CRM Impact:
Experiences from some multinational companies

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Abstract

Date:  2011-06-01
Course:  EFO703 Bachelor Thesis in Business Administration, 15 ECTS points
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Title:  CRM Impact – Experiences from some multinational companies
Problem Discussion:  CRM has a growing trend of popularity in recent years within the
multinational industrial companies, but at the same time; CRM
initiatives achieved high failure rates to the point that it has
become more common for CRM implementations to fail than to
succeed. Thus as a result, the majority of companies fail to
achieve CRM Impact in their organizations.
Research Question:  Which basic elements are important to achieve CRM Impact
within the chosen multinational industrial companies?
Purpose:  The thesis aims to describe and analyze CRM Impact within the
chosen multinational industrial companies, by using the chosen
theoretical framework.
Methodology:  Several company experiences are investigated through an
exploratory qualitative investigation, and then analyzed with the
help of theoretical framework.
Conclusion:  Authors have found that the most important basic elements to
achieve CRM Impact within the chosen multinational industrial
companies are: a supportive top management, and well-
established knowledge management capabilities.
Keywords:  CRM, CRM Impact
Acknowledgements

We would like to thank all our lecturers, researchers and tutors in Mälardalen University, School of Sustainable Development of Society and Technology that contributed in our education and shaped us to become the individuals we are today.

We would like to thank all our executive interviewees who spared their precious time, without expecting anything in return, to provide us with real business cases and great material to work with. Specifically: Kristina R. Andersson (ABB), Christopher Cassidy (Volvo CE), Lennart P. Löfgren (Outokumpu), Eva Lendic Edlund (Telge Energi) and Mattias Nordin (Flir)

We also would like to express our gratitude to CRM vendors: salesforce.com and Oracle who responded to our research very positively and continuously supported us with valuable materials and tools to understand the thesis subject better. Specifically: Rosella Carbone and Hans Rieschel (salesforce.com, Sweden), Sven Heijnen (Oracle, Denmark).

We are also deeply grateful to the company Westinghouse Sweden for their generous contributions to this thesis.

Finally we would like to thank all our student friends and opposition groups for their constructive criticisms through this research.

Västerås, Sweden
01st June, 2011

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Glossary

CRM  Customer Relationship Management
ERP  Enterprise Resource Planning
IT   Information Technology
SFA  Sales Force Automation
E-CRM Electronic Customer Relationship Management
KM   Knowledge Management
ROI  Return on Investment
HQ   Headquarters
Volvo CE Volvo Construction Equipment

Customer Relationship Management:
Customer relationship management (CRM) is a comprehensive business and marketing strategy that integrates technology, process and business activities around the customer. (Love et al, 2008)
CRM is a holistic strategic approach to managing customer relationships in order to create shareholder value. (Payne, 2006) In other words, CRM simply is Information-enabled relationship marketing.

Enterprise Resource Planning:
ERP is a massive software architecture that supports the streaming and distribution of geographically scattered enterprise wide information across all the functional units of a business house. At the core of ERP is a well managed centralized data repository which acquires information from and supply information into the fragmented applications operating on a universal computing platform. (www.tech-faq.com)

SAP and Oracle are common two examples of ERP systems used by multinational industrial companies worldwide.

Sales Force Automation:
A SFA, typically a part of a company’s customer relationship management system, is a system that automatically records all the stages in sales process, simplifies customer tracking and increases overall efficiency of sales departments. (www.gartner.com)
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CHAPTER I

In this chapter, authors introduced the research field with background, descriptions and origins of CRM. Authors then explained the problem, as well as why and how they chose to conduct this study.

1. Introduction

1.1 Background

Customers are becoming harder to please. They are smarter, more price conscious, more demanding, less forgiving, and they are approached by many more competitors with equal or better offers. (Kotler, 2006) At the same time customers are better and better informed. It has become much easier to get information about existing market options. Customers are, by and large, also more sophisticated and often demand more than before. (Grönroos, 2001) Today, customers require flexibility, availability, creativity, and price advantage from the supplier or service provider. Therefore, new techniques to discover these attributes are required for organizations to succeed in a forever-changing world of customer wishes, customer preferences, customer behaviours, and customer loyalties. (Swift, 2001) Companies are now moving away from wasteful mass marketing to more precision marketing designed to build strong customer relationships (Coviello et al., 2002) Today’s economy is supported by information businesses. Information has the advantages of being easy to differentiate, customize, personalize, and dispatch over networks at incredible speed. (Kotler, 2006) Today companies in almost every industry are trying to use customer information to manage relationships. (Newell, 2003)

Due to the global competition and the following trends: seeing the customer as a business asset rather than a commercial audience, using specified information to achieve competitive advantage, high level of technology use in term of managing and increasing the value of information, the development of one-to-one marketing approaches because of the shift from transactional marketing to relationship marketing, organizations started to become aware of the management approach of CRM (Payne, 2006).

The foundation for CRM, namely relationship marketing, is traced back to the 1980s when the dynamics of the markets were rapidly changing. The need for new strategies in order to maximize sales and increase shareholder value was evident as the growth within many markets had halted (Ambler, 1996). Relationship marketing is a philosophy and orientation towards customer retention and CRM is regarded as the practical implementation of relationship marketing (Christopher et al., 1991). So, value for customers is created throughout the relationship by the customer, partly in interactions between the customer and the supplier or service provider (Grönroos, 2001) In order for a relationship to be in place,
communications must be two-way, integrated, recorded, and managed. Without customer historical data, detailed transactions, focused and categorized communications, a relationship cannot be effectively maintained. (Swift, 2001) So, throughout the 1990s there was, in many organisations’ strategies, a shift from the need to manage transactions and toward relationship management. Where Enterprise Resource Planning (ERP) packages dominated the management of transactions era, CRM packages lead in regard to relationships today. (Light, 2003) Many organizations that have already adopted ERP to improve internal efficiencies are now turning to CRM better to respond to individual customer’s needs. Whereas ERP employs customer and other information to reduce costs by improving internal efficiencies in back-office processes related to manufacturing and finance, CRM emphasizes the use of customer information to enhance revenue by increasing external effectiveness in front-office activities including sales, marketing and customer service and support. (Payne, 2006)

In recent years, with the rapidly increasing popularity of CRM, many companies from many industries began to seriously invest in CRM systems (software packages to manage CRM on computer platform) just like it happened with ERP systems back in the 1990s. Leading market analysts such as Gartner estimates that the global CRM market is grown in size from around $US 20 billion in 2000 to $US 47 billion in 2006 worldwide. (Payne, 2006)

1.2 Definition of CRM and CRM Impact

Customer relationship management (CRM) is a comprehensive business and marketing strategy that integrates technology, process and business activities around the customer. (Love et al, 2008) CRM is a holistic strategic approach to managing customer relationships in order to create shareholder value. (Payne, 2006) In other words, CRM simply is Information-enabled relationship marketing.

Tourniaire (2003) defines CRM as it stands for Customer Relationship Management and is used quite loosely to refer to three things:

- The entire field of Customer Relationship Management, that is, all customer-focused functions such as marketing, sales, and customer support.
- The tools used by such functions such as sales force automation (SFA).
- Something in between the two, usually the processes involved in managing the relationships with customers.

CRM is assumed to lead to bottom line benefits for the organization. Advances in information and communication technologies have provided an effective platform to deliver electronic CRM functions. (Love et al., 2008) CRM is also a strategic approach concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments (Payne, 2006). CRM is a comprehensive set of processes and technologies for managing the relationships with potential and current customers and business partners across marketing, sales, and service regardless of the communication channel. (Greenberg, 2001)
CRM Impact refers to the actual benefits businesses receive through the use of their CRM applications. (Love et al, 2008)

1.3 Definition of ERP

ERP is a massive software architecture that supports the streaming and distribution of geographically scattered enterprise wide information across all the functional units of a business house. At the core of ERP is a well managed centralized data repository which acquires information from and supply information into the fragmented applications operating on a universal computing platform. (www.tech-faq.com) For instance, functions such as Human Resources, Supply Chain Management, Finance, Manufacturing Warehouse Management and Logistics were all previously stand alone software applications, generally housed with their own applications, database and network, but today, they can all work under a single umbrella – the ERP architecture.

In today’s world, nearly all multinational industrial corporations use ERP systems to control their enterprise wide architecture, as it chains all the organizational processes together with a central database repository and a fused computing platform. SAP and Oracle are the most famous two ERP systems dominant in corporate world. Their market shares follow as of year 2006: SAP (31%), Oracle (22%) (www.gartner.com)

Many organizations that have already adopted ERP to improve internal efficiencies are now turning to CRM better to respond to individual customer’s needs. Whereas ERP employs customer and other information to reduce costs by improving internal efficiencies in back-office processes related to manufacturing and finance, CRM emphasizes the use of customer information to enhance revenue by increasing external effectiveness in front-office activities including sales, marketing and customer service and support. (Payne, 2006)

1.4 Problem discussion

Based on the background and increasing popularity of CRM, majority of industrial multinational companies today have invested heavily into CRM systems to manage their customer relationships. (www.gartner.com)

However, when it comes to CRM success rate and CRM Impact, the bottom of the iceberg appears. Despite the large number of implementations worldwide, only a small percent are considered successful and have CRM Impact on their organizations. Many recent research and reports indicate that CRM initiatives have a high chance of failure due to several factors of different nature such as: misunderstanding CRM, lack of planning, incoherent CRM strategy, lack of executive support, lack of knowledge management capabilities etc.
According to Love et al. (2008), a plethora of studies have indicated the failure rate of implementing CRM technological initiatives to be as high as 70% to 90% (Giga, 2001; Feinberg et al., 2002; Payne and Frow, 2005). Payne (2006) also presents the combined quotations from Insight Technology Group, The CRM Institute, Giga and Gartner, indicating that 60% of CRM projects end in failure and 69% of CRM Projects have little impact on sales performance.

Newell (2003) mentions that, most reports show only 25% - 30% of companies implementing CRM initiatives feel that they are getting the return they expected. (Newell, 2003) Thus, it is more common for CRM system to fail, than to succeed, and according to recent industry research only 16% of CRM projects provide real, reportable business return on investment (ROI). (Bligh, P., 2004)

1.5 Research Question

Since, CRM Impact refers to the actual benefits businesses receive through the use of their CRM applications. (Love et al, 2008) and with the interesting fact that CRM have an increasing popularity trend and at the same time high failure rate, Authors aimed to investigate the following research question: Which basic elements are important to achieve CRM Impact within the chosen multinational industrial companies?

By investigating and analyzing some experiences from multinational industrial companies, one can somehow comprehend the challenges these companies face, and understand how some of them achieved CRM success and caused CRM impact on their organizations while majority failed.

1.6 Purpose

The thesis aims to describe and analyze CRM Impact within the chosen multinational industrial companies, by using the chosen theoretical framework, and eventually conclude which basic elements are important for CRM Impact when multinational industrial companies are the research focus.

1.7 Delimitations

Since CRM can be described in many ways and can be used by all companies of all industries (Tourniaire, 2003) who have customer relationships, Authors chose to limit the study, focusing to the large companies that has already spent multi-million US dollars of investment into CRM systems: Multinational Industrial Companies.

In majority of multinational industrial corporations, considering the amount of poured investment into CRM, expectations from CRM are higher and CRM Impact is more essential to deliver ROI (Return on Investment). Majority of them also have already established
customer relationships globally and possess already established technological infrastructure to back-up the CRM's technological requirements, which make them more interesting to investigate why they fail to achieve CRM impact despite the vast amount of resources spent on it.

However, it would acquire immense amount of time and resources to conduct research on large number of multinational industrial companies. Thus, authors chose to limit study further, to some multinational experiences, more specifically: five multinational industrial companies for this research.

1.8 Target group

By providing an investigation for CRM Impact, derived from the critical literature review and real cases from some multinational industrial experiences, this thesis primarily targeted to serve to all students and researchers in Mälardalen University as well as to Sweden Education through DiVA database which is connected to 24 universities in Sweden. It is possible that this study will increase interest on CRM field for students and researchers alike, who may choose to go deeper into CRM studies.

The thesis can also be reviewed by all multinational industrial corporations who are interested in benchmarking or reviewing some counterpart experiences as well as increasing overall awareness of important basic elements of CRM impact within their organizations. For example, the company "Westinghouse" supported and used this thesis to increase knowledge of CRM within their organization before investing to a CRM system.

The company experiences in thesis are provided as five cases, as well as an extra managerial case "Westinghouse" in appendix which will provide additional insight for the readers.

1.9 Reference System

"Referencing is a standardised method of acknowledging sources of information and ideas that you have used in your assignment in a way that uniquely identifies their sources." (Curtin University of Technology) The authors of this report have been using Harvard APA (American Psychological Association) referencing system. Authors have cited the references in the text, in brackets, first giving the name of the author and the year of publication. However, page numbers are removed from brackets to provide readers a smoother and less confusing reading experience. In-text references have been supported with reference list of all sources used in the research. Reference list is arranged in alphabetical order, by the name of the author, or first author, if there is more than one author. After the author, the year of publication is given in brackets, the title of the book, followed by the publisher and the place of the publication. In the case of journals and articles, authors included following information; author's name, year of publication, title of article or journal, volume and issue number of journal. Concerning electronic sources, authors provided the names of the web addresses and the exact dates of accessing the information.
1.10 Structure of the thesis

The structure of the thesis is heavily influenced from Fisher’s (2010) guidelines that specifically address business students. Fisher (2010) also states that this is an appropriate structure designed for an academic audience rather than a managerial audience, thus making it ideal for a bachelor thesis and academic readers primarily.

(a) Chapter I, Introduction:

In this chapter, authors provided a general background of CRM and the main problem. They explained the focus of the study and research question as well. The research question is defined and delimitations are set.

(b) Chapter II, Critical literature review:

In this chapter, authors identified the fields of the literature that are used to investigate the research question. The connections of the literature topics are explained and why they are relevant for the research question. Literature is evaluated and leading authors of the particular fields are identified including brief critique and suggestions for the reader.

(c) Chapter III, Research methodology and methods:

In this chapter, the research methods used for the thesis are explained and justified. The methodological stance is also chosen.

(d) Chapter IV, The theoretical framework:

In this chapter, the chosen main theoretical framework is presented and its relevance to the research question is explained in detail.

(e) Chapter V, Presentation and Analysis of findings:

In this chapter, company cases are presented without any comments from the authors, directly summarized from the qualitative interviews. Then they are analyzed with the support of the theoretical framework and literature review.

(f) Chapter VI, Conclusion:

In this chapter, research question is answered.
1.11 Research Model

Here is the demonstration of how the research is conducted:

**GATHERING DATA**
- Prepare questions
- Executive Interviews
- Empirical Data

**INCREASING KNOWLEDGE**
- Further Literature Review
- CRM Market Reports
- Material from CRM Vendors

**Analysis**

**Conclusion**

*Figure 1, Research model (created by authors)*
First, the topic field is identified and a suitable theoretical framework is chosen as well as the method to be used.

Based on theoretical framework and chosen method, interview questions are structured. At the same time, to understand theoretical framework more accurately, additional literature is reviewed.

At the time of data gathering through executive interviews, market reports and materials from CRM vendors are also reviewed, to be able to have the market knowledge to ask additional spontaneous questions during interviews in order to understand company’s CRM situation and circumstances more precisely.

Finally, Analysis is conducted with the help of theoretical framework, collected empirical data and knowledge obtained during the research period.

Afterwards, the research question is answered with Conclusion.
CHAPTER II

This chapter summarizes the types of literature used to review and why certain authors and resources are chosen specifically for this study.

2. Critical Literature Review

The entire book literatures mentioned under this chapter are reviewed through library and e-library (electronic library) of the Mälardalen University. The majority of journals and scientific articles, with the exception of few, are also found via databases such as DiVA and ELIN of the Mälardalen University. Few scientific articles, reports and resources such as Gartner and Forrester are reviewed through the Internet.

Following figure demonstrates a mapping of literatures that authors have used to write this thesis:

![Figure 2, Mapping of literature (created by authors)](image)

In figure 1, the construct areas demonstrate the amount of books/journals reviewed for that particular topic/field. In this case, CRM Literature is used and reviewed more than any other construct, while on other hand only three to four publications are read on E-CRM, making it the least used resource.
2.1 CRM Literature

When the research subject was chosen, as a first step, authors have primarily focused on what CRM is and understanding the basics of CRM as well as its connection to Relationship Marketing and Customers. A number of potential CRM authors have been identified through the school library, supervisor’s advice and review of references from other master thesis on CRM field. Among the many authors, Payne A. (2006), Bligh P. (2004), Tourniaire F. (2003), Swift R. S. (2001) are chosen as leading figures of CRM literature.

Tourniaire (2003) explains CRM in very a simple way that any reader can understand, however his approach was found too much focused on practical advices, assessments and metrics, in a sense that, his publication of CRM is made for company personnel and managers rather than academic readers. However, the simplicity of the publication and rich content of practical examples makes it a great book to begin the CRM subject.

Payne (2006) and Bligh (2004) are chosen because of their immense knowledge on CRM as well as detailed arguments of how CRM is evolved from Relationship Marketing. Authors also found that their publications focused more on strategic approach to customer relationships. Their content is supported by many models, which makes easier for reader to understand a holistic view of CRM process and marketing connection. Payne (2006) for example explains CRM through a cross-functional process approach but excludes IT side of CRM such as knowledge management.

Thus, Swift (2001) is chosen to understand the IT side of CRM in detail. Swift (2001) explains CRM with all IT and technological aspects including knowledge management and data warehousing, even goes into ROI (Return on Investment) and economic aspects briefly. But, overall, Swift’s approach is a bit advanced for casual readers, but contains essential information to identify basic elements needed to achieve CRM impact.

Newell (2003) is chosen as an opposition argument to CRM, as he argues that CRM is not customer-centric enough and that’s why it’s subject to fail. His views on CMR (Customer Management of relationships) are reviewed but found weak when considered for multinational industrial companies. His criticisms and arguments are found to be more relevant to the E-CRM field which is a more internet-based form of CRM.

Beside these authors, a vast number of journals and websites on CRM are reviewed by authors of thesis to understand CRM subject with all aspects. Some additional content is also received from leading CRM vendors: Oracle and salesforce.com, mainly from their Marketing & Sales departments, but they did not have academic value, thus not used within the thesis, but only to increase knowledge of authors.

Latest reports of well known institutions: Gartner and Forrester are reviewed to identify the key vendors of the CRM market as well as key functionalities of today’s CRM systems. This
knowledge is used to understand the interviewees better while conducting interviews for the company cases in Chapter V, but not used directly within the thesis.

2.2 Marketing Literature

After authors are informed about CRM, second step was to go deeper into relationship marketing, the origins of CRM and how it evolved from Relationship Marketing. Marketing Gurus such as Kotler, P. (2006) and Grönroos, C., (2001) publications are reviewed as well as Christopher et al. (1991) and Ambler T. (1996) to understand the origins of CRM. The reason to go deeper into relationship marketing was to understand the strategic aspects of CRM and how general marketing concept is connected with CRM.

2.3 Research Methods & Methodology Literature


2.4 CRM Impact Literature

Authors could not find much literature written specifically on CRM Impact, which is a term sometimes defined in different ways by different authors. Similar definitions can be like: CRM Nirvana (Tourniare, 2003), or CRM Success (Payne, 2006, Swift, 2001). Jutla et al. (2001) on the other hand, identifies CRM impact as the ongoing performance, costs, and effectiveness of CRM initiatives.

But researchers like Love et al. (2008, 2009) or Croteau and Li (2003) directly used the term CRM impact on their research in a definition that CRM Impact refers to the actual benefits businesses receive through the use of their CRM applications. (Love et al, 2008) They explained that these benefits are received through satisfying categorized constructs of the model they used, which can be identified as "categories" or "elements" to achieve CRM Impact. Thus, their research models are found suitable and chosen for the main theoretical framework of this thesis, to be used to describe and analyze CRM Impact within the chosen multinational industrial companies.

Specifically Love et al. (2008)’s “CRM Impact Research Model” is chosen as primary conceptual framework due to fact that the focus of their research was construction industry that use ERP and CRM systems simultaneously, which is exactly the case with today’s multinational industrial companies as well.
2.5 E-CRM Literature

While reviewing CRM literature, E-CRM, which is a more internet-based form of CRM, is also reviewed in parallel to understand how CRM is integrated with the internet, and E-CRM’s role to achieve CRM Impact. Publications of Swift R. S. (2001), Greenberg, P., (2001, 2004), Gay et al. (2007), and Fjermestad J., (2006) are reviewed for this purpose.

2.6 IT and Technology Literature

The chosen theoretical framework for CRM impact required additional knowledge on Technological Readiness, in addition to the fact that CRM systems today require certain amount of technological know-how, thus further literature is reviewed by authors to understand the technological requirements of CRM for multinational industrial companies and ERP-CRM connections.

Swift R. S. (2001) is still considered a leading figure on this field as his teaching approach was already IT focused. While Iacovou et al. (1995) influenced the main theoretical framework of the thesis with their “Adoption and Impact of technology framework” applied to CRM. Raj, A. and Bajwa, D.S. (1997) and Buchel, B. S. T., (2000) is also used to receive additional insight of technological significance to achieve CRM Impact.

2.7 Knowledge Management Literature

The chosen theoretical framework, Love et al. (2008) identified Knowledge Management Capabilities, to be the most significant construct to achieve CRM Impact. Thus, authors decided to go further review and research on Knowledge Management topic to understand overall significance of KM to achieve CRM Impact in multinational industrial companies.

Swift R. S. (2001) again here was the leading figure for explaining KM capabilities and CRM connection, while Wong K. Y. (2005), Alavi M. and Leidner D.E. (2001) is reviewed to increase further knowledge on KM.

Nonaka I. and Takeuchi H. (1995) is also reviewed to understand the differentiation between explicit and tacit knowledge, and how the knowledge can be exploited within CRM, by turning tacit knowledge into explicit knowledge.
CHAPTER III

*In this chapter, authors explained which academic methods are used to conduct this study, as well as the scientific stance they chose to maintain.*

3. Method

3.1 Research design

Research design is something you use to answer the research question, rather than something that exists in splendid isolation (Rugg and Petre, 2006). Authors determined that the way to answer the research question with the chosen delimitations will be most favourable by conducting an Exploratory Qualitative Investigation.

Initially one might assume that qualitative research is simply defined as a research that does not use numbers or statistical procedures; however defining qualitative research is not as straightforward as it might seem (Cassell et. al., 2006). Qualitative method also enables marketers to get under the skin of the respondent to understand their attitudes, interests and opinions that shape their lifestyle and behavior (Gay et. al., 2007). Since qualitative methods have had long history within business and management research, diversity has developed concerning different range of approaches and varieties in forms and uses of research. Qualitative data is deemed to be more scientific, rigorous, and reliable whilst producing more representative samples of the population under investigation (Gay et. al., 2007).

Qualitative method enabled us to broaden our horizons and dig deeper into the topic and collect all the necessary information from the companies. Curiosity and follow-up questions served the exploratory research since our investigation may give us unexpected responses or even reveal more important issues than those already known. The acquired knowledge from the literature review and the interviews makes it possible to incorporate, analyze and answer the research question with the help of the theoretical framework.

3.2 Scientific approach

There are different approaches the researcher may choose from, depending on which research philosophy he has (Lindfors, 1993). The most widely used approaches are deductive and inductive research approach. “Deduction is when the theory controls the study, i.e., the study is based on already existing theory. Induction can be said to go the opposite way.” (Bryman, 2004)

Authors have chosen inductive approach on the study because the general inductive approach provides an easily used and systematic set of procedures for analyzing qualitative data that
can produce reliable and valid findings. Although the general inductive approach is not as strong as some other analytic strategies for theory or model development, it does provide a simple, straightforward approach for deriving findings in the context of focused questions. (D.R. Thomas, 2003)

Since the main purpose of this study is to describe and analyze the chosen multinational industrial companies and conclude which basic elements are important for CRM impact. The description also needed to contain some type of categorization for these elements, which is the most adequately completed through the use of the chosen theoretical model. Authors have chosen a theoretical model which include already categorized elements that are essential to achieve a satisfactory level of CRM impact on organizations. This model guided the disposition of empirical findings and enabled authors to analyze the findings from a perspective relevant to the research question, in well-defined and categorized way.

### 3.3 Scientific stance

Influenced by the teachings of Fisher (2010), authors of this thesis chose to keep a stance between “Positivism” and “Realist” stances. The reason to keep this stance derives from the fact that authors had limited time and resources, thus unable to conduct a large quantitative research like the chosen theoretical framework.

Fisher (2010) mentions that, the intention of positivism is to produce general (sometimes called ‘covering’) laws that can be used to predict, in terms of probability at least, if not with absolute certainty. Realist research on the other hand is an approach that retains many of the ambitions of positivism but recognises, and comes to terms with, the subjective nature of research and the inevitable role of values in it. Fisher (2010) adds that, researchers with realist stance recognise that things such as ‘strategy’ and ‘job satisfaction’ cannot be measured and studied in the same way as can chemical and physical processes. However, they do believe that a worthwhile attempt can be made to fix these subjects and treat them as if they are dependent variables.

### 3.4 Data collection

All empirical data is collected from qualitative interviews with multinational industrial company executives who have the utmost authority over CRM in their corporations worldwide. The interviews are also enriched with spontaneous questions, in addition to the chosen questionnaire prepared specifically for the interview that contains 30 questions.

Spontaneous questions were essential to correctly interpret the situation in that particular company, in case of situations that they cannot find the direct answer to a questionnaire question. Thus, the interviews are conducted as semi-structured interviews where a list of questions sent in advance to the interviewee by email, and are also informed of a possibility to expand it with spontaneous questions.
The interviewees also had the list of questions during the entire interview period as Gillham (2005) suggested that, the interviewee should have the list of questions in front of them. The list of questions has several functions for the respondent – they can see the structure of the interview, can reflect on the direction of their answers – but they can also ‘see’ how long the interview will last.

Generally, all interviewees showed great interest on the research and seem to enjoy the interviews since all the interviews are extended by fifteen minutes to one hour more than originally scheduled time period.

3.4.1 Primary Data

Authors collected primary data through their semi-structured interviews. The interview questions are mainly prepared to determine the satisfaction levels of constructs from the theoretical framework, however also included additional questions to understand their CRM situation better, such as the basic reasons of why CRM is chosen and how much it is used within the organization. The list of semi-structured questions used in interviews is presented in the Appendix of this thesis, with constructs they correspond to in parenthesis.

3.4.2 Secondary Data

Secondary data is only used to increase the knowledge of the authors on the research field, such as books, journals and Internet. (Fisher, 2010) No empirical data is collected from secondary sources except the descriptions of the chosen companies.

3.5 Company Selection

Authors used Internet for acquiring contacts and gathering information about multinational industrial companies operating on the market today, which then evaluated to be interviewed. Authors’ criteria of company choice were based on factors such as:

- Reputation (how well-known the company is)
- Communication advantages (simplicity to reach interviewee by phone)
- Location advantages (possibilities for a face to face interview)
- Time availability (possibilities to conduct a long and deep interview rather than a short phone call)
- Confidentiality of information (possibilities to use the data in the thesis)

After many contact sessions and evaluations, following multinational industrial companies are chosen for the empirical data: ABB, VOLVO CE, OUTOKUMPU, FLIR, and TELGE ENERGI.
A case of WESTINGHOUSE also is considered to be added to empirical data but dropped due to fact that they do not have a CRM system yet, thus there is no experience that they can share with authors yet. However, they were determined to understand important basic elements and pitfalls of CRM Impact before investing into a CRM system, and also showed great interest to hear the CRM stories of other multinational industrial companies from an academic perspective. Thus, WESTINGHOUSE contributed financial and material resources to this thesis.

In return for the contributions, authors prepared a managerial report for WESTINGHOUSE, in parallel with the bachelor thesis. This report specifically focused on their problems and aimed to identify their CRM Impact needs tailored for WESTINGHOUSE’s structure. The report can be found in Appendix of this thesis as a managerial report for further review for the readers.

### 3.6 Validity and Reliability

In this thesis, authors aimed to collect rich primary data directly from the source: the users of CRM in the chosen companies. However, still CRM knowledge and satisfaction levels might have tendency to change from manager to manager, one manager in same company might defend that their CRM is satisfactory while other might answer its terrible. Thus, determining true satisfaction levels of constructs might not be possible. To avoid this, authors decided to collect primary data from the highest level company executives who are in charge of CRM worldwide in their corporations. Even though, there are times that authors needed to use their own judgements to determine the satisfaction level of the constructs of the chosen theoretical framework. To increase the reliability of their judgements, authors have aimed to increase their knowledge on the CRM field as much as possible.
CHAPTER IV

This chapter introduces the chosen theoretical framework that will be used to describe and analyze the chosen multinational industrial companies.

4. Theoretical Framework

After examination and evaluation of many models, authors chose to use the CRM Impact Research Model (Love et al., 2008) to investigate the research question. Love et al. (2008) state that their model’s base design is a modified version of Iacovou et al.’s (1995) “Adoption and Impact of Technology Framework” and applied to CRM.

Love et al. (2008) used this model specifically to identify critical success factors of CRM for material suppliers in Construction Industry, while Croteau and Li (2003) used this very same model to compile critical success factors of CRM in Canadian Organizations derived from research on 57 large organizations in Canada.

Although authors of this thesis have not aimed to identify critical success factors of CRM, the model is found to be very useful to investigate the research question of this thesis as well.

Figure 3, CRM Impact Research Model (Source: Love et al., 2008)
Love et al. (2008) argues that while designing the model, it has been influenced from different models of different authors. According to Love et al. (2008) the operational benefits, strategic benefits and technological readiness constructs of the CRM impact research model were adopted from Iacovou et al.’s (1995) electronic data interchange (EDI) adoption and impact model. The top management support construct was derived from Rai and Bajwa’s (1997) executive information systems adoption model. The Knowledge Management Capabilities construct developed from an adapted version of the Balanced Scored devised by Kaplan and Norton (1992) and complemented with the Alavi and Leidner’s (2001) Knowledge Management Capabilities Framework. Finally, the CRM impact construct is based on Jutla et al.’s (2001) original customer metrics framework.

4.1 Constructs of the Model

4.1.1 Operational Benefits

Love et al. (2008) have identified two major categories of operational benefits – direct and indirect (Iacovou et al., 1995; Irani and Love, 2001). Indirect benefits are typically strategic in nature as they are difficult to quantify, whereas direct benefits are operational in as much as they can be more readily quantified and focus on improving the internal efficiency of the business. According to Goodhue et al., (2002); Love et al. (2008) direct and indirect operational benefits may include:

- improved response time to customer requests for information;
- delivered product meets customer requirements;
- reduced costs of buying the product/service;
- reduced costs of using the product/service;
- immediate access to order status;
- greater breath of solution options; and
- more responsive technical support.
- increased market share,
- increased profit margin,
- increased revenues,
- reduced costs of buying and using products and services, and
- reduced costs of customer handling

Croteau and Li (2003) explains operational benefits construct as direct perceived benefits such as improved front-office efficiency and productivity in sales, marketing and customer support, and service functional units are perceived to shorten the organizational sales cycle, marketing cycle, and customer support and service cycle due to better employee productivity. Furthermore mention that, improved operational efficiency and productivity will help decrease costs related to all customer-related activities.
Iacovou et al. (1995) also defines operational benefits as the operational savings due to the improved internal efficiency of the organization.

### 4.1.2 Strategic Benefits

According to Love et al. (2008), strategic benefits are associated with the competitive advantage due to the impact of CRM on business processes. (Jutla et al. 2001; Goodhue et al., 2002; Love et al. 2008) which may include certain benefits such as:

- increased customer satisfaction (retention),
- improved understanding of the customer,
- ability to better predict what contributes to improved customer satisfaction and customer behaviour,
- accessing new customer segments,
- achieve greater customer control, and
- achieve greater customer loyalty

Croteau and Li (2003) also supports that strategic perceived benefits include an improved and accurate understanding of the customer, the availability of strategic business decisions that model and predict future customer satisfaction and customer behaviour, and the resulting opportunity to increase organizational profits. Furthermore, mention that, possessing customer knowledge will assist an organization to access new customer segments, achieve greater customer loyalty among its clientele, and provide customized products or services that mirror customers' needs. Thus, these capabilities would also help an organization gain a competitive edge over its competitors. (Croteau and Li, 2003)

### 4.1.3 Top Management Support

Customer relationship management initiatives imply the implementation of customer-centric business strategies, a redesign of functional activities and work processes. (Love et al. 2008) Like any technology led initiative, management support is critical for its success (Jarvenpaa and Ives, 1991). Love et al. (2008) suggests that CRM technological initiatives, supported with top management, are able to realize actual benefits.

Tourniaire (2003) also states that the executive sponsor defines the vision for the project and one cannot carry out a successful CRM project without the active assistance of an appropriately placed executive, as CRM projects need a champion at the executive level to succeed. Top management support is, therefore, proposed to be a critical factor that influences the impact of CRM initiatives and diminishes the resistance to change. (Raj and Bajwa, 1997)

### 4.1.4 Technological Readiness

Love et al. (2008) state that technological readiness refers to the level of technological resources that are available to an organization and usually CRM initiatives are known to be
costly and complex innovations that demand advanced technological skills, integrated information services and costly information system infrastructures.

Iacovou et al. (1995) explains that Technological Readiness refers to the level of sophistication of IT usage and IT management in an organization while Organizational Readiness refers to the level of financial and technological resources available to the organization. Since the thesis research question concerns about multinational industrial companies, majority of them already have financial and technological resources secured, thus analysing the level of financial or technological resources is not necessary. In this thesis, the construct is taken as a Technological Readiness construct just like the same way Love et al. (2008) modified it.

Croteau and Li (2003) state this construct as a necessity. Since CRM necessitates a high level of integration between all contact points, a visible supply chain, encompassing sales, support and service, and marketing functions and a solid IT infrastructure.

### 4.1.5 Knowledge Management Capabilities

Initially, KM appeared to be adopted only in large, multinational and international companies and hence, many organisations are exploring the field of knowledge management (KM) in order to improve and sustain their competitiveness (Wong, 2005). Knowledge management capability is the ability of an organization to capture, manage, and deliver real time authenticated customer, products, services information to improve customer response and provide faster decision-making based on reliable information (Alavi and Leidner, 2001).

Love et al. (2008) states that KM capabilities are inherently based on three factors, which are information, technology and the culture of an organization. Information based capabilities address the need for access to customer and competitor information, product and market information activity-based costing, human resource information, and the current financial status of the business. Technology based capabilities examine issues such as wider bandwidth, email suites, IT infrastructures, interoperability of existing data systems, application integration, and information retrieval. Finally, culture based capabilities refer to the facilitation of change and the promotion of knowledge sharing. Croteau and Li (2003) also state that a survey conducted with executives of 50 Vanguard Organizations emerged very similar results, dividing the KM capabilities into three perspectives which are information-based, technology-based and culture-based.

### 4.1.6 CRM Impact

Both Croteau and Li (2003) and Love et al. (2008) mentions that the CRM Impact construct is based on Jutla et al.'s (2001) original customer metrics framework. These measurement items have been specifically identified as metrics that can be used to measure, monitor, and infuse feedback to assess the performance of CRM technological initiatives. These items were found to be highly consistent with items from Iacovou et al.'s (1995) technology
adoption and impact framework, but Jutla et al.’s (2001) customer-focused evaluation framework is preferred due to its high pertinence to measure CRM impact as the ongoing performance, costs, and effectiveness of CRM initiatives. Here, CRM Impact refers to the actual benefits businesses successfully receive through the use of its CRM.

The CRM impact construct is also a second-order factor made of the two sub-constructs that look into the internal and external actual benefits of CRM technological initiatives. The internal focus was made of six items and the external one of four items, all rated on a Likert-type scale varying from 1 to 5 (very low to very high), with a not applicable option. (Croteau and Li, 2003)

Overall, both Love et al. (2008) and Croteau & Li (2003) mentions that the critical success factors of CRM technological initiatives are defined as all the constructs achieve satisfactory results to make CRM implementation a success.

Although both Love et al. (2008) and Croteau & Li (2003) also researched the relationships and links between these constructs, authors of this thesis limited the study by only investigating the existence and satisfaction levels of those constructs within the chosen multinational industrial companies.

Authors of this thesis also avoided using methods of analyzing statistics, like Likert Scale Ratings or Partial Least Squares (PLS), due to their choice of exploratory qualitative investigation method. While Love et al. (2008) sent 150 questionnaires, Croteau & Li (2003) sent 941 questionnaires for their research.

Due to limitations of the resources and time, authors of this thesis avoided to conduct a large scale quantitative investigation of multinational industrial companies. Instead, authors aimed to provide readers interesting and rich primary data from qualitative interviews from five multinational industrial companies, and with the help of the theoretical framework and gathered literature knowledge, determine the satisfaction levels of the constructs, describe and analyze the chosen companies’ CRM impact situation.

4.1.7 Internal and External Focus

Internal Focus represents the organizations’ level of satisfaction due to the implementation of CRM, and refers to the changes in an organization’s business strategy, structure, business processes, metrics, compensation, skills, and technology. (Croteau and Li, 2003)

While External Focus covers the customers’ level of satisfaction due to the implementation of CRM, deals with customer definition and segmentation, understanding of customer needs, expectations, feedback, communications, and customer-focused metrics. (Croteau and Li, 2003)
CHAPTER V

5. Empirical Findings and Analysis

In this chapter, qualitative interviews are summarized into empirical data as company cases. The companies are described first, then the collected data is divided into categories like the constructs of the chosen theoretical framework. Then they are analyzed individually with applying theoretical framework on the collected primary data, to determine the satisfaction levels of the constructs.

5.1 CRM in ABB Sweden

ABB is a Swiss-Swedish multinational corporation, operating mainly in the power and automation technology areas. ABB is one of the largest engineering companies as well as one of the largest conglomerates in the world. ABB has operations in around 100 countries, with approximately 117,000 employees, and reported global revenue of $31.8 billion for 2009. (www.abb.com)

According Kristina R. Andersson (Support and Master Data Manager for ABB Service, Sweden), ABB has been using SAP CRM system (CRM software of the company SAP) since 2007, integrated with a middleware to their SAP ERP enterprise system. Their SAP CRM system is in current form, only used in service/maintenance division of spare parts mainly for orders, invoices and planning of services. ABB Sweden has around 200-250 CRM users working only with Swedish market and approximately 40% of CRM users are working with CRM actively and continuously every day. ABB do have future plans to upgrade their SAP CRM version to be able to have more functionality and eventually use CRM in Marketing & Sales as well, as requested by their marketing & sales employees.

Their main decision to implement CRM was the willingness to have one standard system in ABB worldwide to ease the reporting and training process. As an example, Andersson mentioned that, today even with the addition of CRM, ABB Sweden is operating on 25 different systems, which causes numerous problems.

According to Andersson, before they implemented CRM, they did conduct an internal research and interviews with employees regarding the need. But when choosing which system to implement, they did not look into other options or CRM systems out in the market. Their choice of CRM was SAP mainly because their ERP is SAP as well, a decision made by top management.

ABB’s reason to use CRM with only such limited functionality today is their dissatisfaction of the current SAP CRM system’s functionalities and user interface. Even when working with
a main functionality such as orders, Andersson states: “If it is a big order, we take it out to excel to work with it. Because even in excel you have more options to work with.” Since implementation, employees of Marketing & Sales showed strong resistance not to use the SAP CRM until today where they agreed to use it only if it’s been upgraded to latest version. Andersson adds: ‘We don’t use all functionalities of our CRM system, because we are not satisfied with it. We are going to upgrade, functionality is much better in new version.” In addition, SAP CRM’s vendor, company SAP AG, does not support ABB’s 3 year old version of SAP CRM anymore, leaving ABB with no option but to upgrade their CRM.

5.1.1 Operational and Strategic Benefits

Despite the dissatisfaction of the current SAP CRM system, Andersson mentions that ABB has been using their CRM system for:

- creating and tracking of orders for services
- creating and tracking invoices for services
- monitoring and instant access to customer maintenance and service contracts
- planning and time registrations for field services
- planning and time registrations for in-house repair
- operating for remote locations in case of employee absences

In operational terms, CRM in ABB is not used with marketing or selling of spare parts. When ABB Sweden sells spare parts, they use their ERP system to operate on, but when they conduct a service with spare parts, they use their CRM system. So, SAP CRM is limited to operate only on service and maintenance related orders and invoices. The reason for this was the resistance from Marketing & Sales employees towards SAP CRM until today. However, according to Andersson, after 3 years of CRM practice, today Marketing & Sales employees have understood the efficiency and benefits of CRM, and are requesting to upgrade the current SAP CRM, to be able to start using it for marketing and sales functions as well.

ABB also have all their customer maintenance and service contracts stored within the CRM system for monitoring and instant access, but they use another system to write the contracts as the contracts are created by Marketing & Sales. One of ABB’s wishes is the ability to write the contracts in CRM as well, moving the whole process into same system.

They also use their CRM system for planning of field services and in-house repairs, mostly for organization and registration of service times and automation of service intervals. The employees working on these functions are called planners, who have direct contact with customers for an efficient service. However the efficiency is still not at desired level, Andersson states:”There’s many good functionalities in CRM like Installed Base, but we don’t use it today.” Installed Base Management is a process that manages products that need to be serviced in their entire product life-cycle. It takes into account their respective configurations by customer, location, and product type and integrates it into service orders, complaints, repairs, warranties, and counters. (www.sap.com) ABB is waiting for the upgrade to new version SAP CRM to start using Installed Base Management function.
Another key CRM function that is used in ABB is the ability to remotely take control of a customer or a job temporarily in cases of employee absences. Andersson gave an example: "If a person in Stockholm is sick, I can do his job here in CRM from Västerås and customer will not even feel it. This covers the whole Sweden, so it’s very convenient especially for covering locations like Lulea, far north of Sweden." In other words, with this CRM function, ABB has a stabilized customer response time in all Sweden, regardless of obstacles caused by employee absences.

According to ABB’s Competitive Intelligence, none of their competitors in Sweden is using CRM for services but it is not considered as a strategic advantage. Andersson does not believe that CRM has improved ABB’s competitiveness more, as revenues did not change much since the CRM implementation, but the way they are doing business is changed, and adds that efficiency is still same compared to before because they are not using CRM in whole way.

5.1.2 Top Management Support

Andersson states, ABB Sweden had a very good customized system even before CRM, but top management stated that they cannot run a specifically designed system only for service in Sweden, thus standardization in all ABB worldwide is needed. The reason of standardization process is mainly to eliminate obstacles caused by differences of time, currency and reporting styles between the countries ABB operates in, thus contributing to consistency in organization. Another reason of standardization is to ease employee training process, by reducing the number of systems and functions required to learn, one system can contribute faster employee adaptation, higher efficiency and easier relocation of personnel around the globe.

But in ABB, top management was only involved in CRM implementation decision and the choice of the system. They did not actually used CRM and still do not use it today. Andersson states: "During the implementation, the management was not there with us, they were just watching. I said to them: We took the train and you are at station, but the train is going now and you are still at station. Our top management thinks project management should fix CRM, and they can just sit and watch."

According to Andersson, in ABB’s 3 year CRM experience, the greatest challenge was to change the mind of the management. She stated that top management support on CRM was regarded as poor since the beginning, as they wanted standardization of the ABB operational systems worldwide, but did not want any involvement in implementations and did not want to change the way they work on management level. But she mentions that it is changing now: “After 3 years, they begin to understand the benefits of having more information in same system and they want to see more functionality now.”

5.1.3 Technological readiness and Knowledge Management capabilities

For a long time, ABB is using SAP ERP enterprise system in nearly every unit operating in the world. They use SAP ERP system for functions such as Marketing & Sales, Distribution,
Project Management, Financial Controlling, Material Master Data Management and Human Resources which are integrated with the ERP system by default. However, SAP CRM system works as a separate function and needed a middleware to be integrated to SAP ERP. The information flow between two systems is interactive and only has minor problems. When a data is entered into SAP CRM, it is automatically transferred to SAP ERP as well, thus SAP ERP is always updated and remains as the master data warehouse which contains all knowledge. Information in SAP CRM and SAP ERP is constantly monitored by administrators and planners to prevent inaccurate information and human mistakes, so information in ABB’s CRM is considered very accurate. Although SAP CRM’s user interface is criticized and faced strong resistance by ABB Management and Marketing & Sales, it is still considered better compared to SAP ERP. Andersson states: “Some units don’t use ERP at all, because it is easier to work on CRM.”

5.1.4 Final words on CRM

As of today, ABB uses CRM with very limited functions and according to Andersson it is related to current CRM system’s quality and capabilities. CRM in ABB is not used by top management or marketing & sales departments, due to employees’ resistance and dislike of current version of SAP CRM; however they showed willingness to use CRM if it is upgraded to latest version. So, ABB has plans to upgrade their SAP CRM to latest version in near future, to be able to achieve more benefits and functionality. When asked about overall CRM experience, Andersson states: “CRM has a bad reputation in ABB now because we have had problems with CRM due to a bad release. I think CRM is a very good system, but we are not lucky that we have a bad release.”
5.2 Analysis of CRM in ABB Sweden

Figure 4, CRM Impact Research Model for ABB (modified by authors based on CRM Impact Research Model, Love et al., 2008)

5.2.1 Operational Benefits

According to Love et al. (2008) the operational benefits is divided into two as: direct benefits (benefits that increase internal efficiency and productivity) and indirect benefits (benefits that are strategic in nature). ABB currently uses their CRM system on tracking of orders and invoices, service contracts and time registrations which is found compatible with Love et al.(2008)'s findings such as improved customer response times, reduced service costs, immediate access to order status, more responsive technical support and reduced costs of customer handling. Although ABB only uses CRM for service and maintenance division, they have standardized their certain business functions in CRM, eventually leading to labor work reduction and cost reduction on performing these functions.

The standardization also contributes to improved service quality and easier planning of conducting service to customers, since it’s been repeated in same way every time a service is performed, which can also be categorized as one of the indirect benefits, thus it leads to customer retention and increased customer satisfaction in long run. The standardization of recording each action in CRM also shows on which parts they have service gaps and which
parts to improve for a better service. CRM also enabled them a better control of service in all Sweden, for example an absence of an employee can be easily covered by another from a remote location and new employees face no difficulties of taking over or face no adoption problems and reduction in service quality.

Operational benefits construct for ABB is considered fairly satisfied since CRM clearly increased their internal efficiency and customer control, but the construct is still missing a lot of elements as ABB is not using CRM in Marketing & Sales or utilize the collected data for strategic decisions yet.

5.2.2 Strategic Benefits

Strategic benefits of CRM in ABB are minor and overall lacking serious progress. CRM is clearly seen as an IT-tool more than a business tool since it’s not being used by Marketing & Sales and only for certain functions of services, thus they cannot evaluate the true increase in customer satisfaction or retention rate even after three years of the implementation. Tourniaire (2003) mentions that, CRM projects cannot succeed without strong and direct business user sponsorship, guidance and feedback.

According to Love et al. (2008)’s findings they should have an increased customer satisfaction, improved understanding of customers and ability to better predict the customer needs and demands, which is partly true in ABB’s case if service and maintenance is the case, but still they are missing a large part of benefits that can be exploited from CRM to increase their competitiveness and customer control. Since ABB has plans to use CRM in Marketing & Sales in near future, this construct in ABB has strong potential to be fixed and satisfied with right actions. However as of today, the construct is considered as nearly non-existent.

5.2.3 Top Management Support

Another essential construct for CRM impact is the top management support. As Love et al. (2008) states and with many CRM book authors and CRM experts agrees that strong top management support is one of the most important basic elements of CRM success. As ABB interviewee confess, CRM in ABB is seriously lacking top management support, and perhaps it can be considered as the main reason why CRM in ABB is not developed and expanded much as of today, since they have been using it for three years. Love et al. (2008) states that to be able to realize the actual CRM benefits, the CRM initiative should be supported strongly by top management and actually used, not only to motivate or monitor the employees, but also to empower their strategic decisions by reducing their time consumption on certain actions such as waiting for reports, or taking immediate action for a opportunity. This construct in ABB can be easily considered as lacking progress and in need of substantial improvement.
5.2.4 Technological Readiness

At first look, ABB can easily be considered as technologically ready for CRM as ABB have vast amount of resources deliberately dedicated to technology and training of personnel, however Love et al. (2008) indicates that that an organisation might possess the best IT infrastructure but not use it adequately to support and manage its customer relationships, i.e. it is simply not being customer-centric. Consequently, the actual benefits from using CRM are minimised since the level of knowledge will be minimal. (Love et al., 2009) However, Love et al. (2008) also pointed out that technological readiness is not significantly necessary to achieve CRM impact, especially in today’s world where many CRM vendors offering services as web based on-demand SaaS (Software as a Service) solutions where hardware and IT maintenance side is handled by the CRM vendors. However, this construct in ABB is considered as satisfied since there are only minor problems with the IT or ERP-CRM integration.

5.2.5 Knowledge Management Capabilities

Love et al. (2009) mentions Knowledge Management Capabilities as the most important critical success factor of CRM and the most significant factor on CRM impact, since each collected information is just an achieve, if it’s not used. The main power of CRM is to automate certain business functions by data mining all collected information and providing guidance to the user in business decisions. Swift (2001)

Knowledge Management Capabilities in ABB however is fairly poor, as they do not use CRM in Marketing & Sales. ABB uses CRM as a new and simplified IT interface for ERP and standardized certain functions to increase internal efficiency and productivity as well as reducing costs for performing maintenance and services. However knowledge is not used for strategic decisions, in other words only maintains small amount of contribution to increase competitiveness or market share, thus ABB is seriously lacking in satisfying knowledge management construct.

5.2.6 CRM Impact in ABB Sweden

By lacking seriously in several constructs, CRM impact in ABB can be considered as clearly not achieved and doesn’t seem achievable in near future. The main missing constructs are Top Management Support and Knowledge Management Capabilities which are found by Love et al. (2008) and Croteau & Li (2003) as the most important two constructs to achieve CRM impact. Andersson also confesses that: “CRM has a bad reputation in ABB now.” ABB believes that with the new version of their current CRM system SAP, CRM reputation in ABB has strong potential to be fixed and improved, and they are hoping to use it in Marketing & Sales as well. However Love et al.(2008) and Croteau & Li (2003)’s findings indicate that, without the top management support and an efficient knowledge management, in other words efficient use of the existing information, regardless of additional
functionalities or IT improvements, CRM impact has high potential not to be achieved in ABB.

5.3 CRM in VOLVO CONSTRUCTION EQUIPMENT in Europe

Volvo Construction Equipment (Volvo CE) is one of the world’s largest manufacturers of construction machines, operating in more than 125 countries mainly through independent and Volvo-owned dealers. Volvo CE is a subsidiary of Swedish multinational corporation AB Volvo which has more than 90,000 employees, and reported global revenue of $28.2 billion for 2009. (www.volvo.com)

The product portfolio of Volvo CE includes articulated haulers, wheel loaders, wheeled and crawler excavators, motor graders, pavers, milling machines, compactors, and a range of compact equipment as well as offering a worldwide service, spare-part distribution and a wide range of attachments for all their machines. Volvo CE’s products are mainly used in general construction, road construction and maintenance as well as in the refuse, mining and forestry industries.

According to Christopher Cassidy (Area Director Customer Support Europe), Volvo CE has been using Microsoft Dynamics CRM (CRM software of the company Microsoft Dynamics) in Europe since 2003, integrated to their ERP system called SAS/AS400, which is a customized enterprise system and regarded as old and outdated. There is currently an ongoing project to change the enterprise system to Microsoft Dynamics AX in near future. Volvo CE is also using SAP ERP enterprise system as well, mainly for accounting functions within the company.

In Volvo CE, each dealer (Volvo-owned or independent) is regarded as a country, in other words each country is also a dealer regardless of the ownership. CRM in Volvo CE is not used centrally with unified structure; instead each dealer (country) has its own customer database and has responsibility over its own CRM management. The policy of Volvo CE top management is to recommend and promote usage of CRM rather than enforcement, and as of today, most Volvo owned dealers use Microsoft Dynamics CRM, while privately owned dealers have either tended to source another CRM or, in some cases, they do not have CRM at all. However, the one’s that use CRM has inconsistency issues as well. The main problem is the variety of efficiency and competence level between dealers. Due to decentralized CRM usage, it varies a lot from country to country and CRM is not monitored or coordinated from Volvo CE headquarters. Cassidy states: “We tend to judge each country separately.”

According to Cassidy, CRM is crucially important especially in Construction Equipment Industry for numerous reasons, thus Volvo CE had a CRM project going on even before 2002, but it failed. So they had to start again on 2002, with Microsoft Dynamics chosen as CRM system.
Their main intentions to implement CRM were to enable all dealers a good quality, reliable CRM system to operate on and to avoid the process of each dealer searching for their own CRM. They also wanted to have more coordination but still leaving final decision up to the dealer, due to business style and cultural differences between countries.

5.3.1 Operational and Strategic Benefits

CRM efficiency in Volvo CE varies from dealer to dealer, but 60% of dealers in Europe are considered by Cassidy as successful users of CRM and using it in departments of Marketing & Sales and After-Sales. Finance departments in Volvo CE are partly involved in CRM activities only in some dealers, mainly registering new customer information into CRM linked in with dealer’s Credit Control System.

According to Cassidy, since the implementation of CRM, certain benefits and functions are clearly identified and used in various dealers such as:

- tracking customer retention
- tracking machine retention
- more targeted marketing (customer segmentation)
- better tracking of opportunities
- increased campaign management efficiency
- forecasting
- simplified and improved process of generating reports
- increased information quality and simplified access to information
- increased competitiveness if well managed

In Volvo CE, customer and machine retention rates has not been followed actively since 2002, but recently, with the use of CRM, they can be monitored and increase/drop rate can be automatically and interactively defined which is regarded as increased visibility and control of customer trends and choices. Retention rates are crucial to identify active customers and guide the direction of marketing, which contributes to a more targeted marketing, in other words, customer segmentation.

Tracking of market and customer opportunities is another CRM function that’s been efficiently used in Volvo CE, which also contributes to decide which market, region or customer to target campaigns. Cassidy states: “If you want make a successful campaign, you must be able to see all the opportunities and all processes involved. CRM provides us visibility and control on campaigns, thus definitely increases our campaign efficiency and competitiveness if it is well managed.”

In some dealers of Volvo CE, tracking of opportunities is also linked with forecasting process in CRM. They have been using it to forecast new machine requirements. But Cassidy adds that efficient use forecasting requires 100% of all offers and quotations for new machines to be included in CRM system. It is then regarded as simple to identify how many offers have been made and how many of them are converted into business. However, there is currently a
lot of diversity between dealers’ CRM usage and majority of dealers are not using CRM for forecasting.

In Volvo CE, there is no central enforcement for standardizing the generation of reports and dealers are responsible to manage the reporting process on their own. However, some dealers are using CRM for generating reports due to simplified structure and easier access to information while others not due to traditional style of doing business which is usually consists of excel charts and tables. Cassidy states: “Due to reporting diversity between countries, if we want to see the overall situation in Europe for example, we would need to call each country one by one.”

According to Cassidy, one of the clear benefits of CRM in Volvo CE is the increased information quality and more simplified access to information due to having one customer database for all departments. According to Cassidy, Volvo CE dealers have had different databases for Marketing & Sales, Accounting and After-Sales and dealers fell into the trap of handling customers with 3 different sources of data which caused many problems. But now with the implementation of CRM, they have all the information in one system, which is also regarded as a better control of customer knowledge.

5.3.2 Top Management Support

According to Cassidy, 60% of European dealers worldwide who are regarded as successful in CRM use have strong and excellent involvement of senior management. But the ones that fail or cannot make a CRM impact have clear evidence of lacking top management support. So, it varies a lot from country to country. As a policy however, Volvo CE headquarters does not put pressure on dealers by enforcing them to use CRM, instead they act more like an advisor, recommending them to use CRM and promoting CRM through demonstrations of best practices or success stories from successful dealers. There is a review process for CRM activities of each country, to compare the level of CRM usage between countries, but there is no interactive and centralized monitoring function of CRM in Volvo CE. Instead countries are encouraged to often contact and learn from each other.

So far, the strategy is regarded as successful in Volvo CE. Although Cassidy states: “In dealers, the level of CRM use by top management is not good overall, varies too much between countries. We have witnessed that senior management support is absolutely crucial to achieve success with CRM. So, sometime in the future we should have a more centralized support, but it will be discussed later.”

5.3.3 Technological Readiness and Knowledge Management capabilities

Volvo CE’s ERP system SAS/AS400, organizes all administrative and accounting functions of Volvo CE and used by all Volvo-owned dealers and some independent dealers. According to Cassidy, just like CRM, there is no enforcement from Volvo management to dealers of which ERP they should use, instead it is motivated by recommendations. SAP ERP is also used by Volvo CE for some accounting functions. Currently, Volvo CE’s CRM system is integrated to their enterprise system, which is scheduled to change to Microsoft Dynamics
AX in near future. Since the CRM Implementation in 2003, with an up-to-date policy, Volvo CE has updated their CRM system to be able to have access to latest functionalities on the market, thus their current version is Microsoft Dynamics 4.0 which is the vendor’s latest version since 2007.

In Volvo CE, CRM of each dealer is managed by their own initiatives, management and personnel, thus quality of data also varies from country to country. Some of the dealers are considered good at getting rid of bad quality data and inaccurate information, to keep the CRM system clean and updated, but some are not. There is currently a project going on within Volvo CE to demonstrate dealers who are good at knowledge management, as a best practice to guide other dealers who are not as much efficient.

When asked about IT obstacles or challenges faced during implementations, Cassidy states that: “The obstacles are more in the minds of the people. If a dealer doesn’t have CRM it’s a big challenge to start. If they don’t use it very well, it’s a big challenge to improve. However, the issues are not really related to ERP system or IT functionality, it is more with the mentality of people.”

5.3.4 Final words on CRM

CRM in Volvo CE is considered as a crucial part of their business and Volvo CE headquarters is strongly recommending all of their dealers to use it for as much functions as possible. According to Cassidy, the greatest challenge of CRM in Volvo CE up to today was to change the minds of the dealers’ top management and employees. Cassidy states: “You have to believe in CRM. If you believe in CRM, you will undertake the work, you will organize yourself, you’ll make all the work which is sometimes quite boring and you’ll drive it on. But, if you don’t believe in it, you’ll always find excuses like oh I am too busy, I am working up too much, I have something else to do, I got training today etc. So, one can always find a reason not to use it. Naturally employees will always resist CRM, because life is always simpler if your boss doesn’t have any means of following what you are doing, especially if you are a salesman. But there is also management who interactively wants to see the overall picture to decide the strategy and organize the company accordingly. So, Implementation of CRM is a great challenge from top to bottom, but once benefits are realized, resistance disappears.”
5.4 Analysis of CRM in VOLVO CE in Europe

Figure 5, CRM Impact Research Model for VOLVO CE (modified by authors based on CRM Impact Research Model, Love et al., 2008)

5.4.1 Operational Benefits

Volvo CE has increased their internal efficiency through full exploitation of direct operational benefits derived from their CRM system, which are compatible with Love et al. (2008)’s findings like improved response times and reduced service costs. However, they are encouraging their dealers to use CRM for more indirect operational benefits, in other words, using collected knowledge to create strategic value, such as increasing market share and revenues through achieving customer retention and product (machine) retention as a goal which can be seen as a positive improvement to maximize exploitation of CRM benefits. They also use CRM in their campaign management ventures which can be categorized simultaneously as a direct and indirect operational benefit, since all the management planning of campaigns are performed on CRM system with the already implemented customer data, in one database. Thus, without adjusting the fact of variation between the regions/countries, the operational benefits construct of Volvo CE is overall considered very satisfied, since CRM has become a core business tool in their daily operations.
5.4.2 Strategic Benefits

Strategic benefits of CRM in Volvo CE depends on the level of CRM use of the dealer, however the motivation of Volvo CE HQ is to encourage dealers to use CRM to increase customer retention, since identifying active customers in machine industry might be a critical business success factor in some regions. They intend to record every action on customers, sometimes through sales force and sometimes through the aftermarket sales, then use the recorded data to achieve greater customer control, improved understanding of customers and eventually better and more accurate predictions of future customer needs and demands. According to Love et al. (2008), all these benefits lead to a competitive advantage. Although not equally efficient in every region, still the direction, the vision and the goal to achieve strategic benefits through exploiting CRM confirms that the strategic benefits construct of Volvo CE is very satisfied.

5.4.3 Top Management Support

According to Love et al. (2008), top management support has a significant role in achieving CRM impact and overcome employees’ resistance. Cassidy stated that there are large differences of top management’s CRM use between regions/countries in Volvo CE, although it’s regarded as successful in Europe, it’s been demonstrated that the dealers that have top management support has achieved CRM impact while others failed to benefit from it. This is a proof that Top Management Support is without doubt one of the CSF’s to achieve CRM Impact.

However, Volvo CE is still lacking a centralized support and centralized top management involvement, and they pursue an advisory leadership style instead of enforcement. The success rate of the top managements’ approach is subject to work on some regions and not on some, still when considering Volvo CE in Europe, the construct is considered very satisfied on some regions, fairly satisfied on some, and poorly satisfied on few. Thus, it shows variety between the countries in Europe. When average satisfaction level is taken, it’s considered as fairly satisfied.

5.4.4 Technological Readiness

In Volvo CE, the technological readiness level is also varies from country to country, but as overall company strategy, they pursue an up-to-date policy on their CRM system, thus their vision is to be always technologically ready for the latest improvements and functionalities on the market. Love et al.(2008)’s findings indicate that technological readiness is not as significant as other constructs; still customer-centric technological initiatives should exist to support other constructs, especially knowledge management. (Swift, 2001) With their vision and direction, the technological readiness construct for Volvo CE can be easily considered as very satisfied.
5.4.5 Knowledge Management Capabilities

Love et al. (2008)’s findings mention Knowledge Management Capabilities as the most important construct to achieve CRM impact, and how the information is used, stored, updated and managed is the key factor to have a successful CRM exploitation. Since there are variations between regions/countries, Volvo CE’s knowledge management capabilities cannot be evaluated properly, however their vision to have a better knowledge management is demonstrated by the initiative that Volvo CE has currently running an ongoing project to improve knowledge management capabilities of all their dealers by providing success stories and best practice derived from dealers that are already achieved a good knowledge management level. Although there are few missing elements, knowledge management construct of Volvo CE has high potential to be fixed and improved with their motivational initiative, and with proven exceptional results on some dealers, the construct today can be considered as fairly satisfied when average is taken.

5.4.6 CRM Impact in VOLVO CE Europe

Love et al. (2008)’s findings indicate that the most significant constructs to achieve a CRM impact is to have a good and continuous top management support and an efficient knowledge management capabilities, which are fairly satisfied in Volvo CE and varies a lot depending on the dealers’ own capabilities. However, the other constructs are very satisfied and contains a good amount of utilization of CRM. Thus, it can be said that Volvo CE in most of Europe has achieved CRM Impact. However, by conducting few improvements like more centralized top management support and more centralized knowledge management capabilities, Volvo CE has strong potential to overcome the regional variations they have today and stabilize their exploitation of CRM globally, causing internal impact (organizational) with increased productivity and internal efficiency, as well as external impact (customer focus), as increased competitive advantage in all their dealers worldwide.

5.5 CRM in OUTOKUMPU Worldwide

Outokumpu is a group of companies headquartered in Espoo, Finland, aimed at stainless steel and a global leader in steel production. The company has approx. 8000 employees in about 30 different countries worldwide with revenue of $3.15 billion for 2009.

The main products are hot and cold rolled stainless steel sheets, plates and strips that are used in numerous applications – such as the construction industry, the automotive industry and equipment for the process industry. Their customers include the processing and construction industries, the energy sector the transport sector, the food and electronics industries, and the producers of household and industrial machinery around the world. (www.outokumpu.com)
According to Lennart P. Löfgren (Business Support Manager, Regions- S&P, Group Sales & Marketing) Outokumpu worldwide now at the stage of final CRM implementation phase to their whole sales company. After much consideration, vendor research, test groups and trials, their choice of vendor is SuperOffice (www.superoffice.com). Their main reason to choose SuperOffice software was its user-friendly and simple interface, and easy to customize aspects. Among their vendor tryouts included IBM CRM and SAP CRM as well.

In Outokumpu, SAP ERP is used as their main ERP system, but there are varieties of other ERP systems being used as well, depending on country. However, according to Löfgren, their CRM system will not be fully integrated with their ERP system SAP, so after implementation, the users will need to use both systems in their daily work. There are plans of integration in the future, but they will decide which parts of ERP to implement which parts to exclude later on. Currently, the numbers of initial CRM users are planned as 100 users worldwide but will be increasing dramatically during the coming years. In Outokumpu, CRM will be mainly used in Marketing & Sales, and by some Accounting personal like credit controllers.

Their main reason of CRM implementation was to have an open, completely visible, transparent and standardized system worldwide where all marketing & sales personal can benefit to increase their competitiveness and predictability. Löfgren states: “One of the reasons of the implementation was to have the visibility and transparency in the business we do. The ultimate goal is to increase our sales of course, and able to perform better service to the customers. By conducting customer surveys, we have realized that we need to make improvements in these areas, like keeping focus on what customer needs, track on what activities are on customers, constantly monitoring ourselves and try to find out where our gaps are, and eventually increase our predictability.”

5.5.1 Operational and Strategic Benefits

According to Löfgren, Outokumpu has identified certain benefits that will increase their productivity and competitiveness with both operational and strategic aspects such as:

- increased and more accurate predictability
- interactive and simplified updating of information
- increased transparency, visibility and improved sharing of information
- customer segmentation
- increased customer information quality and simplified access to information
- increased awareness of sales personal, simplified management of enquiries
- tracking quotations and actions on customers
- increased control of claim handling and technical issues
- forecasting
- simplified and standardized process of quotations and generating reports
- tracking opportunities
Löfgren states that Outokumpu is a matrix organization when it comes to sales part. There are many connections between big strategic projects and small projects, distributors, end users, also including many different industries such as oil/gas, chemicals etc. Collecting information and visibility of actions in this matrix structure is extremely crucial. Especially when it comes to long term contracts, since Outokumpu’s prices are very dependent on material prices in London Metal Exchange. Large part of Outokumpu’s sales includes Nickel substance and they cannot change or set the price for Nickel, it’s traded openly on stock market and affected by stock traders more than industrial consumption. Löfgren adds that Nickel trade is twenty times higher than actual consumption. So a large part of Outokumpu’s prices is flexible and formed as base price + nickel’s adjustment price. So, customers of Outokumpu would like to have long term contracts not to be much affected by Nickel trade. Löfgren add that this is a process where Outokumpu will need a lot of accurate information and very accurate predictability as well as interactive live update of existing information. Outokumpu believes CRM will provide them the necessary interactive environment where all actions will be visible, transparent and easily updated, thus dramatically increasing their predictability and accuracy rate.

According to Löfgren, CRM will be used as an internal communication tool in Outokumpu, by removing the need for emails, phone calls and reports between business units that’s working with customers and market opportunities. Löfgren states: “Everything is open as much as possible. One of the main powers in a system like this is transparency and sharing information, we have worked very active to encourage people to share information and we have seen good results from that.”

Outokumpu is already using customer segmentation, where they do different marketing actions against different segments. However it’s currently being conducted by sending a lot of emails, phone calls and reports between different departments and business units. CRM will provide them ability to collect all customer data and actions into one database where they can trace all their quotations, enquiries and other actions on customers. Löfgren states: “Instead of asking lots of people, sending emails and reports all the time, they can directly access CRM and starting working in that area and the local salesperson can know that, they just need to do once and keep it updated. It’s a much easier process, to formalize a strategy plan around the data.”

There are a lot of report variations between countries, business units and sales departments. Outokumpu would like to see a standardized and easier generation of reports process. Löfgren states: “The needed report should be taken out of the system, not as a send-in from different people around the globe.” Outokumpu believes the standardization will also remove labor work required on generation of reports, in addition to simplified reading and evaluation.

The standardization process will also contribute removing quotation differences of countries as well, as Löfgren states: “We will have a common-standard way of sending quotations to
all customers worldwide, even there can be local language customizations, the general formalization will be done in same way.”

In addition, Outokumpu will also be actively tracking market opportunities with CRM and include them in forecasting process as well.

5.5.2 Top Management Support

According to Löfgren, CRM in Outokumpu has full top management support as CRM will be used by top management in process of strategic decisions. On CRM, all actions on customers, all account plans for the customers will be visible and actively monitored by top management. Löfgren states: “As we can see how many customer visits local office had, how many enquiries etc. there is a lot of information regarding customers in a system like that and using them to see where we can improve is our goal.”

Top management in Outokumpu also has plans to actively participate in trainings, as Löfgren states: “If top managers do not attend trainings, the employee’s focus will not be on training on the system but should they use it or not. But that decision is already taken by top management, so to save energy and time, employees should be motivated by top managers’ participations in training sessions.” They are also planning to motivate sales personal through showing benefits and enforcing when necessary, as they are expecting a natural resistance. Löfgren states: “Some people think that you monitor them too much, they think you don’t rely on them etc. But as a sales manager you have to be consistent and tough sometimes.”

5.5.3 Technological Readiness and Knowledge Management Capabilities

Outokumpu’s CRM, SuperOffice is a Windows Office integrated CRM package with web application. Users can transfer their Windows Office documents and mails directly into SuperOffice and achieve them in the CRM system. However it does not yet work in integration with the SAP ERP system of Outokumpu which is planned as a development in the future. According to Löfgren, Outokumpu is expecting to face some challenges in CRM’s IT savvy side, and states: “IT awareness in sales company needs to be high, this is a web application relying much on local internet connection, sometimes it can slow down the system or sales persons’ IT equipment or operating system may vary. So, little bit IT knowledge is required, especially when thinking of our generation of workers between 50-65 years old, it’ll take some time before they fully adapt to the new system.”

One of the reasons of choosing SuperOffice was its simple, easy-to-learn interface. Also to avoid IT obstacles as much as possible, Outokumpu have decided to structure their CRM implementation into three phases. Phase one-two will be more like tool side where customer contacts, activities, quotations and actions will be collected and housed in the system, while phase three will be more like developing the existing tool and making an ERP integration or connection. To simplify training process, they are planning to include employees with similar
backgrounds on the same teams to ease the adoption process. Löfgren states: “If you put internet gurus and paper/pen people together, problems will occur. It’ll be too slow for one group or too fast for the others.”

One crucial Knowledge Management issue in Outokumpu is the updating of information. According to Löfgren, they need to have as clean data as possible to have clean and accurate predictions, as it is an important success factor. As Löfgren states: “At least we need have more control over the nearest future. We can always have a long term view, which areas could be slightly developed like oil/gas or chemical industry. But in short term we will be able to see what to do in coming months, open enquiries, quotations where we can measure hit rates etc.”

Another issue is that CRM will be used to contain the knowledge which would be lost with employee retirements, parental leaves or quitting job. Löfgren states: “In a tragic event, one of our employees passed away early, by having him working on the system, we have collected all information he had and we have saved the business quite easy. We also had another example when a key employee suddenly quit and caused serious damage, it took us long time to get back to the point we were. CRM will immensely reduce our damage in situations like this.”

5.5.4 Final words on CRM

CRM in Outokumpu is overall in an implementation period today, but according to Löfgren, there is a strong enthusiasm and many benefits to be harvested. However, challenges are also expected, but in long term, worth all the effort. It will also depend more on mental side of organization rather than technological aspects. Löfgren states: “I think the magic word if CRM is going to be successful or failure is top managements’ involvement. Because CRM is like 20% tool and 80% management and approaching people, make them understand the need of it, also see to that they use it, by using the tool and monitoring as a top manager. Of course it will be inconvenient for some people, because they can’t lie or run away, but we are trying to motivate all our employees by demonstrating the benefits of the system and the necessity of CRM for our business success.”
5.6 Analysis of CRM in OUTOKUMPU Worldwide

![Diagram of CRM Impact Research Model for OUTOKUMPU](modified by authors based on CRM Impact Research Model, Love et al., 2008)

5.6.1 Operational Benefits

Outokumpu is currently at state of CRM implementation, thus the operational benefits are not completely in place as of today. However based on Outokumpu’s research, internal tests and findings, they have decided to head for direction of total visibility and simplifying business through use of CRM. Love et al. (2008) categorizes operational benefits into two: direct (internal efficiency), indirect (strategic in nature) benefits. Considering direct operational benefits, by implementing CRM, Outokumpu has plans to increase internal efficiency, since one of the main reasons to choose their CRM system was its’ user-friendly interface and simplicity to use the tool.

However, the requirement to use ERP and CRM system together in day to day work, have high potential to affect the operational benefits negatively and perhaps even reduce the internal efficiency further, since the employee will be required to record same data into two
different systems and regardless of simplicity or motivation, it will increase labor work for the employee, thus Outokumpu might face strong employee resistance for their CRM initiative. Love et al. (2008)’s findings are more towards reducing costs, time and labor work required to respond customers, which is not consistent with Outokumpu’s vision today. Although they have plans of ERP-CRM integration in the future, with the requirement of using two systems together for operational actions, Outokumpu’s direct benefits have tendency to improve less or not improve at all.

Indirect operational benefits on other hand have higher chance to improve, due to fact that visibility will enable them more control over their market and worldwide actions, as well as more accurate predictability. However, as of today, the whole Operational Benefits construct of Outokumpu cannot be considered compatible with Love et al. (2008)’s findings, as CRM in Outokumpu has potential not to reduce labor work and service costs, but instead increase, thus will be considered as lacking efficiency until a ERP-CRM integration is in place or it is proved that there is little employee resistance against use of two systems at the same time for customer data.

5.6.2 Strategic Benefits

Love et al. (2008) states that strategic benefits are benefits that provide competitive advantage with the use of CRM on business processes. Since Outokumpu is in a state of CRM implementation, the strategic benefits are not yet in place as well. However, their intentions are purely strategic in terms of CRM need. The total transparency of actions on customers, customer segmentation, forecasting and increased awareness of sales personal will enable them greater control on their customer portfolio, leading to customer retention as well as strategic vision to access new customer segments.

The strategic benefits construct of Outokumpu today is not satisfied since the CRM is not fully implemented, thus it is non-existent. But the direction and vision is to utilize and exploit CRM precisely for strategic purposes increases the potential that the construct have high potential to be satisfied in future and provide competitive advantage to Outokumpu compared to today.

5.6.3 Top Management Support

According to Love et al. (2008), Tourniaire (2003), Jarvenpaa and Ives (1991), top management support is critical for a CRM success and Love et al. (2009) defines this construct as very significant to achieve CRM impact. According to interviewee Löfgren, CRM in Outokumpu has full top management support. Senior management is planning to use CRM on their daily work to monitor the actions on customers as well as to take strategic decisions like improvements necessary to close their service gaps. Top management also has strong intentions to participate in CRM training sessions to motivate employees. Thus, the construct can be easily considered as very satisfied.
5.6.4 Technological Readiness

Although Love et al. (2008) mentions technological readiness is not as significant as other constructs. In Outokumpu, technological readiness can be an issue, as their CRM system SuperOffice is using Microsoft Office integration and there are sometimes varieties between different windows versions and IT equipment of salesmen. Löfgren also mentions they have a generation of workers that’s been constantly working with pen/paper for long years, thus they cannot be categorized same with IT savvy employees. Technological Readiness construct might include some challenges for Outokumpu, thus will be considered as fairly satisfied. However the construct have tendency to be fixed in due time, with further adoption initiatives, increased IT awareness and further IT investments with the realization of CRM benefits.

5.6.5 Knowledge Management Capabilities

Love et al. (2008) mentions utmost significance on knowledge management capabilities to achieve CRM impact, as the construct represents how to retrieve, store and use the collected information. Outokumpu today is working actively to encourage sharing information and transparency through their matrix organization, and planning to have an open channel for a greater control over customers. They would like to have simplified access to information and constant updates through CRM, since timing of customer contacts and nickel prices are crucial in Outokumpu’s business. Although efficiency of knowledge management today is not at desired level, their vision of KM through CRM is applicable to Love et al. (2008)’s findings, thus can be considered as fairly satisfied. However, there is a high chance of facing several obstacles between technological readiness and knowledge management capabilities; unless a good connection is ensured between two constructs, such as global standardization of IT equipment and Windows Office in Outokumpu.

5.6.6 CRM Impact in OUTOKUMPU Worldwide

Although still in implementation phase, Outokumpu’s CRM vision is overall found to be sufficient to achieve a CRM impact after all constructs are fully satisfied. However their requirement to input same data into two systems (ERP and CRM), might cripple the efficiency of knowledge management and operational simplicity, as some employees might make more mistakes or focus one system more than the other which will lead inconsistency of data quality between systems. Another concern is the risk of asking too much labor work from employees or in other words, too much management enforcement, might reduce their productivity and motivation as well.

However, Outokumpu had full top management involvement on the project since the beginning of trials, which proves Outokumpu believes in CRM and has plans and enthusiasm to fully exploit the benefits to increase their internal efficiency and competitiveness through achieving CRM impact on their organization.
5.7 CRM in TELGE ENERGI Worldwide

Telge Energi is electricity trading company. It is a part of Telge-Group, which is a Group of 11 commercial companies together with the owner Södertälje Municipality, Sweden. The group is present in national and international market.

Telge Energi does not have electricity production, but purchase electricity from Power Exchange NordPool. They sell only electricity produced from wind and water to their customers, which are households and private and public companies. Being a customer at Telge Energi, means having a freedom to contribute to the way electricity is distributed; customers are involved in development of electricity market, expansion of wind energy and displacement of coal power. According to one independent market research, done by SKI (Swedish Quality Index) 2009, which is an analytical system in the service of society, Telge Energi has Sweden's most satisfied electricity customers for the fifth year in a row. (www.telgeenergi.se)

Telge Energi has been using a customized CRM system (specifically built for them), for one year, purchased from company Microsoft Dynamics, according to the information received from Eva Lendic Edlund (Sales Manager).

5.7.1 Operational and Strategic Benefits

Telge Energi has 60 employees using the system in the company today. Company wanted to implement the system to be able to have better control over sales-flow, better customer service and better statistics. The system they had before CRM was Lotus Notes, which is an integrated desktop client option for accessing business e-mail, calendars and applications. This system has been used together with CRM for a while, but was inefficient and outdated and has been completely excluded from the use. Sales, Administration, IT and Controlling functions of the company have direct contact with CRM system today, and make daily inputs into the system. Operational goals with the implementation were to have more effective workflows, within sales and administration, to reduce work hours and to get better overview of the operations within mentioned departments. According to Edlund, the goals are still not entirely met; the company managed to achieve faster, smoother and more transparent workflow, but still wants to achieve better overlook over process flows.

Concerning strategic functions within their customized CRM, according to Edlund, Telge Energi is not using the system up to its complete potential. They are using the system to track opportunities, to make forecasts, and to calculate probabilities on different opportunities. They can track opportunities more successfully but are not using that function completely yet. To the question, if they are making market and sales forecasts in the system; authors received similar answer: “yes but not to its full extent”. But the departments, who use the system for forecasting, seem to be comfortable with it. They believe that forecasting is reliable, but still
under evaluation, since the system has been used only for a year. The company “works out” some strategies from probability calculating, but as mentioned before, still early to heavily rely on it. According to Edlund, the company needs more development concerning the process, strategically, and that is why some functions of the system are not used today.

Edlund states that, the company is not completely satisfied, and would like to improve marketing follow-ups, and implement better budget analysis functions, but the most obvious strategic benefits of CRM are, that the company has the possibility to grow and plan present and future actions in more organized and easier way.

5.7.2 Top management support

It was Edlund who initiated the process of the implementation of CRM, who is one of company’s top managers. Top management led the process together with their employees and internalized all the transformation needs, and accomplished that with the help of customized CRM, specially designed based on their requirements. Therefore to conclude; the system had full support of company’s top management.

5.7.3 Technological readiness and Knowledge management capabilities

According to Edlund, the company was considered technologically ready for the CRM implementation and the initial research about CRM systems was conducted by IT department. The problems which occurred during the implementation were mostly “bugs, wrong-thinking, logic-gaps and similar”, so mostly small operational mistakes and troubles. But the whole company was involved in the implementation and the plans, requirements and all the necessities from different departments and different levels were taken into consideration, so that solutions could be brought for all the users involved, as Edlund states: “We are very unusual and different company!” They really strived to include everyone in the implementation, and all the changes and constant developments and improvements on the system, are done based on needs and suggestions of employees within the company.

According to Edlund, Telge Energi has better access to the customer information with the use of CRM, they use the collected information, to improve and expand their offerings, services and products for future relations with their customers. The information, employees enter into the system, is considered rather accurate, and since they are monitoring the inputs live, they correct human errors directly. Edlund states that, the CRM system is not used as a means of internal communication within the company, it serves more as a tool company uses, in their objectives towards achieving operational and strategic goals.

5.7.4 Final words on CRM

According to Edlund, with the help of CRM, Telge Energi managed to impact both internal and external environment. Internally, company improved the workflow, gathers real-time data and manages the strategic actions and uncertainties much more efficiently and effectively than before. While externally, CRM helped the company to serve customers
better, and to have accurate information about customers and their needs, which gave them more satisfied customers and higher revenues in the long run.

5.8 Analysis of CRM in TELGE ENERGI Worldwide

![Diagram](image)

**Figure 7, CRM Impact Research Model for TELGE ENERGI (modified by authors based on CRM Impact Research Model, Love et al., 2008)**

### 5.8.1 Operational Benefits

Telge Energi has been using CRM for only one year, thus the operational benefits are still fresh, some are unsettled, some just reached maturity and some are missing. They have partly achieved their expected operational goals with CRM implementation like more transparent workflow, reduced work hours and eventually reduced costs needed to perform services which is compatible with Love et al. (2008)’s findings. In addition, they integrated CRM into daily works of many departments beside marketing & sales, such as administration, IT and controlling, thus operationally CRM is very active within the organization. Thus, the direct operational benefits are considered satisfied. Indirect operational benefits on other hand are not in use effectively yet, as they mention certain improvements and optimizations needed on
marketing & sales processes and to forecasting probabilities. But, overall, the construct will be considered as fairly satisfied, as CRM simplified and improved their daily operations.

5.8.2 Strategic Benefits

According to Love et al. (2008) strategic benefits are related with competitive advantages derived from CRM use. Even with the one year use of CRM, Telge Energi mentions an increase on customer satisfaction levels, as with CRM they could understand customers better, have more control over customer needs and also have more efficient predictions over customers. All these traits are compatible with Love et al. (2008)’s findings, and although they are not fully satisfied with all strategic functions in use, there is a constant on-going development which proves that in long run, they will fully achieve all strategic benefits derived from CRM use. Thus, the construct is considered as satisfied.

5.8.3 Top Management Support

CRM in Telge Energi had full top management support since the beginning. They even decided to lead the CRM initiative with involving many employees from different departments and different levels, brainstorming and identifying company needs together, which motivated the employees, raised the enthusiasm of CRM use and substantially lowered the employees’ resistance. Today, they still work in cooperation with all their employees for improvements needed on the system, so the top management support is consistent and continuous. Thus, the construct is regarded as very satisfied.

5.8.4 Technological Readiness

Telge Energi was found to be technologically ready as they have done a research about CRM options before their implementation and have decided for a customized version of on-premise system which is Microsoft Dynamics, which requires a strong client side technological readiness. They mention some obstacles such as software bugs derived from wrong logical thinking on first stages of implementation, but they have been eliminated in time and company successfully launched the CRM tool. Today, there are minor IT problems in the system and full transparency of operations is ensured. Thus, the construct is regarded as very satisfied.

5.8.5 Knowledge Management Capabilities

Telge Energi is well aware of the significance of knowledge management capabilities that Love et al. (2008) mentions, as every data entered into CRM today, is monitored live by controllers and human mistakes are corrected to improve the accuracy and quality of information. They also constantly use the collected information to improve and expand their offerings, services and future products. In addition, information is always up-to-date and used constantly for purposes of achieving operational and strategic goals of the company. As a result, keeping a clean data environment enabled them to use CRM in forecasting today. In
addition, they are on the direction of developing and improving existing Knowledge Management capabilities. Thus, the construct is considered as very satisfied.

5.8.6 CRM Impact in TELGE ENERGI Worldwide

CRM Impact in Telge Energi is imminent, as many of their constructs are very satisfied already. According to Edlund, they have already seen positive results despite just one year of CRM use, such as: improved workflow, improved management of strategic actions and uncertainties which leads to increased internal efficiency (internal impact). They have also seen increase in satisfaction levels of customers since CRM implementation (external impact) which will make an increase on revenues in long run.

5.9 CRM in FLIR Worldwide

Flir was founded in 1978, originally providing infrared imaging systems that were installed on vehicles for use in conducting energy audits. Later, they expanded their focus to other applications and markets for their technology, in particular, designing and selling stabilized thermal imaging systems for aircraft used by law enforcement. They have since grown substantially, due to increasing demand for infrared products across a growing number of markets, combined with the execution of a series of acquisitions. Today they are one of the world leaders in the design, manufacture and marketing of thermal imaging and stabilized camera systems for a wide variety of applications in the commercial, industrial and government markets, internationally as well as domestically. (www.flir.com)

Flir has 1900 employees and conducts business in more than 100 countries around the globe. Matthias Nordin (Systems Specialist for CRM and WEB) states that, in order to manage cultural and linguistic differences, and operating habits in different countries, company is using CRM in all of their locations.

5.9.1 Operational and Strategic Benefits

According to Nordin, the company has been using many different CRM solutions for long time, which eventually created inconsistencies and the information company had about their customers, was spread on different places, within different departments. All employees who use the system on daily basis, as well as top management, have realized the need to eliminate other systems and to introduce one global solution. After a research made, company implemented two customized systems provided by CRM vendors, RightNow (CRM system of the company RightNow) and salesforce.com (CRM system of the company salesforce.com)

Nordin stated that they have been using salesforce.com for three years, and RightNow even longer, but since RightNow is used only for support by Customer Support Department, which
is beyond his position and knowledge, so the interview was mostly focused on salesforce.com and its impacts on the company. According to Nordin, departments which are making daily inputs into the system are Marketing, Sales, IT department and Top management, and there are 260 users of Sales Force in the company, all over the world. According to Nordin, another specialist from Flir argued that the company still has the same customer information they had before the implementation, but now, with the use of one solution, information is more accessible, gathered on one place and visible for everyone who finds it valuable and necessary.

Nordin states that, departments are using different functions, according to their work specifications, and the type of information needed, but they use all the functions customized by their requirements, by different departments, except for the Customer Support System which is the only function used in RightNow. Authors questioned the reason of using two systems, which could easily be managed by one, which Nordin could not find right answer for. According to Nordin, this inconsistency does not, however, depend on either of the systems, concerning the quality, adoption or the access to the system, it depends more on lack of the communication between different locations, and decisions made individually by one group of top management without consulting with other locations. Because of the communication difficulties, company is bearing unnecessary costs of having one additional CRM solution, and it creates time consuming tasks of entering the same information again in another system, which already exists in the first one.

According to Nordin, the goals which company aimed to achieve with the implementation of this system (salesforce.com), was to have the information gathered in one place, for the company to be able to have free access to the information, ease of entering the data, transparency and visibility of the information, within all company locations around the globe. Nordin states that the company managed to achieve that goal. However, what created slow development and adoption in the early stages was fear of making errors by the users, the information was locked, and each department entered their own information, and were afraid of allowing other departments the access to it, especially to release it globally. That was time consuming and reduced effective usage of CRM. The need to act as one unit, where departments should share the information, was realized later on, and employees learned to trust each other, which brought back the efficiency and the information sharing openly.

Nordin states that, the company can therefore track the opportunities more easily with the use of CRM and transparency developed, which gives them more profits and competitive advantage. Flir have used the system for probability calculating and forecasting before, but not anymore, which, does not depend on the system, but rather on internal change and reorganization the company executed recently. Nordin also stated that he would prefer to improve the Offer Function in the system, to make it more easily to get the offers created, out of the system, which, by the way, appeared to be the only dissatisfaction with their CRM solution.
5.9.2 Top management support

According to Nordin, the decision about the inevitability of the change has been made by the top management. There is a one leading group of corporate managers within the company who brought the initiative and supported the whole process. They made the final decision about which vendor was the best for their needs, which should be capable of globalizing the company and simplifying strategic and operational actions and efforts.

5.9.3 Technological readiness and Knowledge Management capabilities

Nordin states that, since the company is rather technologically oriented, they possess high technological competence, and found no obstacles in adopting the system from that perspective. It was given to IT department to conduct a research on CRM systems before the implementation. They examined, compared and evaluated ten different vendors, who were successful on the market at a time. After the research, they brought the conclusion about advantages and disadvantages of each of the vendors, and preceded the conclusion to the top management. The company did not experience any complications regarding the implementation; they had enough competence to manage the innovation, which was even more facilitated by the simplicity of the system implemented.

According to Nordin, since the goal of the implementation for Flir, was to gather the information in one system, Knowledge Management was the most obvious benefit of the implementation. The company uses the information gathered to enhance and improve their products and services for future interactions with their customers. They can approach customers more easily and more rapidly with new offerings and proposals and therefore, provide quicker solutions to their requests. One obstacle in the knowledge flow is the varying prioritization which different departments put on CRM. Therefore Nordin could not state firmly how accurate is the information employees put into the system. While marketing department relies heavily on the information entered, sales department does not share the same spirit, and does not find importance in entering customer personal contacts or email address. Sales department just wants to close a sale and the entire after sale formalities are of low importance for them.

According to Nordin, because of these beliefs and missing information, marketing department can not send out new campaigns and offerings to customers, which is rather disadvantageous in today’s highly competitive market. Because of their unwillingness to get involved, other departments cannot function properly, and that is a challenge this company is faced to. Employees resist changing or adapting their working habits to the system, which is perceived by them as a disturbance and intrusion into their safety zone.

5.9.4 Final words on CRM

According to Nordin, internally, Flir managed to accomplish the goal, and collect all customer data into one system, which is used by all company locations worldwide. When that
goal was accomplished, company could focus entirely on their customers and make every effort towards providing them with the best service. Even if there are still some challenges, concerning adoption and diffusion of CRM, Nordin claims that the solution was successful, it improves rapidly and the most importantly, everyone have the access to it.

5.10 Analysis of CRM in FLIR Worldwide

Figure 8, CRM Impact Research Model for FLIR (modified by authors based on CRM Impact Research Model, Love et al., 2008)

5.10.1 Operational Benefits

Flir is using two different CRM systems for different departments and with settings customized specifically for departmental tasks. They are using salesforce.com in marketing & sales, IT and management while RightNow is mainly used for Customer Support departments. Flir uses CRM for daily inputs of customer actions, and simplified access to information, however concerning direct operational benefits; there is no clear improvement consistent with Love et al. (2008)’s findings, such as reduced costs and labor work. In fact,
use of two different CRM systems increased the costs even more, thus might not worth the investment poured into CRM tools.

The indirect operational benefits are also lacking efficiency as for a long time departments were not connected to each other on CRM, and still Sales Department has tendency and willingness to protect their customer data rather than sharing it on CRM, meaning no contribution from their side to CRM. All missing customer actions and missing updates on CRM will cause a low quality data overflow and the efficiency of CRM will be crippled operationally and strategically as well. Thus, the operational benefits construct can be considered somewhat satisfied as of today regarding the use of CRM in daily departmental functions. However, there is a great gap on other constructs.

### 5.10.2 Strategic Benefits

CRM enabled Flir to have a simplified information visibility and global transparency compared to before. But, overall, there is little clear strategic benefit that can increase customer retention or customer control. They mentioned that they can track opportunities easier and generate more profits through the use of CRM; however that cannot be much efficient without the contribution from the sales side. Nordin mentions that, due to the reluctance of CRM use from sales side, marketing cannot send out new campaigns and offerings, in other words, cannot exploit CRM completely which seriously cripples strategic benefits construct of Flir. Thus, the construct is clearly considered as poorly satisfied.

### 5.10.3 Top Management Support

In Flir, CRM decision is promoted by a group of corporate managers that initiated and supported the implementation process. According to Nordin, they had full top management support for CRM, as they aimed to standardize the use of one system globally, however in reality they ended up investing and using two different CRM systems. In addition, by looking at strong resistance from sales department and overall resistance of employee’s to the systems, top management’s involvement is clearly not enough. There is a lack of vision or realization of CRM benefits among the employees, and employees are neither enforced, nor have enthusiasm to use the system in their business. It is clear that Flir has not enough top management involvement, despite that they claim they have, or they are seriously lacking motivational initiatives within the organization to promote or drive CRM. Thus, the construct is considered as not satisfied.

### 5.10.4 Technological Readiness

Flir possess high technological competence within their organization, and since the beginning they considered CRM as an innovation. They also choose on-demand systems such as salesforce.com and RightNow which does not require much technological contributions from the client. Thus, there were only minor problems regarding technological readiness. Since
Love et al. (2008) also mentions technological readiness as less-significant compared to other constructs, thus this construct is easily considered as satisfied.

5.10.5 Knowledge Management Capabilities

Flir's main intention to implement CRM was to have one database for all customer information. However, according to Love et al. (2008) promotion of sharing knowledge is one requirement to have a fully satisfied knowledge management construct. Today, Flir uses the collected information to enhance and improve their products and services, but efficiency is questionable, since reluctance from sales department have high tendency to cause negativity on knowledge management as well. Without their contribution, the database won’t have all customer information, and lack updates. In Flir, it is proven today with the fact that marketing department cannot use some functions like campaign management, due to sales departments’ lack of contribution. Flir is also lacking in controlling function, as Nordin states that the accuracy of information on CRM is doubtful at times. Thus, the construct is considered as not satisfied today.

5.10.6 CRM Impact in FLIR Worldwide

CRM provided Flir the global visibility and one data warehouse worldwide, which Flir considers as a succession. However, in real, there are serious problems with CRM in Flir today, despite that they are satisfied with a portion of their CRM system. According to Love et al. (2008)’s findings they should be able to exploit much more from CRM, especially considering the fact that they have invested into two CRM systems.

Many constructs of Flir are not sufficiently satisfied or not satisfied at all, thus CRM impact is not seem possible with the current conditions. They have access to information, but the quality of information is not good enough and may lead to wrong decisions. It seems, top management needs to step up and take control, and make sure contributions from all departments are involved, especially one as important as sales department. Because sales department is the one that interacts with customers more than any other, thus their information is crucial to understand customers, and an important data CRM needs.
CHAPTER VI

6. Conclusion

In this chapter, the research question is answered, supported with short explanations of findings from the analysis of constructs for the chosen multinational industrial companies.

After the multinational industrial company cases are analysed with the help of theoretical framework, authors have received very interesting results sufficient to come to a conclusion about the research question.

Authors found that, the most important basic elements to achieve CRM Impact within the chosen multinational companies are: a supportive top management, and a well-established knowledge management capability.

6.1.1 Top Management Support

Top management support is found to be a very important element to achieve CRM Impact in multinational industrial organizations. It has been found that that lack of top management support leads to poor or failed CRM initiatives regardless of the amount investment poured into it. The main reason is found to be the employees’ natural resistance to change.

Authors found that, if executives do not show any interest or involvement in the whole process, organizations' members does not believe in such projects and will tend to resist instead.

6.1.2 Knowledge Management Capabilities

Knowledge Management is also found to be a significant element to achieve CRM Impact in multinational industrial organizations. Especially, collecting all customer information and customer history in one database of knowledge and keeping it clean, updated and constantly running is essential to achieve CRM Impact. Authors also found that keeping accurate and up-to-date information in CRM systems greatly contribute to operational and strategic benefits.

6.1.3 Strategic Benefits

Authors found out that KM capabilities must be already in place to be able to reap strategic benefits to achieve CRM Impact, due to fact that strategic benefits of CRM can be exploited best when the companies have one database containing all information about customer contacts, actions on them, and activities on them, including every detail. It is also found that
without a good KM capability and accurate information, strategic benefits may turn into strategic mistakes, thus this construct is found very reliant to the KM capabilities.

6.1.4 Operational Benefits

Authors found out that operational benefits are not one of the most important elements to achieve CRM Impact, due to fact that, CRM tools today, more or less provides operational benefits in different scales. Even companies who could not achieve CRM Impact, still utilize some operational benefits from the CRM systems they already have. Simply put, with the right tool, a CRM system will provide certain direct and indirect operational benefits to the multinational industrial company, regardless of dissatisfaction of other constructs.

6.1.5 Technological Readiness

It is found out that technological readiness is not one of the most important elements to achieve CRM impact for the chosen multinational industrial companies. The main reason is the fact that the chosen multinational industrial companies have vast amount of resources already invested into IT infrastructure, have their own ERP systems already in place, and can easily afford implementing a CRM system if the benefits are realized by the top management.

Also authors found that today; there are many CRM deployment options on the market. For example, CRM deployment options such as on-demand systems are handled by providers, reducing the time needed for the implementation and nearly eradicating technological requirements of CRM by offering remote server services as well. Further information on deployment options can be found in Appendix.
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8. Appendices

8.1 Appendix 1

8.1.1 Interviews conducted with multinational industrial companies

ABB: One in-depth interview with Kristina R. Andersson, Support and Master Data Manager for ABB Service in Sweden. Interview took place in ABB Service Division, on April 15th, in Västerås. It was a one hour interview, from 13:00 p.m. to 14:00 p.m. A list with semi-structured questions which were discussed has been emailed to Kristina Andersson, in advance. In this way she could prepare for the interview and the research gives automatically more productive results.

Telge Energi AB: Email based interview with Eva Lendic Edlund, Sales Manager – Private Marketing, located in Södertälje. It has been agreed by e-mail that semi-structured questions could be sent to Eva Lendic Edlund, where she would revise the questions and decide whether their experience can be beneficial for the research. In the later telephone conversation with Eva Lendic Edlund, it has been stated that she has the capability to answer the questions. Questions have been answered on April 27th, in rather open self administered unstructured manner, containing the most significant answers for the research.

Flir: One telephone based interview with Matthias Nordin, Systems Specialist for CRM and WEB. Interview has been conducted on May 10th, as a semi-structured telephone based interview. The interviewee received semi-structured questions in advance by email. Since the interviewee already had time to prepare for the interview, the length of the interview was thirty minutes, where Mattias Nordin answered the questions in given order.

Volvo CE: One telephone based interview with Christopher Cassidy (Area Director Customer Support Europe). The interview took place on May 11th, from 10:30 to 11:30. It was conducted as a telephone interview guided by semi-structured questions prepared by the authors. Questions were answered in given order, where authors highlighted the category of the questions, for the interviewee to be able to focus on the right area, when answering.

Outokumpu: A telephone based interview is conducted with Lennart P. Löfgren (Business Support Manager, Regions- S&P, Group Sales & Marketing), on May 29th from 14:00 to 14:40. All questions were answered in given order, few with extra information. Some spontaneous questions asked for a better understanding of their situation.
8.2 Appendix 2

8.2.1 Semi-structured questions

1. Which ERP enterprise system do you use (SAP, Oracle etc.)? *(basic)*

2. Which CRM system do you use? If not a vendor, is it a customized CRM system? *(basic)*

3. Are these two systems fully integrated? Is there a middleware connecting them? *(basic)*

4. How long have you been operating the system? *(basic)*

5. How many employees have access to the system? (no need to be exact figure) *(basic)*

6. How often do you make inputs into system? *(basic)*

7. Which departments have direct contact to CRM system? *(basic)*

8. Do departments use different functions and applications? *(basic)*

9. What kind of functionalities do you consider are the most beneficial for your company? *(operational, strategic)*

10. Where is your master customer data is located at? ERP system, CRM system or else? *(basic)*

11. How good is the information quality in your system? (regarding updates, removal of unused items, sold items, lost opportunities etc.) How do you keep the information quality under control? *(knowledge management capability)*

12. Do you use the collected information about customers to improve/expand your offerings, service or products for future relations with the same customer? *(strategic)*

13. Did the access to the customer information changed with the CRM implementation? If yes, then how (easier, simpler, or harder, more complex perhaps)? *(operational, knowledge management capability)*

14. Why did you implement the CRM system? *(basic)*

   1. What goals did you have? *(basic)*
   
   2. Which results were you expecting to achieve? *(basic)*
   
   3. Have you fulfilled the goals? Are you satisfied with the results so far? *(basic)*

15. Did you experience any problems or challenges with the implementation (before, during, after)? *(technological readiness)*
16. How long was the implementation process? *(technological readiness)*

17. What was the main reason to choose this CRM system? Did you look into other options out in the market? *(basic)*

18. Is the system used for internal communication? If yes, on what level (within one company, within one country, internationally)? *(operational)*

19. What is the main internal communication method (mail, telephone, fax, or intranet)? *(basic)*

20. Have CRM improved your internal communication? Can departments see what each other are doing? (regarding visibility, transparency) What about countries? *(operational, knowledge management capability)*

21. Did CRM improve your generating reports process? *(operational)*

22. Can you track opportunities more successfully with the use of CRM system? *(operational, strategic)*

23. Do you make forecasts in the system? If yes, how reliable/accurate is the forecasting? *(operational)*

24. How much do you rely on probability calculating function for the opportunities? How accurate is it? *(operational, strategic)*

25. How much does your customer retention rate increased since implementation of CRM? *(strategic)*

26. Does the company structure and culture support the system? What about top management? Do you have any executive motivating employees to use the system? *(top management support)*

27. Are there any obstacles with the system today? *(technological readiness, knowledge management capability)*

28. What would you like to change or improve within the system in the future? *(basic)*

29. If you were to implement the system all over again, what would you do differently? *(basic)*

30. Considering your employees taking parental-leave, sick-leave or quitting job, how much do you think CRM is important to keep the information which would otherwise lost with the employee’s leave? *(knowledge management capability)*
8.3 Appendix 3

8.3.1 Additional Insight on CRM

**CRM Applications**

*Figure: CRM applications (Source: Payne, 2006)*

Front-office applications are the technologies used to support all those activities that involve direct interface with customers (Payne, A., 2006). Sales force automation is designed to help sales people acquire and retain customers, reduce administrative time, provide robust account management, and, basically, to make salesperson activities something that earns them and their companies money (Greenberg, P., 2001). Call-centre has been used to deliver effective customer service, while `help desk software has been for some time by IT departments for tracking problems within the organization.

Product configuration tools use a database to track the features and prices of a broad collection of products. Marketing automation involves taking organized manual marketing processes and automating them through the use of defined business rules and executing them electronically`. (Payne, A., 2006)

Back-office applications streamline internal business processes. Some companies are using enterprise resource planning (ERP) systems to provide integrated back-office systems, also adding the benefits of data warehousing and providing additional management and control tools`(Payne, A., 2006).

CRM appeared in early 1990s and has been changed, upgraded, improved, redefined and revolutionized many times by different creators and still is a subject of continuous research and development. It has become a complete business system today which includes various business perspectives, features and applications, in contrast to earlier specifically customer concerned problem solving tool. `The CRM revolution is in full swing, leaving companies to decide not if, but how they will participate. While a company can embrace the revolution one
step at a time, CRM eventually transforms the entire business. Savvy managers are already using CRM for critical insights and decision-making across the enterprise’ (Greenberg, P., 2004). The most important thing is to remember that emphasis is not on software; the system itself, but rather on the people. Suppliers, employees, stakeholders and customers are all equally relevant for successful system functioning. CRM and eCRM are about firms capturing and keeping customers through the Internet in real time. CRM is about customers interacting with employees, employees collaborating with suppliers, and every interaction’s being an opportunity to maintain and improve a relationship. (Fjermestad, J., 2006).

Success Factors

The most important CRM success factors according to Anderson (2001) are:

- Strong internal partnership around the CRM strategy. This essentially means that the whole organization needs to “think CRM”. If an organization is allowing the implementation of the system, then strong relationships and networks need to be built, or reinforced, if lost in order to support the system. This is only a tool of communication, but good quality communication and information sharing needs to be embedded in the organizational culture, because it is human resources who drive, monitor and control the tool.

- Employees at all levels and all areas accurately collect information for the CRM system. Employees are required to understand why they are using CRM, why it is beneficial for their organization and why is their contribution so important. High level of trust needs to be established at all levels, for information to be released without restraints. A challenge is to get everyone on the same side. CRM system needs to be fed constantly, and is monitored by different number of employees, depending on company size and industry.

- CRM tools are customer- and employee- friendly. The system should be designed in rather simple way, which will be trouble-free to use and understand. Too complicated programs and too many additional, unnecessary features and applications are only confusing and time consuming for employees and at the same time, additional burden on the productivity scale.

- Report out only the data you use, and use the data you report. Even though it is expected from certain employees to make daily input into the system, but if there is no accurate, relevant and valuable information, there should be no input at all. If there is too much unnecessary information in the system, effect could be lost opportunities, employee focus on irrelevant daily based short-term goals. CRM is not an organizational diary; it is a tool for tracking accurate information, for organization to make the best use out if it.
• Don`t go high-tech if low-tech will do.

Organizations usually look for simple solution, and want to implement low-tech systems, easy to operate and adopt. An emphasis on advanced technological solution results only in further obstacles piled up after the solution has actually not been understood or accepted by the employees. Additional challenges are that these systems are rather expensive, and often inconsistently implemented.

**Advantages and Disadvantages**

In today`s extremely competitive market, CRM helps company to actualize customer driven strategies and operations. A company needs to have an *outside-in* perspective which according to Kotler (2008), looks like this:

![Figure: The Marketing Concept (Source: Kotler and Armstrong, 2008)]

The marketing concept, according to Kotler (2008), starts with a well-defined market, focuses on customer needs, and integrates all the marketing activities that affect customers. In turn, it yields profits by creating lasting relationships with the right customers, based on customer value and satisfaction. One of the advantages of CRM is to integrate all marketing & sales activities into one place where all the actions are visible and enables company to easily identify and close the gaps they have.

There could be specified different benefits linked to the CRM system, such as: cost savings (by boosting employees` productivity), customer satisfaction and loyalty (retention), increased profits (the result of the previous two benefits mentioned), increased internal accountability (good performance evaluation tool), employee satisfaction (more productive employees), better business intelligence (taking advantage of the information stored). With proper use of CRM companies are also given the opportunity to focus `resources on best customer opportunities and dealing with underperforming customers or segments` (Bligh, P., 2004). In any case, if you want to establish and quantify tangible benefits from your CRM project you must set quantitative goals and a baseline before you start so you can keep a scorecard of the impact of the project (Touniaire, F., 2003). It has been widely known that it is more common for CRM system to fail, than to succeed, and according to recent industry research `only 16 percent of CRM projects provide real, reportable business return on investment (ROI)`. In a related study, of the 43 percent of respondents who claimed to have achieved success in their CRM projects, only half of this group was able to cite solid details about returns. An estimated 12 percent of projects fail to go live at all` (Bligh, P., 2004). But
it is important to distinguish that it is rarely a matter of the tool itself, it is mostly human factor that influences and drives virtually anything to succeed or fail. Failures occur mostly because of three P’s: politics, people and process.

Exhibit 1 demonstrates the most commonly stated reasons for failure.

<table>
<thead>
<tr>
<th>Reason</th>
<th>% Citing in Top 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of cross-functional coordination</td>
<td>50%</td>
</tr>
<tr>
<td>No CRM business strategy</td>
<td>48%</td>
</tr>
<tr>
<td>Lack of process change</td>
<td>45%</td>
</tr>
<tr>
<td>Lack of executive support</td>
<td>40%</td>
</tr>
<tr>
<td>Poor business representation on team</td>
<td>32%</td>
</tr>
<tr>
<td>Inappropriate IT investments</td>
<td>32%</td>
</tr>
</tbody>
</table>

Exhibit: Leading CRM risk factors (% citing risk in top 3) (Source: Bligh, P., 2004)

**CRM Deployment Options**

**On-Premise CRM**

On-premise CRM, also known as licensed, on-site, or in-house CRM, is a CRM application that is housed at a client’s location, and managed by its own employees. Company’s internal IT personnel are responsible for installing all hardware and software components, integrating the solution with existing systems, deploying it to end-users, and storing all related data. System administration, upgrades, and other routine maintenance are also performed by IT staff of the CRM user company.

**On-Demand CRM (SaaS-Software as a Service)**

On-demand CRM, also known as Hosted CRM or Web-Based CRM, provides a simpler, faster, and more affordable way for businesses to take advantage of powerful technology tools that streamline and automate the way customer interactions are managed across touchpoints. With hosted CRM, all hardware and software components are purchased, installed, tested, and maintained by a third-party hosting provider at a remote site. The hosting service provider also stores and manages all customer-related data. Companies need nothing more than a standard Web browser to access and utilize the CRM application and its features.
On-Premise CRM vs. On-Demand CRM (SaaS)

Many experts argue that On-Premise CRM systems are more suitable for larger companies with long-term CRM investment plans; while On-demand performs better on sales-oriented business, clearly has advantage of speed and quicker ROI results. On-demand solutions can be useful in scenarios where customer relationships are managed largely by the sales department which functions more or less as an independent entity. (Vishnoi, 2007) On-demand CRM makes CRM easier and more cost-effective for businesses with IT and budget constraints. It provides all the standard functionality of licensed CRM solutions, as well as the security, reliability and performance companies need to ensure smooth customer operations, without the time and expense associated with in-house systems. There are no complex, labor-intensive implementations and no ongoing maintenance and support. Time-to-deployment is shortened, and company’s application will be up-and-running quickly. Thus, little burden will placed on company’s IT department and technical staff will be free to devote more time to other important projects. (www.business-software.com, 2010)

The good side of on-demand CRM is that it does not require lots of technology readiness. The applications are designed to be easy to use by the sales people, it should capture only the information required for them to do their job and the system has to be provided in such a way that it will be a joy for the end users. However if they want to integrate CRM to other systems, they will need IT organisation to ensure that the integrations will be delivered. CRM On-demand changes the whole perspective of technology demands, because this is typically a project and a system “owned” by the business side of the company rather than the IT side. (S.Heijnen interview, Oracle, 2010)

However, Robert DeSisto, an analyst at Gartner, agreed that SaaS applications have a lower total cost of ownership only for their first two years because they do not require large capital investments for licenses or support infrastructure. However, they lose that advantage from an accounting perspective beginning in the third year of a deployment. That's because on-premises applications depreciate as a capital expense, while SaaS applications are booked as operating expenses and cannot be depreciated. (www.gartner.com, 2009)

On-premise CRM solutions on other hand, provides companies with complete control over their entire CRM, allowing them to put the appropriate mechanisms in place to ensure optimum performance and reliability. On-premise CRM is designed to deliver value over an extended period of time, and has proven to be more cost-effective for companies that have long-term CRM strategies in place. (www.business-software.com, 2010)

Since customer tastes and needs are dynamic, a company needs to evolve its business processes constantly to be able to fulfil customer expectations. To do this it needs a customer process solution that helps it to compete in terms of cost, products, and service level. This requires a high degree of application customization that is usually found in on-premise CRM systems. In addition, large companies need to constantly identify key customer trends and create strategies for cross- and up-selling and present a customized experience. To this end,
they need a CRM solution that offers the depth of applications for achieving cross-organization linkage and swift customer analytics. These attributes are found in on-premise solutions. (Vishnoi, 2007)

However, traditional CRM tools often require technical IT know-how within the organisation, to integrate into the existing IT infrastructure, to ensure access is available in all locations with high speed networks, to constantly manage and upgrade the application, to ensure the necessary hardware and software is in place to cope with capacity. This can sometimes turn CRM into an IT project, driven and owned by IT – with less focus on the business benefits and more on IT restrictions. (S.Heijnen interview, Oracle, 2010)

Vishnoi (2007) also adds that there can also be a combination of both, as it is best to consider the short-term and long-term scenarios and opt for a solution that is cost-effective in the long-term and also provides the necessary scalability. Some companies have roadmap that starts with on-demand and leads into on-premise-CRM, while some have on-premise CRM with pockets of on-demand solution based on specific need for their business units.
8.4 Appendix 4

8.4.1 Management Report: Case of Westinghouse

Background

Authors initially wanted to do the thesis within Westinghouse due to their interest in nuclear industry and good reputation of Westinghouse as well as location (Västerås, Sweden) and accessibility to offices to get primary information easier.

After an interview process, Mats R. Olsson who was at that time Manager for Nordic Marketing of Westinghouse Sweden welcomed authors’ interest of a thesis work. Several options are evaluated with Mats R. Olsson and lack of CRM is decided as an important problem within Westinghouse today. However, since it is a large subject to research on, the work is limited to show benefits of CRM for Westinghouse and increase CRM knowledge of Westinghouse by providing as much insight as authors can.

The topic was interesting and relevant enough to fit into a management report that can be prepared in parallel with the bachelor thesis. Thus, authors enjoyed dedicating their time and energy to the management report. A plan is quickly scheduled and research began.
Westinghouse donated financial and material resources to the research of this thesis; in return authors decided to provide them a management report that has similar structure of a bachelor thesis. The following report is prepared in parallel with the bachelor thesis.

The Management report provided Westinghouse with their words: “a valuable insight on CRM” and how to achieve CRM Impact. In short time a CRM Project team is formed in Westinghouse, USA. CRM vendor is chosen as SAP CRM and currently SAP CRM Implementation is scheduled to begin in February 2011.

Authors were proud to contribute to an international project of such large scale while still studying in Mälardalen University and earned tremendous practical experience by joining the Westinghouse’s CRM project team as observers.

In this appendix, some parts of this management report like critical literature review, theoretical framework, or method are not provided to avoid repeating presentation of same content. In addition, details such as figure numbers and chapters are marked as X, to prevent confusion of the reader.
Achieving CRM Impact: 
A case study of Westinghouse worldwide

Jasmina Bjelevac
Hakan Yayintas
Presentation of Westinghouse

About the Company

Westinghouse Electric Company, a Toshiba Group Company, offers a wide range of nuclear plant products and services throughout the world, including fuel, service and maintenance, instrumentation and control and advanced nuclear plant design.

The company has its roots back in 1886, founded by George Westinghouse, who built the first power generating station in the U.S. Currently, company has more than 457 operating nuclear reactors worldwide, with approximately 14 500 employees in 15 countries around the world. In the fall of 2006, Westinghouse joined with Toshiba Corporation to achieve a goal of becoming the world’s leader in commercial nuclear power. Westinghouse World Headquarters is located in Cranberry Township, Pennsylvania, United States. The company has three core businesses: Nuclear Fuel, Nuclear Services and Nuclear Power Plants. (Westinghouse Sweden)

Figure X: Core business profile (Source: Westinghouse Sweden)

Nuclear Fuel is located mostly in U.S., U.K. and Sweden and is the supplier of value-added products and services. Nuclear Services, located primary in U.S. and Europe, provide solutions with focus to help keep nuclear plants operating safely and competitively.

Nuclear Power Plants is present worldwide and offers range of products and services to design, licence, build and commission nuclear plants (Westinghouse Sweden).

Westinghouse has embarked on a journey to significantly unify the company with a common goal: A commitment to customer success. Initiated in mid-2003, Customer 1st is an on-going commitment aimed at improving the perception of Westinghouse’s customers. Based upon four key elements – Six Sigma, Human Performance, Lean Enterprise and Behavioural Differentiation – Customer 1st forms a unique approach that promotes an operational excellence and puts customer needs, customer drives and customer success at the heart of the Westinghouse business (Westinghouse Sweden).
Company structure

The headquarters of Westinghouse are located near Cranberry Township, Pennsylvania, U.S. with Aris Candris as President and CEO. Company is operating in other eleven states within the United States. Companies in Europe are located in Sweden (Västerås and Täby), U.K. (Springfield), Belgium (Nivelles), France (Orsay, Metz, Marseille and Lyon), Germany (Hamburg and Mannheim), Spain (Madrid and Tarragona), Ukraine (Kiev), Russia (Moscow), and Bulgaria (Sofia). Companies in Asia are positioned in Korea (Seoul), China (Beijing), Japan (Tokyo and Kobe) and Taiwan (Taipei).

Westinghouse is entering African market as well, currently having two established companies in Republic of South Africa (Pretoria and Koeberg).

A world map with company locations is illustrated below:

![World map with company locations](Source: Westinghouse Electric Sweden AB)

The same company matrix structure is recognized and accepted in every Westinghouse Company or subsidiary worldwide. The company is growing rapidly, and recruiting a vast number of engineers in a line with demands.

Problem discussion

The majority of Westinghouse’s customers worldwide are considered key accounts, in marketing terms: platinum customers where the large parts of revenues are emerged from.
Also the majority of Westinghouse’s business is generated as long-term projects or service agreements, so customer relationships are considered crucially important. Westinghouse has a unit within their organizational structure defined as Customer Project Management (CPM) operating both as customer management and project management, in other words, Westinghouse combined their two crucial functions into one unit to increase the efficiency of both functions. When customers approach Westinghouse, they use three channels of communication depending on customer’s preference or business type. In their current worldwide structure, 100% of key account customers and 50% - 70% of regular customers prefer to use CPM channel for communication and contact, while Marketing & Sales receives 30% - 40%, followed by the Product Line receiving the remaining 20% - 30% of customer requests and communication preference. Although these figures are widely acknowledged as worldwide customer preferences by Westinghouse, they can still vary between different locations and countries.

![Diagram]

**Figure X: How customers approach Westinghouse (Created by authors)**

When a customer request is received, the information flow, in other words, data transfer between the Westinghouse’s departments are rather complex and lacking efficiency, which can be defined as an internal communication problem. The data of customer’s request, transaction or opportunity travels internally with phone and emails between all departments.
and in some cases between different departments of different countries which ultimately causes delays and slow information flow. Since it is not an automated process, it is also subject to contain higher risk of human mistakes causing inaccuracy between departmental recordings and loss of knowledge on the way.

Each regional organization also has their own databases where customer information and the information for the transactions are recorded in customized excel sheets. These knowledge sheets are mainly used for generating reports, tracking opportunities, forecasting and identifying investment needs for future. The reason to have these customized knowledge sheets lies in the difference between operational structure of departments and their view of the customer.

![Diagram](image)

**Figure X: How recordings become analysis (Created by authors)**

To finalize the recording process, all knowledge on these excel sheets are then used as inputs to the enterprise system of Westinghouse, which is SAP since many years, integrated with company policy and used by all units of Westinghouse, all around the globe.

However, due to limitations of the enterprise system, to be able to see the complete picture of customer operations and opportunities, the gathered knowledge needs to be data mined by two external systems, customized specifically for Westinghouse. Data mining is the process of extracting and presenting new knowledge, previously undetectable, selected from databases for actionable decisions. (Swift, 2001) One of systems is Opportunity Tracking System (OTS) which basically data mines and extracts information from the enterprise system to provide an analysis and complete view of market and customer opportunities. Another is Toolbox which is used to see the complete forecasting process. However, due to the limitations of the enterprise system and data mining systems, this processes cannot be done interactively, thus Westinghouse decided to standardize the process to once per month. But one month in today’s competitive business environment means a higher chance of losing opportunities as customer decisions tend to change even in one night. So there are cases of opportunities being lost even before Westinghouse can analyze and act on it.

The whole process of information flow, beginning from customer’s first contact, to analysis of customer data for further opportunities and forecasting, is a very labor intensive process, due to multiple channels of information, consumes too much time and too much energy, even
for a simple process as generation of analysis reports, as well as updating, such as removal of items no longer applicable, like sold orders, lost opportunities etc. According to Swift (2001), the sheer amount of data in the multiplicity of systems (in most large organizations) cannot be turned into answers because of duplications of inaccurate information, the lack of focused customer-centric data, and the use of differing information technologies.

**Research Questions**

This research is going to answer the following questions, derived from the main purpose:

- How can Westinghouse solve their problems with the help of a CRM system and achieve CRM impact on their organization?
- What kind of operational & strategic benefits Westinghouse can receive from a CRM system such as increased internal efficiency, communication flow and competitiveness?
- Which functionalities of a CRM system are the most suitable for Westinghouse worldwide structure and needs?

**CRM Requirements for Westinghouse worldwide**

**Departmental needs**

After several interviews with Westinghouse Executives, authors have prepared requirements and expectations of Westinghouse from a CRM system. CRM needs to involve entire organization in order to function properly, which is why Westinghouse includes different departments that would make daily inputs into the system. Since Westinghouse has similar structure in their locations, same business areas within each location would be using the system. Those are specifically five departments as presented in the figures X and X below.

A crucial requirement for Westinghouse is the need of integration to SAP ERP system. SAP is widely used by nearly every employee and every department of Westinghouse, thus removing it is not an option. However, authors found out that many CRM systems have capabilities of integration with SAP in today’s market, thus at present, integration is not the most challenging process.
As demonstrated on figure above, CRM should be used as an internal communication tool between departments to increase the speed and efficiency of information flow. Instead of ordinary communication methods such as sending emails, phone or exchanging excel sheets between departments; all customer data and transactions should be visible on one place: CRM, thus removing all labor work required for sharing information between departments. This will result in increased employee efficiency and productivity as employees will be using the saved time on something else.

CRM should also combine all departmental databases into one place, providing easier access to customer information. With one customer information database, the information quality will increase as there will be more monitoring and lesser human mistakes. One database also will increase efficiency by requiring less labor work in functions such as generating reports, tracking of opportunities, gathering information for forecasting and identifying investment needs for future. Finally and most important: They should have one view of customer. One view of customer should eliminate all departmental differences and knowledge differences, thus providing each department with same quality of knowledge and overview of the situation on that customer.

CRM extracts all information interactively to ERP system which is known to be bulky and have user-unfriendly interface. With figure X type of structure, employees will not work with ERP at all regarding any function that requires customer information. Instead CRM will automatically and interactively update data located in ERP, thus increasing efficiency of the employees by eliminating all labor work related with the ERP SAP system.
In addition, with the CRM implementation, there should be no longer need for separate knowledge databases for each department. Currently, each department has their own view of customer such as Product Line is tracking their operations per product, CPM is tracking per customer, Executives are tracking per country etc. CRM should be easily customized and view of information should be easily changed according to departmental needs and functions.

Time is very important regarding opportunities win/lost. So, interactive visibility and transparency is a crucial business requirement as well. Through all information recorded and tracked with CRM, top management should be able to see all actions interactively, generate reports instantly, to take strategic decisions without waiting for reports or information from each department.

The interface of the CRM system should be simple, understandable and easily learned. Employees should enjoy working with CRM not hate it. An easy interface will motivate employees to use CRM more as it will require less labor work and increase simplicity of all processes and business.

However, if the CRM users have to work with ERP as well due to incapability of the chosen CRM system, request by top management or unmentioned requirements, then another structure can be demonstrated in figure below:

![CRM as a communication tool with ERP](created by the authors)
In this case, CRM will only be used as communication tool; more focused on internal communication rather than information flow. As a result, some functions will be used through ERP system.

But according to information received from Westinghouse executives, authors have found out that, a good CRM system will cover more or less every Westinghouse requirement today regarding functionalities and expectations without the need to use extra functions from ERP system, due to the fact that more or less every good CRM system today can be integrated to ERP systems without facing many challenges.

With a unified structure seen on figures above, there should be significant decrease on labor work and communication expenses as well as speed of sharing information speed and employee efficiency. After implementation of CRM, process of sharing information should be simplified, thus previous ways of communication will be no longer necessary. To sum it up:

- All excel sheets used as recording knowledge between departments will be removed.
- All communication lines dedicated to share customer information and transactions will be removed.
- OTS system (Opportunity Tracking System) will be removed as CRM will be interactively doing same functionality faster, with more detailed data and more accurate data.
- Toolbox (sales forecasting) might be removed as CRM or ERP has the same functionality, however quality and accuracy of forecast varies between systems, thus it should be removed after much consideration and accuracy tryouts on CRM or ERP system.
- Other methods of generating reports will be removed. CRM will be the primary report function regarding customers.
- All methods of archiving customer history and information should be removed. As CRM will be the main customer database, it needs every possible customer data to produce more accurate assumptions and figures. Example: What’s the sales trend in last 5 years?

**CRM Functions for Westinghouse**

Functions considered necessary from the Westinghouse point of view, can be categorized, based on the units who would operate the system. The functions which each corresponding department would be responsible for are presented in the table below.
<table>
<thead>
<tr>
<th>Departments</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing &amp; Sales Department</td>
<td>Marketing Automation, SFA (Sales Force Automation), Opportunity tracking and forecasting</td>
</tr>
<tr>
<td>Financial Department</td>
<td>Financial and Analytical function, forecasting</td>
</tr>
<tr>
<td>CPM</td>
<td>Accounts and contacts, Marketing Automation, Opportunity tracking and forecasting</td>
</tr>
<tr>
<td>Executive Management</td>
<td>OMA (Opportunity Management Analysis)</td>
</tr>
<tr>
<td>Product Line</td>
<td>Product strategies, Forecasting</td>
</tr>
</tbody>
</table>

Table X: CRM functions required by Westinghouse (Created by the authors)

Each of these departments is involved in the sales process. For example, if a customer contacts CPM and is interested in one specific product Westinghouse is offering, then CPM is going to note all the necessary information about that customer and his needs. CPM then informs Marketing Department about the opportunity, after which they develop proposal for that customer. Marketing Department then involves Product Line to evaluate the opportunity and estimate the probability, volume and margin for that customer. One financial employee is responsible for the support in that process and enters the order into the system, while Executive Management uses this opportunity to compare it with other opportunities in their country/region, and proceeds with those opportunities, which have the highest probability to succeed.

So Westinghouse prefers to have all this information and the whole process, more simplified and clear for the managers. The functions presented in the table 1 would help the company to control the process and overcome the problems stated earlier in the report.

Marketing Automation can help the company to identify the opportunities easier, to create bids in simplified and more automated way, having all the necessary information about the customer in one database, as well as good connectivity with other departments.

SFA (Sales Force Automation) can revolutionize the way sales representatives are operating in the company today: it gives the opportunity to the company to track up-sales and changes in the sales; it can simplify the sales process and provide connection with other departments.

With Financial and Analytical functions Financial Department can help Westinghouse, to effectively and time efficiently, enter the orders into the system, visible to all other managers and departments. It can, as well, provide more reliable support to the Product Line and create reliable forecasts through analytical tools available.

Functions like Accounts and Contacts, can help CPM to have entire customer history, which is visible to all managers and relevant for the company, and include reports on major issues and actions of their customers. The utility of this functionality will demonstrate itself best when a key employee decides to retire or quit working for Westinghouse. As Nonaka and
Takeuchi explains differentiation between explicit and tacit knowledge. They mention that explicit knowledge can be written down, while tacit knowledge is expressed in experience and know-how. To preserve tacit knowledge, companies must either pass it on through experience or convert it into explicit knowledge. Better communications improve social relations and thus allow tacit knowledge to transfer from one employee to another. But turning tacit knowledge into explicit knowledge is more complex. Someone has to write the lessons down so that anyone in the organization can read and absorb them (Nonaka & Takeuchi, 1995). With this functionality, most of the tacit knowledge will be preserved and protected as all account information and customer activities will be completely visible and easier for a new employee to understand, adapt the role, absorb the previous knowledge and continue same level of relationship with customers as before.

With functions like Opportunity tracking and forecasting, company can track the opportunities, for each customer, in less time consuming and simpler way with reliable forecasts of the success of the opportunity.

OMA can help executives to integrate and identify the opportunities and have the view of the whole process, while Dashboards can give the company real-time snapshot of corporate metrics and key performance indicators.

Functions like product strategies, can help the Product Lines to have visibility of strategic actions, and to more effectively plan and track the opportunities and calculate the profits for each product sold.

Detailed explanation of why each function is considered necessary, beneficial and appropriate for Westinghouse will be presented in the recommendations of this report, since it needs to be combined with the recommended vendor, who will provide the company with preferred functions.

**Conclusion**

Finally, with the help of theoretical framework, Westinghouse requirements and analysis of industrial companies, Authors will provide a conclusion about problem discussion and provide an overview of how Westinghouse worldwide can achieve CRM impact.

Analysis of companies which authors provided with the conclusion that, Love`s et. al findings and theory on chapter 6 as well as the CRM Impact Research Model is highly reliable with real business cases, since every construct on the model is proved to be necessary and satisfied to achieve a CRM impact in organization. Authors decided to explain the conclusion in the form of Love`s et. al constructs to give a clear vision of why they are important for Westinghouse.
Operational Benefits

With the right tool, CRM will provide certain direct operational benefits to Westinghouse, in other words, more simplified day to day business, or the benefits that will directly increase their internal efficiency are:

- simplified access to information
- reduced labour work requirement for daily tasks
- reduced time consumption of daily tasks
- simplified generation of reports
- increased workforce productivity
- increased workforce effectiveness
- immediate access to order status, quotations, enquiries on customers
- improved response time to customer requests
- reduced costs of service and customer handling

Westinghouse required having more simplified daily processes, especially to increase internal communication, such as removal of information transfer between departments, like emails, phone calls, exchanging excel sheets etc. which consumes unnecessary time and energy, eventually slowing down the process and response time to customers. It also raises the chances to make more human mistakes along the way, causing inaccuracy and inconsistency of information between departments or countries. CRM will provide Westinghouse the interactive environment where they will no longer need to send each other information, instead with few clicks on their computer they will access to the information they were searching for, with no need to email or ask someone and no need to wait for an answer. Of course to be able to achieve this trait, all information should be in one database and the database should be constantly updated and controlled, but that will be explained under Knowledge Management further.

Another benefit will present itself when it comes to generating reports which usually has high time and energy consumption for employees. Since all data is stored in CRM, the tool will not spend much time (only around 5-10 minutes) to generate a detailed report, with the settings and criteria chosen by the user. A good CRM tool usually has function to easily customize the report as well, for example if the user defines, the report could show transactions per country, per customer, per business, or per product depending on users choice, which will enable Westinghouse to customize the report according to departmental interests. All these abilities provided by CRM tool will greatly reduce time requirement to produce reports.

With CRM, CPMs and Marketing & Sales will be able to monitor and see account plans, bid preparation status, order status, probabilities, quotations and enquiries on customers directly, without any delay, thus can react without any delay as well. This will greatly improve response time to customers which will contribute to customer satisfaction, retention and eventually loyalty in long run.
The information on CRM can also easily updated and edited, such as changing probabilities of opportunities, without any delay which will remove the requirement to inform everyone about it, because it will be visible on CRM with a small note or information that why it has been changed. Good CRM tools also have options to automatically send reminders to users if certain probabilities or certain numbers reached certain levels, again, defined by users’ choice.

All these tool-side CRM functions will provide Westinghouse an overall increase on employee productivity and efficient use of time, thus employees can use the saved time and energy for something else. It will also eliminate the current communication problems of Westinghouse worldwide, as the CRM tool itself will be the tool of communication between departments and countries.

In connection, costs will be reduced as well to conduct services or responses to customers. It may even lead to the fact that fewer employees will be needed for certain functions, thus employees might be moved to other positions where they can contribute Westinghouse more.

**Strategic Benefits**

The greatest strategic benefit of CRM will be to have one database containing all information about customer contacts, actions on them, and activities on them, including every detail, even their characteristics, buying behaviour or their personality. So CPMs and Marketing & Sales in Westinghouse will have knowledge of how to approach them, when to approach them, how often to approach them and predict their future needs much easier.

Of course, one can always ask why every detail about customers is needed on CRM. The answer is simple: Strategic benefits. To be more specific:

First, it is needed to know and understand the customer so CPMs and Marketing & Sales can perform better on that customers and increase the accuracy of their predictions. To be specific, a customer from India may not have same characteristics as a customer in China, the reasons can be cultural, educational, political, or even emotional and religion related. By pouring all information into CRM about that customer will inform everyone in the company of how to approach that customer, which factors to be considered before approaching and signals the right time to approach, in other words, CRM will automate and guide Marketing & Sales of what to do and when to do. Because the customers will be better understood, in time, it will increase customer satisfaction levels and retention.

Secondly, it is needed to simply convert tacit knowledge into explicit knowledge. Considering the fact that no employee signs a life-long agreement with Westinghouse, some may decide to quit, some may decide to retire, some might pass away (extreme example) and some may decide to join competitors. Authors have found that the levels of damage caused to the companies especially on the switching to competitor cases are tremendous, just like in Outokumpu’s case in chapter X. In all these cases however, the need to convert tacit knowledge into explicit knowledge becomes clear. CRM will store all details on customers,
thus the knowledge which would otherwise be lost with the employee’s leave will be contained in CRM as explicit knowledge, thus the new employee assigned to do the job will have a clear vision of the current situation and will need less time and less energy to adapt to the new role.

To sum it up, all strategic benefits the Westinghouse will receive from CRM implementation are:

- improved understanding of customers
- ability to better predict customers buying behaviour and choices
- provide automation and guidance to Marketing & Sales activities
- achieve greater customer control
- increased customer retention
- increased customer loyalty
- increased revenues
- simplified monitoring of performance
- better identification of service gaps
- more accurate forecasting
- better tracking of opportunities
- increased win rate

By understanding the customers better, Westinghouse will also identify their service gaps better, since all activity will be monitored on CRM, they will be able to see the lacking parts of the organization or the field that needs improvement.

The ability of monitoring actions on CRM will also provide top management better and more accurate business intelligence, also a chance to peek to the performance levels of subsidiaries as well.

Since the predictability of customer will be increased, it will lead to more predictable sales and opportunities. Thus, it will directly lead to a more accurate forecasting process. Good CRM systems today have forecasting functions already implemented, with probabilities calculated according to users’ defined settings.

Westinghouse should also keep all customer history within CRM for strategic purposes, for example, if CPM or Marketing & Sales would like to know the buying trend or a specific product’s performance in last 5 years, with few clicks and delay they will be able to find out the answer. Then they can take strategic decisions like investment to improve the product or kill it completely if it’s not generating sufficient revenues. Thus, with CRM, Westinghouse can more effectively manage and execute changes in marketing strategies as well, since the customer trends will be visible. They can further increase effectiveness of marketing campaigns as well as enhance marketing & sales opportunities for targeted customers. By having 360 degree view of the customers, CRM will allow Westinghouse to be better aligned
with every customer interaction, giving the opportunity to every department involved in the
process, to participate, contribute and help to bring the decision about certain opportunity to
its full extent and competence level.

Another strategic advantage will be the ability to tracking of market opportunities more
efficiently on CRM, since departments will be able to see what activities each other
performed to capture the opportunity, they will be able to evaluate the sufficiency of the
effort spent on opportunities through monitoring CRM. Thus, CPMs or executives may
decide to get involved in the process and perhaps win the opportunity which would otherwise
be lost.

Authors would like to remind Westinghouse once again with the fact that strategic benefits
has nothing to do with CRM tool’s quality or relation with IT other than providing global
visibility. It is more like how the contained information is used for strategic purposes. It is
essential to understand that CRM is not an IT tool but a business tool, to support driving a
successful customer-centric business. Many companies that have failed CRM initiatives fell
into trap of marking CRM as IT projects thus ignoring the strategic benefits that can derive
from it. One example is ABB today, as seen in ABB case.

**Top Management Support**

Top Management’s involvement in Westinghouse is absolutely essential, as it is
demonstrated many times that lack of top management support leads to a poor or failed CRM
initiative. The main reason is the employees’ natural resistance to change.

Many employees in Westinghouse are using ERP system in their daily work for a long time,
thus there will be serious challenges for change management. Some employees will not want
to change their style of working, some will not want to be monitored, some will work slowly
due to fear of making mistakes, and some may not like the chosen CRM system and so on.
There will always be employees’ resistance of different kinds. However, that’s the point the
top management should step up, own the CRM and drive the new marketing & sales strategy,
inspire and motivate employees with demonstrating the benefits they will achieve through the
use of CRM system. They should also constantly use the tool in their daily work, not only to
motivate the employees but actually to monitor the follow-ups and evaluate the performance
of the employees as well as to take strategic decisions, since every action on customers will
be visible on CRM with all details. Some employees, especially on sales side will not be
happy of being monitored, thus enforcement might be necessary in early stages until the
CRM benefits are fully realized.

However, top management in Westinghouse will also need to find balance between enforcing
the change and promoting the change. Too much enforcement may lead to decrease of
enthusiasm and morale among employees, while too much promotion might be costly and
time consuming. It is proven many times that employees will adopt easier if top management
leads the initiative by example, by using the CRM application themselves in their
management planning and showing employees that they actively use the tools provided. Top management should also actively sponsor CRM; communicate its value and why it is important for the whole organization.

It’s a high chance that there will always be questions raising up among employees during the adoption period, such as why the CRM is needed, why now, why they need to change etc. The answer should not be “because top management said so”. One example that many CRM successful companies have initiated during implementation is the top management participations in training sessions, which Westinghouse may choose to follow. The presence of top management will inspire and motivate employees and lower the resistance substantially. Many CRM experts also mention that to be able to succeed, and CRM projects need an executive champion that has ability to create and communicate a solid, rich vision of how the project will bring tangible business benefits and promote it in the organization.

**Technological Readiness**

It is found out that technological readiness will not be one of the greatest challenges Westinghouse will encounter on their CRM venture. Westinghouse mentioned the requirement of SAP integration as priority of choice of a CRM system; however it is found out that good CRM tools have no integration problems with ERP systems today. The integration between CRM-ERP is often handled by a middle-ware and users can define which parts to integrate and which parts to avoid.

The most important decision for Westinghouse is if to choose an on-premise or on-demand CRM system to begin with. As stated on chapter 3, the maintenance and management of on-premise systems will rely on IT department of Westinghouse while maintenance of on-demand systems are handled by providers, reducing the time needed for the implementation and technological requirements. There are advantages and disadvantages for both types of systems which are mentioned in chapter X in detail, and many experts argue the efficiency of each type, some conclude favouring on-premise and some favouring on-demand. However, there is a general agreement that on-premise systems tend to bring more positive results in long-term while on-demand has a quicker ROI effect, thus perform better in short-term. Although, authors believe that Westinghouse should conduct internal evaluations to decide which type of deployment option to continue with, as well as running tryouts and demos for both types to understand which one is the most suitable for their short-term needs and long-term needs.

Many CRM vendors today offer free testing possibilities, due to heavy competition on CRM market. Westinghouse is also a strong brand that they would like to add to their references to generate more sales later on, means it is a double-win situation for them if they can capture Westinghouse as a client. Thus, authors believe that Westinghouse has an upper hand in negotiations with CRM vendors today. CRM vendors will also be more than happy to provide a free test and will show extra effort to capture and convince Westinghouse, such as fixing a demo customized specifically with Westinghouse requirements. Authors believe that
Westinghouse should use this advantage to try few CRM systems on the market and actually ask for a development direction instead of accepting and trying to adapt to the current product.

There is no such thing as final product in CRM world. CRM vendors have their own development teams constantly working to perfect their tools, releasing new versions and new functionalities every year. They set their development directions according to customer preferences and opportunities on the market. Thus, it is highly possible that CRM vendors will accept to develop their tools further with the direction of Westinghouse’s functional requirements if Westinghouse demands so. Although, some vendors might ask for extra costs and some vendors will do it for free in time. However, vendors have tendency to tell how hard it is to change the product, to ask for extra costs, while in reality it just requires few lines of additional coding on their system. In such cases, IT department of Westinghouse can step-in, estimate the programming needs and the cost asked to evaluate the honesty of the vendor, after understanding the logic of how CRM tool works.

Some companies also use multiple CRM systems, like on-demand for sales organization and on-premise for other functions. There are also cases that sometimes it can be worthwhile to begin with on-demand and switch to on-premise later on, depending on market conditions and urgency of need. But in any case authors do not agree with increasing the number of systems in the company, as it is found out that more systems only lead to slower processes, miscommunications, inaccurate information, double-entries, increased controlling needs, increased maintenance costs, increased updating costs, increased labour work requirement from IT department etc. as well as unforeseen integration issues between systems and so on.

In fact, with the CRM implementation, Westinghouse should also seriously consider reducing the number of systems used today. For example, Westinghouse should question the need for OTS (Opportunity Tracking System) and Toolbox after CRM implementation. It is found out that reducing the number of systems in use will increase the efficiency of others and speed up the processes overall. In fact, if Westinghouse’s choice of CRM tool supports Opportunity Tracking function, it is possible that with little customization or development to the tool, it can be perfected for Westinghouse’s needs and requirements. Same can be said for forecasting as well. Many good CRM tools today contain these two functions already implemented to their products, with proper customizations defined by users, their efficiency can be increased.

Authors strongly believe that the direction of CRM should be to replace as much systems as possible, providing one work environment just like how Windows Office is used today, like for presentations, excel, word documents or email etc. Imagine if there would be different software used for all these functions, it would just slow down the users’ efficiency.

In theory, a good CRM system should replace those Westinghouse uses today and even perform some functions better, since there are many examples on the market today. The main reason will be the advantage to have one work environment, and since opportunity tracking
and forecasting will be in the same system, there is a high chance that a link between them can be created, such as using certain opportunities with certain probability percentages on forecasting process. For example, all opportunities over 80 percent can be automatically linked to forecasting function, thus greatly reducing the labour work and time consumption required to do it manually by using both systems. In simple terms, the time and workforce required to use OTS and Toolbox can be used elsewhere.

There is also a misconception today that SAP CRM will work better with SAP ERP, or Oracle CRM will work better with Oracle ERP. It is found out to be not true. Despite what some vendors claim, a good CRM tool will face little difficulties of integration, regardless of the ERP system of the company. It is also possible that whatever CRM choice Westinghouse decides, they will need a middle-ware to integrate successfully with their ERP. Thus, actual options for Westinghouse are many, and tryouts will give the best answer.

**Knowledge Management Capabilities**

Knowledge Management is found to be the most significant issue concerning CRM today. One database of knowledge and keeping it clean, updated and constantly running is extremely crucial to achieve the CRM impact.

Westinghouse, without doubt, should have one database for all customer actions and history; it can be on ERP or CRM, regardless of where it is, if there is a sufficient integration, there shouldn’t be any problems. The most important factor is the speed of access to information. Users should not wait more than few minutes to access the information they need, otherwise they will start to think that calling and asking the responsible department is better. Improving customer response and internal efficiency greatly relies on the speed of access to information.

To be able to have 360 degree of customer view and simplified access to information, all customer data should be stored in same place. Visibility is one of the strongest points of CRM, thus it is essential to see all actions together to be able to use CRM for strategic purposes. Customer information should also be synchronized and integrated efficiently with back-end systems, like financial and product line as well, to be able to see precisely of at which degree Westinghouse is performing on that customer.

Another issue is the accuracy of information kept on the database. A customer would not like to be called again for the same subject when it’s already been called by another colleague yesterday, or pursuing an opportunity that is lost 2 days ago, but not updated on CRM, will only waste time of the next marketing employee trying to contribute to capture the opportunity. Thus, updating information real-time in CRM is crucial to avoid mistakes, overlapping and repetition of actions. Naturally, some employees will want to update CRM daily, some weekly, and some will want to update it from time to time. In such cases, management should step-in and make them understand the importance of updating the system real-time as it affects everyone connected to the CRM. Some companies use controllers to constantly monitor the information quality on CRM, and correct human mistakes on daily
basis which proved to bring very positive results on information quality being kept in the database.

An effective knowledge management also needs a cultural change within organization, as information sharing should be encouraged and promoted within Westinghouse. A good example would be an executive involvement on promotion process, driving adoption, simply inspiring and motivating employees to realize the benefits of sharing information.

Achieving CRM Impact

Authors have come to the conclusion that Westinghouse, with the help of CRM, can most definitely increase their internal efficiency, productivity and competitiveness, if they follow the right steps, and satisfy all constructs needed to achieve it. Authors believe that CRM will also immensely support Westinghouse’s Customer 1st journey, as customers will witness how relationships are efficiently managed in Westinghouse.

The greatest challenges of CRM are found to be mental, rather than technological. The most common mistake is to perceive CRM as an IT project, however in reality; CRM should be driven by business side, to run a successful customer-centric business. But, most importantly, Westinghouse as an organization should believe in CRM, not be afraid of pursuing the vision, regardless of challenges or obstacles encountered on the way.