customer the ability to see where the status on orders. By keeping the customer apprized at all time of what stage the order is in, customer satisfaction is maximized (Fienberg & Kadam, 2001).

Adebanjo (2003) describes how eCRM creates value for a company, contributed to by;

- Reduction in costs relating to contacting customers.
- Transfer of some responsibility to the customer, which reduces administrative and operational costs for the business, therefore adding value to the business.
- Integration of eCRM applications with back office systems may improve workflow which leads to efficiency, which in turn might leads to further cost saving, for example salespeople using hand-held devices to initiate orders or checking stock.
- Improving sales through customer profiling, automating campaign management, e-mail marketing, etc.
- Overall improvement in customer interaction which leads to better service and customer satisfaction, as well as loyalty and ultimately customer lifetime value.

2.2.3 Difference between eCRM and CRM

According to Friedlein (2001) there is not any fundamental difference between eCRM and CRM, there does however exist differences in the skills required to implement eCRM. The following list below describes some characteristic differences between the two concepts;

- Do (real-time) personalization to degrees you cannot with CRM
- Interact with customer in ways, at speeds and through channels that you cannot through CRM
- Track behavioral trends in ways you cannot with CRM
- Empower customers in ways you cannot with CRM

- Exploit the benefits of an internet-based rather than client/server technical architecture (Friedlein, 2001).

Friedlien (2001) goes on to explain the unimportance of arguing the differences between eCRM and CRM, citing;

'In short, it is not worth spending time worrying about the terminological differences between CRM and eCRM, as they are fundamentally the same thing.'

2.3 mCRM

The possibilities that are created by mobile medium have enabled companies and industries to exploit this medium to promote CRM activities (Sinisalo et. al., 2006). By using mobile medium, according to Sinisalo et al. (2006), companies wish to advance activities with customer in the sense of saving time, cost and inconvenience. These authors define mCRM as "utilizing mobile medium for the purpose of managing customer relationships and activate customers to start dialogue with company via mobile medium. The concept of mCRM is argued accordingly to the authors as to be involved of the following characteristics (Sinisalo et al, 2006):

- Communication, for the purpose of building and maintaining customer relationships between company and its customer.
- The communication would be about sales, marketing, and customer service activities conducted through mobile medium between the company and the customer.
- Communication can be initiated by either the company or the customer.
- Communication thorough SMS (short message service), MMS (multimedia service), JAVA applications and browsing.
- One of the parties engaged in the communication must be human and, naturally, communicate through mobile medium.
- Mobile medium is seen as a complementary channel for CRM activities instead of seeing it as a substitute of traditional ones.

According to Deans (2004), the convergence of mobile internet and wireless communication technology has promised users the concept "anytime anywhere", which implies access to information for work and personal communication. The mobile medium and wireless technology enable companies' four reasons to build relationships with its customers, which are:

- Personalize content and services
- Track customers or users across media and over time.
- Provide content and service at the point of need.
- Provide content with highly engaging characteristics.

The current most interested services for consumers are high mobile values that meet spontaneous and time critical needs, for example checking stock quotes, driving directions, and short messages (Deans, 2006).

Other definitions of mCRM are the ability to use handheld devices to manage sales, sales contacts, and customer service activities (Bitpipe, 2006).

2.3.1 Benefits of mCRM

The new area of mobile medium makes it possible to promote CRM activities, which were not possible before (Sinisalo et. al., 2006). According to the authors Sinisalo et. al. (2006), consider mobile medium of being a powerful opportunity to reach customers, by offering different ways for companies to plan and implement more advanced ways to communicate with their customers. One particular way is SMS, which is seen to be immediate, automated, reliable, personal, discreet and customized channel, which allows an efficient way to reach customer directly. Other benefits that the authors see with mCRM are that mobile medium allows high speed message delivery, relatively low cost and high retention rates. In this sense, mCRM is also suited for industries like retailing, involving plenty of communications with their customers. Interactivity is however the most essential characteristics that differentiates the mobile medium form the traditional media. This is the two-way communication in real-time between companies and their customers. In that sense, Sinisalo et. al. (2006) believe that the mobile medium may not have a comparative alternative when it comes to building a continuing dialogue between the company and the customer.

2.3.2 Problems with mCRM

On the surface mCRM might seem to be an easy way of implementing CRM in a mobile form. However there are certain barriers related to the implementation of mCRM. Although there is not much mention of barriers of mCRM in research literature, there is an abundance of information to be found on reputable internet sites, in the form of articles, discussion topics and interviews with CRM vendors. In 2001 technological barriers were the topic of discussion. The communication standards utilized within mCRM, being in their infancy, hindered mCRM from being readily adopted (Hayes, 2001). Although the technical development within communications technology has come a long way since 2001, there are other issues that have been lifted to the forefront. Hildreth (2006) states that the issue of security is a concern within mCRM. Although security is not completely satisfied to date, improvements are steadily made by mCRM vendors.

Not suitable in all situations – Certain businesses maybe more suited for mCRM than others. According to vice president at Gartner, William Clark, sales force automation and field service automation are areas that have been the main focus of mCRM (Hildreth, 2006).

Need – According to Hildreth, (2006) there also exists a misalignment in terms of what mCRM applications offer, and what the end users needs. In Hildreth's opinion the user only needs basic data and functionality.

Inexperience with mobile applications (migration problems) – Many companies do not have experience with using mobile applications (All, 2006). Due to this issue the learning curve for some companies may be higher than others.

2.3.3 Mobile devices

A company that decides to implement an mCRM solution has a variety of options in terms of hardware. Although there is not much mention of mobile devices in the mCRM literature, the authors of this thesis have identified some commonly used mobile devices.

2.3.3.1 Notebooks

Most mCRM applications are supported for PC use. Although notebooks are vastly superior in terms of performance and flexibility, due to size, these are not always suitable (Heinze et. al, 2004).

2.3.3.2 Handheld devices

Handheld devices are according to Schierholz, Kolbe and Brenner (2006) the most commonly used mCRM devices. They offer the user a blend of mobility and flexibility that the user does not get from a notebook.

As there does not exist a universal standard device for using mCRM applications, the company has to choose appropriate mobile devices. Schierholz et al. (2006) describes different considerations that companies ought to take into consideration when choosing a mobile device. Different devices run on different platforms, or operating systems. The mCRM application might not be supported by the device, as the vendor of the application might not support a specific platform. For instance, Microsoft's mCRM application, Microsoft Dynamics CRM3.0 Mobile, only supports Windows Mobile operating system (Microsoft, 2006)

There are of course mCRM vendors that offer alternatives that are run through web browser, also known as thin mCRM clients. Because mCRM thin clients are only usable in connected mode, they require that the device being used has the ability to connect to i.e. the internet (Schierholz et al., 2006). According to the authors, choice of mobile device can have implications on potential future design decisions.

2.3.4 Examples of mCRM

According to Sinisalo et. al. (2006) mCRM is defined as an application of a CRM system, which is designed to provide customer with company functions such as sales, marketing and service through mobile phones. Three examples within each function will be described.

2.3.4.1 Marketing

A Finnish restaurant chain exploits the mobile medium in various marketing related activities, such as sending SMS messages to loyal customers such as invitations and information to the parties arranged only for loyal customers. Other offerings could be coupons and free tickets. This restaurant chain as well as sending offers from themselves, sends offers which are provided by their partners. This could be movie tickets and product discounts, based on customer preference (Sinisalo & Karialuoto, 2006).

2.3.4.2 Sales

A Finnish magazine, which is backed up by the internet provides ordering from mobile mediums. After joining the loyalty program of the company, the customer can order the products they want, by simply sending a SMS including the product code. This way, the

company can send mobile marketing message to their loyal customers based on their preferences. When receiving the advertising, the customer can reply to the message and instantly order the offered product (Sinisalo & Karialuoto, 2006).

2.3.4.3 Service

The first one to adopt a mobile phone service is Finnair – the national airline of Finland (Sinisalo et. al. 2006). This particular mobile service enables loyal customers to check-in in advance for the scheduled international flights. This means that passengers can go directly to the departure gate without the need of waiting on the check-in line. The airline sends a check-in proposal before departure and the customer replies to check-in. The SMS will then works as a confirmation message including the details of a flight. This will be stored on the mobile phone and are accessible whenever needed; which implies time saving and being easy to use. (Sinisalo & Karialuoto, 2006).

2.4 Technology Diffusion

The process of which a new idea or product is accepted by the market is called diffusion. The term diffusion in relations to the business world was first introduced by Everett Rogers in his book Diffusion of Innovations (Rogers, 1995). Rogers (1995) introduced several ideas concerning the rate of which an idea is adopted as well as several different characteristics of early and late adopters. According to Rogers (1995), the adopters´ willingness to accept an innovation is determined by characteristics such as awareness, interest, evaluation and trial.

Rogers' diffusion theory has been used in several different fields including marketing and product development. The theories of diffusion have also been refined to better suit certain areas of adoption, one example being Technology Driven Models where the adoption of technology is explained. The most popular Technology Driven Model is the Technology Acceptance Model (TAM) introduced by Fred Davis and Richard Bagozzi (Bagozzi, Davis & Warshaw, 1992).

Since mCRM is a new idea in the world of technology, it is suitable to examine the TAM model further in order to better understand how it is being accepted or rejected in the market. According to Davis (1989), there are two main factors that affect the user when presented with a new technology:

- Perceived usefulness (U) – This is "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989).
- Perceived ease-of-use (EOU) – Davis (1989) describes this factors as "the degree to which a person believes a particular system would be free from effort.

The TAM is the most influential of the technology driven diffusion theories. Although the two technology measures "perceived usefulness" and "perceived ease-of-use" might seem simplified they include the variables that affects the user's acceptance or rejection of a certain system. However in the real world there might be many constraints such as time constraints, limited knowledge about the system and organizational limitations (Bagozzi, et. al., 1992).

In this thesis a simplified version of the TAM will be used as introduced by Davis (1989):

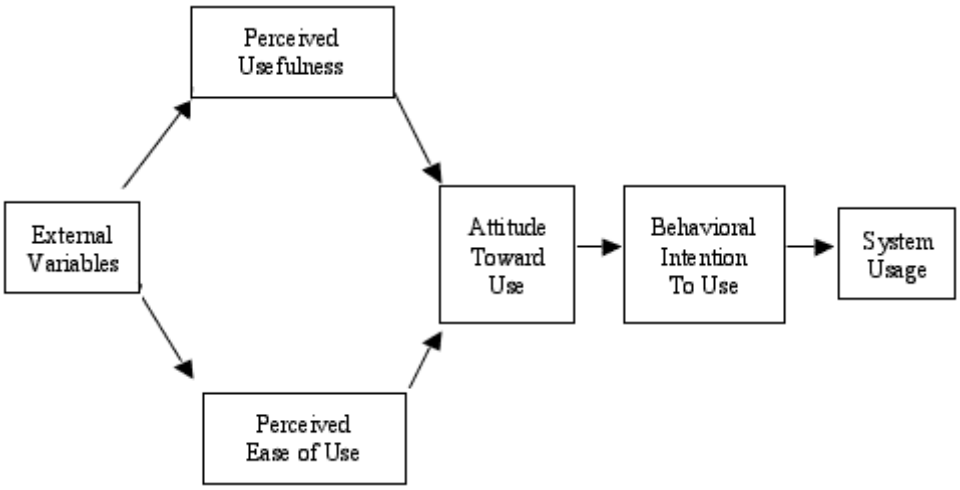

Figure 2-4 Technology Acceptance Model, TAM (Davis, 1989, pp. 319-340)

The above model will be used to identify organizations attitudes towards mCRM. Their behavioral intention to use, and their actual system use, will not be the main focus since it is not aligned with the purpose. Since previous research has shown that perceived usefulness and perceived ease of use are the most important factors that influence the adoption of a new technology, it is critical to understand these factors when examining the adoption of mCRM. External variables, which in this case might be previous knowledge of CRM systems, will also be considered in the research.

3 Method

The following chapter outlines the method used in this thesis. First, the research approach is explained followed by a discussion regarding the data collection. The transcribing of data is clarified and the method of identifying the sample is presented. The method used to analyze the data is also discussed. Lastly, a discussion regarding validity and reliability is held. The essence of this chapter is to explain how the purpose will be fulfilled.

3.1 Research Approach

The choice of research approach will be made based on the problem discussion. A description of research approaches will result in a motivation for chosen approach.

This chapter will include discussions regarding different approaches to a research study. In order to choose suitable approach the authors of this thesis believe that methods of approaching a research study need to be described. Several different approaches to an empirical study can be found. According to Lundahl & Skärvad (1999) a research approach may be inductive or deductive.

An inductive approach creates theories based on empirical findings (Lundahl & Skärvad, 1999). This means of study starts with particular facts from which general conclusions are drawn. The facts may be collected trough empirical studies, not necessarily considering already existing principals or propositions.

A deductive approach starts out with existing theories that are intended to be tested through empirical research (Lundahl & Skärvad, 1999). Existing theories concerning a certain phenomenon are gathered and examined. The theories are then used to draw conclusions and the conclusions about the phenomenon.

The authors have chosen work with an inductive approach in order to gather data about the adoption or rejection of mCRM. The empirical data will then be used to draw conclusions of reasons why this technology is either adopted or rejected. The authors could not find any previous research concerning the rejection or acceptance of mCRM technologies in Sweden. Therefore, it would be unreasonable to choose a deductive approach that aims to test theories. Rather, the authors will choose an inductive approach and aim to generate new theories.

Our problem definition described the gap of knowledge between mCRM and the factors that contribute to its adoption. Since the problem is that there is knowledge gap to be filled, it is the authors aim to fill that gap by generating new knowledge. Empirical findings within the selected field will solve the problem and thus fulfill the purpose of the thesis. The conclusions of the empirical findings may generate theories and recommendations regarding mCRM technologies. The research process will end at this point and will thus not be tested in a deductive matter.

The type of knowledge that is intended to be generated by the thesis is of explanatory nature. The authors will try to explain the relationship between variables that lead to the adoption or rejection of mCRM technology. When a study is aimed to establish causal relationships between variables it may be perceived as an explanatory study (Saunders, Lewis & Thornhill, 2003).

Empirical studies might also be exploratory or descriptive (Goldkuhl, 1998). An exploratory study is often conducted to gain deeper knowledge of a certain field. This type of study is used when sufficient information about the field is lacking and/or if information regarding similar research is limited (Goldkuhl, 1998). Interviews and questionnaires are appropriate methods to gain data within this type of study. According to Goldkuhl (1998), a descriptive study is used when wanting to describe elements of certain subject. The research conducted in as part of this thesis will be both explanatory and descriptive. The explanatory portion of the study will be focused on mCRM itself and describe its characteristics as well as its benefits and limitations. The descriptive portion will be focused around the CRM adoption process in order to describe how mCRM could be adopted by corporations.

3.2 Data Collection

The following section explains the different forms of data collection methods

3.2.1 Literature Study

Secondary data has been retrieved from literature, research reports, magazines and online resources. This was done in order to gain understanding of the current field of study and collecting data for the frame of reference. Literature regarding CRM, mCRM and eCRM where used and they were retrieved from the library at Jönköping University. Recent articles concerning mCRM and the mCRM market were examined and they were retrieved from article databases such as ABI Inform and Science Direct.

It should be noted that internet resources have a tendency to be less reliable than other resources in general terms. This has been taken under consideration and only reliable sources from official websites have been used.

3.2.2 Quantitative Study

Quantitative studies are made to gather quantifiable data (Lundahl & Skärvad, 1999). This method is preferred when working with large amounts of data since standardized ways of collecting that data is used. Methods such as questionnaires allow the researcher to collect data from a large number of respondents which can be used to make generalizations about the research field. However, the ability to make deeper analysis of a subject falls short using this method. The aim with a quantitative study is to test hypotheses (Repstad, 1999). Since generalizations are made and hypotheses are tested, this method will not be used. The problems addressed in this thesis will not be solved using quantitative studies.

3.2.3 Qualitative Study

Qualitative study enables deeper analysis of a research field. The purpose of a qualitative study is to describe, understand and analyze a certain phenomenon (Lundahl & Skärvad, 1999). Certain conclusions regarding specific characteristics of the study field are made using this study method. Questions that are used in a qualitative study are generally more flexible and open ended. Researches have the opportunity to change and add questions as the study is conducted. Interviews are a suitable method for collecting data in this type of study. Quantitative studies have a limitation when wanting to collect data from a large amount of respondents. Each respondent usually provides extensive answers to questions

that may be unique or changed. Therefore, comparing responses becomes difficult and generalizations can not be made. This is however not needed in this thesis. With the purpose of describing, understanding and analyzing barriers and facilitators to mCRM adoption, a qualitative study is suitable.

Interviews will be used as data collection method for this thesis. The method will allow the authors to ask flexible open-ended questions to respondents in order to collect extensive responses. This will provide deeper understanding of the respondents' attitudes and understanding of mCRM and identifications of barriers or facilitators of the technology can be made.

3.2.3.1 Interviews

An interview is a purposeful discussion between two or more people. Interviews can be used to collect valid and reliable primary data in regarding the chosen field of research. Conducting interviews as a means to collect primary data is especially useful when conducting a qualitative study since it allows a deeper insight in the research field (Saunders et al, 2003). Open-ended questions are often used to allow the respondent to explain more extensively. This approach will be put into practice in this thesis when trying to identify the attitudes of companies that use CRM systems regarding the mCRM extension.

The data that is collected is very useful when trying to answer particular research questions and fulfilling a certain purpose. According to Saunders et. al. (2003), there is several different types of interviews, and the type of interview that is selected should reflect the research questions and objectives. The most recognized typology regarding interviews is based on its level of formality and structure (Saunders et. al. 2003), where the categories are:

- Structured interviews
- Semi- structured
- Unstructured interviews

Structured interview use standardized, pre-determined, set of questions. Here, the same questions are asked in the same way to all respondent. Semi-structured and unstructured interviews are non-standardized which means that questions may vary from interview to interview (Saunders, 2003). Using these methods allows for additional questions to be asked to the respondents depending on their answers.

When working to generate explanatory knowledge, as in this thesis, a semi-structured interview method is preferred (Saunders, 2003). The authors will use this type of interview when trying to identify and find relationships between the variables that lead to the acceptance or rejection of mCRM technology, answering the first research question. Also, semi-structured interviews will be used to identify needs of customer oriented companies concerning mCRM technologies, answering the second research question.

3.2.3.2 Interview questions

A complete list of the interview questions can be found in appendix 1. All of the questions were designed with the aim of fulfilling the purpose and adding value to the research. All of the questions and their specific purpose will not be discussed. However, it can be mentioned that some questions are designed as background questions, some deal with

current use of CRM systems and others deal with current level of IT adoption and IT investments. The theoretical framework has been used in many instances to support the design of research questions that will help fulfill the purpose. A more detailed discussion regarding the basis of the interview questions and their structure will follow in chapter 4.

Questions 10, 11 and 12 (see appendix 1) are directly aimed at answering the two research questions. The following table presents relationships between these interview questions and the research questions for this thesis:

Table 3-1 Interview questions related to research questions

Interview Question number	Interview question	Research question
10	Can you identify a need to improve the company's customer relations using mobile services? If yes, in what ways. If no, please explain why.	What are the needs of Swedish customer oriented companies concerning mCRM technologies?
11	What barriers are there in the company towards implementing a mobile CRM system?	What are the facilitators and barriers to using mCRM in Swedish customer oriented companies?
12	How could the company benefit from being able to offer mobile CRM services to the customers and sales staff?	What are the facilitators and barriers to using mCRM in Swedish customer oriented companies?

3.3 Transcribing the qualitative data

There are several methods that one can use to transcribe qualitative data. The method that was used to transcribe the data derived from the semi-structured interviews was to take detailed notes during the actual interview. The strategy included that one of the three authors asked the questions to the respondent, and the two remaining authors took notes of the respondent's answers. Subsequently, all three authors of this thesis were free to ask additional questions if needed. The author responsible of asking the questions had the task of observing the way that the respondent answered, focusing of tonality and non-verbal communication.

This particular method of transcribing data was used since some of interview questions (appendix 1) intervene with each other. This means that when a respondent answered one question he or she might have been partly answering another question at the same time. This would allow the authors to transcribe answers under several headings based on the specific questions. Also, the authors believe that reproducing every actual word of the respondent, by using audio-recording for example, is not needed to get an understanding of the respondents' standpoint in a question. Further, according to Saunders et. al. (2003), transcribing an audio-recorded interview is "extremely time consuming". Most research method literature suggests that it takes between six and ten hours to transcribe every hour of audio recording (Saunders et. al. 2003). In this particular case it would take the authors

of this thesis several weeks to finish transcribing the interviews. Also, as mentioned, taking notes during the interviews fulfilled the purpose of the interviews and allowed the authors to collect sufficient data from the respondents. The notes were later summarized into transcripts and included as appendices (appendices 2-5). The exact words of the respondents were not reproduced, rather the notes from the interviews was used to summarize a group of answered and classified in themes as described in chapter 3.5.

The interview questions were sent to each respondent prior to the interview in order to allow for preparation of clear and succinct answers. The notes will later be stored and converted to computer files for future reference.

3.4 Sample

A sample is a subgroup or of a larger population (Saunders et. al. 2003). Since the whole population of Swedish companies can be used for this research study, a selection of a suitable sample has been made. Saunders et. al. (2003) describe different methods of selecting samples, some examples being purposive sampling and quota sampling (random sampling).

The method that is going to be used in order to find respondents is the convenience sampling technique. This technique involves choosing a sample haphazardly and almost random until the sample size has been reached (Saunders et. al. 2003). The authors of this thesis will not choose Swedish companies at random in an initial stage. Companies that have a CRM strategy, i.e. a customer focus, and rely on a CRM-system will be identified and asked to participate in the research study, independent of their geographical location in Sweden. The companies will be found with the assistance of Jönköping International Business School faculty members, articles in sales magazines and the authors own contacts. When the companies have been identified they will all be contacted through phone calls or e-mail.

The choice of sampling technique is dependent of the research questions, and according to Saunders et. al. (2003) a non-probability sampling technique (such as the convenience sampling technique) can be used when research questions do not require a statistical estimation of characteristics of the population from a sample.

Finding the right sample size is also important, however, the question of sample size becomes an even more important question in quantitative data collection as the sample size can have a direct impact on the result (Saunders et. al. 2003). The authors of this thesis believe that four to five respondents are sufficient for this research. A larger sample size would increase the accuracy of the result but conducting a large number of would be time-consuming. Constraints in time and resources do not allow a large sample size and the sample size of four to five companies would be enough to collect sufficient quantity of data in order to fulfill the purpose.

3.4.1 Sample used in this thesis

After contacting all identified companies through phone or e-mail (15 companies), the authors of this thesis found that four companies responded positively to participating in an interview. These four companies, and the interview with them, will be described more thoroughly in chapter 4: Empirical Findings. The other eleven companies were not willing to participate in an interview.

3.5 Analyzing Data

Analyzing qualitative data can be made from either a deductive or inductive perspective (Saunders et. al. 2003). Deductively based analysis is aimed towards testing collected data against theoretical propositions. Since an inductive approach is used in this thesis, and theories will be generated rather than tested, an inductive perspective will be used when analyzing the quantitative data. The aim is to build theories that are adequately grounded in the data (Saunders et. al. 2003).

Some inductive strategies to analyzing qualitative data, as outlined by Saunders et. al. (2003), include:

- Data display and analysis
- Template analysis
- Analytical induction
- Grounded theory
- Discourse analysis
- Narrative analysis

A quantification, conversion of data that would allow numerical measures (Saunders et. al. 2003), of the collected data will not be conducted since it is not needed to fulfill the specific purpose.

3.5.1 Analysis approach used in thesis

The approach that was used in this research was the template analysis approach. The template analysis method allows the researchers to organize the collected data into categories or themes (King, 1998). This approach combines deductive and inductive methods to qualitative analysis in the sense that codes or categories will be predetermined and then added to as data is collected and analyzed (King, 1998). For this research the categories used in the analysis approach were derived deductively from existing literature and theories gathered in the theoretical framework (chapter 2). This only deals with the method of analysis and not the research paper as a whole.

The template analysis approach resembles the grounded theory approach, however they differentiate in the level of structure. Grounded theory is more structured and does not allow for prior specification of codes and themes (Saunders et. al. 2003). King (1998) also states that there are a set of procedures that have to be followed in order for the approach to be grounded theory. In that sense the template analysis approach offers a more flexible route to analysis, which allows adjustment in its use to match the needs of a specific research (King, 1998).

The chosen approach allows a comparison of the themes and attitudes derived from the interviews with the theories concerning CRM, mCRM and technology diffusion found in chapter 2. The template analysis approach was thereby used for the identification of key issues and relationships in the data gathered from the qualitative research. It also offers the flexibility of revising the templates in the event of emerging issues arising in the research and data analysis, making it a suitable analysis approach for this research (King, 1998).

3.6 Validity

Validity relates to whether the findings are really about what they appear to be about. It refers to the extent to which the researchers gain access to the participants' knowledge and experience, and from that infer a meaning that the participant intended based on the language used by the researcher (Saunders et. al. 2003). It is important to consider validity throughout the research process in order for the study to be reliable and trustworthy.

Lundahl & Skärvad (1999) distinguish between internal and external validity. Internal validity refers to the degree that the method used to gather data measures what is intended to measure. In order to obtain high internal validity the authors of this thesis has aimed to ask the right questions to the right respondents. The interview questions were written in a way that would allow for the fulfillment of the purpose through classification of current IT adoption among the companies, current use of CRM systems and the identification of attitudes towards mCRM technologies (see appendix 1). The questions were asked to managers of companies which are familiar with their company's CRM procedures and use IT-systems. This measure was taken in order to receive relevant and concise answers regarding the subject matter.

To further increase the validity of the thesis the authors sent the interview transcripts back to the respondents allowing feedback and validation of the collected data.

3.6.1 Generalisability

External validity, sometimes referred to as Generalisability, refers to level of which the study reflects reality (Lundahl & Skärvad, 1999). The aim is to produce theories that are generalisble to all populations (Saunders et al, 2003). In order to achieve high external validity companies from different fields, representing various industry sectors in Sweden, will be chosen in order to get a nuanced data collection and only managers within those companies with knowledge about systems use and CRM will be allowed to participate in the interviews.

3.7 Reliability

Saunders et. al (2003) offers a definition of reliability which states that reliability refers to the extent the data collection technique yields consistent findings. This means that the data should be collected precise way absent of random errors (Lundahl & Skärvad, 1999). Saunders et. al. states that reliability can be assessed by asking the following questions:

1. Will the measures yield the same results on other occasions?
2. Will similar observations be reached by other observers?
3. Is there transparency in how sense was made from the raw data?

These questions will be asked on regular bases throughout the research process. The interviews will be conducted under the exact same circumstances giving all the respondents the same chance to explain and discuss their responses.

In order to attain transparency in the analysis of the data it is important to review the raw data several times (Saunders et. al. 2003). When conducting this research the raw data and notes from the interviews will be reviewed and validated numerous times in order to produce reliable transcripts.

4 mCRM – Results and Analysis of Empirical Study

The following chapter will outline the findings of the qualitative study, combined with an analysis of the collected data.

The empirical finding derived from the qualitative interviews will be presented based on a categorization of three topics:

- Current IT adoption
- Current use of CRM
- Attitudes and needs towards mCRM

These themes were chosen based on the template analysis method that was used in this thesis (explained in chapter 2, Method). In order to fulfill the purpose and find the barriers and facilitators to mCRM adoption, a classification of the themes was made influenced by the theoretical framework. Explicitly, the themes were derived based on the research questions and purpose with the aid of data from the theoretical framework.

The first theme, "Current IT Adoption" has derived from theories concerning CRM (chapter 2.1.6), mCRM (chapter 2.3.3) and the Technology Acceptance Model (chapter 2.4). The authors of this thesis believes that identifying current IT adoption is essential since the implementation of mCRM technologies rely on some IT adoption, such as a the use of a CRM system.

The second theme, "Current use of CRM" refers to the level of customer orientation, customer focus and use of CRM strategy among the respondent companies. This theme is based on chapters concerning CRM (chapters 2.1 and 2.1.1) and Technology Acceptance Model (chapter 2.4). Parts of the factors Perceived Usefulness (PU) and Perceived Ease of Use (PEU), as well as external variables, might be found by asking the companies about their CRM strategy and current use of CRM systems. The authors of this thesis believe that PU and PEA might be affected by current use of CRM in the sense that the companies might find mCRM useful if they use CRM extensively. Also, PEA might be affected by current use in the sense that previous experience in CRM systems can result in the companies finding the use of mCRM less complex.

The third theme, "Attitudes and needs towards mCRM" deals with the respondents' attitudes towards mCRM, perceived problems with implementing an mCRM system, needs related to mCRM and why/why not they have chosen to work with mCRM. This theme is based on the chapter regarding mCRM (chapter 2.3) and Technology Acceptance Model (chapter 2.4).

The companies that participated in the research all use CRM to an extent. They have a strategy of how to work with their customer and they all use some kind of IT system to support their customer relationships. This was verified by contacting the companies prior to conducting the actual interviews.

A total of four companies were interviewed. LänsTeknikCentrum AB (LTC AB) is a company based in Jönköping that offers services and support related to product development, business development and IT. Thituson bil AB is a car dealer and is the largest distributor of Mercedes cars in Sweden. Nickes.com is a travel agency with a focus trips to sport events and other events such as concerts. Albany Doors is a company that manufactures and distributes industry doors. The companies operate in different industries

and have different types of customers. Since the respondent companies all have a positive attitude to mCRM technologies, and they operate in different industries, it can be concluded that the findings in this study discards the type of industry as a contributing factors that would affect the attitude towards mCRM.

Detailed information about the companies and the interviews with them can be found in appendices 1-4. The appendices include transcripts of the interviews that are edited by the author. Exact words of the respondents as they were spoken are not presented. Instead, a summary of the answers is presented in the words of the authors and placed under suitable theme in conjunction with the template analysis approach. Specific facts are not edited or altered. The transcript found in appendices 1-4 are based on the detailed notes taken during the interviews.

4.1 Current IT adoption

All companies that were interviewed rely on Information Systems in their day to day work. One or more system is used by the companies to store data, edit data and communicate. Examples of systems used are sales and CRM systems, financial systems, project management systems and business specific systems. Generally it is the Chief Executive Officer that decides what system to invest in. However, suggestions of which systems to use can be made by all company members. All companies have a flat organization enabling close communication among the company's members.

The level of IT adoption is very high in all interviewed companies since they all use IT on a daily bases and also rely on IT systems in their operations. LTC AB for example needs to have advanced knowledge in IT since they offer IT solutions to their customers.

4.1.1 Level of IT knowledge among the employees

Using IT frequently calls for IT literacy. As found in the interviews, all employees in the companies are familiar with an IT environment and some are even experts in some specific fields of IT. In Thituson AB for example there is an IT expert that is responsible for the companies IT procedures, says Erik Fagersson (see appendix 2). The use of information systems is essential for the employees and therefore it is more or less a requirement for them to be familiar with the use of IT.

4.1.2 Attitude towards implementation of a new system

The attitude regarding implementation of new IT systems is found to be positive among all companies. Since their use of IT is high they have gained experience in updating and replacing systems throughout the years. This question might result in a bias opinion whereas the answer would be positively altered to offer a favorable image of the company. However, the authors of this thesis believe that the implementation of a new system is required in a knowledge intensive firm where information is valued. At some time there must have been an implementation of an IT system in the firms that were interviewed, since they are currently working with such a system. The answer to whether their attitude is positive towards implementing a new system is handled with a degree of skepticism, taking into account the possibility of biased opinions. However the fact that the firms have experience in implementing an IT system is accepted.

All of the respondent companies state that external pressure, such as changes in the company's environment, may affect the decision of implementing a new system. However all companies tone down this factor by stating that the predominant factor to acquiring a new system is "internal pressure", i.e. the need of a new system from employees and other company members. This means that, according to the respondents, the consideration of investing in a new system will be based more on the suggestions of the employees rather than external pressure in a sense to "keep up" with the competition.

According to the Technology Acceptance Model (chapter 2.4) there are external variables such as previous knowledge and experience that affects the acceptance or rejection of a certain model. We find that all companies have previous experience in IS and IT usage. All companies currently work with an IT system and all have implemented one or more systems during their active years.

As discussed, the use of CRM systems requires knowledge and experience in the use of technology (chapter 2.1.6). The implementation of mCRM, which is an extension of a CRM-system, therefore also requires the use of technology and IT tools (chapter 2.3.3). Davis (1989) argues that the two most important factors to technology diffusion are perceived usefulness and perceived ease of use. These two factors are affected by external variables (Davis, 1989). The external variables affecting the adoption of mCRM among the respondent companies are believed to be identified in this research. They include:

- Favorable previous experience in IT
- Customer focus and the use of CRM system
- Computer literacy among employees
- Internal pressure rather than external pressure of implementing a new system

Conclusions can be derived from these findings. For one, all of the companies have extensive IT experience and they all have a positive stance towards the implementation of an mCRM system. Also, all companies have an overall positive attitude towards the implementation of new IT systems. It can be concluded that these factors work as facilitators to mCRM adoption, affecting the decision to implement and attitude towards mCRM in a positively.

Also, the size of the respondent firms differs but they all share the same attitude towards mCRM. The authors can therefore conclude that size of the firm does not necessarily affect the attitude towards mCRM technologies.

4.2 Current use of CRM strategy and CRM systems

Customer focus is an important matter for all respondent companies. All the companies rely on offering customer service, which therefore means that it is important to maintain customer relationships in order to retain competitive advantage, (see figure 2.1) (Heinze et. al. 2004). As stated before, all respondent companies use some kind of IT system to support their customer relations. Information Systems are used by the respondent companies in their daily work. Databases are used as storage for customer data and CRM systems to manage customer relations. Companies must however know how to utilize this customer information in order to exploit CRM purposes (Sinisalo et. al, 2006).

Both LTC AB and Nickes.com use database as storage of customer data. How these handle their relationships differ however between these companies and the other respondents. LTC AB, Thituson AB and Albany Doors use a CRM system to support their customer relations. Nickes.com however uses Outlook which corresponds to a CRM-system. Information is stored in a database and Outlook supports the customer orientation, which then are handled manually through phone, e-mail and webpage. The customer is however the one who starts this process by putting an interest notice on Nickes.com. To improve their customer orientation, Nickes.com is planning to implement a CRM system. Because Nickes.com has outsourced their IT solution their free of choice of choosing which one is limited.

As for the other three, a CRM system is implemented as part as their CRM strategy. LTC AB for example uses their CRM system Caesar daily to reduce redundancy. Different customer can be maintained by different project managers. It is therefore important that project managers do insert updated customer data into the database, which is a complementary to Caesar. Cost could be saved in turns of money and time, in that sense that project managers can carry on with the business deal as the previous project manager left it. Customer would save time and money as a result of reduced redundancy. TLC would as a result gain the confidence of their customers by showing that they can work efficiently, which could strengthen their business relationships. Thituson AB however uses their CRM system for both storage and to manage their relationships with their customers. Their customer strategy lies on obtaining long-term relationships with their existing customers for possible future business. Other further businesses are service and maintenance of automobiles.

Albany Doors is the third respondent which also uses a CRM system to manage their customer strategy. They are however the only respondent that uses mCRM solution as an extension to their CRM system. Their CRM system consist of several modules which together function as a CRM system. The CRM system, Tacton is used to enter detailed product information about doors, and the mCRM system Intentia enables sales representatives to a faster process order from customer out on the field. As stated by Sinisalo et al (2006) in chapter 2.3, companies use mCRM to wish to advance activities with their customers, in the sense of saving time, cost and inconvenience. As Albany Doors use their mCRM, Intentia they could conduct “anytime anywhere” processes which provide content and service at the point of need for their customers (bullet from chapter 2.3) (Deans, 2004).

Either Perceived Ease of Use or/and Perceived of Usefulness of mCRM from the Technology Acceptance Model (chapter 2.4) can be identified on the respondent companies. As mentioned above, all the respondents use IT systems to support their customer orientation. They either have a CRM system implemented or planning to implement one as their CRM strategy. This implies the Perceive Ease of Use for mCRM. All companies have employees with knowledge of technology or experience of working with technology, which can be acknowledged as external variables. Because the use of CRM system already exist in the respondent companies, the use of mCRM could also been seen as less complex. The daily use of CRM system or corresponding to one implies the endeavor to maintain customer focus. For the companies to enforce their customer focus, improvements on systems may also be needed. This can undoubtedly be recognized in the case of Albany Doors. The Perceived Usefulness of mCRM in Albany Doors implies that in order to implement mCRM, companies must feel the need for it. Which is also one of

the external variable affecting the adoption of mCRM – Internal pressure rather than external pressure of implementing a new system.

4.3 Attitudes and needs towards mobile CRM

In terms of the interviewees' attitudes towards mCRM systems, they all have a positive stance towards it. As explained earlier in the theoretical framework, Davis (1989) presents two factors that influence the user when faced with new technology, perceived usefulness and perceived ease-of-use. In LTC AB's case, the perceived usefulness of an mCRM solution is low. They do not have a present need for an mCRM system. They argue that seeing how they do not have any employees working out in the field, there really does not exist any need for such a level of mobility. However, the perceived ease-of-use seems to be fairly high, as LTC AB considers themselves to be a technologically capable firm.

Thituson AB also shares LTC AB's opinion concerning the need for mCRM at present. In terms of perceived usefulness of mCRM, Thituson AB is similar to LTC AB. As with LTC AB, Thituson AB does not have any need for at present. Because their sales people working out in the field are seldom gone for more than two days at a time, mobile retrieval and modification of information from their CRM system is not necessary. The interviewee at Thituson AB does however stated that if and when their sales people start spending more time out in the field and less time in the office, an mCRM system will probably become a necessity. According to the interviewee, the employees are experienced and adaptive to new technology, which goes to show that their perceived ease-of-use is high. Overall, in terms of technology diffusion LTC AB and Thituson AB are very similar to each other.

As with LTC AB and Thituson AB, Nickes.com does not have a need for mCRM at the present date. Nevertheless, the company does admit that an mCRM solution would be a nice complement to a CRM solution. Finding a CRM solution is the first and foremost need for the company. Nickes.com does admit that there are potential benefits with using mCRM services, for example implementing an SMS service that notifies their customers of ticket availability. Nevertheless, according to Hellberg, the service industry that Nickes.com finds itself in does not use mCRM systems as much as other industries. They do however feel pressure from a technological stand point, influenced by best practice companies that have benefited from working with mCRM. The company also has concerns relating to the potentially high learning curve that may arise when implementing an mCRM solution. As addressed under heading 2.3.2, problems with mCRM, inexperience is a potential problem for some companies that implement mCRM systems.

Companies may not have an understanding of their employees experience with technology and run the risk of having to spend an overwhelming amount of time and effort at training the employees. Therefore, in relation to the perceived usefulness of an mCRM solution is quite high. Nickes.com see the potential, they are however not in direct need of implementing an mCRM solution, much because of a sales force that works from the office and not in the field. Also, because of the concerns with the potentially high learning curve that would arise by implementing such a solution, the company's perceived ease of-use is fairly low.

The last company interviewed, Albany Doors, is the only company that has implemented an mCRM solution. However their mCRM system has only been used in two years, and changes are being implemented to further improved functionality for the company's

employees. Although changes to the mCRM are being done in order to met the different users needs better, attitudes towards the mCRM system have been positive. In company's perceived usefulness towards mCRM could be describes as high. Depending on which employees' take part of new technological solutions, perceived ease-of-use differs. The authors have found Albany Doors' perceived ease-of-use as being neutral.

As mentioned under the theoretical framework, Hildreth (2006) states that certain companies may be more suitable for mCRM application. Sales force automation and field service automation are areas that receive main focus among these companies (Hildreth, 2006). Interestingly, Albany Doors exhibits this tendency as their mCRM system used by their sales employees and field technicians. It can be concluded that the findings from Hildreth (2006) are accurate and can be applied to this research. Albany doors being the only company among the respondent companies that has adopted an mCRM system for the particular reason of mobility and sales force automation, calls for a conclusion that the need for mobility is one of the most important deciding factors in mCRM adoption. Albany Doors is the only respondent company that has a sales force outside of the company for longer periods of time.

The issue of need is also addressed under heading 2.3.2, problems with mCRM, where it is stated that misalignment between what the company needs and what the mCRM applications offer may have adverse effects. In Albany Doors case, they exhibited such misalignment, and are working at aligning the needs of the service technician with the features of their mCRM. In terms of the other interviewees', the absence of any immediate need for an mCRM solution was the main reason for deciding not to invest in such a solution.

Also, there is a question of redundant functionalities in a CRM system. For example, Albany Doors have been receiving feedback from their sales force addressing the fact that their mCRM system is confusing at times due to redundant functionalities. The system contains too many functions according to sales representatives. LTC AB also claims that their CRM system contains functions rarely used by employees. If there was a possibility to only choose parts of an mCRM system that is needed it would increase the chance of investing in such a system according to Magnusson. The authors can therefore conclude that having the option to choose functionalities to implement in an mCRM system would work as a facilitator and possibly affect the decision to implement and attitude towards mCRM systems.

5 Conclusions

A presentation of the conclusions derived from the empirical findings is found in the following section.

The purpose of this thesis has been to identify barriers and facilitators to mCRM adoption among companies that currently work with a CRM strategy. The qualitative study, and analysis of that study, has resulted in several factors that contribute to the acceptance or rejection of acquiring and implementing mCRM solutions. The attitude towards customer relations and mCRM systems are outlined in the following bullets:

- The need for mobility is one of the most important deciding factors in mCRM adoption. Sales representatives working longer periods outside the office is one example of a need for mobility and mobile access to a CRM system.
- Knowledge and previous experience of IT is an important factor of whether or not an mCRM is adopted. A company's knowledge and previous experience of IT works as a facilitator of mCRM adoption.
- Attitude towards IT plays a vital role in the possibility of IT adoption as well as the level of adoption. The empirical findings in the thesis emphasize the fact; companies' with a positive attitude towards IT are likely to adopt IT solutions, and thus mCRM solutions.
- The type of industry that the company operates in does not affect the attitude towards mCRM. The respondent companies represent several different market sectors, ranging from travel industry to manufacturing. All companies have a positive stance towards mCRM technologies.
- The possibility of choosing specific functions of a system might increase the acceptance of a new system. We found that there might be a problem of redundant functionalities in CRM systems.
- Sales force automation and field service automation are facilitators of mCRM adoption, which are processes that strengthen the customer relation. The empirical findings in the thesis show this; the only company with an mCRM system uses it for sales force automation and field service automation.
- A factor that does not affect the attitude of mCRM is the size of firm, at least in the range of small to medium sized companies. All companies have a positive attitude towards mCRM and might consider implementing such a system independent of their size in revenues and number of employees. Size of the firm is not found to be facilitator or barrier to mCRM adoption.
- The thesis' empirical findings show that companies do not prematurely implement mCRM system because of its growing trend. Internal needs are the deciding factors, not external pressures.

6 Final Discussion

The following chapter includes a final discussion of the qualitative study. This section includes suggestions for further studies followed by a reflection of the method used for this research.

6.1 Suggestions for Further Studies

Numerous suggestions for further studies can be derived from this thesis. First, a study that is not limited to the Swedish marked, using a larger sample, is suggested. Involving several markets and more respondents in a study would result in an even deeper insight in the subject matter.

Using quantitative methods as a complement to a qualitative study would contribute greatly to the result of a similar study. Combining interviews and surveys would offer more extensive empirical findings that can be analyzed on additional levels.

Involving CRM and mCRM developers in a study is recommended. This would lead to a deeper understanding of how mCRM can and will be distributed and spread among companies. A research including mCRM capabilities, such as behavioral intentions to use and actual usage of the technology, could also be conducted. This could be conducted with the aim to develop an insight in why and how companies use mCRM technologies.

6.2 Reflections

Overall, the research process has been satisfactory. Finding literature and sources regarding CRM systems, mCRM and the diffusion of technology was not as time consuming as expected. One major obstacle to the research was finding companies willing to participate in the research. This part took longer than planned which lead to the need of commencing the gathering and analysis of qualitative data as quickly as possible. The transcribing of data using detailed notes rather than audio recording was influenced partially by this factor. If audio-recorded interviews had been conducted, a more precise foundation could have been obtained. The optimal method for conducting the interviews would have been filming the actual interviews. Tonality and non-verbal communications would have been recorded as well. This is however both time and cost consuming and was found to be redundant in the task of fulfilling the purpose.

The choice of sample for this thesis might have been better approached. Four companies might be considered insubstantial to base conclusions on the general market in Sweden, which is acknowledged by the authors of this thesis. First, a preliminary research had to be conducted to identify companies in Sweden that work with some kind of a CRM strategy. This was made by simply reviewing articles in sales magazines that cover companies' way of working with CRM or contacting companies directly and asking them if they have a CRM system included. After identifying the company, the right person at that company had to be found. For this thesis it was decided that a manager, CEO or IT responsible, would be interviewed. The reason for this is that thorough answers concerning level of IT adoption, decision process, CRM strategy and the acquiring and implementation of a new system was needed. This process may have halted the research, however, it is unclear whether a quantitative research would be more time efficient since the right representatives in the respondent companies still needs to be identified.

Concerning generalisability of the thesis, the small sample size might not be sufficient to draw conclusions that are generalisable to the whole population. An attempt was made to cover a range of different industry sectors, still a large amount of industry sectors were not covered. A larger sample size, including more companies from a wider range of industries, would most likely lead to conclusions that represent the larger population more accurately.

Nevertheless, the authors of this thesis has gained useful experience in conducting qualitative research and has learned that planning phase is important as well as allowing more time for such a data collection.

Also, invaluable experience concerning customer relations and technology acceptance has been gained by the authors. This knowledge can be used in numerous scenarios and is highly valued.

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Appendix 1 – Interview Questions

The first set of questions is aimed towards gaining a general understanding of the company and their way of working with IT. The purpose of this first part of the interview is also to classify the degree of IT integration among the respondents.

1. Please tell us about yourself, the company and your responsibilities in the company.
2. Do you have an IT department in your company? If yes, do the managers of the IT department have the authority to decide which systems are to be used in the company? In conjunction with this question, please describe the decision making process in the company regarding IT issues.
3. How dependent is the company of IT systems and how would you describe the overall IT knowledge of the company's members?
4. How would you describe your own general attitude towards the IT systems that the company is using today?
5. What facilitators and/or barriers can you identify regarding an investment and implementation of a new minor IT system in your company?

The second set of questions concerns customer relationship management and CRM systems in the respondent company. The aim is to identify the perceived importance of maintaining customer relations and the attitudes towards systems that supports those relationships.

6. How important is it for your company to maintain and improve your customer relations?
7. Is there an IT system that is used to manage the company's customer relations, such as a Customer Relationship Management (CRM) system?
8. If the answer to the previous question is yes; to what extent is that system used and how important do you think the system is to the company?

The third set of questions deals with mobile CRM and the attitudes towards it. The purpose with these questions is to identify barriers and facilitators towards adopting the technology.

9. Do you use any mobile solutions in the company that is aimed to improve customer relations? The mobile solutions could be to send tailored information to customer and allowing them to contact you and place orders using mobile technologies such as SMS, MMS, WAP and mobile internet.
10. Can you identify a need to improve the company's customer relations using mobile services? If yes, in what ways. If no, please explain why.
11. What barriers are there in the company towards implementing a mobile CRM system?
12. How could the company benefit from being able to offer mobile CRM services to the customers and sales staff?
13. How do you think the company's employees would react if a mobile CRM system was implemented in the company? Do you think that the technology would be seen as complicated and hard to use?

14. Can you identify an increased need to improve your customer relations?

Appendix 2 – LänsTekninkCentrum AB

Interview with Anna Magnusson, project manager

About LTC in general and the level of IT integration at the company

LTC AB is a company which works with projects that offer companies service and support within product development, business development and IT. LTC AB was founded 1987 and is partly owned by different companies in Jönköping Country. They have regional, national and international customers, mostly from Europe. But the main focus lies on the customers in Jönköping Country. The company in Jönköping Country includes eleven employees and half of them are project mangers and the other half are within the IT department.

As the organization is a flat organization, the decision process is made from a centralized management position by the CEO of the company. The need for an update or a new system is however noticed by the users of the company, which are the project managers, accordingly to Magnusson. It is therefore the project manages' task to obtain information concerning the need. This will then be passed to the IT department. LTC AB uses a system called Caesar and most of the employees use it for daily work. Because they offer service and support within IT, they have to be updated with new technologies, according to Magnusson. The employees are therefore, all interested and knowledgeable of issues concerning technology.

LTC's attitude towards Customer Relations and the current use of CRM systems

Because LTC AB is a company within service and support, it is important to frequently be in touch with their customers. As mentioned above, LTC AB uses Caesar to support their customer relationships. By handling a good customer relationship, time and money can be saved says Magnusson. It is therefore important that all the information that the project manages gather puts into the database, which is a complement to their Caesar CRM. They feel that the existing system works satisfactory. It is an advantage that the information can be gathered in one place and that systems can communicate. The downside with the system is that it has a lot of modules which the company does not use. It is often big systems that implements, which cost a lot of time and money.

Answers about attitude towards mobile CRM and technology diffusion

The mobile integration has been tested in a project matter, but LTC AB does not use the mobile integration themselves. They are however using mobile phones and PDA's with 3G, which is connected to the internet. Their CRM system is connected to their PC and their laptops, but everything is done at the office. It is therefore LTC AB does not feel the need to implement a mobile integration with their CRM today. If they however had employees working out in the field, an mCRM system would then be appropriate for LTC AB says Magnusson. They feel that because LTC AB is a company which always has to be up do date with new technology, since they themselves offer It solutions, they would embrace changes and are open to new emerging applications, says Magnusson.

Appendix 3 – Interview with Thituson AB

Interview with Erik Fagersson, sales manager

About Thituson AB in general and the level of IT integration at the company

Thituson Bil AB is a family owned car retailer and is the largest retailer for Mercedes and Chrysler in Sweden. There are five locations around Jönköping County and one location, the largest, in Stockholm. There are about 180 employees at Thituson AB and around 50 located in the Jönköping location we visited. One of the employees works as an IT-technician and is solely responsible for the company's IT operations. Besides offering IT support the IT technician collects feedback from the employees regarding the systems that are used. If a current system needs an update or new system is needed, the CEO is notified and the decision process is handled from a centralized management position. Thituson AB uses three different systems: one for modifying car orders, one for finance and one for sales. A CRM system is used very frequently as a part of the sales system. All the employees are trained to use the system and in general they have good knowledge about IT functionalities. The systems are frequently updated and Fagersson claims that there is a positive attitude in the company towards implementing new systems. Fagersson also believes that the general young age of the employees contribute to easy adaptation of new systems.

Thituson's attitude towards Customer Relations and the current use of CRM systems

Customer care is of upmost importance for Thituson AB. Information about all customers is stored in the CRM system and the sales force use the information regularly in their work. The CRM system that is used today does not have a mobile extension, but the data can be accessed from an online platform. Sales representatives that travel in their work and visit customers access the CRM system using a laptop pc with internet access. No mobile devises or PDA's are used to retrieve information from the system. The main reason for this is that the sales representatives are usually not dependent of the information on a minute to minute basis. Since the information about the customers is not needed or edited ad-hoc, the sales representative can access and edit the information after or before the sales call using a laptop. This method of retrieving data is not used that often however. There is no need for this way of working says Fagersson. The sales people that work out in the field are often out of office one or two days. If they where on longer trips out of the office, the need for mobile access of customer information would increase and the technology of online access to the CRM system would be used more often. It is only when or if this scenario occurs that a mobile CRM solution would be considered says Fagersson.

Answers about attitude towards mobile CRM and technology diffusion

Fagersson does not see any hinder to acquiring and implementing a mobile CRM system, as long as there is a need for it. The relative young age of the employees and the company's strive to stay innovative would allow for an adaption of a mobile CRM solution. The employees use IT as a part of their daily work and are familiar with the IT environment. Because of this it would be easy for the employees to adapt to a new system and since they have gone through a change in systems before they would start using a new system quickly. Fagersson tells us that he thinks that mobile solutions such a mobile CRM is going to be more popular and that Thituson AB might very well implement such a system. It would be a great way to inform their customers about different products and updates. It would also be used to govern and maintain their relationships to the customers. Sales representatives

would also benefit from the system if they would have worked out of office for longer periods of time. If a mobile CRM system is going to be implemented it will solely depend on the need for such a system. According to Fagersson the company would not consider their competition using such a system as much as the internal need for it. The situation today at Thituson results in an interest and consideration for IT, CRM systems and mobile CRM, but they are still far from planning to acquire and use a mobile CRM system.

Appendix 4 – Interview with Nickes.com

Interview with Niklas Hellberg, owner of Nickes.com.

About Nickes.com in general and the level of IT integration at the company

Nickes.com was founded in 1997 by the owner Niklas Hellberg. Nickes.com offers trips with events within the segments sports and concerts for their customers. Nickes.com is much depended on the technology, as they are a 'click and mortar' company. The contact between them and the customers are through their webpage, e-mails and telephones. Hellberg has five employees, whereas three are salesmen and two IT managers. The system Nickes.com uses today is a system which is more of less build by Hellberg himself. The system is used for daily work by the employees. The two IT managers are constantly updating the system, which is requested by Hellberg. The decision process is therefore made by a centralized management position. As Hellberg is open for new changes, when he feels that the system they use today is not the optimal system for Nickes.com. Hellberg says that he needs his employees to be on the same page as him concerning the embrace of new changes.

Nickes.com's attitude towards Customer Relations and the current use of CRM systems

As mentioned above, Nickes.com contacts their customers through e-mail, telephone and their webpage. The customer relationships are important to Nickes.com. Because Nickes.com is a 'click and mortar' company, their vision is to provide "one click" function for their customer and make everything automatic that is done manually today. The company is working towards two systems, but all the information is stored in one database. The data transmit is through ODBC, and because they are working through two systems, the data transmit is slow. Nickes.com is using Outlook which is corresponding to a CRM system today. However, because they are not completely satisfied with the outcome they have plans to implement a CRM system. Nickes.com does not have the free choice of selecting a CRM system. This is because they have outsourced their IT solution to SYSTeam, which therefore narrow their choices. Nickes.com is content with SYSTeam, which have been providing them with a safe solution without any problems. They feel however, that their decisions are too locked. The CRM system which Nickes.com has considered is therefore Microsoft's CRM, which does not conflict with SYSTeam.

Answers about attitude towards mobile CRM and technology diffusion

Having mobile CRM in a business as Nickes.com is not as common as the other service, says Hellberg. He believes however, that the mobile CRM will be the optimized solution for the future. This means that work do not have to be in an actual office. Hellberg sees many facilitators, but also a few barriers. These could be that his employees' mind will not be set for major changes, or the investment would be too big for them. Facilitators were mentioned more than barriers. To mention a few of them, Nickes.com could send SMS to their customers when a limited of tickets are left, or to update their customers if changes about their deal has been made. Hellberg feels that there is pressure from the technology side, and that other companies are ahead with the technology. The decision to implement mobile CRM, will however only be made if they feel a need for such. Nickes.com also voiced that their concern with the potentially high learning curves that would follow by implementing an mCRM solution. The time and effort that would be spent on training inexperienced users might not be justifiable for an mCRM investment.

Appendix 5 – Interview with Albany Doors

About Albany Doors in general and the level of IT integration at the company

Albany Doors international Corp was founded 1895. The company operates in five countries and has approximately 170 employees. In the late 1960's, a young engineer at a clothing plant came up with the idea to use a unique fabric panel on a door that would rapidly roll up and down. This door came to become the fastest opening and closing industrial door and resulted in the founding of the sister company, Albany Doors. The company offers its industry doors to different companies. Göran Peterson, Albany Doors head of IT in Sweden, oversees the daily IT operations at the company's Swedish office. However, IT decisions are mainly a question handled by the IT department that oversees all of Albany Doors offices. Therefore, all Albany Doors offices use the same systems as one another. According to Peterson, the level of IT knowledge of the employees does vary. Younger employees tend to grasp and have a greater understanding and easy for IT related areas. Interaction with IT does however occur on a regular basis for many of the employees in the company. Albany Doors sales representatives and service technicians both have experience with interacting with IT systems, as they are required to use such systems in their day to day tasks. According to Peterson one issue that may be considered negative is related to the complexity of the system. Also, participation and attitude towards IT systems are areas that may have a negative impact on IT system implementation. If the employees do not actively participate and embrace the new IT system, there is slim chance of the IT systems succeeding.

Albany Doors' attitude towards Customer Relations and the current use of CRM systems

Customer relationship management is an important part for Albany Doors. The company has several systems that together function as a CRM system. Sales representative have access to a customer quotation module, Intentia, which is used for quotation of its customers. The system Tacton is then used to enter all the detailed product information about the door. This enables the sales representatives to faster process orders from the customer by interacting with the CRM system out in the field.

Answers about attitude towards mobile CRM and technology diffusion

In 2004 Albany Doors initiated an mCRM solution, which is explained in the previous heading. Since its inception in 2004, sales representatives have used the mCRM solution. Service technicians have also use the solution at present. However, Albany Doors have realized that there are certain aspects of the mCRM solution that have to be changed. For instance, the service technicians experience that many functions in the mCRM are complex. Albany Doors are working on making some changes towards the use of the mCRM. However, employees have, since the adoption in 2004, succeeded in using the mCRM and had a positive attitude towards the solution. The mCRM has enabled the company in functioning more effectively, as well as helping them stay in the forefront of technology within their industry.