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CRM approach penetration in a

service organization

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Thesis Abstract

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The purpose was to develop CRM (Customer Relationship Management) system user commitment and CRM results for a service organization. The CRM approach penetration was used as an indicator to measure and explain the success of the CRM introduction. CRM related research questions and hypotheses were created.

21 respondents (95 %) answered the questionnaires before and after development activities. After both surveys, interviews were conducted to collect additional research data. A new method was developed to measure the level of CRM approach penetration.

Core CRM benefit related key data were analyzed by means of gap analysis. The aim was to identify the most critical development needs and obstacles for more active use of CRM software. Obstacles to CRM use were addressed by developing the software characteristics and functions, carrying out internal marketing activities, creating user manuals and setting up a helpdesk.

The company's CRM approach penetration was improved. Results allow the author to conclude that increased awareness and understanding of core CRM benefits together with user-oriented CRM development activities had a positive impact on CRM approach penetration. The measurement method developed during the process can be used in other organizations at the introduction and maintenance stage of a CRM software project.

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Tarkoituksena oli kehittää palveluorganisaation asiakkuuksien johtamisjärjestelmän (CRM, Customer Relationship Management) käyttäjien sitoutumista ja asiakkuuksien johtamisen tuloksia. Asiakkuuksien johtamiseen liittyvän lähestymistavan ymmärrystä käytettiin indikaattorina mittamaan ja selvittämään CRM:n käyttöönoton onnistumista. Tutkimusta tukemaan kehitettiin asiakkuuksien johtamisen lähestymistapaan liittyviä tutkimuskysymyksiä ja hypoteeseja.

21 vastaajaa (95 % työntekijöistä) vastasi kyselylomakkeeseen sekä ennen että jälkeen asiakashallinnan kehitystoimenpiteitä. Molempien kyselylomakkeiden käytön jälkeen haastatteluiden avulla kerättiin tutkimuksen tavoitteita tukevaa lisätietoa. Tutkimuksen tuloksena kehitettiin uusi mittausmenetelmä, jonka avulla mitattiin asiakashallinnan lähestymistavan ymmärryksen tasoa.

Asiakkuuksien johtamisen ydinhyötyihin liittyvät avaintulokset analysoitiin kuiluanalyysin avulla. Tavoitteena oli tunnistaa kriittisimpiä kehitystarpeita sekä aktiivisemman CRM järjestelmän käytön esteitä. Käytön esteitä poistettiin kehittämällä ohjelmiston ominaisuuksia ja toimintoja, käyttämällä sisäisen markkinoinnin keinoja, luomalla käyttäjämanuaaleja sekä perustamalla tukipalvelu käyttäjille.

Kohdeyrityksen asiakkuuksien johtamisen liittyvän lähestymistavan ymmärrystä pystyttiin parantamaan. Tutkimustulosten perusteella voidaan todeta, että käyttäjien lisääntynyt tietoisuus ja ymmärrys asiakkuuksien johtamisen ydinhyödyistä yhdessä käyttäjäsuuntautuneiden kehitystoimenpiteiden kanssa vaikuttavat positiivisesti asiakkuuksien johtamiseen liittyvän lähestymistavan omaksumiseen. Kehitetty mittausmenetelmä soveltuu käytettäväksi myös muiden organisaatioiden asiakkuuksien johtamisjärjestelmien kehitysprojekteissa, joissa kehitettävä järjestelmä on käyttöönotto- tai ylläpitovaiheessa.

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Abbreviations and terms

Analytical CRM   Means to analyze the data created by the Operational CRM.

B2B   Business-to-business. Commercial transactions between businesses.

Brand equity   Customer's subjective appraisal of the company's brand.

CE   Customer Equity. CE describes the asset value of the customer relationship. It is calculated by using volumes, margins, and durations of purchases. The sub-components of CE are value equity, brand equity and relationship equity.

CLV   Customer Lifetime Value. CLV is a financial net value of customer calculated by using annual revenue, relationship years and profit margin.

Collaborative CRM   Tools designed to facilitate interactions between customers and organizations including e-mail, e-communities, and similar vehicles.

Core CRM benefit   Activity associated value driver with the goal of improving customer relationships.

CRM   Customer Relationship Management. CRM includes tools and systems that enable the implementation of relationship marketing strategies.

CRM approach penetration   Company-wide strategic and operational adoption of core CRM benefits and related CRM tools.

CRM value driver   core CRM benefit, which serves as value driver to customer equity

Customer Life Cycle	Describes stages of customer relationship such as find, attract, acquire, retain, grow, advocate, and break off.
Customer Purchase Cycle	Frequency between customer's purchases. Corresponding purchase behavior information relates to purchase frequencies, purchase stages and contents.
Data Mining	Computerized systematic process to analyze customer databases.
Data warehouse	Central database incorporating data from different applications into one accessible database.
eCRM	Electric Customer Relationship Management. Computerized CRM.
ERP	Enterprise resource planning. Company's operations control system.
hCRM	Humane Customer Relationship Management. Humane contacts included by CRM.
Internal Marketing	Management philosophy, where employees are treated as customers. One of the nano relationships, which supports organization's relationships with external customers.
Learning Relationship	Learning process within Relationship Marketing. Customer allows supplier to learn the customer's needs to achieve services, which fit better to customer's needs.
NPS	Net-promoter Score. NPS is a customer relationship metric measuring customer loyalty with ability to capture net effect of customers who promote over customers who detract.

One-to-One Marketing	1to1 Marketing. Personalized Marketing. Based in four main steps in order to fulfill goals: identify, differentiate, interact and customize. CRM uses elements of the one-to-one philosophy.
Operational CRM	The formation of day-to-day interactions with customers. Automation of horizontally integrated business processes, including customer touch-points, channels, and front-back office integration.
Operational CRM penetration	Company-wide adaptation of CRM tools for daily use.
PRM	Partner Relationship Management
Relationship equity	Special elements of relationship that link customer to the brand and strengthen the relationship.
RM	Relationship Marketing. RM is a business philosophy whereby marketing is based on relationships, networks and interactions. CRM is based on relationship marketing philosophy.
SRM	Supplier Relationship Management
Strategic CRM	Company-wide managerial decisions aiming to increase the value of customer base by the achieving company's CRM objectives, increasing CRM user commitment, and creating profitable customer relationships.
Strategic CRM penetration	Company-wide understanding of core CRM benefits
Value equity	Customer's perceptions of the quality, price and convenience of the services delivered by the company. Fundamental to establishing long-term relationships with the customers.

1 INTRODUCTION

Every organization exists to produce value for its customers and its owners. The same requirement applies to every service company. When the service company is familiar with its customers' needs, it can succeed in delivering services that meet identified customer needs. The successful service company bases its customerships on relationships, networks and interactions (Gummesson 2004, 411). Gummesson states that the modern Relationship Marketing (RM) philosophy is based on above-mentioned things, and is implemented by Customer Relationship Management (CRM) procedures and tools. Relationships, networks and interactions are increasingly important in competition between service companies, who have demands to deliver tailor-made services.

Competitive and successful service companies know their customers on the average better than their competitors. They know how to implement RM principles successfully (Grönroos 2009, 61). Possibly their most important customer relationships have already developed toward long-term partnerships. Successful implementation of the RM principles and using of CRM tools enables growing the value of customer base. At best CRM can offer effective ways to learn from its customers by recording, analyzing, utilizing and sharing the customer information among customer contact persons. Despite CRM being already quite widely studied and plenty of information is available, the adaptation of CRM is not an easy task.

Efforts to introduce CRM to an organization might often fail. In order to achieve successful CRM approach introduction, both deeper understanding of CRM, RM and right change management actions are needed. CRM fits especially for service organizations that are customer-oriented, act analytically and tailor-make their services. There is a possibility to achieve better CRM approach penetration when CRM fits to tasks of the users.

This research investigated CRM approach penetration in a B2B service company. This was done by literature review and carrying out surveys and CRM development activities. The research reviewed RM and CRM framework including adaptation, penetration, core benefits and CRM measurement related

factors. Besides literature review the research included two separate user surveys, group of different development activities between these two surveys, internal marketing and trainings for the users. The main aim was to develop the target company's CRM system, user commitment and the CRM results.

1.1 Company presentation

Foodwest Ltd was established in 1995. Company was awarded with a status of National Centre of Expertise in Food Development by the Finnish Government. Turnover in 2009 was 1.9 M€. Offices were in Seinäjoki and Tampere. Company had 22 employees. Most of them were working with direct customer contact on their own special field of expertise. Almost half of the employees were part time marketers and were dedicated to sales activities besides other tasks. Company had no full time marketers or salesmen.

Foodwest Ltd. provided expert services for organizations operating within food chain both domestic and abroad. The main service groups were the quality management, product development, and marketing research. The quality management service included different kinds of development, auditing, evaluations and training services. The basic idea of this service group was to help customers to fulfill the various requirements given by legislation, authorities and customers. The product development service focused on improving the profitability of the product portfolio by extending the life cycle of the current food and drink products, and developing completely new products. Marketing research service could offer the customer company among other things relevant information dealing with the attractiveness, the acceptance and the business possibilities of tested products. Foodwest Ltd. was also familiar with the different kinds of national and EU financing tools.

Foodwest Ltd.'s customer base was rather heterogeneous. Over the years the company had built a number of active and long-term customer relationships with large and medium-sized food companies. The company's scope of services had ensured the company to be able to serve a large proportion of additional services for its customers. Despite of the many efforts marketing and sales operations had

not yet developed to be systematic. The company was aware of the development needs of marketing and sales activities.

1.2   Writer's relationship with the company

The writer worked in Foodwest Ltd as a development manager. His main responsibility was to develop the quality management services of the company and tailor them to fit for the needs and demands of the customers. Besides this, the author acquired new customers as well as sold additional services for existing customers. He was also one of the board members of Foodwest Ltd.'s executive group. The writer had no previous experience in CRM systems before the current duties. He was also involved in organizing tenders for CRM systems suppliers. As a main user of the CRM software, the author had got his own user training directly from the system supplier. He was using the CRM system at work on a daily basis. His role of CRM' was to operate in the organization as an internal trainer, a helpdesk and a developer of CRM practices. The writer had more than ten years working experience in the company.

2 DESCRIPTION OF THE PROJECT

This research investigated CRM approach penetration in a service organization. Theories regarding CRM adaptation and innovation adaptation were used to explain partly the stages and factors related to CRM approach penetration. This research identified both operational and strategic way (Bruggen & Wierenga 2005, 14-15) to use the CRM system. For this reason, also the CRM approach penetration was seen to have both operational and strategic dimension. Research included the development of new method for the measurement of the level of CRM approach penetration. Core CRM benefits identified in previous studies were used to form the key questions for the questionnaires and interviews. The seven core CRM benefits identified in earlier research by Richards and Jones (2006, 123) were used as factors to measure the CRM approach penetration. The awareness and understanding of these core CRM benefits were seen as important indicators to show and explain the level of CRM approach penetration. The level of users' perceived expectations and importance regarding presented core CRM benefits were measured and used to explain the level of organization's CRM penetration.

CRM approach penetration was measured twice by using both quantitative and qualitative research methods. The content of questionnaire was identical on measuring moment t_0 and t_{+1}. The questionnaires measured both CRM approach penetration and fitness of CRM software for tasks of users. First interview collected information regarding the CRM benefits, the customer information storing and utilization procedures, obstacles for use, and further development needs of CRM software experienced by users. After carrying out the planned development activities, the same questionnaire was used again and the second interview was carried out. The second interview presented the seven core CRM benefits first time for interviews. This interview measured the identification of these defined core CRM value drivers, and also further development needs of the CRM system. Core CRM benefit related research results were dealt with gap analysis both after the survey at moment t_0 and t_{+1}. Results were analyzed and used for identification of development targets and for the development of CRM software characteristics and functions.

2.1   Research aim

This research was planned to support the introduction and the maintenance of CRM system in Foodwest Ltd. The main aim of the research was to develop the company's CRM system so that users are more committed to the program usage and the CRM results will be improved. Since the CRM users have a key role of the successful introduction of CRM system, the CRM approach penetration was chosen to be an indicator on measurement and explanation of the success of the CRM introduction. The CRM introduction cannot succeed without the commitment of the users. Understanding of CRM benefits is one factor which affects user commitment and might lead to better CRM approach penetration. Bruggen and Wierenga (2005, 31) found in their research, that CRM system can be effective, if the individual employees are able to recognize the value of CRM system. All this explains why the research perspective was selected to be user-oriented. The main aim of the research was supported by two sub-objectives.

The first sub-objective of the research was to achieve better understanding of CRM approach penetration in a service organization. I tried to describe this research objective through aiming to understand user needs and perceived CRM benefits of the users. Previous studies related to this research (Bruggen and Wierenga, 2005; Richards & Jones, 2006; King & Burgess, 2007; Ko et al, 2007) were used to support the determination of factors affecting the CRM success and identification of factors being obstacle for CRM success. This sub-objective was supported by the research questions and hypotheses presented below. All previous studies were also used on formulating research questions. Because of the importance of this sub-objective, it was also chosen to be the title of this research.

CRM has many definitions. The resulting confusion is also reflected in CRM research methods (Richards & Jones 2006, 120). Since the clear and consistent research method, suitable for the purpose of this research, wasn't identified in literature review, the development of the suitable CRM measurement method was chosen to be the second sub-objective of the research. Previous studies were used to assist in this development goal. The most important requirement for

the method to be developed was that it's capable of measuring the level of organization's CRM penetration, and the changes taking place therein.

The research aimed to understand the CRM approach penetration by following research questions. In addition to the actual main research questions also supportive questions were used for planning and supporting the research.

- How CRM approach penetration can be improved?

  - What does CRM approach penetration mean?

  - What contributes to the CRM approach penetration and what factors are obstacles for it?

- How CRM approach penetration can be measured?

  - How CRM has been measured earlier?

  - How does CRM penetration and CRM success relate with to each other?

  - How CRM penetration can be seen inside an organization and its working practices?

Research questions were also supported by three hypotheses. The first hypothesis was developed on the basis of the results of two researches (Bruggen & Wierenga, 2005; King & Burgess, 2007). Besides the two above-mentioned researches, the second hypothesis was also based on two other researches (Richards & Jones, 2006; Ko et al., 2007). And finally the third hypothesis was based on the findings of the last two researches, and the results of Bruggen & Wierenga (2005). The above mentioned researches and results behind these hypotheses were described more in detail in sections 3 Theoretical Framework and 5 Customer Relationship Management.

The hypotheses of the research were:

1. Increased fit for the needs of CRM users will have a positive impact on user commitment and CRM approach penetration of organization.

2. Increased awareness and understanding of CRM benefits among users will have positive impacts on CRM approach penetration of the organization.

3. Increased CRM approach penetration will have a positive impact on CRM introduction and maintenance.

This research consisted of three main phases. First phase measured the starting situation, and tried to bring out the central needs, the obstacles and problems related to the use of adapted CRM system. Second phase aimed to remove the identified main problems by developing CRM software characteristics, functions and user skills. Third research phase measured and analyzed changes and tried to understand the grounds for changes and further development needs. The previously mentioned hypotheses were tested by comparing the results T_0 and T_{+1} with each other.

2.1.1 Problem

Case research organization, Foodwest Ltd adapted CRM system 4.5 years before this research. The chosen CRM software was the first real company-wide ERP (Enterprise Resource Planning) software. In addition to CRM, the employees have shared data files at server. Besides this financial department had financial management and accounting software, which included purchasing, invoicing, salary management and bookkeeping modules. The employees of case research organization's didn't have earlier experience on CRM software.

At the beginning of this research, the CRM system adaptation process was still mainly in the introduction stage. Most of the software basic functions were not in active use. The group calendar was rare function widely used. There were probably several reasons for the modest utilization of the system. Part of the problem might have been that users didn't understand the potential value of CRM system. Users weren't aware and didn't understand the real core benefits of CRM software usage. Before this research the user training had been fairly general and light. Besides this users didn't have any user manuals or helpdesk to ask

when they encounter difficulties. Because of all these reasons users CRM knowledge competence level was quite modest. The executive group of case research organization was well aware of the problems in the introduction of CRM software. CRM investment hadn't showed any visible benefits yet.

Previously, the company's business was mainly based on implementing of publicly funded projects. Today, these projects are just a minority of the company's business. As previously described company's project history still affected company's activities in many ways and set own challenges for the development of company's customer-orientation. Because of the above described reasons, the financial system of the company was mainly concentrated on monitoring and reporting of the profitability of individual projects. Another important monitoring area was the monitoring of the profitability of the service groups based on the organizational structure. Since the financial system did not produce automatically suitable customer profitability information, the identification of the most profitable customers was not entirely unproblematic. Due to a shortage of the customer base had not been segmented.

At the introduction of CRM system, there had been no training of RM philosophy and the CRM benefits. The CRM investment was seen as means to develop the sales and marketing activities. The company's CRM objective was the same. But it was too general to guide the organization for concrete development measures. At the beginning of the research, company had no plan how to encourage the users to use CRM better. At the same time the expectations and needs of CRM users were not known. Due to these reasons the importance of the development of customer relationships, and recording and sharing customer information were not understood. These reasons also related with the fact that the organization's sales and marketing efforts were not so successful.

3 THEORETICAL FRAMEWORK

Theoretical framework aimed to describe the research related issues generally and also show they relate to each other. Issues presented in this chapter have influenced significantly to this research, as well as the planning and practical implementation of the research.

Several factors are essential prerequisites for the successful CRM introduction. According to one of the research hypothesis, a good CRM penetration will have a positive impact on CRM introduction. This research focused particularly on understanding these factors related to CRM introduction, maintenance and penetration. The research tested the former study results in practice to measure CRM approach penetration.

The literature review was focused on both RM and CRM. RM literature review focused on RM philosophy and strategies, which affect behind the CRM theory. RM theories helped to see CRM as a collection of tools to implement RM philosophy. The understanding of these relations between RM and CRM also helped to set realistic CRM objectives. CRM literature review focused on understanding adaptation, success, obstacles, core benefits and measurement of CRM. The results of RM and CRM literature review have been principally presented in their own chapters in this research.

The theoretical framework of the research can be divided into two main categories. One category relates to the RM and CRM literature. And another category focuses on change management and process related theories. These two main categories related to each other in many ways. For example, the CRM adaptation process was investigated partly by using the innovation adaptation theory. Change management literature was used to support the CRM development activities and to enable to do the desired change. It also helped to eliminate some of the identified obstacles and to develop the CRM software more user friendly during this research.

According to Gummesson (2004, 46) CRM is part of the RM, so that CRM provides the tools and systems that enable the implementation of relationship

marketing strategies. Previous author has stated (2004, 73-74) that the CRM is based on relationship marketing philosophy and related strategies, and is a systematic way to apply to the relationship marketing in practice, particularly in customer relations. Gummesson (2004, 327-328) has described that CRM is the means to convert the workers' human capital into structural capital. Human capital includes the employees and their unique skills, behavior, motivation, and their relationship network. According to Gummesson, eCRM is primarily structural capital. The author also defined that structural capital of relationship marketing is formed by relationships that have been agreed with the company itself. It would remain in the company, even if employee would leave the company.

Peppers and Rogers (2004, 95) has described that today's new technologies are making it possible more than ever before to manage the actual mechanics of individual customer relationships, at company level. They (2004, 19) said that technological advances during the last quarter of the twentieth century have mandated shift in business philosophy.

The research also applied change management principles described by Kotter (1996, 21) and some other authors. Change management approach was taken into account in research planning, and especially on implementation of the development activities as well as communicating the CRM development results.

3.1   Articles that significantly influenced on research frame

A group of CRM literature review articles had a significant effect on planning and practical implementation of the research.

Rigby and Ledingham (2004) have studied companies' success on implementing the CRM system. They found relations between successful CRM projects and CRM goal setting. Their research helped to define target company's CRM objectives and understand connection between customer relationship problems and customer relationship cycle.

Bruggen and Wierenga (2005) have studied the CRM system success, when CRM system have an effect on company's performance, and what are the factors

associated with the impact of CRM systems. They created and tested 22 hypotheses related to CRM system effectiveness. They focused especially on studying how the individual impact and organizational impact relate to different factors affecting the CRM system success. As a result of the study they made interesting statements between user and organizational benefits and CRM system success. Their results were useful when planning the development activities of this research. Their study findings are presented more detailed in the chapter 5 Customer Relationship Management.

Richards and Jones (2006) have identified in their study a core group of expected CRM benefits. They called these core CRM benefits as CRM value drivers. They focused to investigate the ability of these value drivers to increase company's customer equity (CE). Richards and Jones made an extensive literature search. They found 26 sources relating to CRM benefits. One result of their study was the identification of seven core CRM benefits, which were served as value drivers of CE. In this study these core CRM benefits are also referred as value drivers. These value drivers are (Richards & Jones 2006, 123):

1)   improved ability to target profitable customers;
2)   integrated offerings across channels;
3)   improved sales force efficiency and effectiveness;
4)   individualized marketing messages;
5)   customized products and services;
6)   improved customer service efficiency and effectiveness; and
7)   improved pricing.

The above-mentioned core CRM benefits were used in this research to measure CRM approach penetration level of the organization. Richards and Jones study results were collected and summarized in a table. Table 1 is modified from this original source. It shows the connections between core CRM benefits and value drivers.

Table 1. Core CRM benefits and indications of their support as value drivers. Modified from the original source (Richards & Jones 2008, 124-125).

Core CRM Benefit	Value drivers						
	Improved targeting	Integrated offering	Improved sales	Individualized messages	Customized services	Improved customer service	Improved pricing
• Saves time on searching customer information			x				
• Saves time on utilizing customer information	x		x				
• Saves time on storing customer information			x				
• Improves communication with customers		x		x			
• Improves internal communication		x					
• Improves acquiring of customers	x		x				
• Improves on retention of customers	x						
• Helps on winning back lost customers	x		x				
• Supports pricing and penetration of offered price							x
• Improves cost-efficiency of sales			x				
• Helps to identify and meet customer needs			x				
• Supports on developing new services					x		
• Helps decision-making dealing customer relationship planning	x		x				
• Helps to understand customer's buying behavior	x		x	x			
• Increases customer loyalty	x		x				
• Improves customer focus of operations					x	x	
• Improves customer satisfaction					x	x	
• Increases sharing of customer relationships across organization		x					
• Improves long-term customer profitability	x						
• Names actions and events to responsible persons improving planning of further actions	x		x			x	
• Improves planning of marketing operations	x			x			
• Develops sales follow-up			x				

Ko et al. (2007) have researched how organizational characteristics influence on CRM adaptation process. They investigated the relations between perception of CRM benefits and implementation of CRM technologies. Ko et al. (2007, 73)

suggested for the future research a longitudinal study to examine the perceived benefits of CRM before its adaptation and the achieved benefits afterwards. The previous suggestion and some research results have been used on planning the research and CRM approach penetration measurement method, and on planning development activities. Some of their results were also presented in the chapter 5 Customer Relationship Management.

King and Burgess (2008) have studied factors related to the success and failure of CRM innovation. They developed a conceptual model of CRM innovation and also converted it into a dynamic simulation model. These models helped to understand both causes of success and failure. These models showed an illustrative way, how the organization's senior management, departments, project organization and CRM users are linked to each other, and CRM processes and results. This literature review article was useful on planning development activities.

According to Reichheld (2006), there is a correlation between Net Promoter Score (NPS) and a company's average growth. Reichheld has described how this customer relationship metric is capable to measure customer loyalty and ability to capture net effect of customers who promote over customers who detract. This literature review article supported in planning external CRM success measurements. The previous literature review article was supported by Owen and Brooks (2009, 18) who developed Reichheld's results further by developing the Net Promoter Operating Model. Their model provided a checklist of critical components and a process with circular elements which require repetition. The elements of Owen and Brooks gave ideas for development activity planning process of this research.

4 RELATIONSHIP MARKETING

4.1 History of relationship marketing

Roots of the Relationship Marketing (RM) are deep in industrial history. Mudie and Pirrie (2006, 228-229) described how the strategic orientation of companies have changed gradually after Second World War in proportion as the market has become more saturated, and the competition has become harder. After the war most markets were faced lack of supplies. Everyone could sell what they just made. At that time the voice of customer wasn't important and companies adopted a product oriented approach.

According the previous researchers, many markets were oversupplied during 1970s. Now companies had to start to listen to the needs and requirements of customers. They stated that offerings had to be differentiated and directed more carefully to the right markets. They also described that the companies had to learn segmentation in this era. This approach was called market orientation.

According to Baron, Conway and Warnaby (2010, 13), RM came out as an alternative to mainstream marketing for Business-to-business (B2B) and service marketers in the late 1970s and early 1980s. They have explained that RM was seen as an alternative means, where marketers are heterogeneous, buyers and sellers are active, and interactions and relationships are important. By the 1980s markets were again saturated of the same kinds of products and services. This started new era when companies had to develop new competitive orientation to secure their position in the markets. This approach aimed to achieve competitive advantage - for example by finding value-chain savings and by differentiating routes to market. This led companies to deeper customer orientation. Companies realized the importance of fulfilling the expectations of important customer groups.

The relationship orientation was a natural extension to that of customer orientation (Mudie & Pirrie 2006, 229). Although the origins of RM are found in an industrial context, it has been found to be especially important to service sector

(Payne, Christopher, Clark and Peck 1995, 63). RM has been a standard tool in the B2B marketing as well (Peppers & Rogers 2004, 95). B2B marketing targets company's marketing measures to other organizations (Gummesson 2004, 389). Relationship Marketing spread during the 1990s, and was followed by one-to-one (1to1) marketing, and later on customer relationship management (Gummesson 2004, 21).

4.2   Defining relationship marketing

Relationship marketing has been defined in several ways. According to Kotler (1994, 713), RM is based on company's need to focus on important customers and give them continuous attention. RM can be seen also as a practice focused on attracting, maintaining and enhancing customer relationships (Payne, Christopher, Clark and Peck 1995, 66).

Customer orientation is a ground of every successful business. Mudie and Pirrie stated (2006, 227), that organizations can grow their business basically just by attracting new customers, losing fewer customers and doing more business with existing customers. Customer focus should be taken into consideration already in organization's strategies (Peppers & Rogers 2004, 5). According to Peppers & Rogers the value of the organization can be increased through specific customer strategies (Figure 1).

– Acquire profitable customers	Get
– Retain profitable customers longer – Win back profitable customers – Eliminate unprofitable customers	Keep
– Up sell additional products in a solution – Cross-sell other products to customers – Referral and word-of-mouth benefit – Reduce service and operational costs	Grow

Figure 1. Increasing the Value of the Customer Base (Peppers & Rogers 2004, 5).

Relationships and interactions between individuals and organizations forms networks (Gummesson 2004, 23). According to Gummesson (2004, 21), RM is the marketing based on internal interaction of networks. Gummesson has also defined (2004, 411) that RM is the marketing studied as relationships, networks and interactions.

Relationships with customers form the crux of the customer-strategy enterprise (Peppers & Rogers 2004, 19):

> Relationships between customers and enterprises provide the framework for everything else connected to the customer-value business model. The exchange between a customer and the enterprise becomes mutually beneficial, as customers give information in return for personalized service that meets their individual needs.

Quite often RM is described to be a business philosophy. Mudie and Pirrie (2006, 227) have defined, that RM is a philosophy of doing business, a strategic orientation, which focuses on keeping and improving current customer relations rather than on acquiring new customers. According to them (2006, 228), the practice of RM is designed to secure the continuity of relationship by developing number of 'bonds' between organization and customer.

The RM philosophy can be seen to be based on cooperation and trust-based relationship with customers and other network partners and interested parties (Grönroos 2009, 71). Grönroos (2009, 53) have defined RM as marketing, which means identifying, creating, cherishing and developing of relationships with customers and other interest groups - and if necessary, cut off - so that the financial and other objectives of all parties are met. Grönroos also described that this can be achieved by mutual giving of promises and their fulfillment. According to Grönroos (2009, 51), from relationship perspective the marketing process focus shall be on customer value creation processes in which value is created and where customer experience it. In this case the marketing strategy is to promote and support the value creation process and influence on the value experienced by customers.

Baron, Conway and Warnaby (2010, 10) have described the essence of RM with two following statements. RM draws attention to the importance of retaining as well as attracting customers, with emphasis being placed on the development of long-term relationship with customers. They stated that the primary goal of RM is to build and maintain a base of committed and profitable customers. According to them, the basic business philosophy is to strive to get a customer, keep that customer for a lifetime, and grow value of the customer to the enterprise. Attracting new customers can be viewed just as an intermediate objective within RM philosophy (Payne, Christopher, Clark and Peck 1995, 73).

According to Peppers and Rogers (2004, 19) the critical business objective is no longer to acquire the most amount of customers and to gain the greatest market share for a service. Instead, they described that to be successful in this era of interactivity; company has to deal individually with separate customers whenever it's possible. They also stated that the business objective must include establishing meaningful and profitable relationships at least with the most valuable customers, and making the overall customer base more valuable.

Baron, Conway and Warnaby (2010, 13) have described that RM stresses the importance of loyalty, customer retention and long-term relationships as a key to profitability. According to them customer loyalty emphasizes the interactive nature of commitment of the customer to the company and / or its employees (2010, 31). According to Peppers & Rogers (2004, 57), any company wanting to increase loyalty, in attitudinal terms, should concentrate on improving its brand including elements as product, its image, and other elements of the customer experience, relative to its competitors. Previous researchers (2004, 60) have described different forms of loyalty. According to them, emotional loyalty or attitudinal loyalty means to have a preference for one brand or company over another. Customers with attitudinal loyalty may buy another brand or from other company for practical reasons, for example if the brand they prefer is not available. Furthermore, they have described that functional loyalty or behavioral loyalty means basically buying the same thing over and over or repeatedly from a particular same company.

The customer revolution has made enterprises to change their business philosophy. Successful enterprises are committed themselves to keep and grow their most valuable customers. Peppers and Rogers (2004, 25) have described that today's businesses have become more sophisticated about shopping for their needs across multiple channels. According to them, this has created service providers a clear need for learning about the needs and buying behavior of customers.

According to Grönroos (2009, 59-60), to succeed in RM the company must learn to design organization's value creation processes so, that a comprehensive service offering can be produced and delivered for the customers. Bergeron (2002, 44) have stated that most customers base their purchase decisions on wants, not needs. In any case, the customer's needs and wants are related. Customer needs are the result of his value creation processes and how he wants his needs to be supported (Grönroos 2009, 421). Continuous development of the customer knowledge and related activities is a key for successful business (Peppers & Rogers, 2004, 5). According to previous researchers, customer knowledge enables:

– developing the business operations highly customer-oriented
– identifying customer needs and requirements
– carrying out the given promises and commitments agreed with the customer

4.3   Development of customer relationships

Long-term and durable relationships are not possible to build by using traditional sales and marketing measures. When needs of customers are taken into account sufficiently, deeper bonds are being created between a customer and the supplier. Kotler (1994, 48) has defined five different levels of relating to customers:

– Basic: The salesperson sells the product but does not contact the customer again.

- Reactive: The salesperson sells the product and encourages the customer to call if he or she has any questions or complaints.
- Accountable: The salesperson calls the customer a short time after the sales to check whether the product is meeting the customer's expectations. The salesperson also solicits from the customer any product improvement suggestions and any specific disappointments. This information helps the company continuously improve its offering.
- Proactive: The company salesperson calls the customer from time to time with suggestions about improved product use or helpful new products.
- Partnership: The company works continuously with the customer to discover ways to effect customer savings or help the customer perform better

These five levels, described by Kotler can be used in the marketing relationship so, that the key customer relationships of the company are developed towards profitable partnerships.

Peppers & Rogers (2004, 37) have also made a list of the distinct qualities that characterize a relationship between a company and a customer. According to them, a relationship implies mutuality. This characteristic has been seen well in a relationship when both parties participate in and are aware of the existence of the relationship.

Second characteristic is that relationships are driven by interaction. So, when two parties interact and exchange information, this information exchange is a central engine for building the relationship. Interactions always take place always when a customer buys a product or service from the company. At the same time every interaction adds total information content of the relationship.

Third characteristic of a relationship, what they listed, is that relationships are iterative in nature. Interactions themselves build up history and context with time. This context give solid base for the future interactions, because every successive interaction represents all the previous ones.

Previously mentioned characteristics are also driven by an ongoing benefit to both parties. Participating in a relationship will involve a cost in money, time, or effort. According to previous researchers, this leads to long arrangement in relationship, if there is enough continuing benefit to offset customer's cost. Due to the context of the relationship and its continuing benefit to both parties, each party in a relationship has good incentive to recover from mistakes.

They also listed that relationships require also a change in behavior on the part of both parties in order to continue. Each party's current and future actions appropriately reflect that historical context and drive ongoing benefit of a relationship. Enterprise's actions toward a particular customer should be somehow tailored to reflect the customer's own input so that there is ongoing benefit for the customer.

Sixth characteristic of a relationship, what the previous researchers listed, is uniqueness. Every relationship is constituted with individuals and is different. As a result of this an enterprise must be prepared to participate in different interactions, remember different histories, and engage in different behaviors toward different customers.

Finally, the seventh and ultimate requirement of a successful continuing relationship is trust. When a customer develops a relationship with an enterprise, the customer tends more and more to trust the enterprise to act in the customer's own interest. Trust, affection and satisfaction are all related to feelings on the part of a customer toward a company with which he has a relationship. They all bring more emotional elements into a relationship. An enterprise must be able to reconcile its own culture and behavior with the requirement of generating and sustain the trust of a customer (Peppers & Rogers 2004, 37).

According to Peppers & Rogers (2004, 68-69) there are four interrelated implementation tasks for creating and managing individual customer relationships. They called these tasks following be each other as an IDIC process. Tasks are:

1. Identify customers
2. Differentiate customers
3. Interact with customers

4. Customize treatment

Peppers & Rogers stated that a company needs to recognize and know each customer. According to them, knowing different habits, preferences and other characteristics of the customers allows a company to differentiate customers and focus on customers who bring good value for the company. They described that company must aim to improve the effectiveness of their interactions with customers. Besides this they described that companies should adapt some behavior toward customer based their needs and value.

Deeper understanding of the different kinds of relationships will help to develop relationships further. According to Gummesson (2004, 56-57), the RM philosophy should be translated into concrete and systematically specified relationships, that could be utilized on planning and implementation of company's marketing. Gummesson distinguished 30 different types of relationships, whose importance varies according to company and the market. He divided relationships into groups of market relationships, mega relationships or nano relationships. According to Gummesson actors of market relationships include suppliers, customers, competitors and other market participants. They form together the basis for marketing, are directed outwards, and apply to the actual market. Mega relationships are above the market relationships, they are also economy and society related, and forms the basis of market relations. Nano relationships are in turn both below market relationships and within the organization affecting to external relationships. All previously described relationships cannot be applied in every situation.

Company's relationship portfolio is good to be chosen, so that it fits and supports the company's current situation (Gummessonin 2004, 64). The personnel have a key role in the development of customer relationships. You could influence their commitment by using internal marketing. Internal marketing belongs to the group of nano relationships and supports indirectly organization's relationships with external customers (Gummesson 2004, 61). Successful internal marketing is the condition on successful external and interactive marketing (Grönroos 2009, 448).

Previous researcher defined internal marketing as a management philosophy, where employees are treated as customers to whom you market services.

According to Grönroos (2009, 61), the company deserves every relationship based on how it implements relationship marketing. Grönroos (2009, 63) has also stresses, that when a relationship is established, customers are customers all the time - and they should be treated as customers, regardless if they are purchasing in a particular time or not.

4.4 Benefits of relationship development

Without knowing and learning about the customers, customer relationships tend to stay relatively weak. Consequently the customer relationships don't develop and strengthen organization's competitiveness and financial position. If the market is more competitive, weak customer relations could be seriously jeopardized. According to Peppers and Rogers (2004, 20), customer relationship has a potential to be developed deeper, when the customer allows supplier to learn the customer's needs, and when the supplier is capable of meeting the individual needs described by the customer. They described this learning process within relationship marketing as Learning Relationship.

Previous researchers have described the fundamental and principles of learning relationship. According to them, the basic strategy behind learning relationships is that the supplier let customers teach what he/she value and wants from the supplier. The more the customer teaches the company, the more exactly the company can provide what the customer wants. Learning relationship leads to a situation where company knows something about customer that company's competitors don't know. So company can do things for customer what his/her competitors can't do. Before long, customer can get services from the company the customer can't get anywhere else, for any price. Finally, customer would have to start all over with someone else, but starting over is much more costly than staying with the company (Peppers & Rogers 2004, 20).

Payne, Christopher, Clark and Peck (1995, 68) have stated, that services have a nature, which enables service companies to customize the relationships. According to them by learning and utilizing the specific characteristics and requirements of individual customers, service companies could more precisely tailor service to the situation at hand. Learning relationship protects also against competition. It's important, that a service fits on the value creation processes and support the value creation, or value formation on customer's daily actions and processes (Grönroos 2009, 420).

According to Peppers & Rogers (2004, 20-21), even if a competitor were to establish exactly the same capabilities, a customer already involved in a learning relationship with an enterprise would have to spend time and energy on teaching the competitor what the current company already knows. This creates a significant switching cost for the customer; if it's supposed that the value of what the company is providing continues to increase, partly as the result of the customer's own time and effort. This leads that the customer becomes more loyal to the company, because it is simply in the customer's own interest to do so. So in this situation it is more worthwhile for the customer to remain loyal than to switch. As the relationship progresses further, the customer's convenience increases, and the company becomes more and more valuable to the customer. This allows the company to protect its profit margin with the customer, often when also reducing the cost of serving the customer (Peppers & Rogers 2004, 20-21).

According to Baron, Conway and Warnaby (2010, 25) long-term customer relationships with good customer knowledge and personalized marketing offer a unique and sustainable competitive advantage, because competitors can't easily duplicate such relationships. Baron, Conway and Warnaby (2010, 31) have described several benefits of RM. According to them, long-term service customers become also better co-producers and this helps the production and delivery of high-quality products and services. They also stated that customers tend to become less price-sensitive as the relationship becomes more important to them than price alone.

5 CUSTOMER RELATIONSHIP MANAGEMENT

As presented in chapter relationship management, CRM includes tools and practices, which implement relationship management philosophies and strategies. For this reason procedures and measurements of research theme are presented in this chapter, although they clearly also relate to relationship marketing.

CRM is already quite widely studied and core CRM benefits are already quite well known (Richards & Jones, 2006, 123-125). There have been various approaches. Some studies have taken for example a CRM process perspective, information system perspective or have investigated the effects of its use.

This chapter describes CRM history, definitions and philosophy and strategies behind CRM. Also CRM success factors and CRM benefits are reviewed. This chapter also describes how customer data is managed by using data warehousing and data mining. CRM structure components are viewed. Also CRM measurements are presented. Previous CRM activities will assist customer segmentation. The relation between CRM and customer segmentation has been also described. At the end of this chapter important factors for successful CRM development project have also been presented.

5.1   History of customer relationship marketing

Reynolds (2002, 1-2) has described the various changes and stages of CRM history. According to him, the first generation of CRM tools appeared with the affordable and computerized technology in the late 1980's. The first CRM tools were DOS or Unix-based products usually referred to as "sales force automation" solutions. They were mostly contact management tools, which did not consider the strategic points of view or customization needs.

According to Reynolds, it was early to mid-1990s, when e-commerce entered the markets and offered customers more control over their purchasing choices. One early CRM approach was to analyze shopping patterns. After this a variety of

CRM tools came to market offering tools that could automate sales and marketing processes, as well as call centers, dispatch, and other customer-centric business process. Also in that case the technological development drove the changes, not strategy.

The second generation of software was usually Windows-based and offered client-server support for relational databases, such as Informix, Oracle and Sybase. Reynolds explained that this software generation could normally interface to back-end systems allowing data transfer to and from legacy databases. But they didn't offer much opportunity for customization yet. Not earlier than 20th century, it was possible to find solutions known currently as CRM solutions. These new tools are technologically advanced and they can automate all processes providing information relating to customer interaction so that it's available corporate-wide. According to Reynolds (2002, 1-2), it was only with the convergence of information technology, telecommunications, and the Internet that the whole concept of CRM really came alive. Reynolds also defined CRM as a strategy that enables the integration of information management systems so that customer related data can be spread throughout a company and used to plan, schedule and control pre-sales activities (Reynolds, 2002 1-2).

As it has been described earlier CRM has its roots in relationship marketing. Over the years a number of experts have developed customer relationship management theory in their respective fields (Peppers & Rogers 2004, 8). Previous authors have described, just as there are several definitions of CRM. Also CRM itself is known in many different names such as integrated marketing communications, one-to-one relationship management, real-time marketing and customer intimacy.

According to Gummesson (2005, 45), CRM made its breakthrough in 1998 and since then, IT has had more and more dominant role in customer relationship management.

5.2   Definitions of customer relationship marketing

CRM has many different dimensions and definitions. Every study and the work have its own focus and limited perspective. For this reason, researchers and writers have also defined CRM to mean different things. CRM has been seen among other things as an approach, concept, business strategy, top management tool, management discipline, process, and means to improve customer relationships. CRM definitions can be classified into strategic or operational category (Richards & Jones 2006, 121).

Swift (2001, 12) defined that CRM is an enterprise approach to understanding and influencing customer behavior through meaningful communications in order to improve customer acquisition, customer retention, customer loyalty, and customer profitability. This definition didn't recognize the relationship perspective. According to Burnett (2001, 253), CRM may be described as a concept, or management discipline, concerned with how organizations can increase retention of their most profitable customers, simultaneously reducing cost and increasing the value of interactions, thereby maximizing profits.

Storbacka et al. have seen CRM to be the strategic management of customer relationships done by top management. They defined (Storbacka et al. 2001, 327) CRM as a management of customer relationships in corporate level aiming to enhance the value of customer relationships by removing elements of dissatisfaction, and designing customer relationship concepts and customer experiences. Ko et al. studied CRM adaptation process and stated (2007, 66) CRM to be an innovative management strategy.

Peppers & Rogers (2004, 6) described CRM as an enterprise-wide business strategy for achieving customer-specific objectives by taking customer-specific actions. Previous authors stressed customer-specific viewpoint because an important objective of CRM is to increase the value of each customer. They have also made another more detailed CRM definition. According to it (Peppers & Rogers 2004, 33-34) CRM is making managerial decisions with the end goal of increasing the value of the customer base through better relationships with customers, usually on an individual basis. This definition supported their other

definition, described above, by expanding the description of CRM objective and means.

Some definitions have stressed the relation between CRM and relationship marketing where CRM offers practical procedures, tools and processes to implement the philosophy and strategies of relationship marketing. According to Gummesson (2004, 21) CRM means emphasizing of customer relationships by applying the values and means of relationship marketing in practice. Besides actual CRM definition Gummesson has described (2004, 327-328) that CRM is the means to convert the workers' human capital into structural capital.

Operational CRM definitions are often described to have the process perspective. CRM has been seen as a process that manages the interactions between a company and its customers (Berson, Smith & Thearling 2000, 10). Burnett (2001 OVERVIEW XVII) described CRM as a selective process. Previous author argued that an organization can only effectively manage a limited number of key customers. CRM has been also seen as a set of business activities supported by both technology and processes that is directed by strategy and is designed to improve business performance in an area of customer management (Richards & Jones 2006, 121-122).

Also some other more limited CRM definitions, such as customer contact software, exists (Richards & Jones 2006, 121). This research identified both operational and strategic CRM definitions and ways (Bruggen & Wierenga 2005, 14-15) to use the CRM system. This research defines CRM as a company-wide customer relationship management approach that focuses on continually improving customer relationships by identifying, keeping, and growing best customers, interacting with them, and utilizing the created customer knowledge to promote and support customer's value creation processes.

This research identifies and determines approach the two sides of CRM approach penetration. The research sees the operational CRM penetration as a company-wide adaptation of CRM tools for daily use. Strategic CRM approach penetration is seen as a company-wide understanding of core CRM benefits.

Successful operational and strategic CRM approach penetration enables CRM user to commitment to the company's CRM objectives.

5.3   Philosophy and strategies behind customer relationship marketing

Philosophy and strategies

CRM is based on RM philosophy. In a history RM was followed by one-to-one marketing and CRM. Reynolds (2002, 9) has described relationship between the term one-to-one marketing and CRM. Both of these terms refer to marketing techniques aimed toward creating a one-to-one relationship with the customer. Previous author stated that one-to-one philosophy relates to CRM, since any CRM initiative in one way or another must adopt some elements of the one-to-one philosophy. According to him the implementation of a one-to-one philosophy can provide benefits as:

– The business focus shifts to the most profitable customers.
– The lifetime share of the customer base, not market share, becomes a key performance indicator.
– Keeping profitable customers is cost-efficient and far outweighs the cost necessary to acquire new customers.
– Better bang for the buck – products and services are more accurately targeted due to in-depth knowledge of the individual customer.
– Customers, as collaborators, become a rich source of ideas for new product development, leading to high post-launch success rate.

Customer-centric way of thinking has an important role in every CRM system introduction. Reynolds (2002, 33) has stated that the adoption of a customer-centric philosophy and its supporting strategy, along with change management techniques that educate of the end-users, are even more critical to a successful CRM initiative.

According to Reynolds (2002, 3), the first step for a business, when planning the CRM initiative should be to determine its most important CRM objective. Should it

sell more products to existing customers? Increase sales by extending its customer base? Or work on keeping the customers it already has through better customer service and loyalty programs? In any case the objective of CRM is the optimization of profitability (Berson, Smith & Thearling 2000, 44).

According to (Wayland & Cole 1997, 120-121), the goal of strategically manage the customer portfolio is to increase the mean and reduce the variance of the company's customer-relationship value distribution. The key questions that must to be answered to accomplish this are:

- Which are the most valuable customer relationships, and what can we do to keep them and find more like them?
- What can be done to increase the value of the modestly profitable and moderately unprofitable customer relationships?
- What factors account for the unprofitable customer relationship? Can these factors be changed, or should we disengage from the unprofitable customer relationships?

Reynolds (2002, 34) stated that each company must find a CRM strategy that addresses not only its specific business philosophy and strategy, but also the company's current needs and priorities. According to previous author, the CRM team needs to determine whether the company's philosophy and supporting strategy is based on;

1. Product-based selling: This is where a company gathers information about its customers' transactions and performs simple analysis of the variables. This strategy doesn't offer any real insight into a specific customer's relationship.
2. Managed service and support. The company's focus is on applying customer service to the sales process to improve customer relationships, such as setting up a call center and/ or helpdesk.
3. Customer based marketing. Here focus is on the customer. This method allows a company to make different offers to different customers and

identify individual cross-sell and up-sell opportunities, maximizing customer profitability.

4. Personalized relationship marketing. This requires that the business collects and analyzes extensive information about its customers. Knowledge is used to offer personalized service. To support this strategy, the business must have a IT system that can support.

Finance	Growth	Logistics
CRM Strategy		
Shareholder	Marketing	Management

Drives

Policies	Silo or Matrix	
Organizational Structure		
Reporting	Measure	Controls

Drives

Technology Implementation
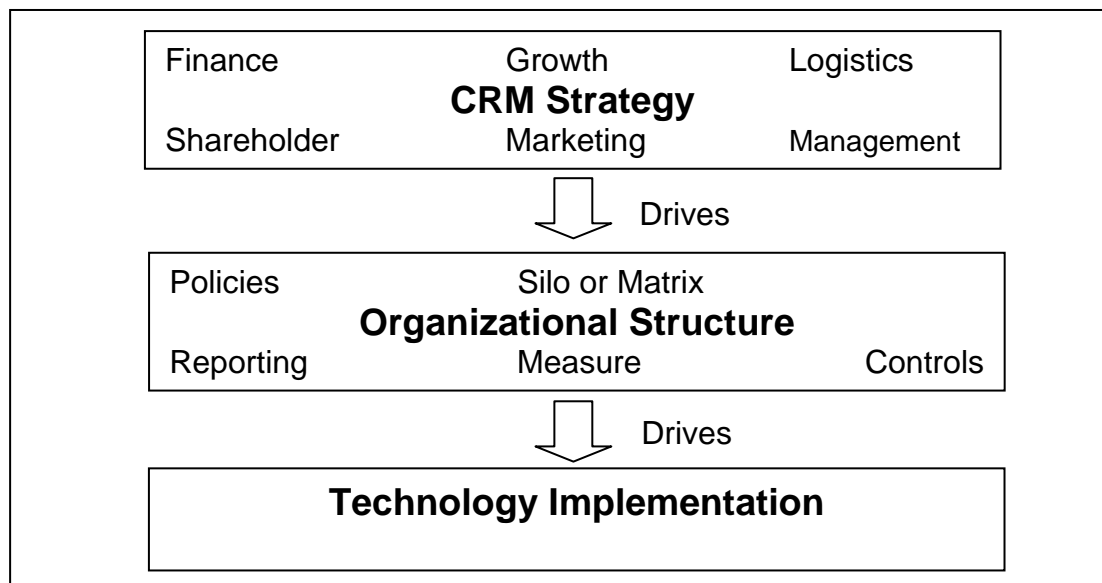
Figure 2. CRM strategy drives structure and technology (Anderson & Kerr 2002, 6-8).

Anderson & Kerr (2002, 6-8) has described how the CRM strategy drives organizational structure and can have positive influence on technology implementation (Figure 2). Ko et al. (2007, 72) have found that organizational strategy and maturity of information system both have significant influence on the CRM adoption process.

Peppers and Rogers (2004, 5-6) has stated that to become an enterprise focused on building value of customers should start with a strategy or an ongoing process that helps transform the enterprise from a focus on traditional selling or manufacturing to a customer focus. Customer-strategy enterprise builds its business model around increasing the value of the customer base (Peppers & Rogers 2004, 33-34). According to previous authors this applies to companies that may be product-oriented, operations-focused, or customer-intimate.

According to Peppers and Rogers, every employee who interacts with a customer should have real-time access to current information about that individual customer so that it is possible to continue from the latest interaction. The foundation for growing a profitable customer-strategy enterprise stands in establishing stronger relationships with individual customers (Peppers & Rogers 2004, 32). A customer-strategy enterprise seeks to create one centralized view of each customer across the company (Peppers & Rogers 2004, 31-32). According to previous authors, customer-driven competition requires enterprises to integrate five principal business functions into their overall customer strategy:

1. Financial custodianship of the customer base. The customer-strategy enterprise treats the customer base as its primary asset.
2. Production, logistics, and service delivery. Enterprises must be capable of customizing their offerings to the needs and preferences of each individual customer. The Learning Relationship with a customer can help and is useful when it is incorporated into interactions with customer in the way the enterprise behaves toward the customer.
3. Marketing communications, customer service, and interaction. Marketing communications and all forms of customer interaction need to be combined together.
4. Sales distribution and channel management. It might be a difficult challenge is to transform a distribution system if needed.
5. Organizational management strategy. Enterprises must organize themselves internally by placing managers in charge of customers and customer relationships, rather than just products and programs.

According to Bergeron (2002, 46), to capitalize on repeat business and enhance customer loyalty, companies should explore the costs and benefits of all customer interactions. Bergeron also described that certain types of customers favor some touch points over others. Technology can intensify the interactions between the company and the customer. It allows the conversion of collected customer information into enterprise-level customer knowledge. Technology also supports the customer relationships to develop economically more profitable.

According to Wayland and Cole (1997, 31-32), customer knowledge, customer-connecting technology, and customer economics are the foundations of customer-connected strategy (Figure 3). They make it possible to determine where a business can position itself.
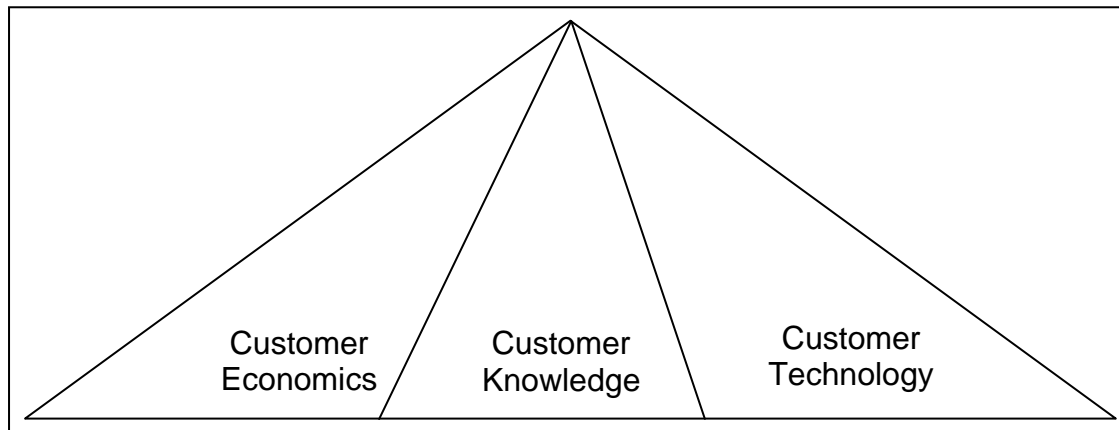
Figure 3. The foundations of customer-connected strategy (Wayland & Cole 1997, 31-32).

CRM process

CRM philosophy can also be viewed from the process perspective. According to Berson, Smith & Thearling (2000, 405), optimizing the CRM process requires a business best practice that consists of three main steps and an architecture for implementing and supporting those steps; "measure," "predict," and "act". With this statement the previous authors applied the principles of continual improvement on CRM. According to previous authors the previous steps represent the steps in a cycle of customer relationship management that is continuously improving. The methodology is general enough that it is applicable to the vast majority of customer management functions such as the following:

- Cross-selling - selling a new product to an existing customer
- Acquisition - acquiring new valuable customers
- Retention - retaining existing valuable customers

To achieve these goals of better customer management, there are a variety of processes that are used over and over again by the marketing organization:

- Targeted marketing

– Lifetime value prediction

Customer lifecycle is one dimension of process perspective. CRM aims to extend the customer lifecycle and increase the profit within customer relationships. Customer life cycle is related to net profitability of customer relationship. According to Reynolds (2002, 121), the customer life cycle is a means of defining and communicating the way in which a company interacts with its customers and prospects, i.e. acquire, retain and enhance continuum. By accurately predicting the life cycle of its customers, a company can proactively offer appropriate products and services to its existing customer to extend the company-customer relationship (Bergeron 2002, 48).

CRM benefits

According to Berson, Smith & Thearling (2000, 44), by launching enterprise-wide CRM efforts, companies attempt to better coordinate customer contact points, so that the enterprise can more efficiently manage its marketing resources and establish more meaningful relationships with its customers.

The best functions on CRM system are those useful for the individual users, the company and the customers. To gain better CRM results it is important to listen to the needs of users. User-orientation contributes to successful CRM introduction and its use. According to Van Bruggen and Wierenga (2005, 5), it's important to realize that individual impact is the means to accomplish organizational impact. This means that the information from the CRM system has effect on its users, on the outcomes of their decisions, and, thereby on the results of the company. CRM can help users to be more effective, increase the user's productivity, improve job performance and/or make the job easier. On organization level the CRM can lead to quicker response to customer requests, higher customer satisfaction, higher sales volumes, bigger market share and better profitability.

Richards and Jones (2006, 122-123) have identified in their study a core group of expected CRM benefits. They identified seven core CRM benefits, which serve

as value drivers of customer equity. These core CRM benefits had an important role in this study when measuring the CRM approach penetration. According to Richards & Jones (2006, 122-126) these value drivers are related to customer equity through value equity, brand equity and relationship equity:
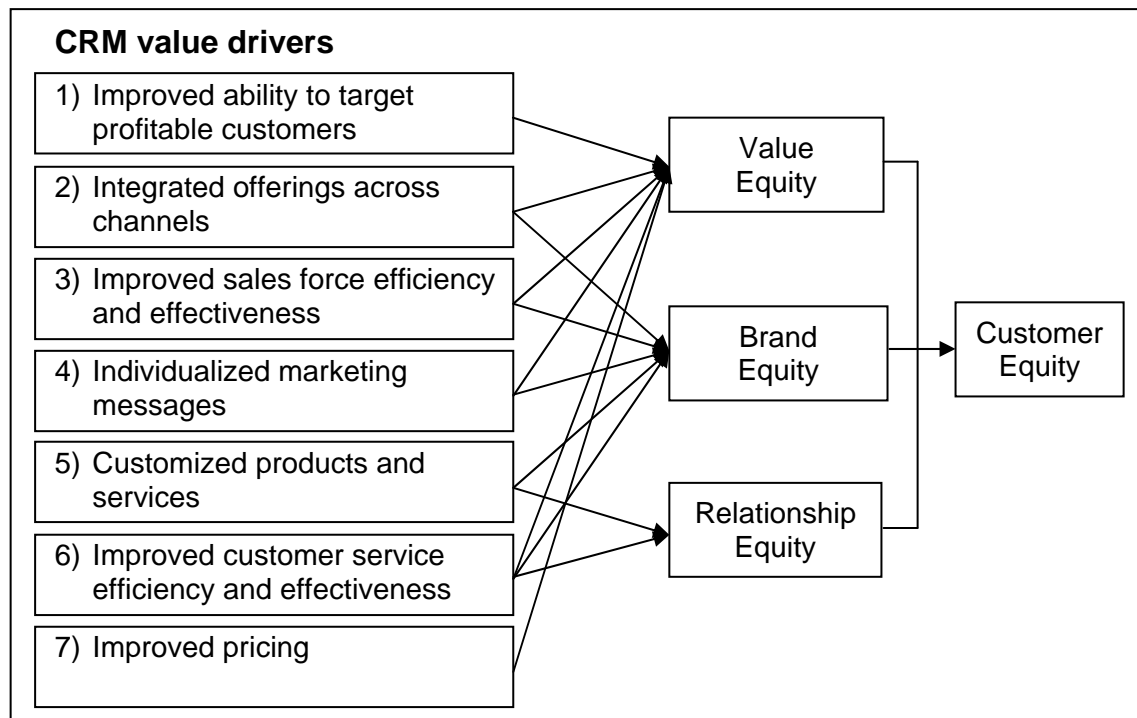
Figure 4. Conceptual model relating CRM value drivers to customer equity (Richards & Jones, 123-126).

CRM success

The successful CRM approach introduction and maintenance are the core objectives of every CRM initiative. CRM Anderson and Kerr (2002, 11-14) have listed the CRM success factors:

1. Strong internal partnerships around the CRM strategy.
2. Employees at all levels and all areas accurately collect information for the CRM system.
3. CRM tools are customer – and employee-friendly.
4. Report out only the data you use, and use the data you report.
5. Don't go high-tech when low-tech will do.

Gummesson has stressed the meaning of networks, relationships and human contacts. According to Gummesson (2004, 73-74), CRM effectiveness requires two things:

- The relationship between customer and supplier should also be viewed from the point of view of the whole network of relationships. Otherwise the single relationships doesn't base on reality.
- IT (electric CRM, eCRM) should be complemented by human contacts (hCRM)

Many authors have investigated the CRM success. Garrido-Moreno and Padilla-Meléndez (2011, 442) found in their study, that knowledge management capabilities, organizational variables, technology, customer orientation and CRM experience all have positive influences in CRM success. Previous authors found that organizational variables as strategy, top management support, organizational structure and human resources are the key success factors for CRM. Bruggen and Wierenga (2005, 34) stressed that if CRM system is beneficial for the individual user and fits well for his/her tasks, it's more likely that system is beneficial for the organization too.

More success factors of CRM introduction is presented in chapter 5.8.

5.4   Managing of customer data

Every customer contact person handles various kind of customer information. Some of this information is also related to future business opportunities. Important information should be recorded in a way which makes it possible to utilize it in the future. This information should be available for all the persons interacting with customers. Too often the customer data might be collected in personal files.

An organization has to make the right choices and actions to increase its customer value. This is where reliable information is needed. Without proper procedures and tools to collect, record, analyze and utilize the customer data a

company will lose possibilities to utilize this information important for the business.

Management of information flows will gain benefit for organization. Just collecting some kind of customer data doesn't help much. The organization has to know how to collect, store, analyze and use the key information. Customer information is maybe the most significant information group.

Customer knowledge management

Wayland and Cole (1997, 32) defined customer knowledge management as the effective leverage of information and experience in the acquisition, development, and retention of a profitable customer portfolio. Each of the three words - customer, knowledge, and management - is central to the definition and highly interdependent. According to previous authors, many companies possess plenty of customer-related information, but often it's scattered across various databases or resides in the heads of employees who do not interact. Due to this these companies systematically fail to create and to apply the knowledge that would strengthen their customer relationships. Previous authors states that reason for this is not the customers but rather the lack of disciplined processes for managing the customer knowledge.

Wayland and Cole (1997, 45) described that to attain full value, all above mentioned elements must be used in a way that focuses on acquiring the right knowledge of the right customer and that puts that knowledge into action in ways that maximize the value of the customer relationship. Customer-knowledge management activities should focus primarily on knowing what the customer wants (Wayland & Cole 1997, 63).

According to Wayland and Cole (1997, 63-64) there are three domains of knowledge about what customers want. These domains are:

- Conversational knowledge: understanding what customers want via dialogue and interactions between customers and employees, employees and suppliers, and so forth.

– Observational knowledge: knowledge acquired through observing how customers use products and services.

– Predictive knowledge: knowledge based on analytic models designed to predict likely outcomes.

Conversational knowledge offers the opportunity to develop deep knowledge of customer requirements, perceptions, and motives (Wayland & Cole 1997, 64). Every customer functions as a social being in combinations of rational and emotional states, on which side do you need to generate knowledge? (Wayland & Cole 1997, 67).

According to Bergeron (2002, 44-48), the major area of information that the company should gather is Customer Wants and Needs, Customer Purchase Cycle, Customer Interaction Opportunities, Customer Profile and Customer Life Cycle. Gummesson (2004, 27) has described that the maintenance of customer relationships, customer loyalty, and positive opinions and recommendations of customers are the main contents of the CRM. Grönroos (2009, 420) have taken a process perspective and have defined that customers' daily operations and their value creation processes are the most important information what the company needs to know about their customers (Grönroos 2009, 420). Peppers and Rogers (2004, 90) has recommended that valuable written customer information should be transferred to a computer database, so that it is internally accessible and also protected from loss or unnecessary duplication.

Data warehousing

Customer data needs to be managed effectively. A data warehouse is a central database, frequently very large, that can provide customer service representatives, call center managers, administrators, and other authorized users with access to a variety of information (Bergeron 2002, 79). Typical data warehouse incorporates data from several different applications into one accessible database (Bergeron 2002, 79-80).

Company data warehousing is a process that captures, stores, and analyzes a single view of company data to gain business insight for improved decisions

making (Peppers & Rogers 2004, 33-34). Data warehousing is a blend of technologies aimed to integrate effectively the operational databases into an environment that enables the strategic use of data (Berson, Smith & Thearling 2000, 18-19).

According to Grönroos (2009, 59), the well-developed, updated and easy to read customer file gives an employee the opportunity to manage the moment of interaction by relationship-centred way. A good database will help cross-sales and offering of new products. Besides customer relationship management, the database can be used for customer base segmentation, marketing measure adjustment, preparation of customer profiles and the determination of the likely buyers. Customer information used for the needs of RM should also contain profitability information; so that the unprofitable customers of customer base are not mixed with the profitable customers.

Reynolds (2002, 177) has suggested a quality assessment for the CRM data:

- – Priority data should be close to zero defects (e.g. an error could have high cost of failure). For example, where the misspelling of a customer's name or incorrect address could lose a customer.
- – Important data comes second. E.g. demographics are vital for accurate marketing campaigns but errors in the data won't cause customer attrition.
- – Non-priority data is optional or non-critical data where the cost of omission and error is marginal. A good example is duplicate addresses.

According to Peppers and Rogers (2004, 100), directly supplied customer data consists of three obvious types:

1. Behavioral data, such as purchase and buying habits, interactions with the company, communication channels chosen, service consumption, and company share of wallet.
2. Attitudinal data, reflecting attitudes about products, such as satisfaction levels, desired features, and unmet needs, personal values, opinions, and the like.

3. Demographic (i.e., "descriptive") data, such as turnover, amount of personnel, business field, markets, and so on.

Without any one of these three pieces of information, it is not possible to optimize or improve the system. Reason for this according to previous authors, is that in order to make the interactions with your customers as profitable as possible and optimize the performance of the CRM system, you must be able to differentiate between good and bad customers, and profitable and unprofitable customers. You must know who they are and how they differ. Previous authors (Peppers and Rogers 2004, 100) have also described the importance of recorded customer information, by explaining that in order to know whether your investments in promotions and marketing are working, you must know and keep track of what you did to each customer. You are creating many small experiments with your customer base, and you must know what is different in each experiment in order to judge best what is working and what is not working.

Data mining

CRM helps the organization to learn from the collected information. Data Mining is a process of extracting and presenting new knowledge, previously undetectable, selected from databases for actionable decisions (Swift 2001, 93). Data mining is a systematic process where customers and regularities in their buying behavior are looked up (Gummesson 2004, 75-76). According to him, this makes it possible to identify the structures and links, which could be utilized on improving the focus of marketing communications, increasing competitiveness and promoting customer retention. According to Berson, Smith & Thearling (2000, 6), data mining can use well-established statistical and machine learning techniques to build models that predict customer behavior.

Data mining is facilitated by access to large samples of customer data, such as is made possible by a data warehouse (Bergeron 2002, 80). Bergeron (2002, 80) has described that data mining software supports the process of extracting meaningful patterns from usually very large quantities of seemingly unrelated data and it can identify relationships and correlations in data.

According to Berson, Smith & Thearling (2000, 360), there are three main types of interesting data for data mining system that are being used for customer relationship management. This data describes:

– Who the consumer is
– What marketing or sales promotions were made to the customer
– How the customer reacted to those promotions by transacting with the company

According to Berson, Smith & Thearling (2000, 71), data mining can help with the following:

– Discovering knowledge; the goal of knowledge discovery is to determine hidden relationships, patterns, or correlations from data stored in an company's database. Data mining can be used for:
    – Segmentation (to group customer records for custom-tailored marketing)
    – Classification (assignment of input data to a predefined class, discovery and understanding of trends, and text document classification)
    – Association (discovery of cross-sales opportunities)
    – Preferencing (determining preference of customer's majority)
– Visualizing data; analysis must make sense out of a huge amount of information stored in company databases. The goal is to visualize the mass of data and find a clever way to display the data.
– Correct data; while consolidating massive databases, it's possible to find that the data is not complete, and discover that it invariably contains errors and contradictory information. Data mining techniques are able to identify and correct problems in the consistent way.

5.5 CRM structure, characteristics & technology

Companies' software's can be classified into front office software and back office software. The back office is known as enterprise resource planning (ERP), which

has already embraced manufacturing, purchasing, inventory control and various other back-office systems including financial infrastructure (Burnett 2001, 251). According to Burnett (2001, 253) CRM is a front-office software – a system to automate sales, service and marketing processes, providing access to all information required to service customer needs while maintaining consistency across all access points, customer-facing functions and customer data.

CRM architecture

Reynolds (2002, 6) has described that a full-spectrum CRM architecture (Figure 5) will provide integrated automation of business processes that encompasses customer touch points. Reynolds explained that normally these include sales (for example contact management and product configuration), marketing (for instance campaign management, telemarketing, data mining), customer service (call center, field service, email management come into play), and all data storehouses. Customer communication streams in through a variety of channels: in person, telephone, chat, email, fax, etc. Previous author stated that the customer experience should be identical no matter what channel is used.

From the architecture point of view the entire CRM framework can be classified into three key components (Berson, Smith & Thearling 2000, 45):

– Operational CRM. The automation of horizontally integrated business processes, including customer touch-points, channels, and front-back office integration
– Analytical CRM. Means to analyze data created by the Operational CRM
– Collaborative CRM. Applications of collaborative services including e-mail, e-communities, and similar vehicles designed to facilitate interactions between customers and companies
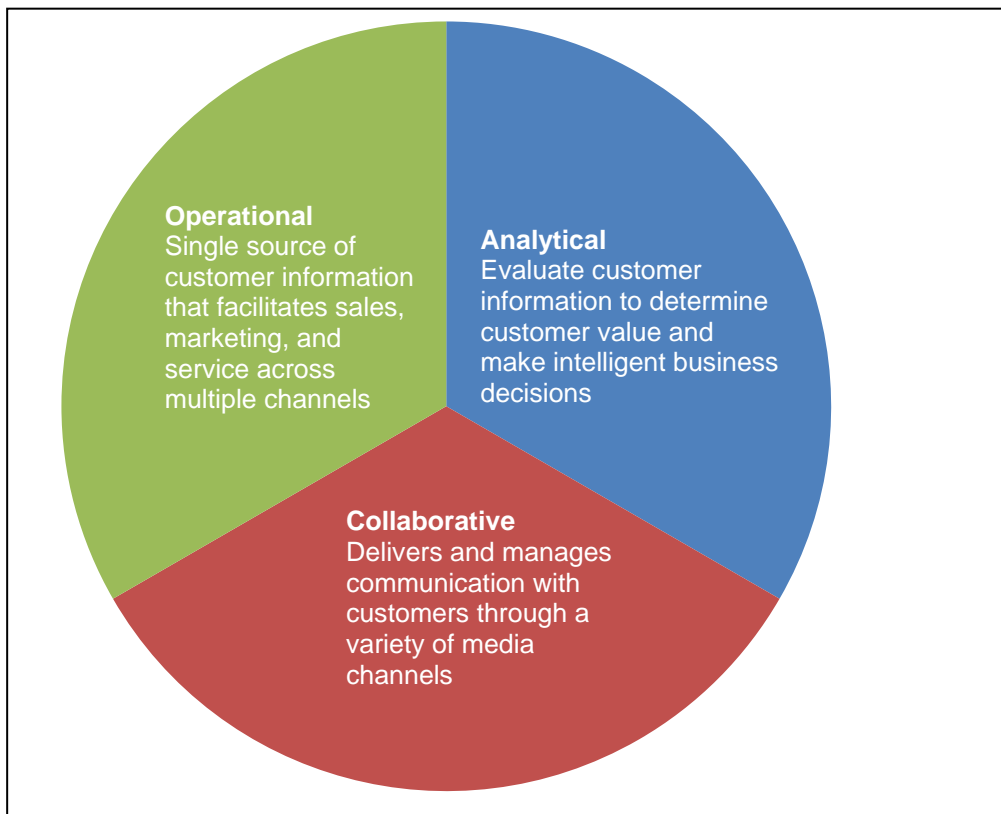
Figure 5. Components of CRM (Reynolds 2002, 7).

According to Wayland and Cole (1997, 32-33), connecting technologies create either a direct interface with the customer or a channel for exchanging information and they may be used to foster conversation with customers, stimulate collaboration, or execute commerce and customer care.

According to Peppers & Rogers (2004, 33-34) analytical CRM can help to know what a company has to know about a customer to make him more valuable. Whereas operational CRM helps company to do the things which makes customers more valuable (Peppers & Rogers 2004, 33-34).

Dyché (2002, 129-131) has described how analytical CRM can serve on developing progressive relationships with customers (Figure 6). According to Dyché analytical CRM enables more broad-brush customer segmentation and deploy customer communications that are truly one-to-one. By integrating operational CRM data with information from around the enterprise, companies can begin performing analytic CRM and, with it, make truly customer-centric business decisions (Dyché 2002, 129).
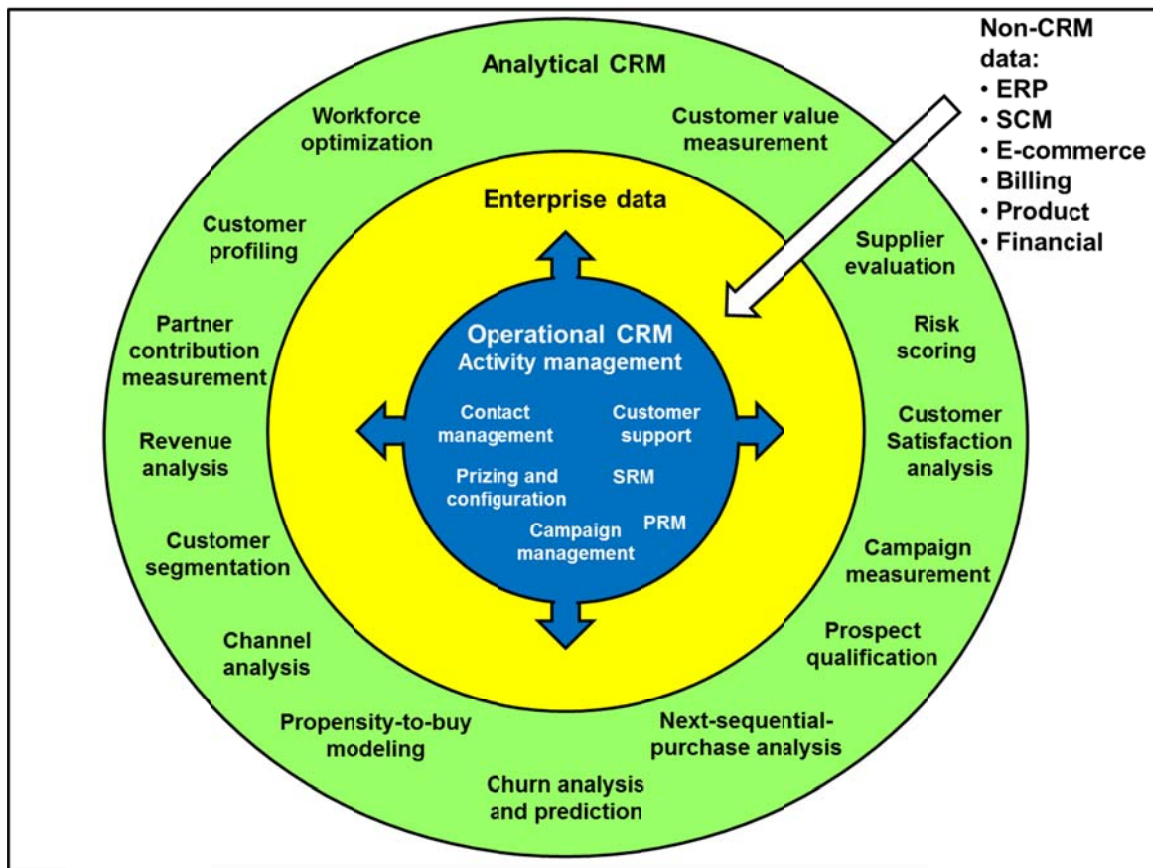
Figure 6. Analytical CRM: The sum of its parts (Dyché 2002, 129-131).

According to Burnett (2001, 256-257), CRM software will usually consist of the following 11 components. Burnett described that at the beginning the initial CRM system will consist of one or more of these components, and is likely to grow over time to include additional components from this list and new components that will emerge as the CRM industry matures.

1. Sales – contact management profiles and history, account management including activities, order entry, proposal generation
2. Sales management – pipeline analysis (forecasting, sales cycle analysis, territory alignment and assignment, roll-up and drilldown reporting)
3. Telemarketing/telesales – call list assembly, auto-dialing, scripting, order taking
4. Time management – single user and group calendar/scheduling (this is likely to be Microsoft Outlook), e-mail

5. Customer service and support – incident assignment/ escalation/ tracking/ reporting, problem management/resolution, order management/promising, warranty/contract management

6. Marketing – campaign management, opportunity management, Web-based encyclopedia, configurator, market segmentation, lead generations/enhancement/tracking

7. Executive information – extensive and easy-to-use reporting

8. ERP integration – legacy systems, the Web, third-party external information

9. Data synchronization – mobile synchronization with multiple field devices, enterprise synchronization with multiple databases/application servers

10. E-commerce – manages procurement through EDI link and Webserver, and includes business-to-business as well as business-to-consumer application.

11. Field service support – work orders, dispatching, real-time information transfer to field personnel via mobile technologies

5.6 CRM measurements

Customer related measurements make CRM more valuable for the company. According to Grönroos (2009, 61), one way to identify the relationship developed between the parties, is to measure how many times the customer has purchased from the company, or whether the contract has been valid for a certain period of time. To be able to judge the actual value of the system or a customer, you must be able to measure the results. If you don't know whether the result of the experiment or interaction was good or bad, then you really have not learned anything new that can be used to improve the system the next time around (Berson, Smith & Thearling 2000, 361-362). CRM related measurements are often somehow measuring the financial value of customer relationship. Customer economics provides good tool kit by which to evaluate investments in customer knowledge and connecting technologies to achieve profitable customer portfolios (Wayland & Cole 1997, 33). Figure 7 shows economic benefits of CRM described by Reynolds (2002, 28).
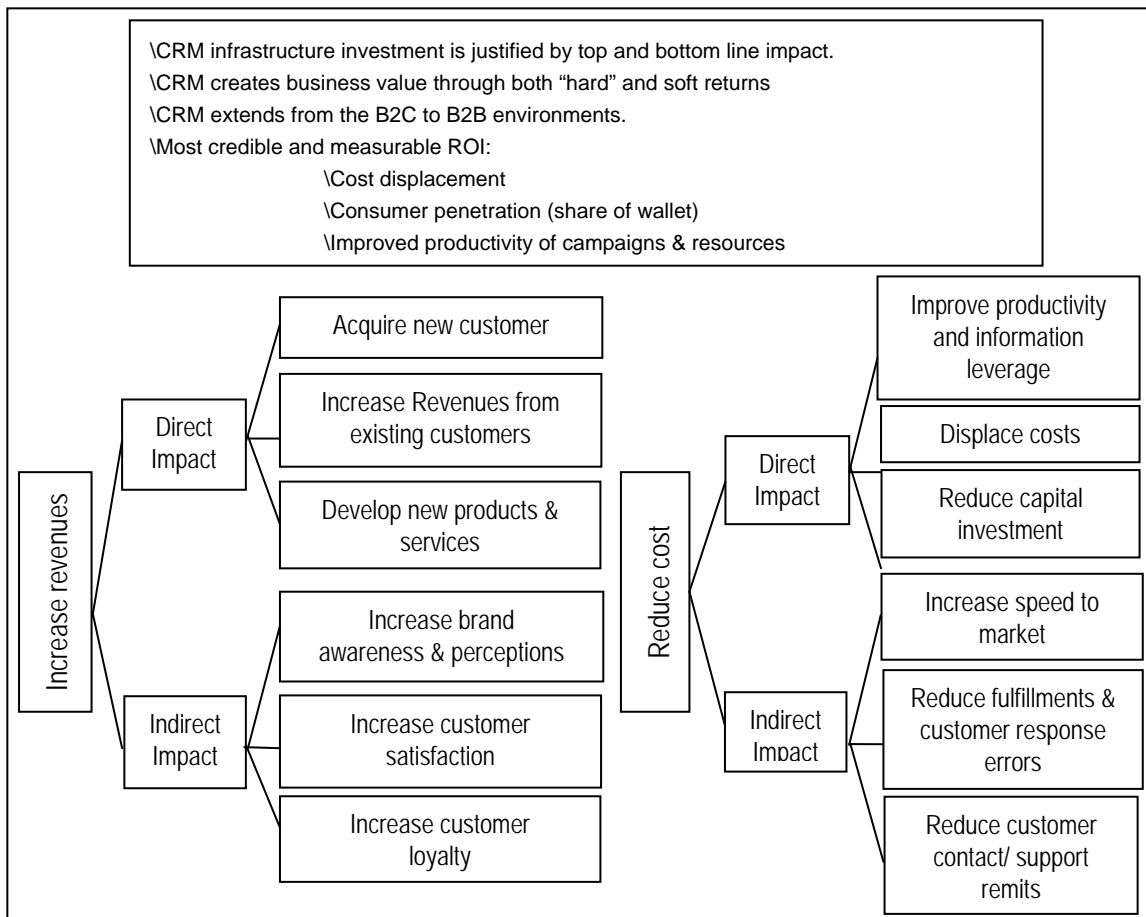
Figure 7. CRM affects revenue and cost structures both directly and indirectly Reynolds 2002, 28).

Customer equity (CE)

Customer equity is the term used to describe the asset value of the relationship. The value of customer equity is determined by customers' volume of purchases, the margin on those purchases, and the duration of the purchase stream (Wayland & Cole 1997, 5). AntePeppers & Rogers (2004, 33-34) have used another name for customer equity. They have told about Relationship equity and defined it to be as a sum of the value of all current and future relationships with current and potential customers.

Calculating customer equity involves identifying the cash flows received from a particular customer or group, the outflow of cash necessary to establish and maintain the customer relationship, and the period over which the relationship will continue (Wayland & Cole 1997, 103). According to previous authors (1997, 103), the customer equity, the net value of the customer relationship, is simply the

difference between intrinsic value and the ADR (Acquisition, development, and retention) costs.

Acquisition costs refer to the investment made to attract and qualify customers, and include the marketing, advertising, and selling expenses associated with acquiring new customers. Development costs are those expenditures made to increase and maintain the value of existing relationships, such as learning more about the customers' needs, increasing their probability of purchase, or responding to their requests and servicing their accounts. Retention costs involve expenditures to increase the duration of relationships, to reduce customer defections, or to reactivate customers. With this model it's possible to rank customers by the expected value of the relationship, determine how much we can afford to spend on getting and keeping their business, and test ideas for increasing the value of the relationship (Wayland & Cole 1997, 105).

Customer lifetime value (CLV)

One of the criteria in evaluating the value a customer presents for future business is the customer purchase cycle (Bergeron 2002, 45). By applying the customer purchase cycle information we can calculate the annual customer revenue. This calculation can be expanded to lifetime calculation. According to Kotler (1994, 48), the customer lifetime value (CLV) can be calculated:

Annual customer revenue	$5,000	(1)
Average number of loyal years	x 2	
Company profit margin	x .10	
Customer lifetime value (undiscounted)	$1,000	

Net-promotor score

According to Reichheld (2001, 73-75) Net-promotor score (NPS) is a metric that correlates with company's growth rate. It measures customer loyalty and has ability to capture net effect of customers who promote over customers who detract. According to previous author the idea behind NSP is to ask company's customers just one question; "How likely is it that you would recommend us to a colleague?". Reichheld has described that this metric uses zero-to-ten scale and

classifies customer into six different segments regarding their profitability and response to previous question. Promoters give the company 9 or 10 meaning that they recommend company to others "extremely likely". Passives rate the company 7 or 8. Those who give less than 7 are known as Detractors. Zero reference the grade "Not at all likely". Previous author states that each segment has its own set of behaviors. This segmentation tool is able to show the most profitable and valuable customers and also helps to plan what strategies are best for each segment (Reichheld 2001, 76). Net-promotor score can be calculated (Owen & Brooks 2009, 2):

$$\% \text{ Promotors} - \% \text{ Detractors} = \text{Net-promotor score} \qquad (2)$$

Higher relationship value

The best customer relationships have various kind of value. Storbacka and Lehtinen (2001, 14) described indicators of CRM success and they called it as a higher relationship value. Previous authors defined that dimensions of higher relationship value are profitability of the relationship, the monetary volume of the relationship, relationship longevity, customer share, relationship strength (including customer satisfaction), reference value and competence value.

5.7   Customer segmentation

According to Burnett (2001, 8) marketing success depends upon the integration of three activities:

– identification, analysis and selection of market segments
– creation of relevant products and services
– sales activity focused on key customers within the targeted segments.

The basic objective of the customer segmentation is to find valuable customers. But a business looking for valuable customers is likely to find them distributed across several segments rather than bunched together in one or a few clearly defined groups (Wayland & Cole 1997, 125). According to previous authors, the

traditional segmentation defines groups first in terms of their characteristics and then, perhaps, estimates their value. Segmentation can be classified to be behavioral, demographic, needs-based, and other types of segmentation. Segmentation is also used in marketing campaigns to define a target audience within a group of customers (Bergeron 2002, 48).

 Wayland and Cole (1997, 125) have called customer segmentation first estimating value and responsiveness to be an economic segmentation. By using this customer segmentation approach customers can be grouped on the basis of customer relationship value and responsiveness. This approach involves estimating the intrinsic relationship value of existing and potential customers and then estimating their responsiveness or probability of responding favorably to our offer (Wayland & Cole 1997, 125). Customer profitability data gives company a good way to segment the existing customer base and strengthen the marketing and service functions further (Grönroos 2009, 207). It's good to remember that customers must be provided a service package, which they are very happy with, before they buy again. Very satisfied customers have significantly higher probability to purchase again than the satisfied customers have (Grönroos 2009, 178).

Peppers and Rogers (2004, 122-123) have categorized customers to four different categories. By them the objective of a company with its Most valuable customers (MVCs) should be retention, because these customers keep the company in business. Most growable customers (MGCs) have most growth potential and they are competitor's best customers and the aim with these customers is to grow. Below-zeros (BZs) are the customers, who generate less revenue than cost-to-serve. According to previous authors both BZs actual and potential value is in less than zero. They might be customers who buy little but need lots of service or they are buyers who push prices down. Company's strategy with BZs should be to convert customer's trajectory into more profitable one or let them be someone else's customers. Migrators are not profitable but they have some growth potential. Company's strategy should be nurture them to grow or try them to show if they are profitable for the company over the long therm.
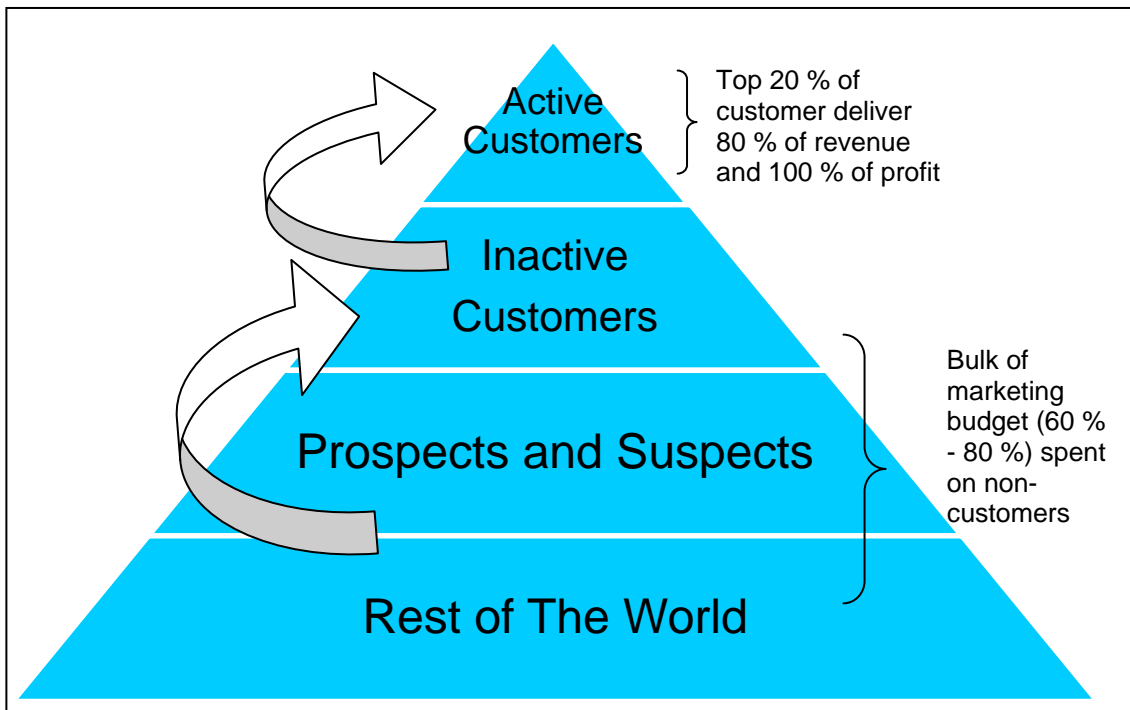
Figure 8. One-to-one relationship model (Reynolds 2002, 9).
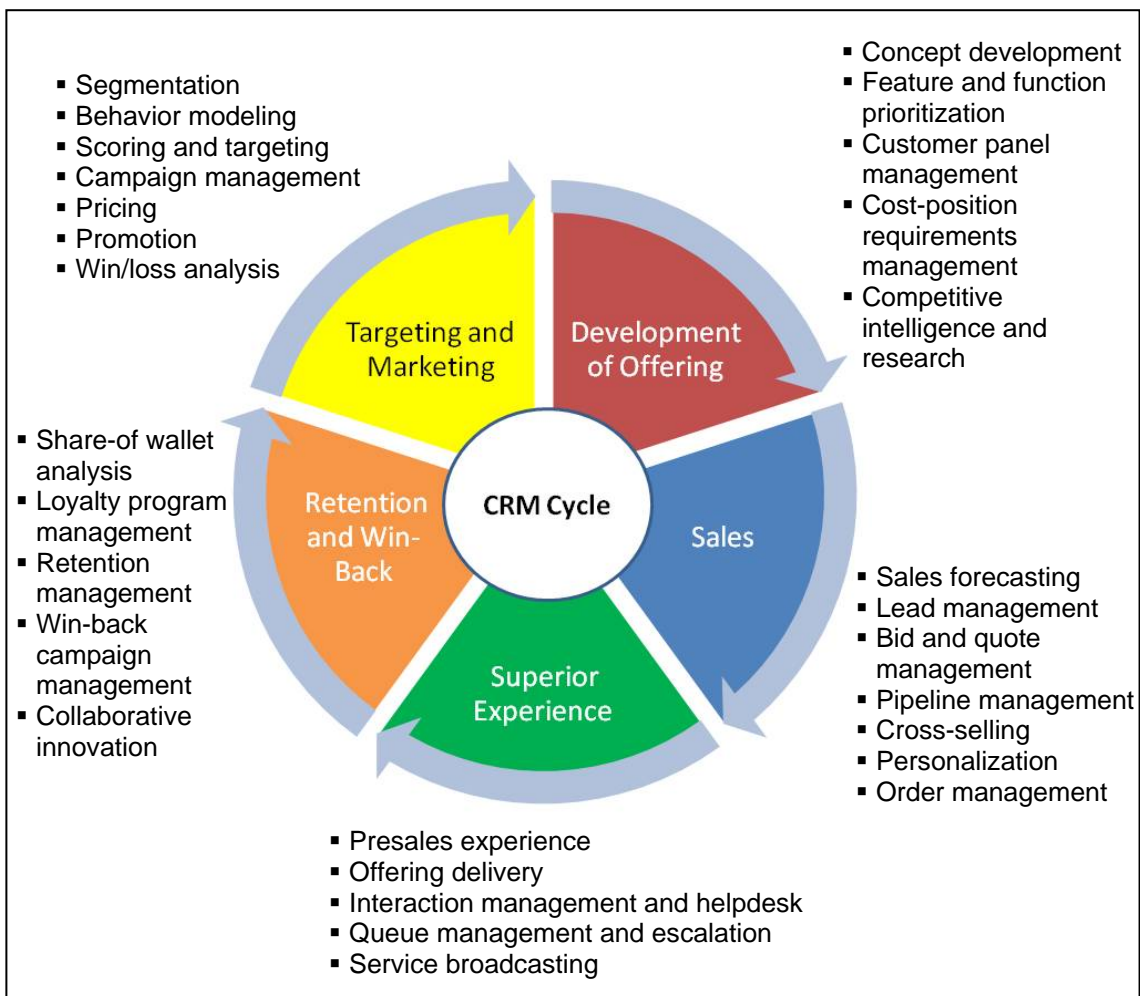
Figure 9. The Customer Relationship Management Cycle (Kirby and Ledingham 2004, 4).

Reynolds has described a one-to-one relationship model (Figure 8), which shows the objective of customer relationships. This model can also be used to help customer segmentation. Also by applying Net-promotor score measurement principles, presented in a previous chapter, customers can be classified to different segments. Customer segmentation can be also used in marketing campaigns and in other customer related targeting and activities described in customer relationship management cycle bellow (Figure 9).

5.8 CRM initiative, introduction, development and maintenance

5.8.1 Preconditions and obstacles for successful CRM initiative

Adapting the CRM system should be a strategic decision of an organization. CRM system is the most useful for the organizations which need to record and utilize intimate customer information. Service companies have often needs to produce the tailor-made services for their customers. Due to this the service companies have a good possibility to gain significant financial benefits by adapting CRM system and utilizing its properties.

According to Peppers and Rogers (2004, 50), companies should study and understand well the basic foundations of relationships, and the basic principles of the Learning Relationship, before starting up their CRM initiative. They described (2004, 6) CRM to be an enterprise-wide business strategy for achieving customer-specific objectives by taking customer-specific actions. The adoption of a customer-centric philosophy and its supporting strategy, along with change management techniques that educate of the end-users have been seen to be critical to a successful CRM initiative (Reynolds 2002, 33).

Ko et al. (2007) stated CRM to be an innovative management strategy. Adaptation of innovation is not an easy task. The same applies also to adaptation of CRM. Many of the early adopters of CRM system failed with their CRM initiatives because many of them tried to use CRM organization-wide from the beginning (Rigby & Ledingham 2004, 3). According to previous authors one

major reason for failure was that there was just far too much information, which needed to be handled.

Rigby and Ledingham (2004, 1-2) studied companies' success on implementing the CRM system. They found out that all the successful companies launched pragmatic and highly focused CRM projects. They all had relatively narrow scope and modest goals. They didn't try to use the CRM for entire business. Instead of that, they directed their investment toward solving clearly defined problems within their customer relationship cycle. They also understood that extremely accurate and timely data are not required everywhere in their business. Knowing this they tailored their real-time CRM initiatives to those parts of their customer relationships that truly do depend on "perfect" information. After a comprehensive analysis Rigby and Ledingham (2004, 1-2) came to conclusion that there are four important questions that all organizations should ask before launching their CRM initiatives:

- Is it strategic?
- Where does it hurt?
- Do we need perfect data?
- Where do we go from here?

According to Rigby and Ledingham (2004, 2-10) CRM should be applied only to the processes vital to a company's competitiveness. They concluded that companies should carefully examine their customer relationship cycles and focus the CRM effort to those pain points which undermine overall performance. They emphasize that only few companies need perfect information throughout their customer relationship cycles. Quite often "good enough" information is enough. They also believe that smart CRM adopters rigorously analyze the data their system produce to indentify new, well-defined opportunities to extend the technology's power. Furthermore Rigby and Ledingham (2004, 4) defined that smart companies sharply focus their CRM implementations by choosing carefully the segment of the cycle and the functions within that segment, which are likely to deliver the greatest return on an initial CRM investment.

CRM users' needs are individual. It's critically important to pay special attention to users' needs. No one wants to get more bureaucracy. People want to perform activities which are beneficial both for themselves and for their working community. If the working practices and procedures are necessary to modify, change criteria should be defined and communicated sufficiently clearly. The change will be achieved more likely, if the need for change is clearly justified and the future objective is understandable.

The adaptation of CRM also often creates different needs for changes in the company's information systems and technology. Part of the necessary changes to working practices may be possible to implement easily while others require more from the change management. According to Berson et al. (2000, 51), both internal and external forces might oppose the needed fusion of information and technology. Internally, an enterprise-wide CRM system may suffer due to the political fragmentation of various groups within the organization. According to them one of the most difficult parts of building a powerful CRM system is the difficulty of getting customer information from different customer touch points within the same company. They also defined that, often individual groups do not want to cooperate or share information because they see it as being detrimental to the profitability of their own cost center, even though it could be highly profitable for the organization overall. Berson et al. (2000, 51) described, that the external force that opposes enterprise-wide CRM systems (and CRM in general) is the desire for customer privacy. According to previous authors there is a clear contradiction between customer's preferences for privacy and CRM systems requirement for sufficient customer information in order to function well.

5.8.2   Change management of CRM introduction

Every CRM introduction will need various kind of change management. According to Reynolds (2002, 15-16), need analysis is needed to determine if and how the company's current ecosystem can support the requirements of the CRM introduction. The author has listed the following six stages of need analysis:

1. Decide whether the company's general direction will support CRM or if a shift in focus will be necessary
2. Analyze how customers proactively and reactively interact with the company
3. Analyze how consistent different customer segments are treated, and how current initiatives are coordinated between different channels
4. Define what data is critical for the support of a CRM initiative and determine what approach and tools will be used to analyze this data to make it meaningful and accessible
5. Consider the existing technology including both the front-and back office systems. Investigate the existing level of integration, and the changes that will be needed to support the CRM initiative
6. Analyze the needs of users related to their daily tasks

Change management starts according to Reynolds (2002, 64), when the idea of CRM is first raised with the executive board and key influencers. The author has stressed the following responsibilities of CRM team that can;

1. Communicate CRM objectives in a clear, concise manner
2. Establish good relationships between users, IT staff, and top management
3. Approve rewards to encourage use of the new CRM system
4. Ensure the necessary support (technical, training and helpdesk)
5. Put into place a method that allows users to comment on the effectiveness (or non-effectiveness) of the new system and suggest improvements

Besides of previous lists Reynolds (2002, 66) has also made a list of phases of CRM introduction:

1. Spread the message
2. Establish the best approach for corporate-wide change
3. Employee buy-in
4. Collaboration
5. Acceleration

Cook (2008, 51) has described that vision, values and corporate customer service objectives could be converted into reality by creating a customer service strategy. It could be described as long-range plans on such critical issues as customer-focused processes, human resources, innovation management to meet customer demands. According to Cook, many organizations have adopted customer service strategy as follows:

1. Review and link to vision, values and corporate objectives
2. Evaluate current position
3. Formulate strategy
4. Develop a specific action plan
5. Establish criteria for success
6. Identify obstacles to progress
7. Implement

In addition to previous definitions and listings, also stages of the eight-stage process of creating major change defined by Kotter (1996, 21) were used in research. The stages are:

1. Establishing a sense of urgency
2. Creating the guiding coalition
3. Developing a vision and strategy
4. Communicating the change vision
5. Empowering broad-based action
6. Generating short-term wins
7. Consolidating gains and producing more change
8. Anchoring new approaches in the culture

The above described change management approaches were taken into account in research planning, and especially on implementation of the development activities as well as communicating the CRM development results. The relations between above-mentioned change management approaches, and stages of research are also described in chapter 6 Methods and tools.

5.8.3 CRM maintenance

CRM system needs continuous maintenance. Reynolds (2002, 262) has described the responsibilities of CRM post implementation team. The team should ensure that;

- The CRM system is easy to access
- The data provided is timely and relevant
- Documentation and knowledge transfer is complete and satisfactory
- New releases, upgrades and patches are installed as they become available
- There is adequate support and maintenance
- Security is maintained

CRM maintenance usually includes annual update cycles which are targeted on updating customer data, activate CRM users, solving obstacles and problems related CRM usage, assessing the quality of data, creating annual templates and summaries, updating manuals, improving helpdesk and training new employees.

6 METHODS AND TOOLS

The theoretical background of this research was constructivism epistemololology. The truth and meaning have been seen created by the subject's interactions with the world (Gray 2004, 16-17). The theoretical perspective of the research was mainly related to interpretivist research approach and further to symbolic interactionism. Research tried to understand the CRM adaptation process by studying the CRM related actions, objects and company from the perspective of the CRM users (Gray 2004, 20-21). According to Gray (2004, 26-28), the chosen research methodology had elements from structured Case study, Descriptive survey and Action research. The processing of result was also planned to include the investigation of the generalizability of the research results. For this reason the research also had some characteristics of Analytical survey. The chosen methodological research path included also the elements of Action research, because the emphasis was to promote the change within target organization.

This research was planned to support the introduction and maintenance of CRM system of Foodwest Ltd. The main aim of the research was to develop CRM system of the company, increase user commitment and improve CRM results. It has been shown in earlier researches (Bruggen and Wierenga (2005, 31) that CRM system can be effective, if the individual employees are able to recognize the value of CRM system.

The first sub-objective of the research was to achieve better understanding of CRM approach penetration in service organization. This research objective was investigated through aiming to increase understanding on how the CRM benefits are perceived by CRM users. Since the clear and consistent research method, suitable for the purpose of this research, wasn't identified with literature review, the development of the suitable CRM measurement method was chosen to be the second sub-objective of the research. The research was supported with broader research questions and testable hypotheses.

The most important requirement for the research methods was that they were capable of measuring the level of organization's CRM penetration, and the changes taking places therein. Chosen methodological path was planned to

reflect the changes on the respondent's awareness, understanding, opinions, experiences, needs and satisfaction regarding CRM system and related benefits. In this research both quantitative and qualitative methods were used to collect and analyze data. Data was collected by using questionnaires and interviews. Reasons for using multiple methods was both to support the research questions and hypotheses, and balance out any of the potential weaknesses in used data collection methods (Gray 2004, 33).

The research had a longitudinal timeframe (Table 2) having both before and after dimension. The organizational change and development between the surveys were investigated. Between the surveys, several development activities were carried out, from the basis of identified user needs. The development activities were supported by change management principles. Relations between research stages and change management approaches are described in table 3.

This case research concentrated on measuring the interacting group of employees of Foodwest Ltd. The aim was to include the entire personnel of the company. Realized sample size was 21 respondents out of total 22 employees who use CRM software. A person who stayed outside of the research project is working in position where the company's CRM can help only indirectly. Therefore, his daily duties were usually associated with the development of company's customer relationships less directly. All this gave the research fairly good possibility to infer that the results can be generalized to cover the entire organization. The same 21 employees were involved as respondents in the whole research. The purpose of this arrangement was to improve the internal validity (Gray 2004, 91) of the research. Persons who participated in the survey were referred depending on the situation as an employee, the user, the respondent or interviewee.

The first survey measured the starting point of this research. At this point some of the CRM users had already 4.5 years user experience. This measurement point was called T_0. Core CRM benefits related to the results from the first and second survey were analyzed by using gap analysis. After analyzing the results of first survey the in-depth interviews were planned and carried out. The results of survey and interview were used for developing the CRM software more user-

friendly and beneficial for the organization. The second survey preceded CRM software development, new user manuals, internal marketing and user training. The second survey was carried out 10 months after the first survey. In this research the moment of the second survey was called T_{+1}.

Table 2. Stages, actions and schedule of the research.

Research stage / action	Schedule 2009-2011

• Planning the research ……………………………
  o choosing topic, process, methods
  o piloting questionnaire and interview
	March - April 2009

• First literature review …………………………………	April - June 2009
• CRM software user training ………………………..	June 2009
• Data collection; first quantitative research, T_0 ….. o data collection by questionnaire	May - June 2009
• Data collection; first qualitative research, T_0 ……. o data collection by interviews	June - July 2009
• Data analysis ………………………………………..	June - July 2009
• Choosing core CRM benefit related CRM development objectives	June 2009
• Development of CRM software functions ……….	June 2009 - February 2010
• New CRM user manual for sales and invoicing follow-up	October 2009
• New CRM user guidelines for carry out marketing campaigns and group mails	October 2009
• CRM update training for users (manuals)	October 2009
• New CRM user guidelines for creating a report	January 2010
• New CRM user manual: Main CRM user manual	February 2010
• Data collection; second quantitative research, T_{+1} o data collection by questionnaire	February - March 2010
• Data collection; second qualitative research, T_{+1} o data collection by interviews	March 2010
• Data analysis ……………………………………………	March - July 2011
• Second literature review …………………………..	October 2010 - February 2012
• Writing the thesis ………………………………………..	February 2010 - February 2012

Questionnaires were chosen to be Internet based. Questionnaire collected information of CRM approach penetration, user experiences and expectations. This information was planned to clarify the user awareness and understanding of CRM benefits defined on previous studies and literature. It was also planned to collect information of the user commitment on CRM related procedures, and needs of the users. Questionnaire was tested and validated before approval. Questions in questionnaire were tested to avoid ambiguousness. A representative sample of key persons was selected to participate on interviews.

Aim for using interview after the questionnaire was to supplement already collected information by getting deeper background information.

Table 3. Relations between research stages and change management approaches described in chapter 5.8.2.

Research stage / action	Reynolds (2002, 15-16) stages 1-6 (page 63-64)	Reynolds (2002, 64) tasks 1-5 (pages 64)	Reynolds (2002, 66) phases 1-5 (page 64)	Cook (2008, 51) stages 1-7 (page 65)	Kotter (1996, 21) stages (page 65)
• Choosing the topic and main objective	1	2	2	1,2	3
• Planning the research process	1,4,5	2	2	3,4,5	2
• CRM software user training	4,6	1,2,4,5	1,3,5	7	1,4
• Data collection – questionnaire, T_0	2,3,4,6	5	1	6	1
• Data collection – interview, T_0	2,3,4,6	2,5	1	6	1,2
• Data analysis	2,3,4,5,6	3,4	2	2,4,5,6	7
• Choosing core CRM benefit related CRM development objectives	4,6	1,2	2	5	2,3
• Development of CRM procedures	4,6	2,3,4	4,5	7	6,7
• Creating new user manual and guidelines	4,6	1,2,4	1,5	7	7,8
• CRM update training for users (manuals)	4,6	1,2,4,5	1,3,4,5	7	1,4,5,7,8
• Creating new user manual and guidelines	4,6	1,2,4	1,5	7	7,8
• Data collection – questionnaire, T_{+1}	2,3,4,6	5	1	6	1
• Data collection – interview, T_{+1}	2,3,4,6	5	1	6	1,2
• Data analysis	2,3,4,5,6	3,4	2	2,4,5,6	7
• Development of CRM procedures	4,6	2,3,4	4,5	7	6,7

Questions at the first interview dealt with user expectations and needs of CRM adaptation process. Questions were planned to collect details of user opinions and expectations in order to gain higher user benefit, better customer knowledge and better user commitment. Interview T_{+1} also included the claims and questions of CRM value drivers. Now they were presented for the respondents for the first time. The aim of this stage was to get more information of the aspect of CRM penetration, in other words, the awareness and understanding of CRM

value drivers. At the same time information of further development needs was also collected.

Core benefit data was dealt with the gap analysis both at moment T_0 and moment T_{+1}. The gap analysis helped to identify the biggest needs for change experienced by users, and also bring the results into measurable form.

6.1 Questionnaire T_0

Questionnaire was the main method to collect data. The respondents answered on-line questionnaire. Internet link was sent to respondents by email. Every respondent answered two separate questionnaires with similar content. Questionnaire was planned to be repeatable and suitable for measuring both before and after dimension.

Since the questionnaire had an important role in data collection, special attention was paid to the content. Three selected persons tested all the questionnaire revisions. Two of these persons worked for Foodwest Ltd, but they were not available at the time of planned survey stages. One questionnaire tester represented partners of Foodwest Ltd. Testing protocol was carried out to validate the questions and verify reliable and valid answers. The aim was to ensure that the questionnaire would measure what it was intended to measure (Gray 2004, 90) Fourth revised questionnaire was accepted to be used at the survey.

Selected testers answered the questionnaire and gave their written feedback of the clarity and unambiguousness of the questions. After this, the researcher went through the answers together with the testers. Particular attention was paid to the claims of question number one. Respondents told in their own words, how they understood the claims. Questions were planned to be clearly defined to avoid multiple meanings and unintended overlap.

The questionnaire was planned to collect data of user opinions and expectations on using CRM system, obstacles of use, user needs and experiences. This data was planned to clarify the user awareness and understanding of CRM benefits

defined on previous studies and literature. It was also planned to tell about user commitment on CRM procedures, and needs of the users. The information was used to understand the CRM penetration better and its level in the company. Through this research stage it was possible to understand the obstacles better, which have an influence on CRM penetration. This enabled to direct the needed development actions to them. The aim was to achieve better user commitment by tailoring the CRM system and serving more benefits for users.

Information dealing with CRM benefits was investigated taking into consideration benefits for user, organization and customer. Various benefits were related to all these interested parties. Benefit point of view and especially good fit for tasks of users were planned to enable to provide efficient CRM development actions, better CRM characteristics, and better CRM penetration. Bruggen and Wierenga (2005, 26) found in their research that CRM system characteristics and functions are among the most important preconditions for good fit for user's tasks. They also found that easy usage and the system flexibility are positively related to task fit.

Questionnaire consisted of 14 questions. Seven of them were multiple choice questions. Questions number 1, 2, 6, 9 and 10 collected information of penetration. Questions 3, 4, 5, 7 and 8 collected in turn information of CRM software fit to tasks of user. Questions 11 and 12 were both category questions (Gray 2004, 196). They collected information regarding CRM user experience and daily user activity. Question number 13 in turn was classification question (Gray 2004, 191-192) gathering the background information of respondents. Number 14 was an open question for free comments.

Question number 1 was scale question (Gray 2004, 197-198) and also the core question of the whole research. It was planned to measure the user's awareness and understanding of core CRM benefits. The chosen core CRM benefit claims were based on earlier studies on CRM success factors. Every claim was related to either one or several value driver. As part of the survey questionnaire was used to find out, how useful and important CRM program features were for the users. Claims were based on analysis of the results of previous comprehensive CRM research made by Richards and Jones (2006). According to them, core

CRM benefits can be categorized to seven core benefits which serve as value drivers. They defined that these value drivers represent activities associated with the goal of improving customer relationship. None of earlier studies listed by Richard and Jones (2006) identified all these defined seven value drivers. These value drivers were related to improved customer targeting, integrated offerings across channels, improved sales force efficiency, individualized marketing messages, customizing products and services, improved customer service and improved pricing. The external validity (Gray 2004, 91) of these value drivers was improved by the fact that Richard and Jones found them to occur several times in investigations conducted by different researchers.

More information of previous value drivers is presented in the sections 3 Theoretical framework and 5 Customer Relationship Management. Research hypotheses described possible relations between user needs, CRM characteristics, user commitment, understanding of CRM benefits, the CRM approach penetration and CRM results. However, at the beginning of research it was expected that respondents were not aware nor understand all seven value drivers, and they didn't find all the presented core CRM benefits important. Question number 1 included 22 core CRM benefit claims. Respondent was asked the expectations and significance of described CRM benefit when using CRM software. The answer was given by choosing the alternative which reflects the opinion of respondent. The scale for both expectations and significance was from 1 to 7. Number seven meant highest expectations and significance for user.

If the respondent chose highest score - completely agree, respondent was considered to have the highest expectations for defined core CRM benefit. And furthermore, if the respondent had chosen the highest significance for the related CRM benefit, respondent was considered to feel important that CRM will satisfy related expectations presented in the claim. The answers for the question number 1 gave indirect information of awareness and understanding of core CRM benefits. It seemed that different users would experience the importance of presented core CRM benefits in a different way. Defined core CRM benefits formed a network of benefits, which all could have direct and / or indirect effects. 11 of these claims related to more than one defined value driver. 12 claims

related to improved sales and 10 for improved targeting. Three of the claims related to integrated offering, individualized messages, customized services and improved customer service. Only one of the claims related directly to value driver improved pricing. At research both direct and indirect core CRM benefits were valued in the same way.

Both working experience and differences on duty combination might both have an influence on respondent needs, interest and opinions. Background variables like user experience years and the content of customer contacts were collected to explain the differences between respondents. Respondents were presented two sales work related options. One of the choices was selling the services for existing customers and another was acquiring new customers. The respondents who were acquiring new customers were also involved on selling services for existing customers.

Respondents were asked questions about more than 20 different CRM software functions and related reporting tools. The different ways to transfer customer related information was also asked. Survey took into consideration that customer related information could be transferred by using both direct and indirect communication channels. Day-to-day use and spending time per day was also asked and recorded.

6.2 Interview T_0

The face-to-face interview was chosen to be another research method to collect supplement information from the respondents. Besides face-to-face interviews, semi-structured reflective interviews could be also used (Davies 2007, 29) as they focus on interviewees' perspectives on the research subject. The interview fits well for the purpose of this research, because small numbers of available people were involved. Most of the questions were 'open' and some of them required an extended response with prompts and probes. Both research aims and interview questions also required insight and understanding of connections. Also every respondent was 'key' and important to interpret the results collected

by questionnaire. Gillham (2000, 11) has summarized all above aspects to describe the appropriate grounds for the face-to-face interview.

The main structure and stages of the interview were planned before using the questionnaire at moment T_0. The stages of interview were arrival, introducing the research, beginning the interview, during the interview, ending the interview and after the interview (Ritchie & Lewis 2003, 144-146). The requirements of a good qualitative interviewer (Ritchie & Lewis 2003, 142-144) were taken into consideration both when planning the interviews, and as well as when implementing them. This included the aim to maintain clear and logical mind, formulate relevant questions, establish good working relationship and trust, focus on listening and responding, connect things what have been said, follow the interview process, keep notes that needs to reply later. Interviews were helped by the fact that the interviewer was an experienced certifier of certification body. It was visible in the interviews that being a good interviewer or auditor requires the same kinds of personal qualities.

In this type of structured and focused interview the same questions were posed to all interviewees (Gray 2004, 215-217). Researcher aimed to encourage the respondent to talk freely when answering questions. If necessary, the interviewer used follow-up questions to obtain a deeper and fuller understanding what respondent means. Researcher explored also the factors that underpin respondent's answers: reasons, feelings, opinions and beliefs. The interview data was captured by using written notes, in other words, by using pen and paper during the conversation. It was decided that the recording device was not needed in the interview. Even though the questions were open form, they were planned not to require long answers. Errors of manual recording of answers were estimated to be rather small and have no significant effect on reliability of research results. However, the interview results play mainly complementary role in this research. Time reserved for one interview was approximately one hour.

The detailed content of the first interview at moment T_0 was planned after analyzing the results of questionnaire survey. The aim was to collect deeper background information to help to understand the collected information more. Five interview themes were chosen to increase the necessary information

interpret earlier collected information. Questions were planned to collect information about user needs and expectations. Also aspects of customer knowledge and user commitment were collected. The first theme was user expectations for benefits of collecting and recording customer information. This benefit perspective included benefits for the company, CRM users, and also for the customers. This perspective also collected information about awareness and understanding of core CRM benefits. The second theme studied customer information transferred within organization. Third theme focused on working practices related to customer information recording. The fourth theme in turn concentrated on knowing the customers better. Finally the fifth theme was dealing with user support and better commitment on using CRM software.

A representative sample of key persons was selected to participate in interviews. Selected respondents represented widely different responsibility areas of the company. Most of them were experienced CRM system users and they also acquired new customers and communicated actively with customers and other interest groups. All the interviewed respondents could expect various benefits from effectively functioning CRM system. It was also likely that they have identified development needs, whose solution serves them as well as the whole organization. Same chosen six respondents were interviewed both at moment T_0 and T_{+1}.

6.3   Gap analysis

6.3.1   Theoretical presentation of the method

According to Kotler (1994, 369), the key idea of gap analysis is to identify possible gaps in the product line, distribution, usage, competition, and so on. The gap analysis is a respondent-oriented needs analysis. The method can be used to determine the current performance level and describe it in a measurable format. It is also capable to highlight the greatest development needs experienced by program users, if the research viewpoint is a user orientation. Gap analysis results make it possible to identify the most critical factors

experienced by users, and target the needed development activities towards them.

Gap analysis goal-setting is usually made to serve some special defined development purpose. This kind of company driven research aim can for example to measure the gap between current performance level and defined future target level. The current level can also be measured against the personnel's or customers' desired target level. The measurement can also be directed to measure the process performance of the organization. Alternatively, it may also be directed to measure the distance of objective level set by personnel or customer. Gap analysis gives the measurable values for chosen characteristics. By using these values the characteristics can be arranged in order of magnitude. Positive gap value indicates that expectations of target group have been exceeded. Whereas negative gap tells that expectations of target group are not met. The high negative value indicates that the characteristic is more critical and it needs to be developed.

6.3.2   Criteria and reasons for selecting the method

The gap analysis played an important role in data analysis. The following selection of criteria was used to select a suitable research method. The chosen method had to be able to determine the comparable and measurable result, which will describe the current situation. The method had to be suitable for measuring especially users' expectations and needs. It also had to be able to identify the greatest development needs. And it had to be repeatable too. The results T_0 and T_{+1} had to be comparable. The method had to be capable to measure CRM approach penetration level by measuring CRM users' awareness and understanding of the core CRM benefits. Gap analysis was found to meet all these requirements.

6.3.3   Presentation of chosen method

In this research the gap analysis used the scale, which told the gap between user's expectations and the importance of measured characteristics. In other words, the user satisfaction with the program characteristics was measured by comparing the success estimates against importance estimates.

Before the gap analysis factors subject to the research were listed. Factors were presented in the form of claims. After reading the claims respondent answered the following questions:

1) How large extent, is the CRM program considered to be useful via this characteristic
2) How important is that the CRM program meets this described need

Gap is a numerical value by which a need exceeds the current performance level. Gap value for each claim was calculated from the success and importance values means. Gap can be calculated by this formula:

$$\text{Gap} = \text{current performance level - importance of the factor} \qquad (3)$$

The measured performance level was planned to describe the success of the needs and expectations. Gap analysis told how well the CRM software had managed to meet expectations of users. When the gap is negative, the feature is below its expectations. The bigger the negative gap is, the more critical the factor is.

The gap can be presented by using the image as shown in Figure 10.
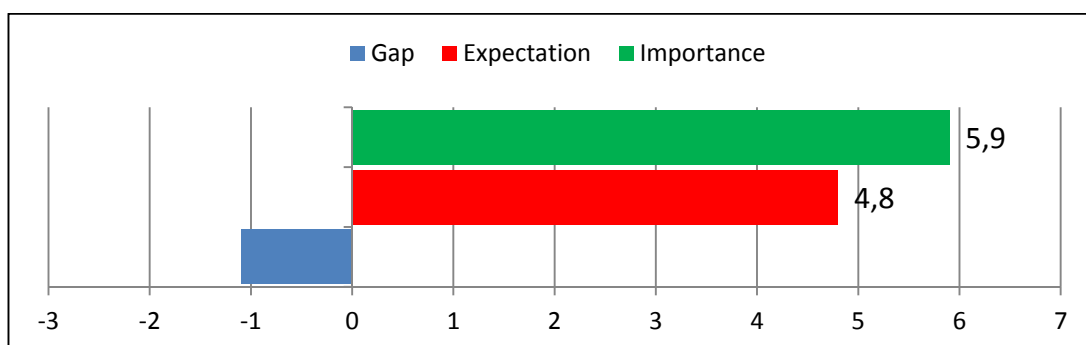
Figure 10. Image presenting results of gap analysis.

The method measured the gap both at time T_0 and T_{+1}, and gave them comparable values. The changes between the measurements were determined by comparing the gaps T_0 and T_{+1}. The used process of gap analysis is presented with more detail in appendix 3.

The influenced of work tasks content and user experience on the results were investigated by using two separate background-runs.

6.3.4 Scale determination and classification of gaps into categories

Positive gap value indicated that target group expectations had exceeded. Whereas the gap was negative, target group expectations were not met. The bigger negative value indicated, the more critical characteristic in question was. Thus the high negative values emphasized the need for development.

For this research the factors of the gap values were divided into three categories: critical factors, opportunity to improve-factors and the successful factors (Figures 11 - 14). Drawing the line between the categories is open to interpretation. In other situations the lines could be in different places. It is even possible that the measured gap can be high up to -2.2.

-2,2	-2,1	-2,0	-1,9	-1,8	-1,7	-1,6	-1,5	-1,4	-1,3	-1,2	-1,1	-1,0	-0,9	-0,8	-0,7	-0,6	-0,5	-0,4	-0,3	-0,2	-0,1	0,0	0,1
Critical factors									Opportunity to improve factors									Successful factors					
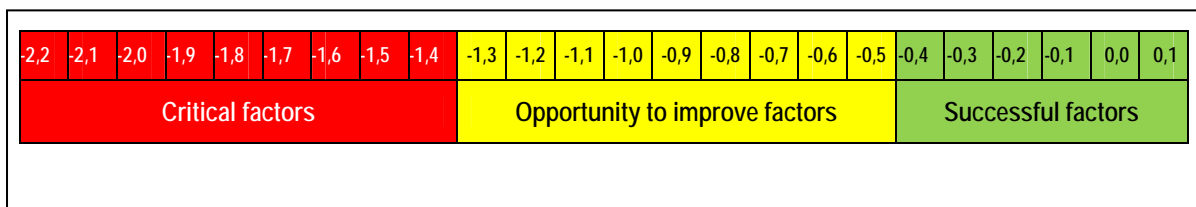
Figure 11. Factors of gap analysis.

This research classifies gaps into following three categories:

The successful factors (explain: 25%); these properties for a program more or less corresponds to the expectations of users.

-0.4	-0.3	-0.2	-0.1	0.0	0.1
Successful factors					
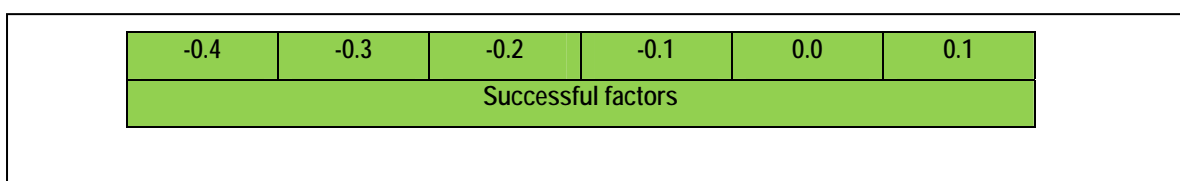
Figure 12. Successful factors of gap analysis.

The opportunity to improve factors; these properties could be improved a little.

-0.8	-0.7	-0.6	-0.5
Opportunity to improve factors			
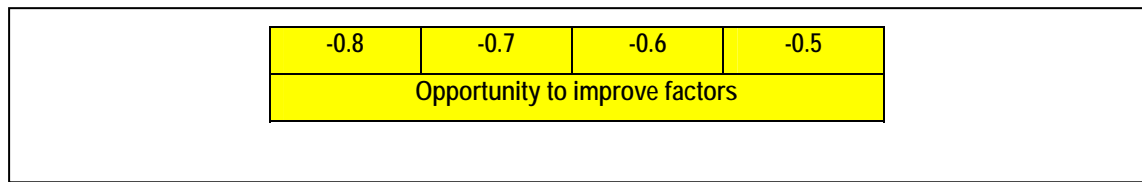
Figure 13. Opportunity to improve factors of gap analysis.

The critical factors (explain: 25% of the results of first measurement - from the gaps); these properties of the program does not meet the expectations of users.

-1.4	-1.3	-1.2	-1.1	-1.0	-0.9
Critical factors					
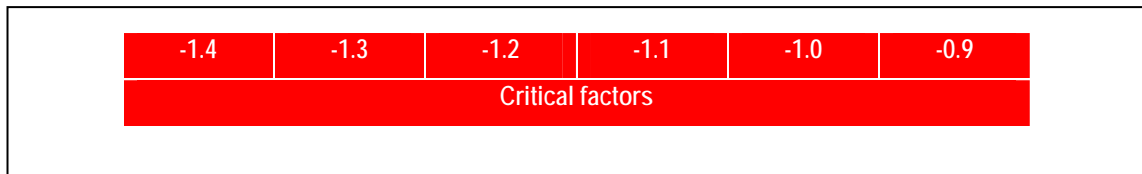
Figure 14. Critical factors of gap analysis.

6.3.5   Uncertainty factors of the method

The claims listed in question number 1 could be seen as standardized claims that helped to understand the respondent's awareness and understanding of the core benefits of CRM. The study of Richards & Jones (2006) provided a relatively strong foundation for used claims. The CRM benefit claims were planned to measure the organization's CRM penetration level. Bruggen and Wierenga (2005, 31) found in their research, that CRM system can be effective, if the individual employees are able to recognize the value of CRM system.

The measurement arrangements were planned to be suitable for measuring the development level of both novice and experienced CRM users and organizations. The determined gaps cannot be used directly for making comparisons between companies. The measurement serves better single organization when it is repeated regularly.

Organizations, management systems, strategies and working practices differ from company to company. Thus, also strategic choices of organization, setting targets and priorities differ from each other. There can be found also differences in the ERP systems, reporting and monitoring systems, communication practices,

resourcing, training practices, organization of sales and marketing and IT support. In addition to these factors, the CRM working experience of the respondents and the content of customer contacts might also have an influence on the success and importance estimates experienced by respondents. Of these, the CRM working experience and the content of customer contacts were used as data analysis background variables. Uncertainty of the comparability of separate measurement results could be reduced by taking into account the previous background variables. A good objective for the measurement arrangements would be, that at least every employee in the organization with direct customer contacts – including billing and invoicing would participate in.

6.4 Planning and realization of development activities

This research included a wide selection of development activities between survey T_0 and T_{+1}. In this section attention was paid to the user needs, and the extent and content of customer data, bringing up-to-date customer information, user guidance and support and user training. Data analysis was made after data collection, and the most critical needs of development were recognized from the CRM system and procedures. Data analysis was followed by planning of software and improvements of working practice and other development activities. The development objectives and activities were approved by executive group.

The analyzed research results were used as an input to develop the CRM software. The objective was to remove or decrease identified obstacles for the utilization of CRM software. The aim was to achieve more user-friendly software and better fit for the tasks of users. Also internal CRM marketing was done and follow-up training was given to the company personnel. The ultimate objective of the training was to achieve better understanding of CRM approach and commitment of the CRM software. The development activities were done in the summer, 2009 and follow-up training in the early autumn, 2009.

6.4.1   Need analysis

Every organization has their own ERP system, which is quite often a combination of several software and data storages in different hard disks. Once the CRM objectives are determined, it is good to review all the data in the ERP system. In a big integrated ERP software project, the aim is typically to including all the order-to-delivery process information into ERP database.

Customer relationship management information could be included into ERP project or left out and stored in CRM system database. In any case it is important that elements of ERP system will be combined to each other. Recommendable solution is to build up working interactions between ERP, CRM and other software systems. Integrated software system enables to use the database together. This could have its own important impact on the benefits experienced by users. If the integration of programs is not appropriate, it may be possible to transfer and update the information for example by using MS Office tools.

It is important to recognize and determine what kind of information is collected into different databases and what are requirements and expectations for this information. The premise is that all the information doesn't have to be perfect and on real-time. Some of this information is aging fast and is no longer usable after it is gathered. It is worth of planning how the information will be maintained up to date. CRM software system needs regular updates and maintenance to be efficient. Comprehensive customer database update is recommendable to be done at least annually. Besides this, it's very important that every user updates the customer information to CRM system. Without update procedures the CRM system usability will be decreased rapidly.

When the development objectives for CRM system are clear, it's recommendable to perform analysis of necessary data. Customer organization's basic and contact information is also constantly changing. Organizations' home pages and other Internet pages could be easily linked to CRM system. Results of the data analysis should tell what information is vital for achieving desired CRM benefits.

The objective of CRM investment should be always to gain benefits for the organization. Both good user know-how and user commitment might be critical for the system success. But anyway, good CRM penetration is not easy to achieve. It's important to remember that most of the users' needs are task related. Similarly, every user will get benefit from the system in a different way. It's also good to remember that the introduction and use of a computer program will always tie some resources. Time used for CRM has to be seen meaningful and useful to keep up user's and management's commitment.

Management and key personnel commitment as well as own example will increase the commitment of the rest of the organization. Visual improvement in performance level can improve user commitment, and further can help in adoption of future changes.

CRM penetration measurement could be also seen as specialized organizational performance measurement. The measurement results are worth communicating as feedback for the users.

Helpdesk and user manuals should serve users and give the necessary answers for them. User manuals are preferred to be updated at least annually. Regular maintenance is a strong signal indicating that system is in active use, and that the system belongs to the group to be developed also in the future. User-oriented development of the system can be among the key factors to strengthen the commitment and motivation of users. After gaining good experiences and CRM results, users are motivated to adapt newer and more useful CRM functions.

CRM system of Foodwest Ltd. as part of the project

What comes to CRM cycle, the target company had the biggest problems and development needs on targeting customers and marketing. This includes functions such as segmentation, behavior modeling, scoring and targeting, campaign management, pricing, promotion, win/loss analysis. The company hasn't had any fulltime sales and marketing representative. This has created several serious challenges for the organization. Because of these organizational

arrangements marketing measures have been relatively random. The marketing and sales of the organization can be usually seen as a function that receive orders from customers. Customer contact history hasn't been effectively recorded and used for planning and executing marketing and sales measures. All this has caused losing important customer contact information and maybe some customers too.

Several reasons can be seen for modest use of CRM system or failed CRM introduction. The modest use of Foodwest Ltd. CRM software has been probably the outcome of many reasons. User skills have been inadequate due to insufficient training. There have been neither user manuals nor helpdesk. Users, company and customers haven't recognized enough visible results, which could promote user commitment more. This has possibly caused motivation problems and major distinctions between user commitments. Unfortunately, several employees stored some of the important customer information outside of the CRM database and haven't shared them with rest of the organization. Due to all this most of the customer contacts have been just between organization's and customer's contact persons. This has created remarkable threat to one of the most critical business area. If the customer contact person is changed, probably most of the deeper customer knowledge is disappeared.

After collecting the information by using questionnaire and interview and analyzing it, the author presented research results to the executive group of the company. Executive group confirmed the proposals of author's for development targets and action. The development actions were targeted on the most critical need of development identified in the first survey. Target was set to achieve improvement on the areas of following core CRM benefits:

– increased effectiveness of marketing action planning and realization
– improved sales follow-up
– improved customer information sharing within the company
– improved customer acquisition
– improved long-term customer profitability
– improved customer satisfaction

6.4.2 Development action plan

The accepted development activities were written into a development action plan. In this research development actions were divided into three groups.

Development action plan with the realized schedule:

– Development of CRM functions and characteristics, starting from June, 2009
    Development of
        – sales and invoicing follow-up practice
        – customer company background information options
        – customer contact persons background information options
        – marketing campaign practice
        – practices used for recording and transferring customer information
        – reporting options and Excel compatibility
        – customer satisfaction recording practices
        – customer segmentation
– Customer information update, starting from autumn, 2009
        – searching and adding of information regarding new potential customer companies
        – information updates of current customers
        – offer and sales history update

– CRM user manual and guidelines for special purposes, starting from autumn, 2009
        – user manual
        – manual for sales and invoicing
        – guidelines for
            – marketing campaigns and sending group mails
            – creating reports from CRM database

– CRM training for users; basic, update and advanced, starting from autumn, 2009
– Establishing helpdesk, starting from autumn, 2009

6.4.3   Development of CRM characteristics and functions

Several CRM characteristics and functions were developed to support user needs. Real-time sales and invoicing follow-up tool was developed to help sales follow-up. Updated CRM system was also targeted to support better communication with the customers. CRM had also a function, which enabled to send the group mails to selected interest groups. These group mails were planned to be used for training and seminar invitations, company magazines, press releases, marketing campaigns, customer satisfaction inquiries, Christmas cards etc.

Both an advanced analyzing tools and well-designed database can play an important role to enable the company to achieve some of core CRM benefits. Developed functions and database of Foodwest Ltd. enabled to create following customer related reports:

- – Sales reports; offers, sales, lost offers
- – Real-time sales and invoice situation
- – Customer reports; transaction history
- – Project reports; transactions, use of resources
- – Work daybooks – monthly distribution of resources
- – Customer segment group summaries
- – Customer groups by interest; turnover, province, market
- – Interest groups; specific service interest

Further analysis of software characteristics and database was needed to motivate the users, especially active and advanced users.

Development of database and software functions and characteristics, and user manuals
- – Full sales, invoicing, offer and order conformation information
- – Detailed customer company and contact person information
- – Information regarding customer satisfaction and segmentation

- – Reporting, analyzing and communication tools and manuals
- – User training and helpdesk

6.4.4 Updating of customer information

CRM system database of Foodwest Ltd.'s update included following:

- – establishing basic information of new potential customers
- – updating current customer information
- – adding previous sales and invoicing sum totals into CRM databank
- – adding the information of previous offers

The extra workforce was used for collecting and recording all information mentioned above.

Customer satisfaction information dealing with Net Promoter Score (NPS) was planned to be collected starting at the beginning of year 2010. This was planned to enable to introduce of NPS on CRM system and further actions of NPS results. These activities required the use of extra working force.

6.4.5 Creating CRM user manuals

The research results were taken into account when planning the manuals. User manual presented the basic features of the CRM program in detail. Aim was that the basic features and functions are presented in such details that the manuals will help to solve the most common questions. The user manual was supported by the Sales and invoicing follow-up manual, which focused to instruct functions related to sales and invoicing. These manuals particularly focused on the instructions of recording and updating the customer data. In addition, the two guidelines were also made to guide users to utilize collected customer information. Another documented guideline advised users to design and implement marketing campaigns and group mailings, and another presented the

CRM reporting possibilities. The manual and guidelines contents are presented in appendixes 5, 6, 7, and 8.

6.4.6   User training

User training supports to use manuals. The personnel got additional training of guidelines. Before training manuals and guidelines were published and available in company server. Training sessions presented CRM program benefits, requirements, and useful characteristics and functions for both basic and advanced users. Training objective was to ensure that users are aware and understand the basic features of the program. This was planned to help users to find benefit of use of the program. All personnel participated training sessions. The training took place in two different locations.

6.4.7   Establishing helpdesk

Two main users established a CRM helpdesk. The objective of helpdesk was to provide proper solutions to users quickly and to give them more concrete benefits of CRM. As part of facilitating the helpdesk the manuals and guidelines were stored in the server. Direct links to these manuals and guidelines were also added to CRM software. Users were activated to give feedback for main users during or after the training sessions.

6.5   Questionnaire T_{+1}

Second survey was carried out in autumn, 2009. Internet based questionnaire as moment T_0 was used to measure at moment T_{+1}. Second survey was carried out after new CRM characteristics, functions and procedures were introduced and were in use. The objective of questionnaire T_{+1} was to measure the progress of CRM approach penetration. This survey measured the effects and results of the development activities, user training and internal marketing. The aim was to identify changes and compare them with the situation of measurement point T_0.

The aim was to measure the CRM penetration related to development on user awareness, understanding, acceptance and commitment.

6.6 Interview T_{+1}

Second interview collected additional information regarding CRM approach penetration. The aim was to get more information regarding awareness and understanding of CRM value drivers.

The interview presented claims of CRM value drivers to the chosen respondents for the first time. One question was directed for each seven CRM value driver. If respondent agreed with the claim, they were asked to give examples how the effects could be useful in practice. They also commented what they thought how CRM could support the realization of described CRM value driver.

Also further development needs were collected. Other questions were almost the same with the content of questionnaire at moment T_0. Interview T_{+1} collected information regarding user opinions and expectations about gaining higher user benefit, better customer knowledge and better user commitment. Collected information enabled to analyze changes of respondent opinions and expectations between moments T_0 and T_{+1}.

7 RESEARCH FINDINGS

7.1 Results T_0 questionnaire and interview

7.1.1 User experiences of CRM software T_0

Almost half (44%) of respondents had used the program for more than three years. 94% of the respondents used the program daily. 72% of the respondents had straight contacts with customers. 44% of the respondents were involved in sales and 39% of the respondents are also involved in acquiring new customers. None of the respondents had full-time sales work.

The utilization of program database was still limited. About one third of users (39% of respondents) hadn't used reporting capabilities in the program yet. The observation gave an indication that users were not familiar with the reporting possibilities offered by the program yet. Since the program was still in the implementation phase and the amount of information in database was still relatively low, it was possible that respondents didn't see the CRM reporting capabilities as very useful yet. Customer satisfaction data was not usually stored in database of the program. 83% of the respondents hadn't yet saved any customer satisfaction information into the program. Use of these functions could be increased after the user skills are more advanced and after customer database is expanded.

All respondents were able to name some of most useful characteristics and functions by themselves. Respondents felt that the calendar and resource-allocation are most useful functions among the CRM program. More than half of the respondents thought customer-related information retrieval to be a useful characteristic. A few respondents thought also sales and invoicing follow-up function was useful. A positive finding was that each user had found the program to be useful in some way.

At time of survey customer information was handled, stored and transferred outside of the CRM program quite a lot. Almost half of respondents (44% of respondents) collected and stored customer information somewhere else than in CRM program. A third of respondents collected and stored customer information, which could accumulate the entire customer information capital of the organization. The collected data was related to sales meetings, assignments, and issues agreed with customers including the customer's needs and problems. Approximately every fifth respondent collected customer information, which was not openly available for the rest of the organization. The finding indicated that the respondents relied more on their own notes than a common customer database. The situation could be probably corrected, after the critical mass of joint customer database will be attractive enough. Respondents told that they commonly forward this customer information to their colleagues via e-mail.

Respondents mentioned a number of barriers limit the usage of the program. Approximately half of the respondents told at least two obstacles for more active use of the program. However, about a quarter of respondents did not see any obstacles for more active use. Altogether four different and interrelated obstacles for use were identified. At the time of the survey users didn't see the program useful enough for themselves. Some of the respondents still preferred to use the old familiar alternative working habits. The whole personnel's commitment to active use of program was still considered to be fairly low. The fourth reason was a clear lack of guidance and training program. These reasons were likely to decrease correspondent's motivation to use CRM program. Based on the previous observations the further development of CRM program and additional user training could possibly increase users' perceived benefits, and users' motivation and commitment.

7.1.2 User expectations and needs on CRM software T_0

Respondents expected to get various kinds of benefits from CRM program. They felt that the most useful information in customer database was customer contact history including information of the content of customer contacts. Customer

transaction history and calendar entries were mentioned several times in the interviews when respondents were asked opinion on how colleagues will benefit from customer information recorded by them. Accumulation of customer history and its utilization were mentioned in every interview, when CRM benefits for the company were asked. Several interviewees believed that the accumulated customer information could be helpful, when communication will be targeted to selected customers. Each interviewee believed that CRM can improve the quality of customer communications. CRM was seen to be possibly helpful to make customer communications more personal and more focused. One respondent summed up the customer's benefit in the sentence "We can talk about right things with the customer." For the questions, What information you would want to be delivered via CRM software?, respondents listed future plan of information needs such as what has been agreed with customer, customer's needs and customer future plans. In respondents opinion the company should store also information of customer potential.

At interviews respondents felt that there was still plenty of important customer information we didn't know yet. Respondents agreed that customers' buying behavior, decision-making process and buying criteria were not known well enough. However the CRM system was seen to be helpful on developing the customer knowledge. Interviewed respondents felt that also customer satisfaction was not known well enough. One of the interviewees inquired the possibility to get customer satisfaction template in CRM software. According to the interviewed respondents, the best and most profitable customers were not known within a company. Everyone knew their own customer contact, but at the company level the most profitable customers were not known. Half of those felt that the CRM could be helpful also with this matter. Interviewed respondents consider that it was not clearly identified what customer relationships company should try to increase and what potential customers to attract to become new customers.

All interviewed respondents were in favor of frequent user training. Basic training, advanced training and user support were requested for all users. Periodic training content was required to handle the new characteristics and functions of new CRM software revisions and working practices. Also helpdesk and user manuals

were inquired. Approximately half of the respondents and the majority of those interviewed mentioned the training and orientation, when they were asked about ways to achieve better CRM system engagement. A training highlighting the CRM benefits of the company and key personnel support on CRM were both mentioned to improve the CRM user's commitment. When respondents were asked what kind of characteristics, functions and practices would increase their own use, each respondent's reflected their personal needs. Due to their different working tasks, they gave different responses. Also previous studies (Bruggen and Wierenga, 2005, 26) have shown that the better the CRM software functionality fits to working tasks, more actively the program is used.

Tables 4 and 5 show that respondents saw Integrated offerings across channels to be CRM value driver with the highest expectations (5.43). It was followed by CRM value drivers Individualized marketing messages and Improved customer service. Value driver Integrated offerings across channels included various kinds on communication activities as communication with customer and internal communication. The result could be explained by the fact that the communication often plays a key role on managing customer relationships. It is not easy to develop customer relationship further without high-quality communication. Five CRM value drivers included at least one CRM core benefit, with a mean value within 3.6 - 3.9, meaning slightly disagree. This indicated that respondents didn't have clear expectations for all presented core CRM benefits. Whereas all core CRM benefits listed under the above-mentioned number one CRM value driver were ranked within top-ten list (Table 5). Individualized marketing messages and Improved customer service were both listed second. This gave an indication that the respondents expected that CRM will develop customer communication more specific and targeted. Value driver Improved pricing got lowest average (3.70). This could be seen that respondents slightly disagree (Table 4) that this CRM value driver could bring some benefits for the organization. This indicated that this CRM value driver was not properly known and understood among the respondents yet.

Table 4. User expectations for CRM value drivers at T_0.

No.	1	2	3	4	5	6	7
	Improved customer targeting	Integrated offerings across channels	Improved sales force efficiency	Individualized marketing messages	Customized services	Improved customer service	Improved pricing
average	4.59	5.43	4.69	4.77	4.17	4.77	3.70
min	3.60	5.30	3.60	3.90	3.60	4.20	3.70
max	5.90	5.60	5.90	5.60	4.70	5.40	3.70
std deviation	0.69	0.15	0.76	0.85	0.55	0.60	0.00

Value driver Integrated offerings across channels was directed the highest expectations and its measured variation (0.15) was smallest. In turn, highest variation (0.85) was observed for value driver Individualized marketing messages. This could be explained by taking into consideration the fact that this value driver group included both one core CRM benefit with low expectation and one core CRM benefit which high expectations. Improves customer focus of operations was measured the highest variation (1.60) of all core CRM benefits. Regardless of this variation, this core CRM benefit was in a top-ten list of highest core CRM benefit expectations (table 3). Neither the user experience of respondent nor respondent's role regarding participation in acquisition of new customers explained the extent of variation. The result indicated that respondents perceived and understood the importance of customer orientation in different ways.

Respondents who did not participate in acquiring new customers had higher expectations of the CRM system (group total average 4.80) than respondents who participate in acquiring new customers (group total average 4.50). This result was explained by the fact that the first group had fewer contacts with new and potential customers. And also their expectations of organization's CRM related to internal communication channels were higher. Groups, CRM experience less than 3 years and CRM experience more than 3 years, had visible differences. Group with experience more than 3 years had higher expectations

(group total average 4.81) towards CRM program, than group with less experience (group total average 4.61). The difference between above-mentioned groups could be explained maybe the best way by considering the fact, that group more than 3 years had already been using the CRM system for a long time within introduction phase and they were more ready to move forward with the system.

Table 5. Value driver ranking related to top ten user expectations at T_0.

Value driver ranking, Top ten expectations, T_0 / 1st survey	Value driver	Appearance in top ten [number]	Total appearance in core CRM benefit list [number]	App [%]
1.	2. Integrated offerings across channels	3	3	100
2.	4. Individualized marketing messages	2	3	67
2.	6. Improved customer service	2	3	67
4.	1. Improved customer targeting	5	10	50
5.	3. Improved sales force efficiency	5	12	42
6.	5. Customized services	1	3	33
7.	7. Improved pricing	0	1	0

Table 6. Top ten core CRM benefits expected by users at T_0.

Top ten expectations, T_0 / 1st survey	Core CRM benefit	Average	Standard deviation	Value driver number
1.	Saves time on utilizing customer information	5.9	0.96	1, 3
2.	Saves time on searching customer information	5.7	1.07	3
3.	Improves communication with customers	5.6	1.10	2, 4
4.	Saves time on storing customer information	5.4	1.42	3
4.	Names actions and events to responsible improving planning of further actions	5.4	1.14	1, 3, 6
4.	Improves internal communication	5.4	1.04	2
7.	Increases sharing of customer relationships across organization	5.3	1.36	2
8.	Develops sales follow-up	4.9	1.39	3
9.	Improves planning of marketing operations	4.8	1.50	1, 4
10.	Improves customer focus of operations	4.7	1.60	5, 6
10.	Improves on retention of customers	4.7	1.13	1
10.	Improves long-term customer profitability	4.7	1.57	1
	Average:	4.68	1.33	

Value drivers: 1. Improved customer targeting, 2. Integrated offerings across channels, 3. Improved sales force efficiency, 4. Individualized marketing messages, 5. Customized services, 6. Improved customer service, 7. Improved pricing

Seven out of the core CRM benefit expectations were related to internal and external communication, and also handling of customer information (Table 6). Respondents directed their highest expectations on time saving by CRM system in handling customer information. The system was expected also to be clearly helpful to improve customer communications. Top three expectations were quite high and gave an indication that respondents had fairly strong expectations for the CRM system.

7.1.3 The importance of CRM characteristics for user T_0

Table 7 presented that respondents saw Integrated offerings across channels to be a CRM value driver with the highest importance (5.93). It was followed by CRM value drivers Individualized marketing messages and Improved customer service. Top three for CRM value drivers were the same when measuring both importance and expectation. In value driver ranking Improved sales force efficiency came third (Table 8). Average score describing the importance of all the core CRM benefits (5.32) was higher than the corresponding average describing the expectations of all the core CRM benefits (4.68). This indicated that the gaps between importance and expectation estimates could be measured for a number of core CRM benefits.

Table 7. Importance of CRM value drivers at T_0.

No.	1	2	3	4	5	6	7
	Improved customer targeting	Integrated offerings across channels	Improved sales force efficiency	Individualized marketing messages	Customized services	Improved customer service	Improved pricing
average	5.20	5.93	5.31	5.37	4.90	5.37	4.40
min	4.30	5.50	4.30	4.30	4.30	5.10	4.40
max	6.00	6.40	6.20	5.90	5.30	5.70	4.40
std deviation	0.58	0.45	0.62	0.92	0.53	0.31	0.00

Table 8. Value driver ranking for user importance (Top ten) at T_0.

Value driver ranking, Top ten importance, T_0 / 1st survey	Value driver	Appearance in top ten [number]	Total appearance in core CRM benefit list [number]	App [%]
1.	2. Integrated offerings across channels	3	3	100
2.	4. Individualized marketing messages	2	3	67
3.	3. Improved sales force efficiency	6	12	50
4.	1. Improved customer targeting	4	10	40
5.	6. Improved customer service	1	3	33
6.	5. Customized services	0	3	0
6.	7. Improved pricing	0	1	0

Respondents' felt at the moment T_0, that most important for them was that CRM Improves Internal Communication (6.4). Development of internal communication was more important for respondents with less than 3 years CRM experience (6.8) than for respondents with more than 3 years' user experience (5.9). Less experienced CRM users shared an opinion that development of internal communication was most important single core CRM benefit for them. This could be partly explained by the fact, that work assignments of the worker with shorter work experience are often dependent on information transferred by longer employed workers. Good internal communication would help them to carry out their assignments. Most important core CRM benefits for respondents were related to the internal and external communications and handling of customer information (Table 9). Among them the most important core benefits were also Develops sales follow-up and Improves Planning of Marketing Operations. The observation indicated that the respondents expected the CRM system also includes tool for sales and marketing.

Supports pricing and penetration of price offered was a core CRM benefit, with one of the lowest average (4.4) regarding the importance, and also one of the biggest standard deviation (1.79). This core benefit was considered to be more important for the respondents who did not participate in new customer acquisition (4.6) as well for the respondents who had used the CRM system for less than 3 years (5.1). These personnel groups had the least experience in sales negotiations and pricing of company's services. Thus, their opinion was not

based on experience in the same way as the respondents involved in acquiring new customers. An interesting observation was that the respondents involved in acquisition of new customers (4.0) and respondents with more than 3 years user experience (3.5), considered this core CRM benefit to be less important. The latter observation indicated that these groups of respondents did not feel that the CRM system could contribute to setting of right price for the service, and that the offered price would be accepted. It is also possible that they had not identified any pricing related tools in the system.

Table 9. Top ten user importance at T_0.

Top ten importance T_0 / 1st survey	Core CRM benefit	Average	Standard deviation	Value driver number
1.	Improves internal communication	6.4	0.90	2
2.	Saves time on searching customer information	6.2	1.25	3
3.	Saves time on utilizing customer information	6.0	1.33	3
4.	Develops sales follow-up	5.9	1.02	3
4.	Improves planning of marketing operations	5.9	1.06	1, 4
4.	Improves communication with customers	5.9	0.90	2, 4
7.	Saves time on storing customer information	5.8	1.69	3
8.	Names actions and events to responsible persons improving planning of further actions	5.7	1.33	1, 3, 6
9.	Increases sharing of customer relationships across organization	5.5	1.69	2
10.	Improves long-term customer profitability	5.4	1.38	1
10.	Improves acquiring of customers	5.4	1.61	1,3
	Average:	5.32	1.44	

Value drivers: 1. Improved customer targeting, 2. Integrated offerings across channels, 3. Improved sales force efficiency, 4. Individualized marketing messages, 5. Customized services, 6. Improved customer service, 7. Improved pricing

7.2 Results of gap analysis T_0

Data collection at T_0 was held after the gap analysis. Once gaps had been calculated, the core CRM benefits were classified into three categories (Appendix 3). Due to the large gaps five core CRM benefits were classified under the critical factors. In addition, nine core CRM benefits were classified under the category Factor possible to improve. Development activities were allocated towards these factors. But they were also aiming to influence to all critical factors:

The following core CRM benefits were identified to belong into the critical factors

- – Improves planning of marketing operations
- – Increases customer loyalty
- – Develops sales follow-up
- – Improves internal communication
- – Helps to identify and meet customer needs

This list reflected the fact that at the time T_0 target company's sales and marketing actions were mostly random. The company had no active marketing or sales plan. Sales follow-up data wasn't sufficiently available for all those who needed it. Internal communication practices were mostly oral and didn't always reach all the personnel simultaneously. Customer information was scattered in users own records. Customers and customer relationships were not known at the company level. Each employee knew only their own customer contacts. Colleagues' actions and plans were not known.

Core CRM benefits were also grouped into CRM value driver groups (Table 10). The average was calculated for every CRM value driver group. At T_0 all the CRM value driver gaps were between -0.50 and -0.73, which means that all the value drivers belong under the category Opportunity to improve factors. This gave clear indication that it's worth of developing CRM system to achieve and secure better user commitment and satisfaction.

Table 10. CRM value driver gap analysis at T_0.

No.		1 Improved customer targeting	2 Integrated offerings across channels	3 Improved sales force efficiency	4 Individualized marketing messages	5 Customized services	6 Improved customer service	7 Improved pricing
Expectations	average	4,59	5,43	4,69	4,77	4,17	4,77	3,70
Importance	average	5,20	5,93	5,31	5,37	4,90	5,37	4,40
Gap		-0,61	-0,50	-0,62	-0,60	-0,73	-0,60	-0,70

Critical factors	
Opportunity to improve factors	
Successful factors	

7.3 Results of development activities

CRM characteristics and functions were developed from June, 2009 to February, 2010 to provide more benefits from CRM system. One of the most time-consuming operations was to develop and introduce a new sales and invoicing follow-up tool. For the first time in the company every employee had access to real-time billing and sales follow-up information. Other new tools were among other things Microsoft Excel reporting tools which are suitable for database searches. Also procedures used for recording and transferring customer information from the customer databank were developed.

Customer satisfaction and loyalty measurement were developed by introducing a renewed customer satisfaction questionnaire. Customer satisfaction and loyalty measurement utilized the NPS principles. These principles were also used in customer segmentation. Customer satisfaction information dealing with NPS was collected in the beginning of year 2010. This action was carried out by using extra working force. As an aim to improve the customer segmentation executive group decided to adapt NPS approach for customer segmentation. Reichheld (2006, 73) has described clear correlation between NPS and company's average growth. This was a good recommendation to try use NSP in practice. Updated CRM system enabled to record NPS information as part of the individual customer contact person information. This was also a tool for customer segmentation. Customer segmentation was now also possible to do for different service groups. NPS could also be used for behavior modeling, scoring and targeting, campaign management, and for promotion. It's possible to expect some advantages for pricing when the NPS results are ready to use. Customer data analysis can enable to find those customers which are more valuable than others. Different customer segments and individual customers should be treated in a different way, which is based on organizations experiences and the knowledge about the customer. Utilizing of the customer database for targeted marketing campaigns was a new marketing management practice. New background information choices were also added to CRM system which could be connected with customer organizations and with their contact persons. These options could be used as search criteria for database searches.

Customer database was updated in September and October, 2009. Information of new potential customers was collected from the commercial list of 500 biggest Finnish food companies. Sales and invoicing information was collected from the company's financial system called Nova. The extra workforce was used for collecting and recording the information mentioned above. Also new potential customer companies were added into the databank. Totally 300 new potential customer companies were added. Current customer information was updated including various kinds of contact information. Company's offer and sales history were recorded into the databank. This included related information from 1999 to autumn, 2009. Also information of given offers in year 2009 was added into the database.

First CRM user manual and guidelines were developed for users' needs. Also manual for sales and invoicing follow-up was developed in October, 2009 to guide users to carry out sales and invoicing tasks by the common rules. This was followed by Guidelines for carrying out marketing campaigns and group mails in October, 2009 and Guidelines for creating a report in January, 2010. The next was CRM user manual in February, 2010. User manual formed an entire guidance package with already published special manual and two separate guidelines.

These manuals, guidelines and new CRM characteristics and functions were introduced to users by several training sessions. First user training was arranged in October, 2009. User trainings were supported by establishing a helpdesk in October, 2009.

7.4   Results T_{+1} questionnaire and interview

7.4.1   User experiences of CRM software T_{+1}

Some progress was identified after moment T_0, but still database utilization wasn't familiar with all the CRM system users. About one quarter of users (24% of respondents) hadn't used the program reporting capabilities yet. The

observation gave an indication that customer database was not attractive enough for users yet and maybe they didn't see enough benefits to start to use it yet. Recording the Customer satisfaction information into database of the program was also still pretty rare. Even as many as 65% of the respondents hadn't yet saved any customer satisfaction related information into the program. This indicated that users still needed additional training. These functions could be used more often after the user skills were more advanced and after customer database become bigger.

All respondents told group calendar was most useful among CRM functions for them. Respondents felt that the calendar was an important channel for internal communication and resource-allocation. More than three quarters of the respondents told customer-related information retrieval to be useful characteristic. The answers gave an indication that the respondents had maintained a positive attitude towards the CRM program.

Some customer information was still handled, stored and transferred outside of the CRM program. One third of respondents still collected and stored customer-related information for personal usage, which should accumulate the entire customer information capital of the organization. The result was same at T_0. The findings indicated that the same respondents still relied on their own notes and hadn't found a way to transfer all the important customer information into CRM database. It is also possible that more personal help and guidance is needed to satisfy some respondents' needs.

Some of the obstacles had been removed after the development activities. This was seen in the results. At the time T_{+1} only three respondents told two obstacles for more active use of program. The commitment of some user's for more active use of program was still considered to be pretty low. This was the most often mentioned obstacle for more active use of CRM. Seven respondents mentioned this was the biggest obstacle. This gave an indication that other user's low commitment might decrease considerably the other respondent's motivation to use CRM program. Based on previous observations it looked like that the further development of CRM program might not be the best way to get all the users to use CRM program actively enough. Some new ways are needed to motivate rest

of the respondents with low commitment. These activities could include for example more personal guidance, monitoring of use and related feedback.

7.4.2   User expectations and needs on CRM software T_{+1}

All the respondents expected to get various kinds of benefits from CRM program. Respondents felt that the most useful functions of CRM program were group calendar and tools related to handling of customer information. CRM was still considered to be one of the important internal communication tools. It was the most important tool when searching for a suitable date for the organization's internal meetings. It was also the fastest way to know colleague's current customer contacts.

Respondents felt that there was still plenty of important customer information organization didn't record. Respondents shared same opinion that customers' buying behavior, decision-making process and buying criteria were not known well enough. Personnel didn't generally record and share with each other the information about the causes of lost deals yet. One interviewee wished more recorded information of customer feedback and satisfaction. The interviewed respondents felt that all the company's most important customer relationships as a whole were not known well enough. Respondents felt that everyone knew their own customers, but there was still room for improvement on long-term customer relationships development and sharing customer information at company level. One respondent stated, "It would be good to tell about the most important customers to the others". Segmentation was expected to be useful on planning of marketing and sales as well as on targeting of customer related activities.

About quarter of respondents felt user training was good tool for removing obstacles for more active use of CRM. In addition, the respondents felt training was most important tool to improve user commitment and give more CRM benefits for users. In the interviews the respondents felt that the needs-based and interactive additional training sessions would be useful for this purpose. In training sessions it was good to review the benefits obtained from the CRM, to think about the additional benefits, as well as new perspectives. Respondents felt

that the reviewing of benefits and an introduction of new features could improve the user's commitment to CRM. Developed manuals and guidelines were designed to be useful. Respondents told several ways to increase both the commitment of all users and their own CRM system usage. These motivational activities included additional training sessions, making benefits visible, management's own example as well as keeping CRM in sight by means of internal communication. By centralizing customer data in the CRM system was seen as useful and as a factor increasing the system usage. The interviewed respondents said that the new tools and characteristics of CRM program and their introduction training sessions increased their own use of CRM program. Also sales reports and customer reports were mentioned among the above-mentioned new characteristics. Respondents still wanted more reports, and analysis and calculation tools. All of the interviewees reacted positively to the further development of the CRM program and mentioned at least one development opportunity.

Table 11. User expectations for CRM value drivers at T_{+1}.

No.	1	2	3	4	5	6	7
	Improved customer targeting	Integrated offerings across channels	Improved sales force efficiency	Individualized marketing messages	Customized services	Improved customer service	Improved pricing
average	4.87	5.53	5.10	5.27	4.83	5.30	4.50
min	3.90	5.30	3.90	4.70	4.10	4.90	4.50
max	5.60	5.70	6.20	5.70	5.50	5.50	4.50
std deviation	0.60	0.21	0.77	0.51	0.70	0.35	0.00

Tables 11 and 12 shows that respondents still saw Integrated offerings across channels to be CRM value driver with the highest expectations (5.53). It was followed by CRM value drivers Improved customer service and Individualized marketing messages. Now only two CRM value drivers included core CRM benefit with the mean less than scale average of 4.0. This gave an indication that

respondents were aware and understands almost all the presented core CRM benefits.

Table 12. Value driver ranking for user expectations (Top ten) at T_{+1}.

Value driver ranking, Top ten expectations T_{+1} / 2nd survey	Value driver	Appearance in top ten [number]	Total appearance in core CRM benefit list [number]	App [%]
1.	2. Integrated offerings across channels	3	3	100
2.	4. Individualized marketing messages	2	3	67
2.	6. Improved customer service	2	3	67
4.	3. Improved sales force efficiency	5	12	42
5.	5. Customized services	1	3	33
6.	1. Improved customer targeting	3	10	30
7.	7. Improved pricing	0	1	0

All core CRM benefits listed under the above-mentioned number one CRM value driver were still ranked within top-ten list (Table 13). Value driver Improved pricing got still lowest average (4.5). But the result was better than at moment T_0 and more than average on the scale from one to seven (Appendix 1). This also indicated that this CRM value driver was slightly known and understood among the respondents.

Increases customer loyalty was measured both the lowest average (3.9) and the highest variation (1.52) of all core CRM benefits. The result can be understood by the fact that at the moment of T_{+1} the users didn't have any information available, which would support the claim. It is easy to understand that the respondents experience the relationship of CRM system and customer-loyalty in a different way. It could be assumed that users need to get more CRM experiences from long enough follow-up periods, which enables them to form more clear opinion on CRM system impacts on extending customer loyalty.

Table 13. Top ten core CRM benefits expected by users at T_{+1}.

Top ten expectations, T_0 / 1st survey	Core CRM benefit	Average	Standard deviation	Value driver number
1.	Saves time on searching customer information	6.2	1.07	3
1.	Develops sales follow-up	6.2	0.81	3
3.	Improves communication with customers	5.7	0.85	2, 4
4.	Saves time on utilizing customer information	5.6	1.12	1, 3
4.	Saves time on storing customer information	5.6	1.06	3
4.	Increases sharing of customer relationships across organization	5.6	0.80	2
7.	Names actions and events to responsible persons improving planning of further actions	5.5	1.23	1, 3, 6
7.	Improves customer focus of operations	5.5	1.01	5, 6
9.	Improves planning of marketing operations	5.4	1.00	1, 4
10.	Improves internal communication	5.3	1.21	2
	Average:	5.09	1.10	

Value drivers: 1. Improved customer targeting, 2. Integrated offerings across channels, 3. Improved sales force efficiency, 4. Individualized marketing messages, 5. Customized services, 6. Improved customer service, 7. Improved pricing

Respondents who did not participate in acquiring new customers had higher expectations of the CRM system (group total average 5.26) than respondents who participate in acquiring new customers (group total average 4.92). The situation was almost the same as at the time of T_0. However, the CRM expectations of both these groups had slightly increased. The expectations of group with experience more than 3 years had about same level CRM expectations than group with less experience.

Top ten core CRM benefit expectations list was about the same as at moment T_0. An interesting result was that at moment T_{+1} the core benefit Develops sales follow-up was now sharing the first place with the core benefit Saves time on searching customer information (Table 13). This gave an indication that the new sales and invoicing tool developed for the users fits well with their needs.

7.4.3 The importance of CRM characteristics for user T_{+1}

Respondents saw Integrated offerings across channels being CRM value driver of highest importance (Table 14). It was followed by CRM value drivers Individualized marketing messages and Improved customer service. Top three CRM value drivers were the same both when measuring importance and expectation. Importance average for all core CRM benefits was higher than the corresponding expectations average for all the core CRM benefits again. The result indicated that the gaps between importance and expectation estimates still existed.

Table 14. Importance of CRM value drivers.

No.	1	2	3	4	5	6	7
	Improved customer targeting	Integrated offerings across channels	Improved sales force efficiency	Individualized marketing messages	Customized services	Improved customer service	Improved pricing
average	5.29	6.03	5.49	5.57	5.17	5.50	5.40
min	4.20	5.80	4.20	4.90	4.60	5.40	5.40
max	6.10	6.20	6.30	6.10	5.50	5.60	5.40
std deviation	0.54	0.21	0.63	0.61	0.49	0.10	0.00

Biggest change in value driver ranking was that Improved customer service rose to third position at the time of T_{+1} (Table 15).

Table 15. Value driver ranking for user importance (Top ten) at T_{+1}.

Value driver ranking, Top ten importance, T_{+1} / 2nd survey	Value driver	Appearance in top ten [number]	Total appearance in core CRM benefit list [number]	App [%]
1.	2. Integrated offerings across channels	3	3	100
2.	4. Individualized marketing messages	2	3	67
2.	6. Improved customer service	2	3	67
4.	3. Improved sales force efficiency	7	12	58
5.	1. Improved customer targeting	4	10	40
6.	5. Customized services	1	3	33
7.	7. Improved pricing	0	1	0

At T_{+1} the most important core CRM benefits for respondents were related to the internal and external communications and handling of customer information (Table 16). Develops sales follow-up was now first. The developed sales and invoicing follow-up tool was seen to be important. The observation indicated that the respondents felt that the CRM system should include working tool for sales and invoicing follow-up. Previously, users had no real time access to this information. Between user groups there were distinct differences, when the CRM experience was used as a background variable. Expectations of experienced CRM software users, with the CRM experience more than 3 years, were exceeded with three CRM value drivers; Individualized messages, Customized services and Improved customer service. And the expectations of experienced users were fulfilled (gap -0.1 - 0.0) with other three value drivers; Improved targeting, Improved sales and Integrated offerings.

Table 16. Top ten user importance at T_{+1}.

Top ten importance, T_0 / 1st survey	Core CRM benefit	Average	Standard deviation	Value driver number
1.	Saves time on searching customer information	6.3	1.10	3
1.	Develops sales follow-up	6.3	0.85	3
3.	Improves internal communication	6.2	0.90	2
4.	Improves communication with customers	6.1	1.03	2, 4
4.	Saves time on utilizing customer information	6.1	1.05	3
6.	Saves time on storing customer information	5.9	0.90	3
7.	Increases sharing of customer relationships across organization	5.8	1.07	2
8.	Improves planning of marketing operations	5.7	1.05	1, 4
9.	Names actions and events to responsible persons improving planning of further actions	5.6	1.42	1, 3, 6
10.	Improves cost-efficiency of sales	5.5	1.18	3
10.	Improves on retention of customers	5.5	1.01	1
10.	Improves customer satisfaction	5.5	1.33	5, 6
10.	Improves acquiring of customers	5.5	1.33	1, 3
	Average:	5.51	1.23	

Value drivers: 1. Improved customer targeting, 2. Integrated offerings across channels, 3. Improved sales force efficiency, 4. Individualized marketing messages, 5. Customized services, 6. Improved customer service, 7. Improved pricing

However, the user expectations for value driver Improved pricing, couldn't be responded for the part of experienced CRM users. CRM approach was unable to fulfill the expectations of the group, with CRM experience less than three years, regarding all the CRM value drivers. Similarly any single core CRM benefit didn't exceed the expectations of less experienced group. This indicated that it was more challenging to respond to the expectations of less experienced CRM users than CRM users with longer experience. The differences between groups are likely to become smaller, after user's CRM experience is increasing, as well as by the help of user training and helpdesk.

7.4.4   User awareness of CRM value drivers

The CRM value driver related claims were presented for the first time for interviewees in the interview T_{+1}. Prior to this, the interviewees were familiar with only the core CRM benefit claims. Each CRM value driver claim included CRM benefits. If the interviewee agreed with the claim, he/she was asked to describe how he sees the benefits in practice.

Half of the interviewees felt that the CRM improves the organization's ability to target profitable customers. The other half felt that the benefits related to this might be seen possibly in the future. CRM system was considered to be useful when an organization is directing actions for all kinds of customers. More customer profitability information was hoped to be collected into the CRM system.

All respondents felt that CRM diversified and increased the effectiveness of customer information delivery both with the customer and in the organization. Each respondent had experienced that shared customer database intensified and diversified communication in many ways, and each respondent was also able to present several concrete examples. Despite the previous benefits, more than half of the interviewees told that many customer needs were transferred outside of the CRM system. It is necessary to pay attention to this problem in following training sessions. This could be also helped later by giving more personal

guidance for the CRM users after first reviewing CRM customer contact documentation.

The interviewees saw that CRM system had a potential to improve sales force efficiency and effectiveness. One interviewee described CRM system benefits by saying: "Marketing capability is already there. Joint offer is easy to make by using the software. Offers can be targeted better. CRM supports sales planning." One respondent requested CRM tool for making marketing and sales plan. The latter should be taken into account in the future CRM development.

CRM enabled individualized marketing messages. All interviewees agreed with this claim. The desired customer group could be picked out from customer database. Besides this possibility most of the interviewees had not used this CRM system tool yet. In the later training sessions attention must be paid to sending individualized marketing messages.

Interviewed considered that there were some prerequisites for CRM to customize customer-oriented services. Three interviewees considered that service customization would always be carried out of the CRM system. Result can be explained by the assumption that at the moment T_{+1} the interviewees didn't see CRM system to be helpful on identifying customer needs. This assumption was also partly confirmed by the previously found observation of another driver value, which showed that customer needs were also transferred outside of the CRM system.

All of the interviewees had positive attitude toward the role of CRM system on improving customer service efficiency and effectiveness. Respondents felt that the customer database can provide an effective internal communication and improvements of customer service. CRM was also seen as a tool, which could improve the design of future projects.

Interviewees considered that CRM might be able to improve service pricing in the future. Only one interviewee felt that he was able to make use of the customer database price history when making new offers. Other interviewees experienced that the CRM might be able to help in pricing. However, they didn't see concrete benefits at the time of the interview. The pricing information of previous orders

was found in customer database. In some accepted projects, it was also possible to compare the offered price and the accepted price. Some information of lost sales was also found from customer database.

It was possible to see at interview T_{+1}, that the majority of interviewees were aware of all seven CRM value drivers. Some of the core benefits were already visible at the system introduction phase. Based on the research some benefits would be visible only after a long and active use of CRM system. Value driver numbers 7, 5, 3 and 1 included high portion of core CRM benefits which will be visible later. These issues were also reflected to value drivers in such a way that value drivers number 7, 5, 3, and 1 had the lowest expectations and importance averages. The interviewees expressed a number of CRM system development needs. This helped to direct the development actions to the right factors and enabled to make those core CRM benefits and related value drivers more visible, which were experienced to be less important at T_{+1}.Tables 18 and 19 show together all the expectations and importance averages of CRM value drivers at T_0 and T_{+1}. Within scale from one to seven a result 5.0 tells that respondents slightly agree with core CRM benefit claims (Appendix 1). By comparing the tables 18 and 19 it is possible to see that user awareness of CRM value drivers had been increased from the moment T_0. Actually all expectations and importance averages have increased at T_{+1}. This also indicated that CRM approach penetration had been increased among CRM users.

7.5   Results of gap analysis T_{+1}

Gap analysis results T_{+1} showed that value drivers were classified into all three gap categories (Table 17). Most of them did belong to Successful factors and had fairly small gaps. Value driver number 7 Improved pricing was classified to category Critical factors. Result can be explained by assuming that users haven't found enough support for the service pricing from the CRM system. Another explanatory factor was that the respondents valued this value driver in question at the time T_{+1} to be much more important (+1.0) than at the time T_0 (Table 20). Towards this value driver it was also directed even higher expectations. The

above-mentioned changes in the perceived importance of users had risen more than the users' expectations. This had also contributed to the gap. Value driver Integrated offerings across channels had high importance average. This meant that respondents strongly agreed that core CRM benefits belong to this group were important for them. Related gap -0.50 showed that you still needed to improve CRM characteristics and functions of regarding this value driver. The most significant single factor explaining the previous result was that this value driver included a core CRM benefit Improves internal communication. For this core CRM benefit was measured gap -0.9 both at the time T_0 and time T_{+1}. The result was an indication that CRM system had not yet been able to redeem the users' expectations as an important internal information channel.

Table 17. CRM value driver gap analysis at T_{+1}.

No.		1	2	3	4	5	6	7
		Improved customer targeting	Integrated offerings across channels	Improved sales force efficiency	Individualized marketing messages	Customized services	Improved customer service	Improved pricing
Expectations	average	4.87	5.53	5.10	5.27	4.83	5.30	4.50
Importance	average	5.29	6.03	5.49	5.57	5.17	5.50	5.40
Gap		-0.42	-0.50	-0.39	-0.30	-0.34	-0.20	-0.90

Critical factors

Opportunity to improve factors

Successful factors

7.6 Trends and changes

Between the moments of T_0 and T_{+1} it was seen a general trend. The averages of core CRM benefit expectations had raised more than ones of the core CRM importance (Tables 18 and 19). The result gave an indication that the perceived importance estimates experienced by CRM users were slightly more stable than CRM expectations estimates experienced by CRM users. This indicated that

increased user awareness and user-oriented development actions together have positive effect on users' core CRM benefit expectation estimates and the importance estimates.

Table 18. Changes in top ten core CRM benefits expected by users.

Top ten expectations ranking		Core CRM benefit	Average outcome		
T_0	T_{+1}		T_0	T_{+1}	Change
1.	4.	Saves time on utilizing customer information	5.9	5.6	-0.3
2.	1.	Saves time on searching customer information	5.7	6.2	+0.5
3.	3.	Improves communication with customers	5.6	5.7	+0.1
4.	4.	Saves time on storing customer information	5.4	5.6	+0.2
4.	7.	Names actions and events to responsible persons improving planning of further actions	5.4	5.5	+0.1
4.	10.	Improves internal communication	5.4	5.3	-0.1
7.	4.	Increases sharing of customer relationships across organization	5.3	5.6	+0.3
8.	1.	Develops sales follow-up	4.9	6.2	+1.3
9.	9.	Improves planning of marketing operations	4.8	5.4	+0.6
10.	7.	Improves customer focus of operations	4.7	5.5	+0.8
10.	13.	Improves on retention of customers	4.7	5.0	+0.3
10.	16.	Improves long-term customer profitability	4.7	4.7	±0
Average change:					+0.3

Expectations of Sales follow-up improvement had raised the most. At T_{+1} core CRM benefit Develops sales follow-up had the highest expectations. Perhaps most obvious reason for this was after the moment T_0 developed CRM sales follow-up tool. Another strong improvement on the list of top-ten expectations was made by core CRM benefit Improves customer focus of operations. This had been likely influenced by the fact that after the introduction of CRM system there had been more discussion about customer relationships at the enterprise level. At T_{+1} Improves internal communication fell six places on the top-ten list. This drop occurred even though Improves internal communication got almost the same expectations estimate both at time T_0 and at time T_{+1}. The result didn't mean that the internal communication is no longer seen as important. The most obvious explanation for this was that the other six core CRM benefit expectation estimates have only increased more than Improves Internal Communication (Table 18). Top seven core CRM benefits in top ten expectations list had

minimum average 5.5, which could be kept as a minimum limit for a strong user expectation.

Table 19. Changes in highest importance for user.

Top ten importance, ranking		Core CRM benefit	Average outcome		
T_0	T_{+1}		T_0	T_{+1}	Change
1.	3.	Improves internal communication	6.4	6.2	-0.2
2.	1.	Saves time on searching customer information	6.2	6.3	+0.1
3.	4.	Saves time on utilizing customer information	6.0	6.1	+0.1
4.	4.	Improves communication with customers	5.9	6.1	+0.2
4.	1.	Develops sales follow-up	5.9	6.3	+0.4
4.	8.	Improves planning of marketing operations	5.9	5.7	-0.2
7.	6.	Saves time on storing customer information	5.8	5.9	+0.1
8.	9.	Names actions and events to responsible persons improving planning of further actions	5.7	5.6	-0.1
9.	7.	Increases sharing of customer relationships across organization	5.5	5.8	+0.3
10.	18.	Improves long-term customer profitability	5.4	5.2	-0.2
10.	10.	Improves acquiring of customers	5.4	5.5	+0.1
13.	10.	Improves customer satisfaction	5.1	5.5	+0.4
13.	10.	Improves on retention of customers	5.1	5.5	+0.4
13.	10.	Improves cost-efficiency of sales	5.1	5.5	+0.4
Average change:					+0.1

Develops sales follow-up was also in top ten list. It was the core CRM benefit, which was able to climb in the top-ten list more than others. The result gave an indication that with the sufficiently good and precise development activities and tools, it was possible to clearly increase the core CRM benefit importance estimates experienced by CRM users. All top ten core CRM benefits in top ten importance list had minimum average of 5.5, which could be kept as a minimum limit for a strong importance perceived by users.

All expectation and importance averages increased from the moment T_0 to moment T_{+1}. This suggested that needs-based CRM development actions were able to increase CRM approach penetration within an organization (Table 20). An interesting observation was, that value driver number seven had clearly the highest change both with expectations average and with importance average when comparing moments T_0 and T_{+1} against each other. Value driver number

seven had highest change on importance. This caused also biggest gap at the moment T_{+1}.

Table 20. CRM value driver expectations, importance and gap analysis comparison.

Value driver no.	1	2	3	4	5	6	7	
	Improved customer targeting	Integrated offerings across channels	Improved sales force efficiency	Individualized marketing messages	Customized services	Improved customer service	Improved pricing	
Expectations								Average
1st survey, T_0	4.59	5.43	4.69	4.77	4.17	4.77	3.70	4.59
2nd survey, T_{+1}	4.87	5.53	5.10	5.27	4.83	5.30	4.50	5.06
Change	0.28	0.10	0.41	0.50	0.66	0.53	0.80	0.47
Importance								Average
1st survey, T_0	5.20	5.93	5.31	5.37	4.90	5.37	4.40	5.21
2nd survey, T_{+1}	5.29	6.03	5.49	5.57	5.17	5.50	5.40	5.49
Change	0.09	0.10	0.18	0.20	0.27	0.13	1.00	0.28
Gap								Average
1st survey, T_0	-0.61	-0.50	-0.62	-0.60	-0.73	-0.60	-0.70	-0.62
2nd survey, T_{+1}	-0.42	-0.50	-0.39	-0.30	-0.34	-0.20	-0.90	-0.44
Change	0.19	0.00	0.23	0.30	0.39	0.40	-0.20	0.19

Critical factors	
Factors possible to improve	
Successful factors	

Measured expectation average change was bigger than importance average change. This suggested that it might be easier to influence expectation estimates than importance estimates by CRM training, and by carrying out CRM development activities. The result indicated that importance estimates seemed to be more stable than the users' expectation estimates.

The results of gap analysis indicated how well the users' expectations had been met. The reduction of the gap had a positive impact on the CRM approach penetration. Gap value showed drivers that were critical to a better penetration of the CRM approach. All but one of the gaps had changed comparing with the moment T_0. Value Driver Integrated offerings across channels had the same gap.

Now value driver Improved pricing was classified to category Critical factors. Result can be explained by assuming that users haven't found enough support for the service pricing from the CRM system.
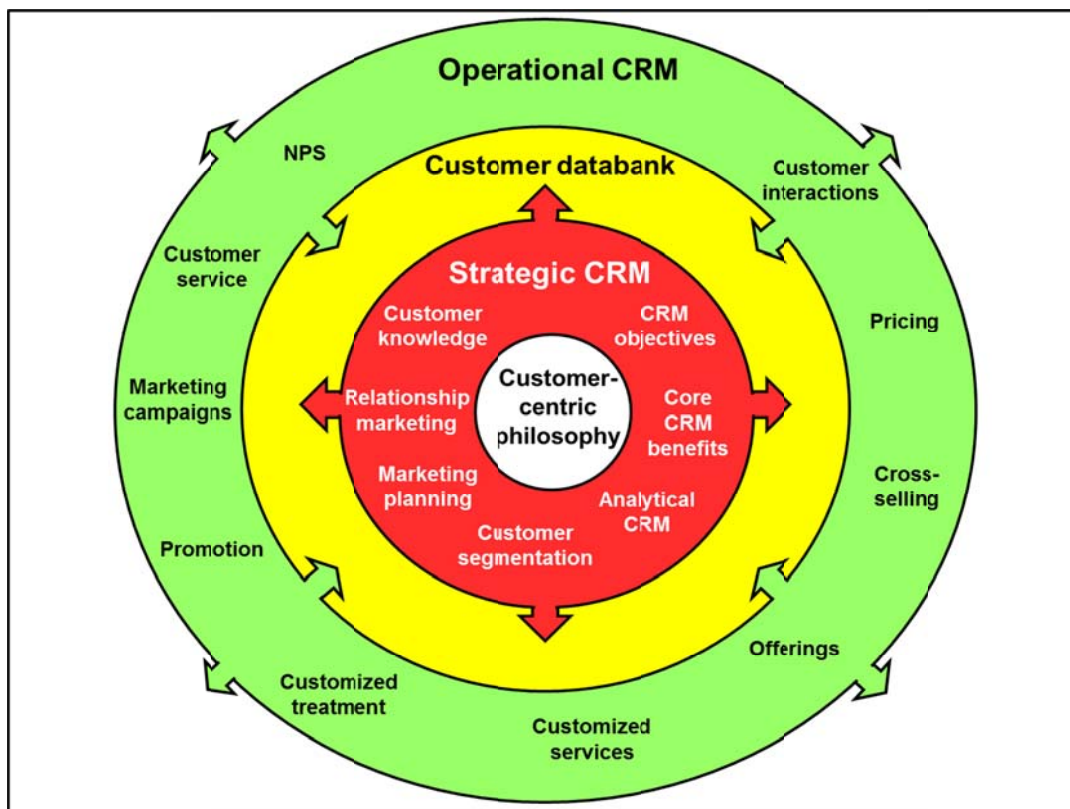

Figure 15. The structure and content of CRM system.

Supports pricing and penetration of offered price is the core CRM benefit that is usually not clearly visible at the CRM introduction phase. Pricing benefits may become visible later, when users are able to see the connection between the CRM and the pricing procedures. Another explanatory factor was that the respondents valued the value driver Improved pricing at the time T_{+1} to be much more important than at the time T_0 (Table 20). Towards this value driver it had also been directed even higher expectations. These changes in the perceived importance of users have risen more than the users' expectations. This also influenced on measured gap.

As a research result was also developed a model (Figure 15) that could be used for the further development of company's CRM system. The model is intended to be used on CRM training of the personnel and internal marketing later.

8 Evaluation, discussion and conclusions

CRM has both operational and strategic dimensions, which are important to successful CRM introduction and maintenance. As previous studies have shown the successful adaptation of the CRM approach requires understanding of the factors that are critical to success and obstacles to it, and also successful use of change management elements. Previous studies have also shown that the CRM can be an effective tool for an organization if the individual users are able to see the value of the CRM system and understand the benefits of CRM. The previous studies have also shown that the better CRM system functionality and fitting for user's working tasks have a positive influence on more active use of CRM system. This research utilized the previously mentioned research results as well as some recommendations for further research subjects made by researchers related to previous results.

This study extended the perspective on CRM approach penetration. The CRM approach penetration was seen as one aspect of strategic CRM and it was used as an indicator on measuring and explaining the success of the CRM introduction. User-driven development of operational CRM was mainly seen as means to increase CRM system usability and user commitment. As a side result of research a new method was developed to measure the level of CRM approach penetration. The new CRM measurement method gives a higher level perspective for the company's CRM system introduction and maintenance, CRM research, analysis and also for CRM development.

This research also extended the CRM definitions by defining the two sides of CRM approach penetration. The research saw the operational CRM penetration as a company-wide adaptation of CRM tools for daily use. Strategic CRM approach penetration was seen as a company-wide understanding of core CRM benefits. Successful CRM introduction was seen as a combination of operational and strategic CRM approach penetration, which together enable CRM user to commitment to the company's CRM objectives.

The research answered to questions and all hypotheses were confirmed. User's awareness and understanding of core CRM benefits were improved. As a main

result of this research the target company's CRM approach penetration and user commitment were improved. Development activities could be targeted to important subjects for users when users' CRM expectations, experiences, and awareness and understanding of the core CRM benefits were known. These research results gave an indication that the user-driven development of CRM system characteristics and function, user training and helpdesk together enabled to increase CRM benefits experienced by users. At the same time also the awareness and understanding of core CRM benefits, perceived by users, increased. The result can be seen to increase the level of core CRM benefit importance and expectation estimates perceived by CRM users. Results allow the author to make a statement that increased awareness and understanding of core CRM benefits together with user-oriented CRM development activities have a positive impact on CRM approach penetration.

The reliability of the results of the research was increased by carrying out the research twice, the questionnaires and respondents were the same in both times, and the respondents covered most of the target company's personnel. Also the use of CRM experience and user's job content as background variables improved the reliability of the results. Uncertainty in the results caused by the fact that under the value driver Improved pricing was registered only one core CRM benefit. Another factor causing uncertainty was the usage of Improves internal communication as a one core CRM benefit. Traditionally, toward the organization's internal communication it is directed great expectations and requirements. CRM should be seen just as one channel for organization's internal communications. It cannot alone meet the diverse communication needs.

As a result of CRM development activities CRM fits better for the user needs. Every user is able to find several benefits from the CRM system, which supports their own working tasks. User's awareness and understanding of the core CRM benefit has increased, which contributes their commitment to the company's CRM objectives. Adaption of Net-promotor score measurement during the research, gave the company both internal and external monitoring system for the needs of measuring CRM results. Net-promotor score results can provide useful

external feedback of the organization's CRM approach penetration and development level.

Developed measurement method is also usable in other organizations at the introduction and maintenance stage of CRM systems. By using the developed measurement instrument it is possible to find critical CRM development needs, and increase user awareness and understanding of core CRM benefits, and also increase user commitment and CRM results. Research results showed that gap analysis suits well for measuring the CRM. Gap analysis is not suitable only for one-time measurement, but it could serve well when it is used at regular intervals.

Although the target company's CRM approach penetration was successfully increased during the research, the CRM users will need motivational training and development activities also in the future. Further development of CRM system will pay attention to the elements of CRM system content presented in previous chapter in Figure 15. The results of this research showed at the moment T_{+1} that some CRM system development is still needed. Next step will be to develop the CRM pricing functions and increase the importance of CRM as an internal communication tool of the company. The users will be also activated to collect Net-promotor score related customer feedback. Attention will be also given on the quality of entries made by users. After these actions, additional motivational training and coaching will be given for users. The core CRM benefit related questionnaire will be used also in the future, in order to obtain updated information of the users' expectations and needs.

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APPENDICES

APPENDIX 1. Questionnaire for CRM users, T_0

Forth Revision, May 12th 2009

Background information

This questionnaire is dealing the CRM software, which has been in use since June 2005. The aim of this survey is to get more benefit from the CRM system both for users and for the company. One aim dealing this questionnaire is to get answer from all the users of CRM software. This enables that every users' opinions and experiences can be used for developing the software itself and the company procedures. All the answers will be handled confidentially.

This survey is also part of MBA final thesis of Asko Mäyry and it will also be rearranged at beginning of 2010. The results will be used for the development of customer relationship management software. Report on survey will be published at spring 2010.

I hope you can find a peaceful moment to give your answers within May 2009. You will need about 20 to 30 minutes to fill the questionnaire.

Questions

1. How useful and important tool company's CRM software is for you?
   (Circle the best alternative).

CRM software:	Completely disagree	Strongly disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Strongly agree	Completely agree	Significance (1-7)
• Save time on searching customer information	1	2	3	4	5	6	7	
• Save time on utilizing customer information	1	2	3	4	5	6	7	
• Save time on storing customer information	1	2	3	4	5	6	7	
• Improves communication with customers	1	2	3	4	5	6	7	
• Improves internal communication	1	2	3	4	5	6	7	
• Improves acquiring of customers	1	2	3	4	5	6	7	
• Improves on retention of customers	1	2	3	4	5	6	7	
• Helps on winning back lost customers	1	2	3	4	5	6	7	
• Supports pricing and penetration of offered prize	1	2	3	4	5	6	7	
• Improves cost-efficiency of sales	1	2	3	4	5	6	7	
• Helps to identify and meet customer needs	1	2	3	4	5	6	7	
• Supports on developing new services	1	2	3	4	5	6	7	
• Helps decision-making dealing customer relationship planning	1	2	3	4	5	6	7	
• Helps to understand customer's buying behavior	1	2	3	4	5	6	7	
• Increases customer loyalty	1	2	3	4	5	6	7	
• Improves customer focus of operations	1	2	3	4	5	6	7	
• Improves customer satisfaction	1	2	3	4	5	6	7	
• Increases sharing of customer relationships across organization	1	2	3	4	5	6	7	
• Improves long-term customer profitability	1	2	3	4	5	6	7	
• Names actions and events to responsible persons improving planning of further actions	1	2	3	4	5	6	7	
• Improves planning of marketing operations	1	2	3	4	5	6	7	
• Develops sales follow-up	1	2	3	4	5	6	7	

2. What CRM software functions you are using? How often you use those functions? Did you know about these software functions before?
(Circle the best alternative).

<u>Usage of CRM function</u> <u>Awareness</u>

	Actively	Occasionally	I haven't used yet	I didn't know about this function before
• Calendar	X	X	X	X
• Calendar checklist / signing of performed actions	X	X	X	X
• Checking and making of resource reservations	X	X	X	X
• Making and answering of meeting invitations	X	X	X	X
• Searching of customer information	X	X	X	X
• Storing of customer transaction information	X	X	X	X
• Storing of project information	X	X	X	X
• Sending of emails	X	X	X	X
• Sending of group mails	X	X	X	X
• Storing of sales transactions	X	X	X	X
• Writing of offers	X	X	X	X
• Writing of conformation of orders	X	X	X	X
• Writing of invoicing orders	X	X	X	X
• Writing of business daybook	X	X	X	X
• Searching information dealing writing of travelling expenses account	X	X	X	X
• Transferring of customer needs across organization by using email link	X	X	X	X
• Carrying out marketing campaigns	X	X	X	X
• Sending of seminar and/or training invitations	X	X	X	X
• Searching of project numbers	X	X	X	X
• Christmas card mailing list maintenance	X	X	X	X
• Company magazine mailing list maintenance	X	X	X	X

3. What are the best benefits for you to use the software (3 benefits)?
(Open question).

4. What customer information would be useful for you? *(Open question).*

5. What are the obstacles to more active use of software? How these obstacles could be removed? *(Open question).*

6. What reports and summaries you make / print for later use by using software?
   (Circle all the alternatives which are most suitable for you).
   - Sales reports   X
   - Project summaries   X
   - Monthly summary of the use of resources for business daybook   X
   - Monthly calendar   X
   - Customer transaction history   X
   - Company contact information   X
   - Calendar checklist   X
   - Mailing lists / address stickers   X
   - Group mails by email   X
   - Something else, what _____   X
   - None of these   X

7. What other reports you would need?

8. Do you store some customer information outside of CRM software (e.g. checklist, sales appointments, and resource reservations)?

	Yes	No, go to question no 9.

   If you store previous information,

   what kind of information you store?

   where do you store it?

   If you transfer the information, you have stored, to the other organization,

   what information you transfer?

   what is the form of that information?

9. What customer information you transfer (among other things writing and linking customer transaction information and / or by using email) to the others via CRM software? *(Circle the best alternative).*

<u>Usage of CRM function</u> <u>Awareness</u>

	Actively	Occasionally	I haven't used yet	I didn't know about this function before
• I store customer companies' and contact persons' contact information	X	X	X	X
• I store customer transaction history information among other things appointments, phone calls etc.	X	X	X	X
• I store information about agreed actions after an appointment with the customer	X	X	X	X
• I store information about customer future interests and needs after customer transaction (e.g. appointment, phone call)	X	X	X	X
• I write future customer transactions to CRM software calendar (e.g. appointments, conference calls)	X	X	X	X
• I store information dealing customer satisfaction	X	X	X	X
• I store sales transactions (in Euros)	X	X	X	X
• I transfer some information above via CRM software email link to my organization	X	X	X	X

10. Do you use CRM software daily (at least when working at office)?

Yes   No

11. How much time per day do you use with CRM software (active use e.g. writing notes or searching information)? *(Circle the best alternative).*

0-15 min	16-30 min	31-45 min	46-60 min	over 60 min
X	X	X	X	X

12. How long have you used CRM software? *(Circle the best alternative).*

Less than 1 year	1 - 3 years	More than 3 years
(Beginning to use in between June 2008 to May 2009)	*(Beginning to use in between May 2006 to May 2008)*	*(Beginning to use in between May 2005 to April 2006)*
X	X	X

13. Which of the following job descriptions describe your work at the company? *(Circle all the alternatives describing your work).*

> a. My work includes communication with customers by phone, by email and/or by appointments.
> b. I'm involved in selling more services for our existing customers.
> c. I'm involved in acquiring new customers.
> d. I work mainly at administration.
> e. I take part of planning and realizing of projects.
> f. None of these

14. Here you can give your extra comments dealing CRM software

Thank you for your answers. Have a nice summer!

APPENDIX 2. CRM -penetration - Interview, T_0

Introduction:

CRM is a tool and course of action, which helps our organization to take good care of our customer relations. It helps us to deliver customer related information efficiently both within and outside the organization. In order to deliver better added value to our customers, we have to develop our operations to be more customer-oriented. Our organization will succeed better on competition by learning our customers better compared to our current knowledge.

1. How will other employees benefit from the customer related information you have stored on CRM software?

2. How will our organization benefit from the customer related information you have stored on CRM software?

3. How will your customers benefit from the customer related information you have stored on CRM software?

4. What information you would want to be delivered via CRM software?

5. What customer related information we should store?

6. Do we know well enough the following customer related subjects? And could CRM software to be useful on storing and utilizing customer related information?

    1) What is customer's buying behavior, decision making process and criteria?

    2) How good is customer satisfaction?

    3) Who are our most profitable and best customers?

    4) What customer relationships are profitable to grow?

    5) What customers we should try to get to be our customers?

7. What kind of user training and support would serve you best as software user?

8. How we can achieve better user commitment on using CRM software?

9. What kind of software characteristics and functions would increase your own use of the CRM software?

Interviews were carried out at June 24th – July 7th, 2009

APPENDIX 3. Process steps of gap analysis

List the factors
↓
Work up factors into claims
↓
Validate claims
↓
(Conduct the survey T_0)
↓
Conduct gap analysis T_0 and calculate the gaps
↓
Determine the scale of gap analysis
↓
Classification factors into three categories based on related gaps
↓
Grouping the factors into CRM value driver groups
↓
Calculate average for every CRM value driver group
↓
Analyze the gap analysis results T_0
↓
(Development actions)
↓
(Conduct the survey T_{+1})
↓
Start gap analysis T_{+1} and calculate the gaps
↓
Carry out gap analysis by using the same scale and categories as gap analysis T_0
↓
Analyze the gap analysis results T_{+1}
↓
Compare the gap analysis results T_0 and T_{+1}
↓
Analyze the results

APPENDIX 4. CRM -penetration - Interview, T_{+1}

Introduction:

CRM is a tool and course of action, which helps our organization to take good care of our customer relations. Our organization will succeed better on competition by learning our customers better compared to our current knowledge.

1. CRM improves our organization's ability to target profitable customers. If you answered yes, how you can see this effect?

2. CRM diversifies and increases the effectiveness of customer related information delivery both with the customer and within an organization. If you answered yes, how you can see this effect?

3. CRM improves sales force efficiency and effectiveness. If you answered yes, how you can see this effect?

4. CRM enables individualized marketing messages. If you answered yes, how you can see this effect?

5. CRM improves customize of customer-oriented services. If you answered yes, how you can see this effect?

6. CRM improves customer service efficiency and effectiveness. If you answered yes, how you can see this effect?

7. CRM improves pricing. If you answered yes, how you can see this effect?

8. Do we know our customers well enough? How CRM software could be useful on storing and utilizing customer related information?

9. What kind of user training and support would serve you best as software user?

10. How we can achieve better user commitment on using CRM software?

11. What kind of software characteristics and functions would increase your own use of the CRM software?

Interviews were carried out at March 4th – March 9th, 2010

APPENDIX 5. Coding of Questionnaire and Interview Questions

Questionnaire T_0, Questionnaire T_{+1}, Interview T_0, Interview T_{+1}

Both questionnaire and interview questions are coded for the data analysis. The questionnaire T_0 and T_{+1} are identical in content. Both questionnaires have 13 questions and question 14 is reserved for free comments. Code is a combination of letters and numbers. The first question in the questionnaire was given a code q1, question number 2 was given a code q2, etc.

Interviews T_0 and T_{+1} were partly different. Interview T_0 had 6 questions. Question number 6 was divided by 9 additional questions. Interview T_{+1} had 11 questions. Last three questions of interviews T_0 and T_{+1} were similar. The first question in interview T_0 was given a code of i_01, second question was given a code i_02, etc. The additional questions of question number 6 were given codes: $i_06.1$, $i_06.2$ etc. The first question in interview T_{+1} in turn was given a code of $i_{+1}1$, second question was given a code $i_{+1}2$, etc.

User experience of CRM software

Data regarding user experiences was collected by questions; q2, q3, q5a, q6, q8, q9, q10, q11 and q12.

- User experience and awareness of CRM characteristics; q2, q6, q10, q11, q12
- Best experiences regarding the benefits; q3
- Handling, recording and transferring customer information outside of CRM software; q8, q9
- Obstacles to more active use; q5a

The user expectations on CRM software

Data regarding user expectations was collected by questions; q1, q4, q5b, q7, q14, i_01, i_02, i_03, i_04, i_05, i_06, i_07, i_08, i_09, $i_{+1}8$, $i_{+1}9$, $i_{+1}10$, $i_{+1}11$

User expectations regarding benefits

- User expectations; q1
- Importance for user; q1
- User's needs; q4, q7, $i_0$4, $i_0$5
- Benefits for the work community, the company and for the customer; $i_0$1, $i_0$2, $i_0$3, i_{+1}8
- Utilizing CRM software on gaining better customer knowledge; $i_0$6.1, $i_0$6.2, $i_0$6.3, $i_0$6.4, $i_0$6.5,
- Removal of obstacles which prevent more active use of software; q5b

Development expectations

- Characteristics and functions, which would increase usage of the software, $i_0$9, i_{+1}11
- Gaining better user commitment; $i_0$8, i_{+1}10
- User training and support; $i_0$7, i_{+1}9

The user awareness and understanding of CRM value drivers

Data regarding user awareness and understanding of CRM value drivers was collected by questions; q1, i_{+1}1, i_{+1}2, i_{+1}3, i_{+1}4, i_{+1}5, i_{+1}6, i_{+1}7

Operational CRM penetration

Data regarding CRM operational penetration was collected by questions; q2, q6, q9

Suitability of CRM practices for the duties of users

Data regarding suitability of CRM practices for duties of users were collected by questions; q3, q4, q5, q7, q8, q10, q11, $i_0$1, $i_0$2, $i_0$3, $i_0$4, $i_0$5

User background information

Data regarding user background information was collected by questions; q13

APPENDIX 6. Table of Contents of CRM User Manual

APPENDIX 7. Table of Contents of Manual for Sales and Invoicing Follow-up

APPENDIX 8. Table of contents of Guidelines for Creating of Reports

APPENDIX 9. Table of contents of Guidelines for Carrying out Marketing Campaign or Group Mailing