Merina Appel

THE EFFECTS OF THE NEW CREDIT MANAGEMENT PROCESS AND ONGUARD SOFTWARE ON THE CASE COMPANY SOUTH EUROPE

Ylempi AMK-tutkinto

Liiketalous ja matkailu

2012

Table of Contents

VAASAN AMMATTIKORKEAKOULU
VAASA UNIVERSITY OF APPLIED SCIENCES
Master of Business Administration
(ylempi AMK)

ABSTRACT

Author	Merina Appel
Topic	The Effects of the New Credit Management Process and OnGuard Software on the case company South Europe
Year	2012
Language	English
Pages	97
Name of Supervisor	Mika Ylinen

This research paper examines the effects of the new credit management process and OnGuard software on case company South Europe. The objective of the study was to compare the theories of Enterprise Resource Planning (ERP) and Business Process Re-engineering (BPR) in addition, to Cash Management theories in the practice of receivables collection in the case company to find out the effects of the system.

Research was conducted on different areas: how the case company had performed receivables collection prior to the new process and software. Next, the new process and implementation of the software was researched. Finally, the case company was examined after they had used the new process and software for six and nine months.

Case study was used as the research method to collect information. Interviews were the main form of data collection. In addition, documentation, artifacts, and participant-observation were used to support the research.

The effects of the new credit management process and OnGuard software turned out to be rather big. The receivables collection time trend had decreased during this period. The automation of the different actions and ready made templates generated by the OnGuard software has released more time for the credit controllers and made it possible to follow up efficiently on all customers.

Keywords	Credit Management, receivables collection, OnGuard, cash management, Enterprise Resource Planning, Business Process Re-engineering

VAASAN AMMATTIKORKEAKOULU
Yrittäjyyden ja liiketoimintaosaamisen koulutusohjelma
(ylempi AMK)

TIIVISTELMÄ

Tekijä	Merina Appel
Opinnäytetyön nimi	The Effects of the New Credit Management Process and OnGuard Software on the case company South Europe
Vuosi	2012
Kieli	englanti
Sivumäärä	97
Ohjaaja	Mika Ylinen

Tämä tutkimus tarkastelee uuden luotonhallintaprosessin ja OnGuard työkalun vaikutuksia kohdeyrityksessä South Europe. Tutkimuksen tavoitteena on verrata toiminnanohjausjärjestelmä- ja liiketoimintaprosessien uudelleensuunnittelu- sekä lisäksi kassanhallintateoriaa saatavien perintäkäytäntöön kohdeyrityksessä ja selvittää niiden vaikutuksia.

Tutkimus on suoritettu selvittämällä seuraavia näkökulmia: kuinka kohdeyritys on suorittanut saatavien perinnän ennen uuden työkalun ja prosessin käyttöönottoa. Myös uuden prosessin ja työkalun implementointi on esitelty. Lopuksi tutkimuksessa tarkastellaan kohdeyritystä kun uuden työkalun ja prosessin käyttöönotosta on kulunut kuusi ja yhdeksän kuukautta.

Tutkimusmenetelmänä käytettiin case tutkimusmenetelmää. Haastattelut ovat olleet tärkein tiedonkeräysmenetelmä. Lisäksi, dokumentaatiota, artefakteja ja osanottajatarkkailua on käytetty tukemaan tutkimusta.

Uuden luotonhallinta prosessin ja OnGuard työkalun vaikutukset olivat huomattavat. Saatavien keräysaikatrendi oli parantunut tänä aikana. OnGuardin luomat automatisoidut työtehtävät ja valmiit kirjepohjat ovat vapauttaneet lisää aikaa luotonvalvojille ja mahdollistaneet kattavamman asiakas seurannan.

Asiasanat	Luotonhallinta, saatavat, saatavien perintä, OnGuard, toiminnanohjausjärjestelmä, liiketoimintaprosessien uudelleensuunnittelu, kassanhallinta

1 INTRODUCTION

The opening chapter gives an introduction on this thesis. The background is presented first, leading to the research problem and questions. This is followed by the objective of the study which is presented together with the scope and delimitations. Finally, the chapter ends with the structure of the whole thesis.

1.1 Research Background

Accounts receivable are one of the most important part of a company's assets on the balance sheet, yet many times under-utilized. Especially overdue receivables tie up significant amounts of money that could be used more efficiently. The case corporation for this thesis has not had a global credit management process defined before the beginning of 2010, and that is constantly being developed further.

There is a big need for the company to implement a harmonized process in to all of its network companies in order to cover all different aspects of credit management. To support the new process a solution called OnGuard is being implemented. The case corporation has started the roll-out of the implementation of a receivables collection tool software, OnGuard, into all of its Network Companies (70) around the world.

The case network company, Services division that is being researched in this thesis is called case company South Europe (CSE) located in South Europe. The company was chosen for two different reasons. First of all, the case company South Europe belongs to the area of South Europe and Africa for which the writer of the thesis is responsible for in her position as an area credit controller. The second reason is the roll-out schedule of the new software and the credit management process for the case company South Europe that suits the schedule of the thesis writing.

1.2 Research Problem

The research problem consists of three different main areas. First, how the collection of the receivables was done in case company South Europe before the

implementation of OnGuard software and the new credit management process is researched. Furthermore, the research examines how the software and credit management process were implemented and the critical issues affecting the success of the implementation. Last, the effects and the benefits of the new software and process compared to prior to the implementation are being researched.

1.3 Research Questions

- How was the collection of the receivables performed in the case company South Europe prior to the implementation of OnGuard tool?
- How was the OnGuard tool implemented in the case company South Europe?
- What is the new receivables collection process like?
- How did the new receivables collection process and the OnGuard tool affect the case company South Europe compared to pre-implementation?

1.4 Objective of the Study

The objective of the study is to compare the theories of Enterprise Resource Planning (ERP) and Business Process Reengineering (BPR) in addition to Cash Management theories in the practice of receivables collection to find out the effects of the new system. To be able to complete the objective in question, the effects of the ERP systems in theory are to be found out. They are to be compared to the receivables collection practice of the case company prior to and after taking the new software into use.

1.5 Scope and Delimitations

In this study the scope has been limited to only one network company, case company South Europe that will be examined. When comparing the ratio of sales and receivables in case company South Europe, only the receivables under the case company's books will be examined despite of who is the responsible network company of that customer. A responsible network company in this context means the company that is responsible for the customers located in the same country where the network company is located. The receivables for which case company

South Europe is responsible for but the receivables are under another case network company entity [(Generated Trade Volume, (GTV) receivables)] will not be examined when it comes to figures. Researching several case network companies would give a more in-depth picture of how the software and the new credit management process has affected globally in the case corporation. The limitations have been done due to the limited scope of this master's thesis.

1.6 The Structure of the Thesis

This thesis is divided in to six chapters. The theoretical study consists of three chapters and the empirical study consists of another two chapters. The *first chapter* begins with an introduction, leading the reader to the background of the thesis and what the research problem and the set questions are, including the objective and scope of the study.

The *second chapter* depicts the research methodology. It covers the research approach, data collection techniques and the methods used, the sources of data, validity and reliability, along with the analysis methodology.

The *third* chapter is divided into two sections. The first section consists of the theory on Enterprise Resource Planning (ERP) and the second part consists of Business Process Reengineering theory. First, the implementation and strategies of ERP are presented. Thereafter, OnGuard software is examined. Moreover, the chapter continues with the ERP implementation phases, and the benefits of the implementation. In addition, the failing factors that affect ERP implementation are discussed. In the second section of the chapter, similarly the implementation of Business Process Reengineering is introduced, following with the problems and issues in BPR and finally the achievements of Reengineering.

The *fourth* and last chapter of the theoretical study comprises of cash management theory. This chapter contains a description of what cash management is, an analysis of its importance and a description of what the different techniques used in cash management are.

The empirical study starts in the *fifth* chapter of the thesis. It begins with an overview of the case corporation and proceeds to the specific case network company with case company South Europe being researched. In this chapter, the kind of collection process there was in use at the case company South Europe is presented before the go-live of OnGuard and the start of the new credit management process. Furthermore, what is the new credit management process in the case corporation is examined. Then, the chapter continues to lay out the implementation of the new software and the new credit management process. Finally, the effects of both the implementation and the new software are researched and compared to the time before the go-live, which is the starting of the new tool and process.

Finally, the findings and conclusion are presented in the last chapter, *six*. The main results and applicable suggestions are presented together with the limitations of the study. In the end, implications for further research are discussed.

2 RESEARCH METHODOLOGY

This chapter presents how the research is conducted. It presents the research approach, the data collection methods, and the sources of data used. Moreover, the validity and reliability are discussed. Finally, the analysis methodology is presented.

2.1 Research Approach

There are three types of business research approaches according to Sachdeva (2009, 14) which are exploratory, descriptive, and causal.

Exploratory research type consists of gathering preliminary information that will ease in defining problems and on suggesting hypothesis. This type of research relies on secondary research and includes reviewing literature and/or data, or qualitative approaches that can be informal discussions or more formal approaches such as in-depth interviews, focus groups, projective methods, case studies or pilot studies. Exploratory research is qualitative research and can answer the questions of why, how and when something occurs. (Sachdeva 2009, 14.)

Descriptive research describes things. It is also known as statistical research, describing data and characteristics about the population or phenomenon being studied. It answers the questions who, what, where, when and how. This type of research cannot, however, describe what caused a situation. (Sachdeva 2009, 15.)

The third research type is causal research. The objective of this type is to test hypothesis about cause-and-effect relationships. This type of design is highly structured and controlled so that other factors do not affect those being studied. (Sachdeva 2009, 15.)

Yin (2009) in his book of Case Study Research states that when research questions focus mainly on "what" questions, there are two possibilities that arise. First, some type of "what" questions are exploratory. The goal is to develop relevant hypotheses and propositions for further inquiry. For an exploratory study,

any of the following research methods can be used; for example an exploratory survey, an exploratory experiment or an exploratory case study. (Yin 2009, 9.)

This research paper follows exploratory research. A key characteristic of the detective's approach to solving the problem is its flexibility. As new pieces of information are available the search for the solution may change direction. (Ghauri & Grønhaug 2005, 58.)

Inductive approach

The classical way of distinguishing research strategies is to divide them in to inductive and deductive research. Induction is based on empirical evidence, while deduction is based on logic (Ghauri & Grønhaug 2005, 15.). In this research the inductive approach is being used. Through induction we draw general conclusions from our empirical observations. In this type of research the process goes from observations -> findings -> theory building, as findings are incorporated back into existing knowledge (literature/theories) to improve theories. This type of research is often associated with the qualitative type of research. The process goes from assumption to conclusion. (Ghauri & Grønhaug 2005, 15.)

Qualitative approach

Ghauri's and Grønhaug's (2005) opinion is that when deciding which of the methods and techniques are most suitable for which research (project) it depends on the research problem and its purpose. Even though it is sometimes stated that quantitative methods are more scientific and thereby better but in Ghauri's and Grønhaug's opinion methods or techniques are not better or more scientific only because they are quantitative.

The main difference between qualitative and quantitative research is not of quality but of procedure. In qualitative research, findings are not arrived at by statistical methods or other procedures of quantification. Normally, the basic distinction between quantitative and qualitative research is considered to be that quantitative researchers imply measurement and qualitative researchers do not. Furthermore, the difference between these two methods is also a reflection of different

perspectives on knowledge and research objectives. In some studies data may be quantified, but the analysis is qualitative. Qualitative and quantitative methods are therefore not mutually exclusive. (Ghauri & Grønhaug 2005, 109.). Qualitative research is a mixture of rational, explorative and intuitive where the skills and experience of the researcher play an important role in the analysis of data (Ghauri & Grønhaug 2005, 110).

In this research paper, qualitative research method is used as it is generally accepted for inductive and exploratory research. Qualitative methods are most useful, as they can lead us to hypothesis building and explanations. In addition, qualitative methods are most suitable when the objectives of the study demand in-depth insight into a phenomenon. (Ghauri & Grønhaug 2005, 110-112.). In this case, as data collection involves a multi-culture or multi-context study, it is important to understand the differences between culture and behavior. Qualitative data collection methods can be useful in such cases, as they often use unstructured questions that can be changed, translated and reformulated more easily. (Ghauri & Grønhaug 2005, 112.)

Case study research

It was natural from the beginning that this research would be performed as a case study. Ghauri and Grønhaug (2005) mention that a case study is a preferred approach when "how" or "why" questions are to be answered, when the researcher has little control over events, and when the focus is on a current phenomenon in a real-life context. In addition, case studies are often of explanatory, exploratory or descriptive nature. To support this, Yin, in his book Case Study Research quotes the words of the observer (Schramm, 1971) "The essence of a case study, the central tendency among all types of case study, is that it tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result."

There is a twofold technical definition of case studies. The first part begins with the scope of a case study (Yin 2009, 18).

1. A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.

2. The case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical propositions to guide data collection and analysis.

The twofold definition shows how case study research comprises an all encompassing method- covering the logic of design, data collection techniques, and specific approaches to data analysis. Case studies are not limited to being a data collection tactic alone or a design feature.

These research designs have not been codified for a case study. It is a separate research method that has its own research. The design is the logical sequence that connects the empirical data to a study's initial research questions and, ultimately, to its conclusion. A description for a research design is a plan that guides the investigator in the process of collecting, analyzing, and interpreting observations. It is a logical model of proof that allows the researcher to draw interferences concerning causal relations among the variables under investigation. (Yin 2009, 26.).

The research design for case studies is composed of five important parts:

- A studies questions
- Its propositions, if any
- Its unit(s) of analysis
- The logic linking the data to the propositions
- The criteria for interpreting the findings. (Yin 2009, 27.)

Single-case design

A primary distinction in designing case studies is between single- and multiple case designs. The single-case study is an appropriate design under several circumstances. There are five rationales that serve as a major reason for conducting a single-case study; critical case, extreme case, revelatory case and longitudinal case. (Yin 2009, 49.). The rationale in this master's thesis used is a longitudinal case. This means the studying of the same single case at two or more different points in time. It depicts how certain conditions change over time. The desired time intervals would presumably reflect the anticipated stages at which the changes should reveal themselves. (Yin 2009, 49.). In this case, the single-case is the case company South Europe that is studied over four different points in time.

2.2 Data Collection Methods and Sources of Data

Getting prepared to collect data also requires some preparations from the investigator. There are some important skills that should be considered before starting the actual investigations. Some of these commonly required skills are: to be able to ask good questions and to be able to interpret the answers, to be a good listener, to be adaptive and flexible, to have a firm grasp of the issues being studied and to be unbiased by preconceived believes. (Yin 2009, 68-69.).

Case study evidence can come from many sources such as: documentation, archival records, interviews, direct observation, participant- observation, and physical artifacts (Yin 2009, 99). In this case study four difference sources of data are used; interviews, documentation, participant observation and artifacts. Each one of them has been described in detail below.

The company used in this case study is a big international organization with 70 different network companies around the world. One of the network companies located in South Europe was used as the case company. The reason why this specific company was chosen was because the company belongs to the South Europe an area for which the researcher is also the area credit controller for at her work. The second reason is that the time schedule of the research paper and the

go-live of the OnGuard tool for the case company matches well together. The interviews were conducted with both of the persons taking care of the credit control tasks in the case company. Furthermore, these persons are the only ones in the case company who are using the OnGuard tool.

Interview

One of the most important and essential sources of case study information is an interview. It is a guided conversation rather than structured query. Throughout the interview process there are two levels to be operated on at the same time; satisfying the needs of the line inquiry while simultaneously putting forth friendly and nonthreatening questions in the open ended interviews. (Yin 2009, 106-107.).

There are three different types of interviews. The interview type used in this specific case study is an in-depth and semi-structured interview with some parts being a focused interview type. The third type of an interview is a formal survey which was not used in this case study. It is used to produce quantitative data as part of the case study evidence.

In an in-depth interview the key respondents can be asked about the facts of a matter as well as their opinions about the events. In some situations, the interviewee can be asked to propose her or his own insights into certain occurrences that can be used a basis for further inquiry. (Yin 2009, 107.). On the other hand, additional questions may be required to explore the research question and objectives given the nature of events within particular organizations (Saunders, Lewis & Thornhill 2009, 320). The more the respondent assists in this way, the more her or his role becomes an informant rather than a respondent. Key informants can very often be critical to the success of a case study. Such persons provide the case study investigator with insights into a matter and can also initiate access to corroboratory or contrary sources of evidence. (Yin 2009, 107.).

The second type of an interview is a focused interview, in which a person is interviewed for a short period of time- an hour, for example. In such cases, the interviews may still remain open ended and assume a conversational manner, but

the interviewer is likely to be following a certain set of questions. The major purpose of this kind of an interview is to support certain facts that the investigator already thinks have been established. Specific questions need to be carefully worded so that the interviewer is naïve about the topic and allows the interviewee to give a fresh commentary about it. (Yin 2009, 109.). In this case study, parts of a focused interview type are also used as there are certain set of questions that were used and followed.

Overall, interviews are an essential part of case study evidence because most case studies are about human affairs or behavioural events. Interviewees can provide important insights into such affairs or events. They can also provide shortcuts to the prior history of such situations, helping to identify other relevant sources of evidence. Even though interviews are an essential part of a case study, they should be considered as verbal reports only and should always be accompanied by other information sources of evidence as well. (Yin 2009, 108-109.).

At first, it was thought that the interviews would be conducted one by one with both of the credit controllers. However, it was suggested by the case company that the interviews could be conducted together as a group interview in order for both credit controllers to support each other and to generate more in-depth discussion. After thinking this through, I did not see a reason why the interview could not be done together. In the end, it turned out to be a good choice because the discussions were fruitful and both of the interviewees supported each other so that, for example, if one remembered a topic and started a new discussion that the other one may not have remembered at that point the other one joined in and vice versa. One possible negative factor is that the interviewee can be afraid to give his/her honest opinion in a group interview, but in this case that was not a problem, as both of the credit controllers are doing the same tasks and there is nothing to hide from each other. It was also felt that the answers were given honestly and truthfully.

The interviews were conducted electronically by using the company's Office Communicator system to hold a "Live Meeting". This means that the interviewer can share his or her screen and the interviewees on the other end can see the same

on their own screen. At the same time it is possible to hold a conversation like on the telephone. In this interview the semi-structured questions were shown on the screen so that the interviewees could see them and easily re-read them to understand them better. Whenever a question needed further explanation the interviewer would provide it. Some questions were reshaped during the interview and some were omitted if the reply was received already in the discussion in some earlier question. The interviews were recorded with the permission of the interviewees to ensure that all information was documented. The recordings were only used for the purpose of supporting in this research paper and no one else other than the interviewer will have access to them.

Documentation

A second important case study source of evidence that is used is in the study documents. This type of information can have many forms and should also be the object of explicit data collection plans. Documents can, for example, be some of the following variety of documents: letters, e-mail correspondence, other personal documents, such as calendars, and notes, agendas, announcements, minutes of meetings, progress reports, other written reports of events, news clippings and other articles appearing in the mass media or in the community newspapers. Documents are useful even though they may not always be accurate and may not be lacking bias. For case studies, the most important use of documents is to corroborate and augment evidence from other sources. Because of their overall value, documents play an explicit role in any data collection in doing case studies. (Yin 2009, 103.). In this research, different forms of documentation used are emails, minutes of meetings, and training material. The case company corporation has prepared documentation related to the credit management process and that is widely used.

At the same time there are also negative features when using documentation as data. There is a possibility of overreliance on documents in case study research. Many researchers think that the documents contain the unmitigated truth. Therefore, it is important to remember that a document was written for a specific purpose and for a specific audience which may be different from the audience for

whom the case study is being done. In this sense, the case study investigator is a vicarious observer, and the documentary evidence reflects a communication among other parties attempting to achieve some other objectives. (Yin 2009, 105.).

Participant-Observation

Participant-observation is also used in this case study as one source of information evidence. It is a special mode of observation in which the investigator is not a passive observer but instead assumes a variety of roles within a case study situation and may actually participate in events being studied (Yin 2009, 107). In this research, the investigator was not physically present in the working environment and organization in South Europe but serving as a staff member in the same large organization and acting as the area credit controller of the area in which the case company belongs to. In addition, the researcher has participated in a similar end user training herself. One can say that participant-observation was used to a certain extent.

This is an opportunity related to the accessibility; of being able to have access to the group of users that would otherwise have been inaccessible to an investigator from outside the company. Another opportunity is to have the ability to manipulate minor events. This can only happen through participant-observation as the use of documents, archival records, and interviews, for instance assume a passive investigator. The manipulations can also produce a greater variety of situations for the purpose of collecting data. (Yin 2009, 112.).

The major problems have to do with the potential biases produced. First, the investigator has less ability to work as an external observer and may have to assume positions contrary to the interest of good social science practice. Second, the participant-observer is to follow a commonly known phenomenon and become a supporter of the organization being studied, even if such support did not exist before. Third, the participant role may require too much attention relative to the observer role. Thus, the participant-observer may not have sufficient time to take notes or to raise questions about events from different perspectives, as a good

observer might. Fourth, the participant-observer may find it difficult to be at the right place at the right time, either to participate in or to observe important events. These trade-offs can be either the right approach or under other circumstances, the credibility of a whole case study project can be threatened. (Yin 2009, 112-113.).

Physical Artifacts

A fourth source of evidence used in this case study is a physical or cultural artifact. It can be a technological device, a tool or instrument, a work of art, or some other physical evidence. Such artifacts can be collected or observed as a part of a case study. Physical artifacts have less potential relevance in most typical kind of a case study. However, when relevant, artifacts can be an important component in the overall case. (Yin 2009, 113.). This case study uses the receivables collection tool OnGuard as an artifact. It is a technological device which can help to observe the daily tasks that the objects being researched are doing. By using the device, it will give visibility on the amount of receivables but also it serves as the main tool for seeing the situation of the disputes that cannot be seen from anywhere else. The second artifact that is being used is QlikView. It is a tool used in the case corporation that shows the open receivables of each network company. QlickView has been used to gather the receivables data for the case company. Data is being used to see how the receivables situation has developed compared to before using OnGuard and after having used it for certain periods of time.

Benefiting from all the different sources of evidence can be maximized if three principles are being followed: the use of multiple sources of evidence, creating a case study database and finally, by maintaining a chain of evidence (Yin 2009, 114-122).

2.3 Validity and Reliability

The quality of any given design can be judged according to certain logical tests because a research design is supposed to be representing a logical set of statements. These concepts for these tests include trustworthiness, credibility,

conformability, and data dependability. There are four tests that have been commonly used to establish the quality of any empirical social research. As case studies are also one form of such research, the four tests are also relevant for them.

There are several tactics for dealing with these four tests when doing case studies. Below are listed the tactics for each test and the phase of the report in which the tactic should occur.

- Construct validity: identifying correct operational measures for the concepts being studied. This tactic occurs in the data collection and composition phase of research
    - Multiple sources of evidence
    - Established chain of evidence
    - Key informants should review draft case study report

- Internal validity (for explanatory or causal studies only): seeking to establish a causal relationship, whereby certain conditions are believed to lead to other conditions, as distinguished from spurious relationships. This tactic is to be used in the data analysis phase.
    - Pattern matching
    - Explanation building
    - Address rival explanations
    - Use logic models

- External validity: defining the domain to which a study's findings can be generalized. The research design phase includes this tactic.
    - Theory to be used in single-case studies
    - Replication logic to be used in multiple case studies

- Reliability: demonstrating that the operations of a study-such as the data collection procedures- can be repeated, with the same results. This tactic is to be used in the data collection phase of the research.
    - Phase study protocol is to be used
    - A case study database is to be developed. (Yin 2009, 40-41.).

Construct Validity

The first test is challenging especially for case studies. It is often pointed out that a case study investigator fails to develop a sufficiently operational set of measures and that subjective judgements are used to collect the data. A reader cannot tell whether claimed changes that operational events constitute reflect the events or whether they happen to be based on an investigator's impressions only. To meet the test to construct validity, an investigator must be sure to cover two steps: first to define the change in terms of specific concepts and second to identify operational measures that match the concept. (Yin 2009, 41-42.).

Internal Validity

Internal validity is mainly a concern for explanatory case studies, when investigator is trying to explain how and why event x led to event y. if the investigator incorrectly concludes that there is a causal relationship between x and y without knowing that some third factor-z-may actually have caused y, the research design has failed to deal with some threat to internal validity. A second important concern over initial validity for case study research extends to the challenge of making inferences. A case study will involve an inference every time an event cannot be directly observed. An investigator will infer that a particular event resulted from some earlier occurrence, based on interview and documentary evidence collected as part of the case study. (Yin 2009, 42-43.).

External Validity

The third test deals with the problem of knowing whether a study's findings are generalizable beyond the immediate case study. The external validity problem has been a major barrier in doing case studies. Survey research relies on statistical

generalization, whereas case studies rely on analytic generalization. In analytical generalization, the investigator is striving to generalize a particular set of results to some broader theory. (Yin 2009, 43.).

Reliability

The final test is the reliability test. The objective is to be sure that if a later investigator followed the same procedure as described by an earlier investigator and conducted the same case study all over again, the later investigator should arrive at the same findings and conclusions. The goal of reliability is to minimize the errors and biases in a study. One prerequisite for allowing this other investigator to repeat an earlier case study is the need to document the procedures followed in the earlier case. Without such documentation it is not even possible to repeat own work. The general way of approaching the reliability problem is to make as many steps as operational as possible to conduct research as if someone was always following what the investigator is doing. (Yin 2009, 45.).

2.4 Analysis Methodology

The nature of the qualitative data collected has implications for its analysis. During analysis, the non-standardized and complex nature of the data that has been collected will need to be summarized, categorized or restructured as a narrative to support meaningful analysis. (Saunders, Lewis & Thornhill 2009, 482.).

Yin (2009, 127) states that the analysis of a case study evidence is one of the least developed and most difficult aspects of doing a case study. There are four different general analytical strategies in doing case studies. The strategy used in this report is *relying on theoretical propositions* that led to the case study. The original objectives and design of the case study were based on propositions which in turn reflected a set of research questions. The proposition is an example of a theoretical orientation guiding the case study analysis. (Yin 2009, 130.).

The analytic technique used in this study is the time-series analysis. This should be conducted directly analogous to the time-series analysis conducted in

experiments and quasi experiments. Such analysis can follow many intricate patterns. The more intricate and precise the pattern, the more that the time-series analysis also will lay a firm foundation for the conclusion of the case study. In time series, there may only be a single dependent or independent variable. The ability to trace changes over time is a major strength of case studies. (Yin 2009, 144-145.).

3 ENTERPRISE RESOURCE PLANNING AND BUSINESS PROCESS RE-ENEGINEERING

This third chapter is the first one of the two theoretical chapters of this research. It will explain the concepts of Enterprise Resource Planning (ERP) and Business Process Reengineering (BPR). First the ERP implementation process and strategies will be gone through step by step, leading to the example of the OnGuard software system. Then, the ERP implementation phases will be presented. Moreover, the benefits and the different critical success factors of ERP implementation will be discussed.

The second section of the third chapter will cover the concept of Business Process Reengineering. Next the implementation of BPR will be discussed and then the problems and issues appearing in BPR. Last, the achievements of reengineering will be presented.

3.1 Enterprise Resource Planning (ERP)

Enterprise Resource Planning (ERP) programs are core software used by companies to coordinate information in every area of the business. ERP programs help to manage companywide business processes, using a common database and shared management reporting tools. A business process is a collection of activities that takes one or more kinds of input and creates an output, such as a report or forecast that is of value to the customer. ERP software supports the efficient operation of business processes by integrating throughout a business task related to sales, marketing, manufacturing, logistics, accounting, and staffing. (Monk & Wagner 2009, 1.). ERP was one of the biggest revolutions in the corporate world for the last two decades (Ray 2011, 4). An ERP implementation should not be viewed only as a pure IT project. It is a multidisciplinary team effort. It cuts in to the center of the business, upturning policies, power bases and practices. It requires a changing set of skills that may not be used again. If it is useful then the rewards are useful. Transactions are rapidly processed. Timely information provides awareness of what is happening. Actions become more proactive. The payback has a positive effect on the bottom line. (Harwood 2003, 1.).

3.1.1 ERP Implementation

The goal for each company that plans to go in for enterprise resource planning is obviously a successful implementation. Any ERP implementation is a special event because it involves the entire organization over a period of time. It brings together different functionality, people procedures and ideologies, and leads to changes throughout the organizations. (Garg & Venkitakrishnan 2003, 37.).

To successfully implement an ERP system and to avoid failure, the firm must conduct a careful preliminary analysis and develop a plan for ERP acquisition and implementation. The most important success factors for ERP implementation include top management support, effective project management, extensive user training, and viewing ERP as a business solution. Factors such as inadequate technology planning, user involvement and training, budget and schedule overruns, and availability of adequate skills are considered reasons for ERP failures. (Hooshang 2006, 185.). The failing factors that affect ERP implementation will be discussed in more detail in the last part of this chapter.

The Objectives of ERP Implementation

Objectives are characteristics that can have major impact upon the success of an ERP implementation project. The characteristics of the objectives include for example speed, scope, resources, complexity, risk and benefits. Each of the objectives is briefly described in the next paragraph. (Leon ERP 2008, 216.).

Speed is related to the amount of time that the company has before the ERP implementation and during it. Scope includes all the functional and technical characteristics that a company wants to include in its implementation. Resources are all that is needed to support the project. These can include, people, software systems, hardware systems, consultants, and technical support. Complexity depicts the degree of difficulty of implementing, operating and maintaining the ERP system. The complexity of the project depends on the size, business environment and organization cultures of the company. The risk is a factor that impacts the overall success of the ERP implementation. Benefits are the extent to which the company will utilize functionality of the ERP system for software

development, maintenance and other support activities. In order to get the maximum benefit out of an ERP implementation, the system should be built around the product design, development and production processes, and organizational procedures followed by the organization. (Leon ERP 2008, 216-217.). Further benefits of the ERP implementation can be read in 3.1.6 of this chapter.

3.1.2 ERP Implementation Strategies

There are different approaches for ERP strategies. One of these common approaches is Big Bang where all locations take into use all modules at once. Rollout, in which selected locations are implemented with all modules, is another approach, Big Bang and Modular where all locations are implemented with only selected module is still is still one approach, and the last one is Rollout and Modular together which means selected locations only and selected modules are taken into use. Each of these has its own advantages and disadvantages. (Ray 2011, 52.).

In the implementation process being researched the ERP implementation in the organization was done by using the rollout approach. This means that each company was rolled out one by one. The ERP implementation is first done in one company which has good representation of the company's all business processes, and it starts to build its global template (Ray 2011, 53). In this case the rollout was first done in the headquarter country of the case corporation. Later on this template is rolled out to several locations, including locations-specific enhancements, if required. The case corporation has SAP as its ERP system and, therefore, implementation of OnGuard collection tool cannot be directly referred to as an ERP implementation. However, the OnGuard roll out has many similarities to ERP implementation although in a much smaller scale. For example in the case company South Europe for example, the dunning notices and other templates needed to be translated in to the mother tongue of the case company country. This was done by the case company themselves.

The advantages of the rollout approach are low risk and the possibility to leverage from the implementations at earlier locations except for the first one. The company can see what worked, where they had problems, what could be done differently. It does not put a lot of pressure on the company in terms of time and effort from a large internal team. The only disadvantage of this approach is that the project may go on for a long time before all locations have been implemented. (Ray 2011, 53.). In the case corporation case another disadvantage was that one of the network companies were implemented and followed the new credit management process where as the rest of the companies were not implemented yet and followed their local way of working. This caused a challenge as the implemented companies could not follow the new process 100% until all the companies had been implemented.

3.1.3 OnGuard

OnGuard is an independent Dutch software company, founded by David W. Taylor that offers software and services for credit, collection and query management. OnGuard has since 2004 grown to become a market leader in Credit Management and their ambition is to become a global leader for Credit Management software. The company has offered credit management solutions to both local and international customers for all sized enterprises for almost twenty years now. Today OnGuard is operational with 850 businesses with over 12 000 users daily in different countries. (OnGuard.).

OnGuard markets itself as a software that will optimize the complete credit management process from invoice to cash and integrates credit management further into the customer's organization. Furthermore, they assure to predict tomorrow's risk and reducing the future write-offs. Segmenting the customer base and applying appropriate action profiles to minimize payment times. Last, they conclude sharing information within the organization. (OnGuard.).

The specific software that the case corporation and each case network company is using is called OnGuard ICMS. The acronym stands for Integrated Credit Management Solution. This software integrates credit management, collections

management and complaints management in one process. The result should not only improve the tangible financial aspects of working capital but should also improve the customer base and relationship with each customer. The OnGuard ICMS is an international solution providing full multi-language and multi-currency support. Also very high volumes of data can be supported by OnGuard ICMS. Integrated functions with other business applications save time and increase the quality and yield of credit management. (OnGuard.).

The four reasons that OnGuard states as why the OnGuard ICMS should be chosen are: first it can segment the customer base and apply appropriate action profile to minimize payment times. Next, a structured and disciplined approach to collection will reduce DSO (Days Sales Outstanding) and improve cash flow. Then, by combining multiple sources of external and internal credit information a tailored collections strategy can be defined for every customer segment to reduce risk and improve customer intimacy. Finally, complaint can be identified earlier leading to less complaints, improvements in internal processes and improvements in payment times. (OnGuard.).

In practice, the user of the software is assigned her/his customers. Each day the user gets an automatic list of actions that she/he has to complete. The actions are defined by each organization according to a time schedule. Actions can vary from phone calls to sending dunning notices or monitoring actions such as reminding the dispute resolver of a dispute not resolved in a given amount of time.

OnGuard also does implementations. They use the Prince2 methodology. Prince2 (Projects IN Controlled Environments) is a structured, generic method for effective project management, aimed at the controller start-up, realization and termination of projects. Their approach is to translate technical and functional preferences into the installation and set-up the credit management software. They also train employees to use OnGuard. All together the implementation will take three months. (OnGuard.). In the case corporation case, OnGuard only trained the implementation team members, who in turn taught all the Case Network Companies into which the software was rolled out to.

The OnGuard implementation project is divided in to five different phases. 1) Kick-off and preparation, 2) Installation, 3) Set up test administration & training, 4) Set up production administration & training and, 5) Go Live. At the end of each phase the steering committee determines using the defined products whether the current phase can be terminated and the following phase started. (OnGuard.).

3.1.4 ERP Implementation Phases

The ERP implementation project like any other project has to go through different phases. There are no clear lines separating each phase, one phase may start before the previous one has been completed. However, the logical order is being followed. The different phases are listed below. (Leon 2008b, 217.).

- Pre-evaluation screening
- Package evaluation
- Project planning phase
- Gap analysis
- Reengineering
- Customization
- Implementation team training
- Testing
- Going live
- End-user training
- Post-implementation (Leon 2008b, 217-218.).

In this thesis the research is done regarding the phases starting from the going live phase. All the phases until testing are not in the scope of this thesis and therefore they will be explained only briefly whereas the phases that have been gone through in this paper will be discussed in a more detailed manner. In addition, the way the theory was implemented in the case corporation will be discussed.

Leon (2008) starts explaining the first phase *pre-evaluation screening* by suggesting to narrow down the number of packages to less than five because analyzing all packages is too time consuming. It is better to do a detailed

evaluation of a few packages. This is called a pre-evaluation screening. Leon goes further by saying that not all packages are equal and each has its own strengths and weaknesses. The most important thing is to try to find out how the different packages are performing in a similar environment as the one in which the implementation will be done. Narrowing down can be done by looking at the product literature of the vendors and getting help from external consultants.

Once the pre-evaluation screening has been done the *package evaluation* can begin. This second phase is one of the most important ones in ERP implementation because the package that will be selected determines if the project will be a success or not. The purchasing of a package involves huge investments and will not be easy to switch to another one later on. The most important factor is to find a package that covers all the requirements but the objective is to find a solution that is flexible enough to meet the needs of the company, a software that can be customized. Once the packages have been identified, the company has to develop the selection criteria that will permit evaluation of all the available packages on the same scale. To choose the best system the company should identify the one that meets the business needs, matches the business profile and identifies with the business practices of the company. It is advisable for a selection or evaluation committee that comprises people from different departments and consultants that will do the evaluation process. (Leon 2008b, 220.).

The *project planning* phase designs the whole implementation process. This phase includes all the details in how the process is to go about including for example time schedules and deadlines. The project plan is developed, roles are identified and responsibilities are assigned. The organizational resources are decided and the people heading the implementation are identified. The implementation team members are selected and task allocation is done. In this phase it will be decided when the project will start, how it will be done and when the project is supposed to be completed. The project is being monitored and controlled. A committee constituted by the team leaders of each implementation group usually does the project planning. It will meet periodically during the entire implementation life

cycle to review the progress and document the future actions. (Leon 2008b, 220-221.).

Gap Analysis phase is the most crucial phase in the ERP implementation phase. It is the process through which companies create a complete model of where they are now and where they are heading to. A model should be designed that anticipates and covers any functional gaps. According to Leon (2008b, 221) it has been estimated that ERP packages that have been custom tailored to a company's needs meets only 80% of the company's functional requirements. The remaining 20% of the requirements present a problematic issue for the company's Business process reengineering. (Leon ERP 2008, 221.).

Re-engineering includes the phase in which human factors are taken into account. In ERP implementation settings, reengineering has two different connotations. The first one involves the use of ERP to aid in downsizing efforts. An ERP should be treated as an investment as well as a cost-cutting measure, rather than as a downsizing tool. The second connotation refers to an ERP implementation model initially designed and used with a lot of success by the biggest ERP consulting firms. The Business Process Reengineering (BPR) approach to an ERP implementation implies that there are two different implementations involved on an ERP site. These two are a technical implementation and a business process implementation. The BPR emphasizes the human element of necessary change within an organization within a company. (Leon 2008b, 221.).

Customization phase is the main functional area of the ERP implementation. Business processes have to be understood and mapped so that the goal where is being headed matches up with the overall goals of the company. A prototype of the actual business processes of the company will be used. ERP consultants test and configure the prototype and attempt to solve any logistical problems inherent in the BPR before the actual go-live implementation. Configuring a company's system reveals its strengths and weaknesses. It is important for the company's health and success of the ERP implementation that the configuration team is able to explain what will fit onto the package and what will not. (Leon 2008b, 222.). In the case corporation many customizations were done so that the tool would better

fit and serve the 70 Network Companies. Some of the main customizations were regarding the setup of the network companies and the dispute management.

While the customization is taking place, the implementation *team* is being *trained* on how to implement the system. During this phase the company trains its employees to implement and later on to run the system. It is important to have a team inside the company who will be able to run the ERP system and handle various situations because the ERP vendors and consultants will leave after the implementation is over. The employees chosen for this team should have the correct attitude and should be willing to change, learn new things and have good functional knowledge. (Leon 2008b, 222-223.). In the case company, OnGuard company trained the implementation team how the implementation would be done.

In the *testing* phase, the system is tried to be broken. At this point, real test case scenarios are being tested. At this phase, extreme cases should be come up with such as system overloads, users entering invalid data, hackers trying to access restricted areas and so on. The test cases should be carefully designed in order to find out the weakest links in the system and these bugs should be fixed before going live. (Leon 2008b, 223.). The implementation team of the case corporation was heavily involved with the testing phase. They tried to find out what worked and what needed to be tested further.

Then comes the *going live* phase. This is the phase where the ERP system is made available for the entire organization. On the technical side several things have been done and work is almost complete. The data conversion is done, databases are up and running and on the functional side, the prototype is fully configured, tested and ready to go operational. The system is officially proclaimed operational and the old system is removed and the new system is used for doing business. (Leon 2008b, 223.). The going live phase took part company by company in the case corporation.

In the *end-user training* the actual users of the system will be given training on how to use the system. This phase starts before the system goes live. The training

is very important as the success of the ERP system is in the hands of the end-users. The training sessions should give an overall view of the system and how each action affects the entire system. In addition, each end-user is trained on the tasks that they are supposed to perform once the system goes live. A human factor that comes along is the nature to resist change. Another factor is that not all people will be successful in making the changeover. End-user training is much more important and at the same time more difficult than the implementation training because of the change resistance. Company management should address these concerns and take all necessary actions to avoid a failure. There is statistical evidence that shows that most implementations fail because of lack of end-user training. (Leon 2008b, 223.). In this case study, the end-user training was done on site by the implementation team of the case corporation. This same method was used to implement and train all the 70 network companies.

Post-implementation phase is the last phase in the ERP implementation life cycle. There should be enough trained users who are able to resolve possible problems that come up. There should also be people within the company that have the necessary technical knowhow to make enhancements to the system when required. The system should be upgraded when new versions or technologies are introduced. Here, the organization should think in terms of the incremental benefits because a new version may bring new aspects such as new user training. Therefore the company should analyze the costs first before going for an upgrade. The post-ERP organization will need a different set of roles and skills. At a minimum, everyone who uses these systems needs to be trained on how they work, how they relate to the business process and how a transaction affects the entire company. The training will never end and will be an ongoing process. Also new people will be coming in and new functionality will always be entering the organization. Projects for implementing the systems get a lot of resources and attention, yet more important is how the organization lives with the ERP systems. It has to do more with value that one receives from them rather than the quick decision made during installation. (Leon 2008b, 223-224.). In the case network companies, the end users have been supported while they have been using with

the tool. The tool has also been upgraded already once during this thesis writing time and more will be coming in the future.

3.1.5 Benefits of ERP Implementation

The estimation of benefit realization of ERP implementation starts when implementation ends and this benefit accrual happens for several years. There are direct/tangible benefit areas and non-tangible benefit areas. First, the direct/tangible areas will be discussed that include four different areas; inventory reduction, better customer service and reduced lost sales, reducing number of days outstanding, and material and labour cost reductions. (Ray 2011, 59-61.). Only better customer service and reducing of days outstanding will be discussed in detail due to the relevancy of the area in this paper.

Reducing number of days outstanding is the third area where most of the ERP implementation had shown benefits. ERP supports better collection procedures that reduce the number of days of outstanding receivables and, thereby, provides additional available cash. This is possible through fast and accurate invoice creation during shipment. There is less chances of invoice error and disputes with customer and resulting in faster settlement. ERP systems can show reports of accounts which are delinquent for last 30/45/60 days. Regular follow up on these accounts can reduce outstanding amounts. Credit checking during order entry ensures that orders are not taken from customers whose past payment records are bad. Improved credit management and receivables practices typically reduce the days of outstanding receivables. (Ray 2011, 60.).

The non-tangible benefits accrued from the ERP implementation are easy data entry, availability of information at the click of the mouse, implementation of best practice processes followed by leading companies in the world that come as a part of ERP package. Last, fast operation- quick goods receipt, purchase order, sales order or invoice creation with minimum data entry. (Ray 2011, 61.).

3.1.6 Failing Factors that affect ERP implementations

Despite the several benefits gained from an ERP implementation yet, many ERP implementations fall miserably during the initial stages of the operational phase or fail to deliver the promised benefits. Below are the most common reasons that are explained further in detail:

- Lack of management buy-in, commitment and support
- Improper planning and budgeting
- Use of wrong ERP tool
- Lack of training
- Work culture of the organizations

One of the most common reasons for a failed implementation is lack of top management support and backing. The top management must be clearly convinced about the importance of ERP and how it can be used as a competitive weapon, and how the company can fail if an ERP system is not available to manage and control the business operations. If the management is aware of the potential benefits of ERP and the dangers of not having an ERP system, it will give full backing and the necessary organizational resources to implement the best ERP system possible. When the employees know that the ERP implementation has full management backing, they too will want the system to succeed. There will be a lot of issues like change of procedures, re-assignment of employees, etc. when the ERP system is implemented. If the management can assure the employees that their jobs are secure, that assurance will go a long way in ensuring employee co-operation. Top managers should also talk to the employees regarding the benefits of the ERP system and how the company can get ahead of the competition by reaping the benefits of the system. (Leon 2008, 133.).

A second reason is the improper planning and budgeting. Before starting the ERP implementation project, detailed planning involving all the major stakeholders is necessary for the success of the project. It is during this phase that the decision regarding procedures to-be followed, tool to-be bought, the budget to-be allocated for implementation and maintenance, etc. are decided. If planning is done

improperly then there is every chance that many factors would be overlooked resulting in selecting the wrong tool, insufficient funds, inadequate team members, and so on. All these can lead to the failure of the project. (Leon 2008, 133.).

Third failing factor can be the use of a wrong ERP tool. We have seen that no two organizations are the same and each organization requires an ERP tool that is best suited for its organizational environment, work culture and procedures. All these factors should be taken into account and the available tools should be researched, matched with the organizations requirements, visit companies where the tools are installed to see them in action, discuss about end-user training, tool updates and upgrades and so on. Only when all the members of the team are convinced that a specific tool is best suited for the organization, the purchasing decision must be taken. (Leon 2008, 134.).

One of the main reasons why ERP fails is due to the resistance of the users. The resistance is often the result of ignorance and fear- ignorance about the tool and fear of additional work or unemployment. These factors can be corrected by giving proper training at different levels, on different aspects of the ERP implementation. Top management should address the employees' fear of losing their jobs as the tool automates many tasks. The ERP implementation team members, tool vendors and external consultants should explain the objectives and goals of the ERP system, the advantages on a day-to-day basis, how it reduces re-work and defects, and so on. Most users think of ERP as a system that creates more procedures and restrictions. Such myths about ERP should be debunked. The ERP tool vendors and external consultants along with the in-house experts should train the users on how to efficiently use the tool and should explain to them how the ERP tools make their lives easier and helps them to create high-quality products without chaos and confusion. Once users are convinced about the potential of the ERP system, it will succeed; without user buy-in even the best ERP system will fail. (Leon 2008, 134.).

The last failure factor refers to the work culture of the organization which is very important for the success of ERP. If the organization has a workforce that is

willing to learn new things and change to new technologies, then there will be no problems for ERP implementation. However, if the employees resist change and see the introduction of formal methods as a means to assign accountability, they will perceive the new technology as something negative. Hence, the basic mindset of the workforce needs to-be changed. This is important not only for the success of the ERP but also for the success of any process improvement initiative. When changing the employee mindset, the two critical factors required are top management support and proper training. (Leon 2008, 134.).

3.2 Business Process Reengineering (BPR)

According to the Encyclopedia of Production and Manufacturing Management (Svadimass 2000, 71) Business Process Reengineering (BPR), alternatively called reengineering, redesign, or process innovation, came into being in the 1990s.

Dr. Michael Hammer defines BPR as "…the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality, service and speed" (Leon, 2008, 73).

The definition includes all the important characteristics of BPR. The key word is "fundamental rethinking" which describes the beginning implementation steps of BPR. Fundamental rethinking is about analysing the existing business processes and the attempt to find out what the organization is doing and why. The first step is necessary to filter out the inefficient, outdated, less value adding, and unnecessary procedures, specifically business processes. (Ashraf 2010, 14.).

The second key word in the definition is radical redesign which emphasises that there has to be taken steps for revolutionary changes in business process implementation of BPR. In addition, it shows that BPR is not a process of modification but a process of reinvention. (Ashraf 2010, 14.).

The third key term is dramatic improvement. This calls for positive dramatic results even though there have been several BPR efforts which failed to deliver

the intended dramatic results, there are also examples of extreme improvement. (Ashraf 2010, 14.).

The last key term in the reengineering definition is processes. An important approach of BPR is to carefully analyse and question core business processes because organizations that are based on processes and not on functions are able to perform better. Due to this fact, BPR concentrates on processes such as strategy creation, production, sales, manufacturing, and customer service. It is said that BPR can be explained as an organization breakpoint, which tends to have major implications on a company's competitive ability, financial performance, and strategy. (Ashraf 2010, 15.).

3.2.1 Implementation of BPR

Davenport and Short suggest five steps for the implementation of BPR: First, develop a business vision and process objectives. Business vision drives BPR which implies specific business objectives such as time reduction, cost reduction, quality of work life, output of quality improvement, learning and empowerment. Second part, of the implementation is to identify the processes to be redesigned. The exhaustive approach attempts to identify all the processes within an organization and then prioritize them in order of redesign urgency. The third step, is to understand and measure the existing processes. This provides a baseline for future improvements and prevents the repeating of old mistakes. The fourth step, is to identify information technology (IT) levers. Process design can and should be influenced by the awareness of IT capabilities. The fifth and last step, is to design and build a prototype of the new process. A redesign of a process should not be viewed as the end of the BPR process. Rather, it should be viewed as a prototype, with successive iterations when necessary. (Svadimass 2000, 71.).

There are some issues and barriers put by managers, executives, employees and others that can be such as opposition to change by employees and managers. Many employees perceive change to be deeply threatening. As a result of this they subconsciously deny to themselves the reality that circumstances have altered and as a result are unable to change. Another issue in implementation is resistance by

leaders, executives and senior managers. Resistance to change may come from the top management. Furthermore, an issue from the customer's side can be opposition. Customers may also resist change. A fourth issue, can be lack of skills and acknowledge. In some circumstances a lack of skill-sets can be a significant barrier to change. Last, successful corporate history can be an issue in implementing BPR. A successful history can blind a top management team to the need for change. Old formulae, which worked in the previous crises, might be assumed to work forever. (Agarwal 2010, 112-113.).

For the success of process reengineering, there are various requirements such as leadership with dedication, process management appointment and responsibility, helping team of Seniors/Steering Committee, team selection and technical skills, responsibility of project team, time commitment, and regular communications. (Agarwal 2010, 87-88.).

3.2.2 Problems and Issues in BPR

There are twelve problems that hinder the success of BPR implementation. First hindrance is bureaucracy. It does not suit project implementation that bureaucratic management believes that the changes are linear in nature and are controllable by an individual. Second, is duplication of same activity. In many processes there is duplication of the same activity found. Identical data may be stored in two data bases, data may be entered twice or reports printed twice, and same checks and balance may be duplicated. Third, hindrance is no value added service. The activity becomes a candidate for elimination where no customer value is added. Fourth factor is complexity of work. These can be non-refining standard reports, longer and non-effective meetings, increasing paper handling, number of stages or tasks. Fifth, is no reduction in process time cycle. This refers to the total time required to complete each stage of process activities, the performance of activities sequentially, which could be done parallel. The sixth hindrance is the errors under stress. When people work under stress or at times of large transactions, simple ways are not adopted to avoid the errors, which inevitably occur under such circumstances. The seventh factor is overlooking of up gradation. Small changes to office layout are overlooked; non-acquiring of new and latest technological

equipments like copying machines, computer systems and telephones. The eight factor is non-effective communication. Employees are not trained in good business writing. The ninth factor is outdated procedures. Work procedures are not standardized to perform work activities. Procedures are not redesigned and improved to document the work flows. The tenth hindrance factor is rude and time consuming process. The processes are not simplified and improved as per need of the customers and suppliers. There should not be any analysing of rude behaviour by employees towards customers and absence of study of customers' real requirements. The eleventh factor is non-improvement attitude. Employees and management are satisfied with present business and do not like any improvements or extra efforts for big picture or broad future requirements. The last hindrance is the absence of automation. The problems of repetitive routine operations, lack of communication between all employees and operations and absence to save time and money by use of standardised computer solutions or packages. (Agarwal 2010, 110-112.).

3.2.3 The Achievement of Reengineering

There are various outcomes of BPR. The first one is improvement in the performance. Due to thorough planning design and implementation of the BPR, the organization gets these benefits. The second achievement is satisfaction of customer demands. Organizations that undergo BPR believe in the standard credo of the customer comes first. Third, is identification of customer. BPR determines the type and kinds of customers, external and internal. The BPR takes care of customers essentially, since customers are the focal point for the organization. Fourth factor is employees on customer concerned areas. Achievements in customers' requirements are timeliness, cost, accuracy, functionality, responsiveness, quantity, dimension, yield, price and availability of product and services. The fifth achievement is knowledge of customer wants. (Agarwal 2010, 121-122.).

The sixth is higher market share. Corporates compare their position in the market with the competitors. Seventh factor is, benchmarking for higher efficiency. Methods of competitors are required to be known in order to do better. The

efficiency level is called benchmarking for keeping the quality at that minimum level. The eighth factor is the need to achieve. After knowing about the customers wants and identification of market offers, the corporate becomes ready to look at what it needs to achieve the goals, for example possible improvement in technology or needs to reduce costs to reduce costs for reducing the price to customers. The last achievement is the possibility of improvement in performances. The corporate looks to its current process to create a vision of what the new process should be. To be able to uncover break through opportunities, the corporate needs to do analyze the "as is" capability, envision desired state, and identify performance gaps. (Agarwal 2010, 122-124.).

4 CASH MANAGEMENT

The fourth chapter of the thesis defines cash management, its importance and the techniques used in it.

4.1 What is Cash Management

The function of cash management in general involves the effective and efficient use of cash to maximize cash flow at minimum cost. Moreover, cash management refers to the practices and techniques designed to accelerate and control collections, ensure prompt deposit of receipts, improve control over disbursement methods, and eliminate idle cash balances. (Sharma 2009, 73.).

Levi (2009) states that inflows and outflows of funds are generally uncertain, especially for large multinational corporations with sales and production activities throughout the world. It is therefore important for companies to maintain liquidity. The amount of liquidity and the form it should take constitute the topic of working-cash (or working capital) management.

From the financial management point of view, cash management is a part of working capital management. The primary financial goal of the business firm is to maximize the wealth of the firm's owners. Wealth in this sense refers to value. The value of a company is determined by whatever people are willing to pay for it. For companies that sell stock to the general public, stock price can indicate the value of a business because stockholders become part owners of the corporation. (Gallagher & Andrew 2000, 5-6.).

The objectives of effective working-capital management in an international environment are: to allocate short-term investments and cash-balance holdings between currencies and countries to maximize overall corporate return. To borrow in different money markets to achieve minimum cost. (Levi 2009, 387.).

It is useful for a firm to denominate as many payments and receipts as its counterparties will allow in units of a major currency and to have bills payable in a financial center. Contract for payment due to the firm should stipulate not only

the payment date and the currency in which payment is to be made, but the branch or office at which the payment is due. Penalties for late payments can help ensure the payments are made on time. If a firm banks with a large-scale multinational bank, it can usually arrange for head office accounts to be credited quickly using an electronic funds transfer system, even if payment is made at a foreign branch of the bank. (Levi 2009, 393.).

The Fourth Annual Cash Management survey conducted by Gtnews in association with SEB (2009) revealed that the process with greatest improvement potential within cash management is the management of accounts receivable, whereas improving cash flow forecasting came as second (Angelovska 2010, 1).

4.2 The Importance of Cash Management

In businesses cash is what is needed to pay the invoices, salaries and other expenses. It is also what business receives from customers for their products or services. Cash is therefore of ultimate importance. The expectation, that the company will generate cash in the future is one of the factors that give the company its value. Cash flow describes the cash moving through a business. Financial managers concentrate on increasing cash inflows and decreasing cash outflows. Cash outflows will be approved if they result in cash inflows of sufficient magnitude and if those inflows have acceptable timing and risk. (Gallagher & Andrew 2000, 6.).

It is paying customers and not orders that pay the bills and pay our employees (Taylor 2010, 19). It is important to realize that sales are not the same as cash inflows. The sale is acknowledged only after the invoice has been paid. If the cash is never collected from the sale, it will not add any value to the firm. Owners care about actual cash collections from sales- that is, cash inflows. (Gallagher & Andrew 2000, 6.).

Likewise, businesses may buy goods and services to keep the company running but may make the purchase on credit. However, the invoice will be due sooner or later and therefore owners will care about cash expenditures for purchases- cash

outflows. For any company, the higher the expected cash inflows and the lower the expected cash outflows, the higher the company's stock price will be. (Gallagher & Andrew 2000, 6.).

According to the study called Controlling Cash Management in the context of trade receivables, a case study in a large international manufacturing company made by Nilsson and Åström (2005), states that: "To make the control of cash management efficient it must be adapted to the business culture in different countries."

A decrease in an asset, such as the firm's inventory balance, is an inflow of cash because cash that has been tied up in the asset is released. An outflow is a net loss caused by for example increase in any asset and decrease in liability. (Megginson, Smart & Lucey 2008, 39)

A company that is performing well normally creates net cash flow from operating activities. This excess cash can be used for expansion or for financing purposes. A combination of positive net cash flows from operating activities and negative cash flows for investing activities is a sign of good performance and growth. Vice versa companies with doubtful cash flows will have lower values. (Ingram & Albright 2007, 186)

4.3 Cash Management Techniques

According to Gallagher and Andrew (2000) people who are managing a firm's cash should focus on four objectives: first, to increase the flow of cash in to the business, second, to decrease the flow of cash out of the business, third, to receive cash as quickly as possible and fourth to pay cash out as slowly as possible without missing any due dates. This gives more time to put cash to work earning a return.

Increasing Cash Inflows

There are only two ways of increasing the amount of cash flowing into a business during any given time period. First, the firm can do more of whatever it is doing, manufacturing, or providing services. Of course when sales increase, costs

increase too. Second, the firm can increase the return that the company's assets are earning. Firms can find ways to produce more money with the same amounts of assets (Gallagher & Andrew 2000, 453-454).

Decreasing Cash Outflows

Managers can also increase the net amount of cash flowing into their firms during any given time period by decreasing the amount of cash flowing out by cutting costs. Another way is to decrease the risk of doing business. Risk in business equates into uncertainty, and a business that faces a lot of uncertainty must keep a lot of cash in hand to deal with unexpected events. If a firm could somehow reduce the degree of risk of doing business, the number of unexpected events would drop, and the amount needed in the cash account could be reduced. (Gallagher & Andrew 2000, 454).

Speeding Up Cash Inflows

The earlier a firm receives cash, the earlier it can put it to work earning a return. Collecting cash funds from firm's customers more quickly speeds cash inflow. The ideal situation, from a business firm's point of view, would be for all customers to pay immediately for products or services that they buy. However, the realities of the marketplace demand that credit be extended. Given that credit often must be extended, the business firm's goal is to encourage customers to pay off their accounts as quickly as possible. The firm might even offer customers a discount if they pay their invoices earlier, for example within 10 days. This technique works and the firm's managers hope that the return they can earn by getting the cash early outweighs the amount lost through the discount. (Gallagher & Andrew 2000, 454-455.).

According to the study called Controlling Cash Management in the context of trade receivables; a case study in large international manufacturing company by Nilsson and Åström (2005), sales units can free a great amount of capital for the company only by marginally decreasing their present overdue payments. Furthermore, they state that for the sales units it is important that they understand

the fact how expensive it is to give discount to customers. In these situations, the payment terms should be at least 24 days shorter for every percentage that they give to the customer.

Another way to speed up cash inflows is to make use of computerized fund transfers whenever possible. An electronic funds transfer is the act of crediting one account and debiting another automatically by a computer system. (Gallagher & Andrew 2000, 455.).

Slowing Down Cash Outflows

The idea is to increase the amount of time that the firm has possession of the cash. One way to slow down cash outflows is to delay paying bills as long as possible. However, a firm must be careful not to over step the bounds of good sense and fair play in applying this principle. Invoices should be paid on due date and firms shouldn't take advantage of creditors by making late payments. (Gallagher & Andrew 2000, 455.).

Accounts Receivable

A key component of working capital policy is managing accounts receivable and inventory. In this section of the thesis, focus will be put only on accounts receivable due to it having more relevance in this study. Accounts receivable represent money that customers owe to the firm because they have purchased a good or services on credit. Therefore, we can call them assets that have value. Nonetheless, any time a company accumulates accounts receivable, it suffers opportunity costs because it is unable to invest or otherwise use the money owed until customers pay. A company may also incur direct cost when it grants credit because some customers may not pay their invoices at all. (Gallagher & Andrew 2000, 464-465.).

At the end of the accounting period, an enterprise may not know specifically which of its trade receivables will never be collected. An estimate of the amount of bad debts can nevertheless be made and the accounting records are adjusted at

the end of each accounting period to reflect this estimate. The adjustment can be either made by writing off the specific receivables identified as uncollectible or by estimating the total amount of uncollectible receivables. The estimate or uncollectible receivables is usually based on the historical experience of bad debts or uncollectable receivables. (Kothari & Barone 2006, 94.).

Big businesses can withstand the impact of bad debts because they have larger profits and cash reserves. A small business is more exposed as they have less customers. New businesses are keen to attract new customers. They often offer favourable credit terms in order to win a new contract or customer. Credit should only be offered to a customer with a good credit record. Many new businesses fail because they have offered too much credit and, as a result, they run out of cash. (Owen 2003, 123.).

The ideal point from the company's point of view would be for the customers to pay cash at the time of the purchase. For most companies, granting credit is an essential business practice. Offering more credit enhances sales but also increases costs. At some point the cost of granting credit outweighs the benefits. Accounts receivable is an investment because it ties up funds and has opportunity costs, but can add to the company's value. Managing accounts receivable should be done in a way to reduce these assets to the lowest level possible consistent with the firm's goal of maximizing value. (Gallagher & Andrew 2000, 465.).

Holding different levels of accounts receivables can affect the company's profitability and liquidity. As a result financial managers try to find the amount of the asset that maximizes firm value. Conflicting forces make it more difficult to assess the situation. The forces are sales that increase as more generous credit terms are offered versus costs that increase with collections, bad debt, and opportunity costs from foregone investments. (Gallagher & Andrew 2000, 467.).

Credit Policy

A firm's credit terms and credit standards make up the firm's credit policy. These terms generally offer a discount to credit customers who pay off their accounts within a short time, and specify a maximum number of days that credit customers have to pay off the total amount of their accounts. (Gallagher & Andrew 2000, 467.). Individual customers receive credit from the firm if they meet the firm's credit standards for character, payment history, and so on. Taken together, the credit terms and credit standards comprise the firm's credit policy. A company that wishes to change its level of accounts receivable does so by changing its credit policy. To relax the credit policy means to adopt less stringent credit standards or extending the net due period. This will tend to cause the accounts receivable to increase. On the contrary to tighten the credit policy means to adopt more stringent credit standards or shortening the net due period. This will tend to cause accounts receivable to decrease. The discount percent or time period could also be changed which may either increase or decrease accounts receivable, depending on the reaction of customers to competing influence. (Gallagher & Andrew 2000, 468.).

Credit standards are those requirements each individual customer must satisfy in order to receive credit from the firm. In other words, they are tests of a person's credit worthiness. Companies often base their credit standards on Five Cs of credit: character, capacity, capital, collateral, and conditions. (Gallagher & Andrew 2000, 479.).

- Character: the borrower's willingness to pay. Lenders evaluate character by looking at borrowers past payment patterns. A good payment record in the past implies willingness to pay debt in the future.
- Capacity: the borrower's ability to pay, as indicated by forecasts of future cash flows. The more confidence a lender has that a borrower is going to receive cash in the future, the more willingness the lender will be to grant credit now.
- Capital: how much wealth a borrower has to fall back on, in case the expected future cash flows with which the borrower plans to pay debts

don't materialize. Lenders feel more comfortable if borrowers have something they could liquidate if necessary to pay their debts.

- Collateral: what the lender gets if capacity and capital fail, and the borrower defaults on a loan. Collateral is usually some form of tangible asset, such as the firm's inventory, buildings, manufacturing equipment, and so on that has been pledged as security by the borrower. (Gallagher & Andrew 2000, 480.).

To evaluate potential credit customers, companies find some way to quantify how well the customers compare to the measurement criteria. Some companies use a method known as credit scoring. Credit scoring works by assigning points according to how well customer meets indicators of credit worthiness. The importance of investigating credit worthiness carefully before granting cannot be overemphasized. On the contrast, not doing so is a quick way to end up with lots of accounts receivable and no cash. (Gallagher & Andrew 2000, 480.).

Bragg (2005, 12) states that a well written credit policy should clearly state the mission and goals of the credit department, exactly which positions are responsible for the most critical credit and collection tasks, what formula shall be used for assigning credit levels, and what shall be followed in the collection process.

Collecting payments

Slow payments or no payments at all are the trigger for companies to establish a collection policy to cope with the problem. A collection policy helps the company and the customer to know what to expect once credit has been granted. There is no one collection policy that will be the best for all companies and all customers. The best policy depends on the business situation, the firm's tolerance for abuse, and the relationship it has with customers. However, most firms consider one or more of the following collection policies. (Gallagher & Andrew 2000, 480.).

- Sending reminder letter: One or more letters to be sent to the customer each one becoming less friendly in tone. The first letter should not sound threatening.

- Making telephone calls: If gentle reminders in the mail don't produce results, the customer can be called to see what is the problem. If there is a good reason why the customer hasn't paid the bill then it can be decided if any action is to be done or if accommodating results can be arranged such as a payment plan that is to be followed up.

- Hiring a collection agency: When all efforts to collect are unsuccessful, one possibility is collection agency. This action should be spared for two reasons. First, it will probably cost the company any future business from this customer and second, the price of the collection agency service may be very high.

- Sueing the customer: Legal action is the last option. A lawsuit is even more expensive than using a collection agency, so companies should determine whether the court action is worth the trouble.

- Settle for a reduced amount: A company should keep in mind that trying too hard to collect from a customer may force the customer into bankruptcy. Once the client is in bankruptcy, the company may not get any money. In such a case, settling for a reduced amount, or a stretched-out payment schedule, may be the firm's best option.

- Writing off bill as a loss: This maybe the company's best alternative if the amount owed is relatively small or too costly to collect. Companies may have to write off all or part of the bill as a loss anyway, if efforts to collect are unsuccessful.

- Selling of accounts receivable to factors: Selling accounts receivable to some other person or business is known as factoring. Businesses that make money by buying accounts receivables from other companies, at less than their face value, are called factors. (Gallagher & Andrew 2000, 480-483.).

5 EMPIRICAL APPROACH OF THE RESEARCH

This chapter will present the empirical data of the case company used in this research. First, the background of the case corporation and the case company South Europe will be presented. Then, the data collected will be introduced. The data has been divided into four: before the use of OnGuard, the implementation of OnGuard, and two parts after having used OnGuard for six months and nine months.

5.1 Company Overview

This chapter will give an overview of the case corporation and case company South Europe.

Case corporation

The case corporation is a global leader in complete lifecycle power solutions for the marine and energy markets. By emphasising technological innovation and total efficiency, the case corporation maximises the environmental and economic performance of the vessels and power plants of its customers.

In 2011, the case corporation's net sales totalled EUR 4.2 billion with approximately 18 000 employees. The company has operations in nearly 170 locations in 70 countries around the world. The case corporation is listed on the NASDAQ OMX Helsinki, Finland. The case corporation has three different businesses: Ship Power, Power Plants and Services. (Case corporation.).

Case corporation History

The case corporation was first founded in 1834 with a construction of a sawmill in Tohmajärvi which later on changed into an iron mill. At the end of the century the company was called Ab Case Corporation that was later on in 1907 changed into Ab Case Corporation Oy. The company quickly became a modern smelting plant and steel mill, operating on electricity generated by the fast waters. (Case corporation.).

In the 1940's the case corporation became the major shareholder of the ceramics factory Arabia Ab and later on attained the entire share capital of the company. The case corporation's head office was moved into Helsinki in 1978. During the same year, the company started its international manufacturing operations. The case corporation was the first Finnish company to be quoted on the London Stock exchange and issuing shares for international investors. In the beginning of the new millennium case corporation expands into Biopower to specialize in plants running on biofuels, oil, and gas. In 2011, case corporation opened a new central distribution Centre in the Netherlands. (Case corporation.).

Mission, Vision and Strategy of Case corporation

The mission of the case corporation is: We provide lifecycle power solutions to enhance the business of our customers, whilst creating better technologies that benefit both the customer and the environment. (Case corporation.).

The case corporation's vision is: We will be the most valued business partner of all our customers.

The strategy of the case corporation is to aim to be the leader in complete lifecycle power solutions for the global marine markets and selected energy markets worldwide. Growth opportunities are seen in gas power plants as part of their Smart Power Generation concept, as well as in gas-fuelled engines and related systems for the marine market. Growth is also being seeked in environmental solutions including scrubbers and ballast water treatment systems. Case corporation sees its strength in technological leadership, having an integrated product and service offering, close and long-standing customer relationships, and unparalleled global presence. (Case corporation.).

Case company South Europe

Case company South Europe (CSE) is a network company located in Southern Europe. There are more than 200 people working in four different locations. (Case corporation.).

Case company South Europe started in 1987 in South Europe as a result of a joint venture with a local company which produced diesel engines and propulsion systems from 1949. The new factory was established in a city in a fishing harbour. Case corporation sees the necessity of spreading up its activities in South Europe, after many years of leadership providing generating sets and complete propulsion packages for the marine market and being a major player in the DPP cogeneration market. (Case corporation.).

In 2003 and after acquiring the Dutch company Lips, case corporation reinforces the propellers manufacturing activity in South Europe. In 2005, case corporation acquires Navalips and settled up an industrial plan within the future strategy of the Group for a factory in their region, a quality international reference in the propellers manufacturing. (Case corporation.).

Since May 2008, the merge of all its activities in a unique legal company case company South Europe guarantees a better management of resources and administration that strengths the personality of the group case corporation in South Europe. Case company South Europe also counts with other work centres in its region. (Case corporation.).

5.2 Credit Management and Collection Process before OnGuard Software

The controller and credit controller of the case company South Europe were interviewed about the receivables collection process and credit management process before the time that the new credit management process and the receivables collection tool OnGuard were taken into use in the case company South Europe.

As was discussed earlier in the Research Methodology chapter, an interview, more specifically, a semi-structured interview is one of the four main sources used in this research paper.

It was found out that there had been in use a receivables collection process in case company South Europe prior to the global credit management process and use of

OnGuard. The collection process mainly consisted of sending statement of accounts to the customers and reminders on overdue invoices.

The receivables were followed by creating a receivables report in SAP. Two reports were used: S_ALR_87012178 Customer open item analysis report and S_ALR_87012168 Due date analysis for open items. This was ran a minimum once a month but usually twice a month.

In the next section of this chapter, the different actions that were done to support receivables collection in case company South Europe were more examined more deeply.

Statements of accounts

Statements of accounts were sent to the main customers usually 10 days after the invoice had been issued, once a month. They were created in SAP, by taking a PDF-copy of their account. In some cases, the account was transferred into Excel. Due to the large amount of customers, approximately 300, the statement of accounts were sent to many customers, not all, but at least to the main ones. Some customers would inform when they would be making a payment and the type of payment that they would make, for example a check or a money transfer.

Proactive tasks

Proactive collection of receivables was also being done. This was done for customers that had invoices with a higher amount for example €50 000- €100 000 or more that were going to be due within the next 10-15 days. These customers were given a phone call. In addition, two days before the due date of the invoice, the customer was called again to confirm if the payment would be made. The proactive tasks were felt to be helpful. Even from the customer's point of view, it was helpful as they need to make provisions.

Reminding of customers

The collection of overdue receivables was done by sending an email or making a phone call and reminding the customer of the overdue invoices. Case company South Europe had a clear process when reminders were given to customers. First

reminder was sent by email when the invoice was about five days overdue reminding the customer about the debt and asking the customer to make a payment as soon as possible. If there was no reply from the customer after about five days, then a second reminder was sent to the customer by email. If still no reply was received on the second reminder then a third reminder was made by calling the customer. All of those customers were called. Basically, all customers were sent a reminder if no comments or payment was received before the due date of the invoice. If the customer replied that they had made a payment or informed of a payment date when the statement of account was sent already, then naturally no reminder was sent to those customers. In most of the cases when a third reminder had to be done, the customer paid the invoice. Sometimes a partial payment was made.

Promised payments and payment plans

Promised payments and payment plans were followed in an Excel file. After the agreed payment date if the payment hadn't been received, the customer would be called in 2 to 3 days after that. Usually the customer would pay on the date that they had promised. If the payment wasn't received and customer was called and then they would pay the invoice or in some cases partial payments were made. There were also some cases where the customer didn't have liquidity.

Disputes

Disputes have been registered in case company South Europe in an Excel file that was only for the credit controller's information and the file wasn't sent to others. A text was also inserted in SAP, in transaction FBL5N in the text column to indicate that the invoice was disputed. When a dispute came, there was an attempt to resolve it together with the customer, but if it was concerning, for example, deliveries, spare parts, service work, or incorrect invoice, then the dispute and most important related information was transferred to the correct person responsible, for example the account manager as the financial team cannot solve those kinds of problems.

The credit controller was involved in resolving the disputes when customer was missing an invoice or a delivery note. All other cases were transferred to other people to be handled. It was pointed out by the credit controller that sometimes it was a challenge to follow-up on disputes because some cases when transferred to, for example the account manager, then he would still need to transfer it onwards to, for example, the parts order coordinator to case corporation or another case network company where the spare parts were sent from. Especially credit notes that had to be issued could take a long time, even several months. This was the biggest problem. The credit controller also mentions that if a part of an invoice was disputed, for example when some parts have been wrongly supplied then the customer would need to resolve the case first in their end. It was also pointed out that the customer would not pay the invoice at all before the dispute had been resolved.

When disputes were taking long, the credit controller would remind the account manager about it and then the account manager would in turn contact and remind the person responsible, for example in case network company about the dispute. The credit controller didn't have a direct relationship with the Network Companies in this matter. Usually disputes were sent out once a month. Some cases were easier, for example, when the dispute related to a back order.

Old receivables

When discussing old receivables, the credit controller stated that there were provisions made on old amounts. Customers were also blocked and deliveries stopped if no payments were received. The interviewee also mentioned that small amounts can be sometimes difficult to collect if they are very old. Bigger amounts, such as €50 000 or more that were on average one year old, are given to a lawyer. When the lawyer sends a letter to the customer and if the customer is afraid of the lawyer the payment in quickly made. Usually this is not the case though and it can take a year to discuss the matter. The credit controller also points out that these cases have to be checked case by case because sometimes the price of the lawyer can be more than the overdue amount.

Involvement of management

The management of case company South Europe (Sales Manager and Service Director) were involved in the receivables collection in a way so that they were informed about the receivables and problems, depending on the amount of the receivable. Small amounts were not discussed with management. Meetings were held once a month. Cases were also checked case by case as they came.

The division of the tasks

Credit controller was mainly working as a credit controller but has also had other tasks, for example registering payments. The person was using about 50% of working time to work with credit management tasks. The other credit controller was involved less than 50% of his time with credit management.

Table no. 1 shows the tasks that are included in the daily work of the credit controller. The two credit controllers are differentiated as CC Y and CC X. The second and third column show the working time in percentage used for each task. As the credit controllers are doing other tasks than credit control related the total percentage is not 100%.

Task	Before OnGuard	
	CC Y	CC X
Dunning notices	10%	-
Statement of accounts	10%	-
Registering disputes	1%	-
Replying to inquiries from sales people	10%	10%
Solving unclear payments	5%	-
Solving Disputes	2%	-
Releasing orders under credit limit blocks	1%	-
Defining credit limits to customers	3%	10%
Monthly receivables reporting	3%	5%
Registering promised pmts and pmt plans		
Other: inserting customer information		
Other: to learn the system		
TOTAL	45%	25%

Table no. 1. Credit control related tasks and working time used for each task in percentages before OnGuard was taken into use in case company South Europe.

5.3 The New Credit Management Process

The new credit management process was taken into use in case corporation in 2010. One by one different case network companies started to follow the global credit management process after they had had their OnGuard go-live. The process is designed for the credit controllers to support the sales team to collect the payments for the outstanding invoices. The sources used, especially in this part of the chapter are documentation and more specifically process description documentation as well as training material.

Credit controllers are divided into local credit controllers, credit controllers and area credit controllers. The local credit controller is the person who is collecting the receivables that are open under the books of the network company that she/he works for.

Credit controller is the person who is responsible for the customers receivables globally that are under the responsibility of that specific network company for which she/he works.

Area credit controller is the person who is responsible for a certain area, for example South Europe and Africa and who follows up on the receivables and on the credit controller's tasks for that area.

There are three collection levels in OnGuard; the local collection level, the global collection level and the area collection level. There is a clear purpose for each level. The whole process is designed on clear goals and time frames.

In the local collection level, the purpose is to handle the local legal requirements related to collection to enable to proceed to legal collection if necessary. The local credit controller does all the collection actions necessary.

On the global collection level, the customer is being contacted on behalf of case corporation group with "one face to the customer." The actions on this level are handled by the credit controller of the customer.

Once the collection reaches the area collection level, the aim is to get the needed decisions from the Area credit committee (Area controller and Area Vice President) to have the issues proceed instead of the receivables continuing to age.

The whole collection process is based on the oldest invoice that is free for dunning. This means that the customer has not promised to pay the invoice, there is no payment plan and the invoice is not disputed. The new global process has been taken into use in the case corporation to enhance transparency of the global receivables, to harmonize the collection for the customers despite of which network company the customer has purchased from, to have the historical data in one place so that other colleagues can also see the same information and that the auditors can access the data as well.

Picture number 1 shows the time frame and actions on the local collection level of the collection process.

		-5 d	+5 d	+14 d	+28 d	+35 d
Delivery	Invoicing	Credit days (payment term)	Due date	Over due		
		Proactive dunning action	1st dunning action	2nd dunning action	(3rd dunning action)	
				Local request 1	Local request 2	(Local Collection block)
New customer			LCC			(Local Collection Block)

Picture no. 1. The local collection level of the collection process. It shows the time frame and actions that are to be done. (Case corporation, process description material).

On the local collection level, there are 28 days reserved (from the due date of the invoice) to perform the actions defined and to get the payment from the customer for the oldest invoices. This is to avoid the collection from being escalated to the global collection level. The actions are divided into external and internal actions. The external actions such as phone calls, emails or letters are carried out towards the customer and the internal actions; email actions, are done towards the local sales internally to inform the status and to activate the sales to negotiate and support in the collection process.

The definition of a proactive dunning action is to call the customer or send a statement of account to customers who have an invoice of more than €50 000 that will be due in the next five days. The purpose is to check that customer has received the invoice and that there are no disputes or complaints about the invoice. Also, if the customer has already booked a payment for the invoice they can inform so and it will be registered in the system. That way the invoice will not generate a dunning notice in case the payment doesn't reach before the invoice is five days overdue. The first and second dunning notice can be either a phone call, a dunning notice by email or by post. The local requests are the internal actions done towards the local sales team. Request 1 asks the local sales team for support in the collection and the local request 2 requests for a permission to block the customer.

Below picture 2 shows the second level which is the global collection level.
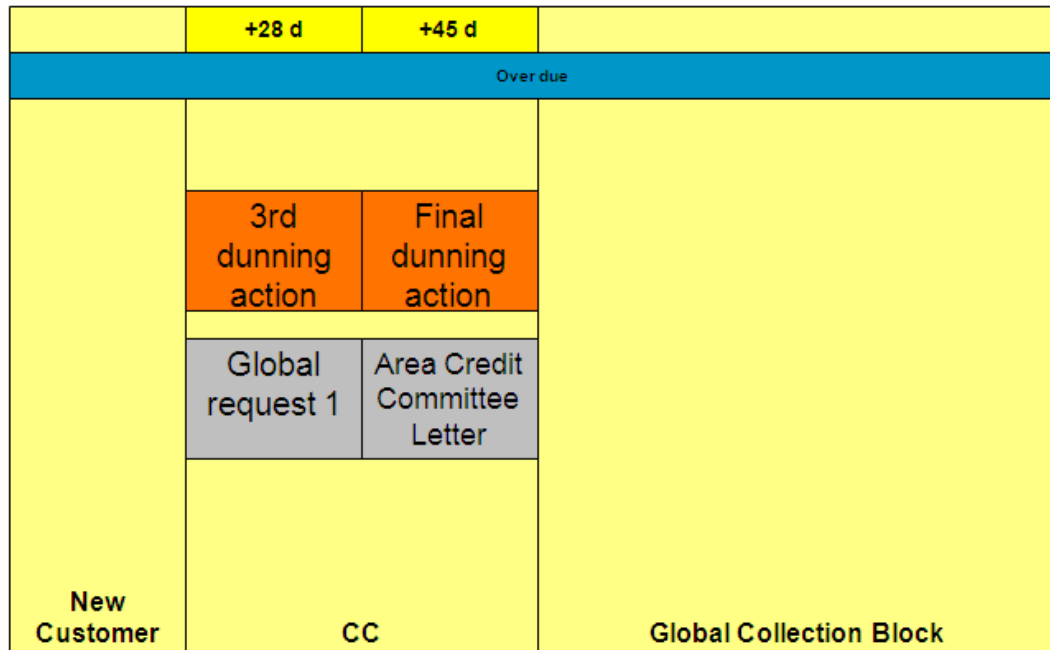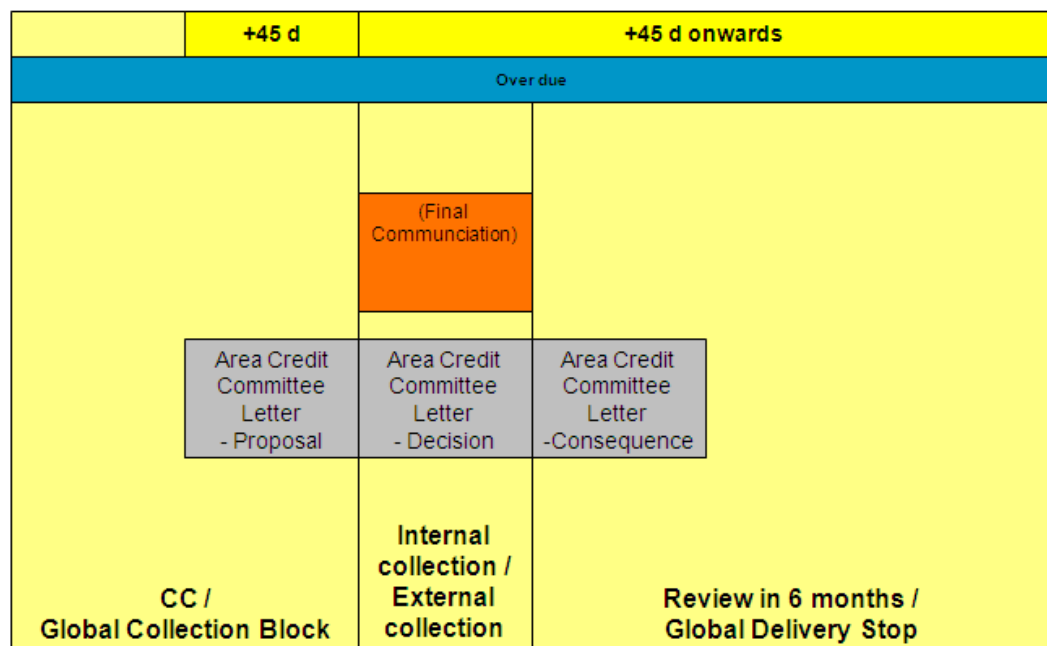

Picture no. 2. The global collection level of the collection process. It shows the time frame and actions that are to be made. (Case corporation, process description material).

In this level, a third dunning notice is sent when the invoice is 28 days overdue. At the same time global request 1 is sent to the account manager of the customer. The Global request 1 asks the account manager to contact the customer on behalf of case corporation Group and try to negotiate for the payment. The account manager has 17 days time to do so. If she/he fails to do so and the invoice reaches 45 days overdue, then the account manager is to create an action plan and suggest the way on with the receivables and the customer. On day 45, a final dunning notice is sent to the customer.

At the same time, the case is escalated to the third level; area collection level and to the area credit committee. The area credit committee consists of the area controller and vice president of the area. It is a template that has the action plan from the account manager and in addition comments from the credit controller

and the area credit controller. At this point in time the area credit committee makes a decision on how to proceed on with the receivable. There are different options such as to give the case to an external collection agency, to place the customer under global delivery stop, or to continue collecting the receivables internally.

Below picture 3 shows the third level, which is the Area level.

Picture no. 3. The area level of the collection process. It shows the time frame and actions that are to be done. (Case corporation, process description material).

5.4 Implementation of OnGuard Software and New Credit Management Process

A second interview was carried out for the case company to find out about the implementation of the new receivables collection software OnGuard and the new credit management process.

This is the point in the case study where participant observation also began up to an extent. As mentioned in the methodology chapter, participant observation and

documentation are some of the sources used in this study. The participant observation in this case is not done by being physically present with the credit controllers but with today's technology. Also, OnGuard software promotes transparency and it is possible to observe the way of working of the credit controllers and the development of the receivables.

The whole topic was introduced to the Case company South Europe in May 2011, three weeks before the go-live, by a kick off meeting held by the Credit Management Manager about the Global Credit Management for the Case company South Europe and in addition a neighbouring Case Network company. The first day was meant for the sales manager, account managers, business controller, controllers and credit controller. The agenda for the first day consisted of topics such as Global Credit Management, Credit Worthiness Assessment, approval process, monitoring the credit accounts, and collection and dispute management.

The second day was targeted for the controllers and credit controllers. The agenda was to go through the process and instructions in detail in order to be prepared for the coming Global Credit Control project training which was to be held before the go-live of the new software. In addition, all requirements, for example, any possible legal requirements were discussed in this session.

Both of the credit controllers attended the kick-off meeting. The feeling was that the session went well because you could get a general idea of how things will be and what to expect. Different kinds of topics were explained well. At the same time the ideas that arose from the kick-off meeting were negative to the other credit controller due to the reason that there was a feeling of getting control even though they felt that they were doing things correctly already. The feeling of being afraid of a big project came on to the surface. Hence, as an observer, change resistance could be felt.

In Leena Lindholm's (2007) research on the implementation of ERP-system, together with the shared services case Wärtsilä Finland Oy, a similar observation was made as in this case study that the "employees definitely had a lot of

questions and issues they were unsure about. Local people of the case company were afraid of losing ownership of their data."

A live meeting, called a commitment meeting, was also held for Sales and Management in the next week of the go-live in June to train staff. The credit controllers were not so aware of this training session but they felt it to be a necessity for the sales because they are the ones most involved in this project and it is a part of their daily tasks and result, especially if we take into consideration that the common way of thinking for the sales is to sell and not necessary to collect the receivables. The thinking and fundamentality of the sales department need to be changed as there will be no sales if the receivables haven't been collected. Sometimes there are clashes when the credit control tries to teach and point this out to the sales people. The case corporation Services guidelines state that the Sales is responsible for the receivables.

The management was afraid of the project and of the big changes to come but at the same time they were supportive. The users were not aware that things were going to change. When asked if they would have wanted their suggestions to be heard before any big decisions were to be made, they felt that it would have been a good idea. They would have wanted to be a part of that questionnaire or survey and to get more information of such big changes that are to come ahead.

Implementation and Go-live

There were different kinds of pre-preparations that needed to be made by each company, before the roll-out of the new software. These tasks included going through a master data file and checking that all SAP partners were correct for each customer. Partners are the local credit controller, credit controller, local sales contact, account manager, sales manager, area controller and area vice president. Another task was to name the default partners. This means that all new customers have to have some default partners named in SAP in case no specific names are given so that there won't be any customers left without any partners. Furthermore, all the templates that were used to send out letters from OnGuard had to be gone through and changes needed to be made if necessary. These changes can be, for

example, some legal requirements that needed to be taken into consideration. Also, if templates were to be sent in another language than English, the templates would need to be translated. In addition, the header and footer details on the letters needed to be created.

The Credit controllers felt that the pre-preparations that were done were enough and sufficient. When asked if there was something that could have been developed or done differently the reply was that the preparations were time consuming and perhaps a bit more time could have been given to prepare them.

End user training was held in the case company in September 2011. The training session lasted for five days, out of which two days were the go-live of the new software. The plan of the training week was to first go over the processes, then to have the training, exercises, review, practicing in the test environment and finally to have the go-live. In the case study interview it was discussed how the participants felt about the training. It was a common feeling that there were too many new things in a very short period of time. It was a chance to have a look at things but not in detail. The number of trainers for the week was 4 and the number of end users was 5. It was a joint training for two other network companies as well. An OnGuard training manual was received as training material on the first day of the training, which was felt to be alright. The users were not able to criticise the material because the whole system was new and there was a lack of understanding of the process. A suggestion and a development idea that came up regarding the training was that a pre-live meeting or a pre-course could have been held before the training in order to understand what is to be done. The training could also be held in two parts. The first part would be to give a general idea of how things work and the second part would be held to actually work with the software.

The feeling in the training was that the users were not comfortable and didn't know what exactly was to be done. The training would be more valid for future use because many topics that were gone over in the training were forgotten after it. In the beginning of the new system everything is new and difficult to understand. Another suggestion was to have a visit to a company where the tool

has already been implemented to see how it works in production in order to understand the training better.

The feelings in the case company can be compared to the results that were found in the study made by Lindholm (2007) regarding SAP implementation, where she states that "the results showed that the training of the personnel was not a complete success and more training and education would be needed in order to have professional workforce. The employees did not feel comfortable with the change because they did not know the SAP system well enough. The training should have started before the realization phase" (Lindholm 2007, 55).

In order to be able to start to use the software, there is certain information that needs to be filled into the system. This information is for example the contact details of the person in the customer's accounts payable department who is to be contacted regarding receivables. This was thought to take a lot of time in the beginning. Something that was much criticised was that the same contact information needed to be inserted three times in to the same system, once for the own company, a second time for the global level and a third time for the customers who have receivables from the case company Global Logistics Center. "This was too much work and stupid work to copy the same information on all different levels and there should be a way to be able to insert the information only once", said the other credit controller.

Also some of the disputes are difficult to describe in only a few words. There is not a possibility to change the status on the way as the dispute develops. The dispute statuses options are only open, overdue, need more time or resolved. Sometimes part of the dispute can be resolved but not the whole dispute and so that partially resolved dispute information cannot be inserted into the tool. The tool is not capable of taking this information and some disputes are difficult to introduce. Furthermore, the days that the dispute has been open before it has been marked as resolved, is not realistic because the credit controller may not necessarily be informed that the dispute has been resolved and hence, the dispute can be marked as resolved many days later compared to the real resolving day. In some cases, even the customer has to be contacted to know if a dispute has been

resolved or not. In other cases, it is not necessarily the case company who is resolving the dispute and that is also another reason why the information is now flowing into the case company.

The first few days after the users started to use OnGuard are felt to be stressful because there was a lot of work to be done even only to insert the needed information. This, of course, varies depending on how many customers the company has.

The biggest challenges that were faced were to be able to do all the actions that came automatically from the software and all the information to be filled into the system in order to be able to do those actions. When the users compared to the old way of working, they felt that the beginning was more difficult when using OnGuard because there was no information ready. However, when all the information had been inserted then things got easier and faster when, for example, the dunning letters come automatically from the system.

Table 2 shows the tasks that are included in the daily work of the credit controller. The credit controllers are differentiated by naming them credit controller Y and credit controller X. The second and third columns show the working time in percentage used for each task before OnGuard was taken into use. The fourth and fifth columns show the working time in percentage used for each task when OnGuard was implemented. The credit controllers also do other tasks than credit control related and therefore the total percentage is not 100%.

Task	Before OnGuard		Implementation of OG	
	CC Y	CC X	CC Y	CC X
Dunning notices	10%	-	8%	-
Statement of accounts	10%	-	1%	-
Registering disputes	1%	-	10%	-
Replying to inquiries from sales people	10%	10%	8%	10%
Solving unclear payments	5%	-	5%	-
Solving Disputes	2%	-	2%	-
Releasing orders under credit limit blocks	1%	-	1%	-
Defining credit limits to customers	3%	10%	3%	10%
Monthly receivables reporting	3%	5%	3%	5%
Registering promised pmts and pmt plans			2%	-
Other: inserting customer information			2%	-
Other: to learn the system				5%
TOTAL	45%	25%	45%	30%

Table 2. Credit control tasks and working time used for each task in percentages before and during implementation of OnGuard.

The actions, dispute registration, inserting customer information during the actual implementation and the few days after that took a lot of time in the beginning when everything was new. Therefore, also the total percentage of time used was about 5% more than before OnGuard was taken into use.

There were several technical problems that the users have faced from the beginning. The tool is good but it does not work technically very well. It is not sure if it is because of the Citrix program but sometimes it logs the user off, it does not work or cannot even be opened on some days. The users have contacted the help desk and as soon as the ticket was closed the problem has occurred again.

When comparing the time used before OnGuard and when using OnGuard, it was mentioned that in OnGuard there are more actions that need to be done. Now, the dunning notices are sent one by one basically and not by customer once a month as before the use of OnGuard. There are also some tasks that are left out of OnGuard that used to be done before. Such a task is sending out statements of account to all the customers to inform them about the situation of their account

before the invoices are overdue. Statements of account were not sent to all the customers but to most of them at least once a month. This way the customers see the current situation and they are also informed of the possible problems regarding the invoices. This would shorten the collection time. This is taken as a very important action, even more important than some other actions that should be done. In OnGuard the practice is to send a statement of account only to the customer that has open receivables of or over €50 000 and which will be due after five days.

Another point that emerged was that some dunning letters are too aggressive, for example the templates that the neighbouring case network company sends (case company South Europe is responsible for the neighbouring case network company customers). Some of the first letters that were sent in the beginning for the neighbouring country customers are in their opinion too strongly stated. The problem according to the users is that the customers are not being sent an account statement so that the customers can inform the sender if there is a problem or express their opinion. Users felt that if they send out the first dunning notice right away and request the customers to pay, the customers do not have a chance to do so. Right away there may begin a quarrel with the customer, especially if for example the product has not been received yet and the invoice was still sent. The information may not flow to the credit controller and so the dunning notice is sent out to the customer. It should also be made sure that the invoice is correct before a dunning notice is sent out but, of course, it is difficult for the credit controller to know if something is incorrect compared to what the customer's ledger shows. It would be a more polite approach to send first the statement of account, so that the users feel that there is an action missing that should be done before the first dunning action. Focus should be in the proactive phase of the collection process. Also, the credit controllers feel that the first and second dunning notices should be more polite in tone and then the third one could be more aggressive and ask more strongly for the payment. It seems that the neighbouring case network company has just translated the English templates into their own language instead of creating the letters themselves and adjusting the wording.

There are still some old tasks that the users continue to do even after the use of OnGuard. Statements of accounts are still sent to customers for their information out of politeness and to decrease the number of problems. Invoice copies are also still being sent to customers if requested although according to the process the credit controller should never be the person solving the dispute. However, the user feels that less time is being used when there is no need to register the dispute but instead the duplicate is sent right away. Before a dispute was registered in these cases where an invoice was missing.

Overall the end users feel about the change: when the system starts to work properly it will be good. In the beginning users were afraid of many things and unsure of how the system would work, especially with the customers and the dunning letters. Some customers think that the credit controllers are quite rude. Customers have even said that the credit controllers are asking for money and in some cases the job has not been done properly and that can cause in losing the customer. Customers should be treated correctly. The collection process is too strong.

5.5 End User Experiences after Six and Nine Months

The users were interviewed again after they had used the OnGuard tool for six months and again after nine months.

After having used OnGuard for six months

This was a third interview that was carried out. Different questions were asked that covered the following topics of: the use of the tool, technical problems, the credit management process, the training of the sales, and workload.

One user felt that the OnGuard tool was easy to use and felt comfortable about it. On the other hand, the other user felt the tool to be more difficult to use because he had used it less. Basic parts of the tool were, however, easy to use but the credit controller would need more instructions and time to learn how to use other parts of the tool such as historical data, the usage feeling is not comfortable yet.

The tool is felt to be a user-friendly tool and easy to use. Things can be done fast and information comes more easily.

When discussing the most challenging functions of the tool, the dispute function was brought up. The same problem came up as in the previous interview that the dispute registration is not well designed. The users would like to insert information about the dispute as the status develops. Also, if some part of the dispute has been resolved, this information cannot be inserted into the tool.

Users feel that they have received sufficient support regarding questions and problems and how to use the tool. On the contrary, users do not feel satisfied with the support and help received regarding technical problems which have happened very often. There have been too many different problems. They have not been resolved properly or in a short time period. The Help Desk has been contacted about these problems. The problems keep on reoccurring, one day the tool is working but not on the next day and then maybe it is working again.

This causes double work because it needs to be checked what has been done for instance in SAP. Also, it needs to be checked what the system does and if the information is correct. Moreover, the invoice amounts were not even correct at times. Sometimes the system even changes the name of the person chosen for sending the local request to. In some cases, the system also says that the message has not been sent even though the user had received it twice.

During the past 15 days to one month the tool has been inefficient. The tool is good if it works properly. All things and actions had to be checked if the information is correct or not.

A lot of time is being wasted in reading emails from different users from the different Case Network Companies around the world because they are informing the whole OnGuard user group in the case company about their technical problems in OnGuard. This affects the users not even trying to open the tool. A suggestion is, for example, to have someone advice not to send emails to all of the users and inform to whom the problems should be addressed. This message was

passed to the Global Credit Control and it was decided that the next time someone sends such a message then an instruction email is to be sent out to the users. The problem was corrected and no more emails are sent across the world by end users about technical problems. Instead the Help Desk is informing about common problems and how they are developing.

One of the topics was the training of the account managers about the new process. The credit controllers have had the need to train and explain different things and each step to the sales, because in the beginning they didn't know how to cope with the new process, for example, with the requests that are being sent to them. Despite of the sales training that was held online, it was felt that they still need more information and explanation about the process. They also felt that someone else should have done the training than themselves. The credit controllers feel that their sales are on the way to adapting to the new process and they feel that the future looks better from this point of view. Nevertheless, the users still feel that the process is too strong and disturbing the customers, this is felt to be so at least in the case company's country.

The workload is better than compared to the implementation time. Now all the necessary information has been filled in to the system, such as the customer contact details so more time can be used to do actual actions in OnGuard. Nevertheless, it has to be taken into consideration that the number of customers has grown due to an internal change that made the case company South Europe also responsible network company for the customers in their neighbour country. The users feel that they usually have enough time to complete all tasks that appear during the day. One of the best things is that the alarms appear easily and things don't have to be followed up manually in the same way anymore as in the old way of working. Now all the customers are being followed up in the same way, except in the beginning and the implementation phase of OnGuard. This was due to the reason that time was needed to insert the customer contact information. Earlier the focus was on the biggest main customers and some small customers were not followed up closely due to the lack of time. The automatic function of OnGuard

helps a lot and saves time. The users feel that they usually have enough time to complete all the tasks that come up during the day.

Table 3 shows the tasks that are included in the daily work of the credit controller. The credit controllers are differentiated by naming them credit controller Y and credit controller X. The second and third column shows the working time in percentage used for each task before OnGuard was taken into use. The fourth and fifth columns show the working time in percentage used for each task after OnGuard was implemented. The sixth and seventh columns show the working time in percentage used for each task after having used OnGuard for six months. The credit controllers are doing also other tasks than credit control related are therefore the total percentage is not 100%.

Task	Before OnGuard		Implementation of OG		After using OG for 6 mo.	
	CC Y	CC X	CC Y	CC X	CC Y	CC X
Dunning notices	10%	-	8%	-	10%	-
Statement of accounts	10%	-	1%	-	2%	-
Registering disputes	1%	-	10%	-	10%	-
Replying to inquiries from sales people	10%	10%	8%	10%	8%	10%
Solving unclear payments	5%	-	5%	-	5%	-
Solving Disputes	2%	-	2%	-	2%	-
Releasing orders under credit limit blocks	1%	-	1%	-	-	-
Defining credit limits to customers	3%	10%	3%	10%	3%	10%
Monthly receivables reporting	3%	5%	3%	5%	3%	5%
Registering promised pmts and pmt plans			2%	-	1%	-
Other: inserting customer information			2%	-	1%	-
Other: to learn the system				5%		5%
TOTAL	45%	25%	45%	30%	45%	30%

Table 3. Credit control tasks and working time used for each task in percentages before the use of OnGuard, during implementation of OnGuard and after using OnGuard for six months.

The customers in the neighbouring country that are also currently under the responsibility of the case company are taken care of sensitively. One reason is the fear of losing some customer markets due to already existing internal problems with some products. Therefore, the users feel that they don't want to disturb the

customers too much so as not to lose the few customers from that area. Instead the users are working by phone and email via the account managers located in the other country and they are the direct contact to the customer. There is still a lot to learn about these new customers and things are proceeding step by step.

The collection process time frame divides opinions into two. One of the credit controller's feels that the time frame is a bit too fast. The first dunning notice arrives too soon. For instance, if the due date of the invoice is on Friday, then the action comes on Tuesday when the invoice is five days overdue. In this way, the customer loses the weekend as opposed to if the invoice was due on Monday and the dunning notice was sent out on next week is Monday. This way the customer has more time to pay the invoice and use the banking days. The system is not taking into consideration the weekends and public holidays, as it is perhaps should. It is felt that the system is too rude as the customer could have made the payment already yesterday. The first dunning action could arrive a few days later so, for example, on the 8th day when the invoice is overdue. The second dunning notice could be sent when the invoice is 16 days overdue instead of on the 14th day. Finally, the third dunning notice could be sent when the invoice is 30 days overdue.

Conversely, the other credit controller feels that the standard time frame set for the collection process is good. The wording in the dunning notices is just a bit too strong. For some customers, five days can be even too much. Some customers are good payers and don't even need dunning notices to be sent to, only a statement of account and a polite notice letter. It can be that the customer has just forgotten the invoice or lost it but in principle are not bad payers. It is felt that not all customers can be treated in the same way. Some customers are more difficult to deal with; they can be lying and are trying to do the same delays all the time. With these kinds of customers the credit controllers want to be stricter and send dunning notices. For most of the customers statement of accounts and polite dunning notices are enough. The alarms are alright but the dunning notices should not be sent in a "robot like" way but they should be evaluated by the credit controller first. At the moment, for example with the customers in the neighbouring country,

the credit controller discusses with the account manager first in order to get his opinion on the current situation because if all dunning notices are sent that are scheduled in OnGuard it may destroy the customer relationship. So instead, the credit controller asks the account manager to call the customer and wait for five to six days before sending the dunning notice to the customer. If no reply or comments are received from the customer then the dunning notice can be sent. If, for example, there is a big customer in economical problems in that case a few more days' time is given in taking care of the invoice. It is about finding a balance so that there will be business also in the future. The users also feel that with the final dunning notice they need to be very careful because the wording is strong. Only a few final dunning notices have been sent as the aim is to close all the cases before the collection process reaches the global level.

Some customers have been set under a delivery block if there have been payment problems. This needs to be evaluated very carefully though and customer by customer. A big customer cannot be blocked due to one or two invoices that have problems.

The credit controllers have received criticism about the collection process from many of their customers. Some of them feel that they are being pressed too much. They don't have enough time to check all deliveries, invoices etc. before paying the invoice. Especially the shipping customers do not approve the invoice before the spare part is on the ship. Perhaps the customer has received the spare parts in to storage and no one is taking care of that before the ship arrives on the port. The inspector has to check all the spare parts, deliveries and invoices. This is the difficult global way of working with the shipping customers and the company has to manage with them. The tool should distinguish customers from each others.

At the moment, there have not been any external factors that have affected the project but the summer vacation period next summer will have an effect because the other credit controller is not using the tool 100% well and feels as not being able to take care of both of the credit controllers' jobs completely. This is due to the credit controller not feeling so comfortable with the tool and also because of limited time resources.

The motivation level of the credit controllers is still the same as before because the work is also still the same only just the way of working has changed. The tool has made working easier. None of the credit controllers would go back to the old way of working. The tool is good and if the process is maintained in good balance then things are alright.

The collection process is more efficient now compared to the time before OnGuard was used. More customers can be managed today than before. The overdue receivables have decreased during the time of OnGuard. However, currently there is a financial crisis that can have affected the receivables situation in some parts.

When the interviewees were asked what suggestions they would give new users who are starting to use OnGuard, the suggestion given is learning by using the system. Moreover, it was asked if a new tool would be taken into use then what factors should be taken into consideration so that the end result would possibly be better. The opinions were that the program should be learned properly one by one per project because new things take a lot of time on top of the everyday tasks that have to be taken care of. The important thing is to learn one tool well and then see if it works properly or not and then try to develop it. Another opinion is to introduce the tool into the group and to integrate the tool into the culture of each of the companies. There shouldn't be just one way of working for all countries in the world and is a mistake because there are differences in each country and the credit controller should be allowed to work according to the way of their own country.

A grade given for the whole project was 8 on a scale of 1-10. The collection letters can be developed in to a smoother direction. The technical problems are, of course, something that needs to be taken care of.

In the end the users want to comment that the company should be more proactive in sending information to the customers and asking them if everything is alright and correct with the invoices. Then, not to be so strong very rapidly after the due date, this can be done so later for example after the invoice is 30 days overdue. It

is also brought up that not all payment terms are up to date in SAP but they are being worked on and, therefore, the collection process cannot always be handled exactly the way designed. For example, some customers have 30 day payment terms but are always paying after 60 days. And many times, the problem why an invoice is not being paid is due to a dispute and many times due to internal problems. But when it is known that a customer is really not paying on time, then you can send the dunning notice to the customer. A normal way of working and culture in the country of the case company has normally been to pay invoices after 90 days. Currently the payment terms are being reduced to 60 days and so on which is quite strong in the local way of working. Focus should be more on the proactive phase to resolve things before dunning notices are sent; when time is correct, for example, after 60-70 days dunning notice should be sent. Internal problems should be resolved before the collection process can be used properly as planned.

After having used OnGuard for nine months

The fourth and last interview was held when the users had been using OnGuard for nine months.

The users were asked about the current situation compared to the situation three months ago when they had been following the new receivables collection process for six months. Their feedback was that currently there were more customers and therefore also more actions. In addition, more time was needed to look for customer contact details because that information is not available in customer master data in SAP. Overall it was felt that the receivable collection had developed. Furthermore, it was criticized that a network company should check with the responsible network company before sending a third dunning notice. However, in the future when all the network companies are using the software, the third dunning notice will not be sent locally anymore and only the responsible network company will be sending out the third dunning notice to the customer.

The technical problems with OnGuard software had diminished and the system was working better now than before.

New things were learned between the third and fourth interview. The reports that can be taken out from OnGuard were something new and convenient.

The co-operation with sales had gotten better. A challenge for the credit controllers that remains is internal communication. They feel that they don't receive information from their sales regarding any problems with an invoice. It is many times the customer who informs of such problems. Customers assume that credit control knows the problem as they have already discussed it with sales. Therefore, there is a lot room for improvement in cooperation. Some of the sales people also understand the process better than the others. Something that had developed over the time was that sales had replied more to the local requests, meaning the request sent by credit control to contact the customer and to inform if a customer is possibly to be put on the local collection block.

The current workload has increased compared to earlier because the number of customers has increased. It was felt though that the dunning notices could be quickly created and sent compared to when the same was be done by phone to the same number of customers.

Table 4 shows how the tasks have been divided when the users have used OnGuard for nine months. The two credit controllers are differentiated by naming them credit controller Y and credit controller X. There were no changes compared to the interview held after they had used the software for six months compared to the nine months of use.

Task	Before OnGuard CC Y	Before OnGuard CC X	Implementation of OG CC Y	Implementation of OG CC X	After using OG for 6 mo. CC Y	After using OG for 6 mo. CC X	After using OG for 9 mo. CC Y	After using OG for 9 mo. CC X
Dunning notices	10%	-	8%	-	10%	-	10%	-
Statement of accounts	10%	-	1%	-	2%	-	2%	-
Registering disputes	1%	-	10%	-	10%	-	10%	-
Replying to inquiries from sales people	10%	10%	8%	10%	8%	10%	8%	10%
Solving unclear payments	5%	-	5%	-	5%	-	5%	-
Solving Disputes	2%	-	2%	-	2%	-	2%	-
Releasing orders under credit limit blocks	1%	-	1%	-	-	-	-	-
Defining credit limits to customers	3%	10%	3%	10%	3%	10%	3%	10%
Monthly receivables reporting	3%	5%	3%	5%	3%	5%	3%	5%
Registering promised pmts and pmt plans			2%	-	1%	-	1%	-
Other: inserting customer information			2%	-	1%	-	1%	-
Other: to learn the system				5%		5%		5%
TOTAL	45%	25%	45%	30%	45%	30%	45%	30%

Table 4. Credit Control tasks and working time used for each task in percentages before the use of OnGuard, during implementation of OnGuard and after using OnGuard for six months and nine months.

Another topic discussed was the current motivation level. The users were happy that the actions were coming automatically from the system. If the same would need to be done manually it would not be possible to do the same work in time. As an example the statement of account letters that come out from the system very quickly and easily. The system gives a lot of information and alarms but at the same time it was felt that the system was too strict and too strong.

Another issue that was brought up was the fact that before sending out reminders to the customer, internal disputes should be resolved, what comes to, for example, wrong spare parts sent out or an invoice sent before spare parts have been sent. When internal disputes are resolved then the pushing of customers can start. The credit controllers felt that the invoices should be checked first if they are correct. Many times the sales are getting a message from the customer that they are fed up with receiving dunning notices even though the invoice maybe incorrect which in turn causes damage to the customer. As mentioned also earlier, there is a lack of communication between the network companies.

Development ideas that were suggested for the future were to be more proactive in the beginning of the customer relationship. The templates should be checked before sending them so as not to be so aggressive. Templates should be made

more polite as the same thing can be said in a different way. The customers should be treated in a friendly way and not as enemies.

5.6 Summary of the Case Study Analysis

The target of this case study was to research the effects of the new credit management process and OnGuard software on case study South Europe.

In order to be able to perform this case study, there were four interviews that were held with the two credit controllers in the case company South Europe. The first interview was held to find out what their credit management and collection process was like before starting to use the OnGuard software.

In the second interview the target was to find out how the implementation of the OnGuard software and the new credit management process was done and how it started out in the case company.

The third interview was held after the case company had used the OnGuard software and used the new credit management process for six months. The fourth and last interview was held after the users had used OnGuard software for nine months. This was a checkpoint to see if something had changed in the past three months after the third interview.

The starting point with this case company regarding the receivables collection was already good. This means that they had been actively in contact with their customers about their receivables. It was very positive to also see that the company had been not only active in reminding customers of overdue invoices but they also put much weight on proactive collection. They had sent statements of account to their customers frequently to ensure that the payments would be made in time and that the customers would be aware of what open invoices there were. Customers with very big invoices were called about 10-15 days before due date. In addition, two days before the due date of the invoice the customer was called again to make sure that the payment would be made.

The reminding of customers was followed by a clear process, first by sending a reminder by email. If no reply was received from the customer then a second reminder was sent by email. If still no reply was received then a phone call was made to the customer. If a customer informed about a payment to be made then that was inserted in to an Excel file that was followed up. Also, disputes were inserted into another Excel file. The resolving of the dispute was usually delegated to the correct person in the company unless the credit controller was able to resolve it. The receivables were followed by creating receivables reports in SAP. Most of the percentages used for different tasks were divided by sending statement of accounts, dunning notice emails and replying to inquiries from sales people.

Summary of the implementation of the OnGuard software and the new credit management process

The kick-off meeting that was held prior to the whole implementation of the project was felt to be a good information session of different topics related to credit management so that everyone would be aware of what there is to be expected in the near future. The feelings that arose for the management and the credit controllers about the new way of working were also fearful yet at the same time the management was being supportive. The end users experienced a negative feeling as to being controlled even though they felt that they had done things correctly in the past already. There was uncertainty of the big project ahead. The credit controllers wished that they could have taken part in the survey made so that they could have expressed their suggestions. In addition, they wished that they would have received more information of the big changes that were to come ahead.

There were different pre-preparation tasks that needed to be completed prior to the go-live. The biggest portion was to correct the customer master data. The credit controllers felt that the pre-preparations that were done were sufficient. The downside was that there was not much time to complete the requirements.

One week of training was an important part of the whole implementation process. A common feeling for the credit controllers was that there were numerous new topics in a very short time. It was a possibility to have an overall look at the different topics introduced but it was not possible to go very deeply into the details. The training material; an instruction booklet by the OnGuard company could not be criticised because the whole software was new and there was a lack of understanding. It was suggested that the training could have been held in two parts. The first part would be on the more general information about the whole process and the second part would consist of learning and working with the software. An overall feeling of the users in the training was that of being uncomfortable and the uncertainty of what exactly was to be done. Many topics were said to have been forgotten after the training and, therefore, it would have been better to hold the training partially later on when the users were more familiar with the software and the new process.

To be able to start to use the software and use it as a daily tool, the contact information of the customer's accounts payable persons need to be filled into the system. The software was strongly criticised for its inflexibility regarding the contact details. This is due to the fact that the customer contact details need to be inserted by the same credit controller for the same customer even three different times.

The technical features of the disputes were thought to be inflexible, meaning that the status of the dispute cannot be stated in too much detail while it develops because there are only fixed options to choose from. In addition, the number of days that the dispute is open may not be realistic as the information of a resolved dispute does not reach the credit controller right away or at all. The resolving of a dispute may be found out only later when the dispute is closed and the number of days maybe very high.

Using the OnGuard system for the first few days was felt to be stressful; first due to all the information that had to be filled into the system to be able to do any actions. The second reason was to be able to complete all actions that were scheduled to come from the system. The beginning was more difficult compared

to the old system because there was no information ready in the system. However, when all the necessary information had been inserted then it was felt that the new system was easier and faster because, for example, the dunning letters came automatically from the system. The credit control related tasks took about 5% more of the employees' time all together than it had before the implementation. Tasks such as doing actions, registering disputes, and inserting customer information were mentioned to take more time.

The users have faced a lot of technical problems with the software. Sometimes it can log off users, it doesn't work or the whole system can't even be opened during some days.

When making comparisons between the times before OnGuard and the time when using OnGuard, it was mentioned that in OnGuard there are more actions to be done. However, there are some actions that have also been left out such as statement of accounts to all customers about once a month. This used to be the practice of the company before the OnGuard implementation.

The language on the dunning notices was felt to be too aggressive. Especially as the customers are not being sent a statement of account, the credit controllers feel that the customers don't have a chance to inform the company if there is a problem or to express their opinion why an invoice is unpaid, instead we are requesting for a payment. There are quarrels that may begin with the customer after they have received the dunning notice, for example, in cases where a product has not been received even though the invoice has been sent. The credit controllers feel that the accuracy of the invoice should be checked before sending out a dunning notice. Therefore, a lot of weight is put on the proactive phase of the collection. The feeling is that the first and second dunning notices should be more polite and the third dunning notice could be more aggressive and requesting more strongly for the payment.

Summary after having used OnGuard for six months

The third interview was held with the credit controllers after they had used OnGuard and the new credit management system for six months. The interview touched the following topics: the use of the tool, technical problems, the credit management process, the training of the sales, and workload.

One felt that the OnGuard tool was easy to use and felt comfortable using it. The other user felt the tool to be more difficult to use because he had not used it as much. The tool was said to be user-friendly and information is reached easily. The same problem was still mentioned as last time regarding the dispute registration function not being well designed.

On one hand the users felt that they have received sufficient support regarding questions and problems on how to use the tool. On the other hand, they were not satisfied with the support and help received with technical problems with OnGuard that occurred often. They felt that the past 15 days to one month had been a disaster because there had been some major technical problems and it was not possible to even use the tool every day. Also, things had had to be checked twice before you could do anything just to make sure that all the details were correct.

The training of the sales was one topic discussed and it was a common opinion of the users that they had needed to train their sales people on each step as in the beginning despite the training that they had received from Global Credit Control, as they didn't know how to cope with the new process. However, at the moment they felt that their sales are on the way of adapting to the new process and the future was said to look better from this point of view. Nevertheless, they still felt that the process was too disturbing the customers at least in the case company's country.

The workload was said to be better compared to the beginning when the tool was taken into use as all necessary information has been filled into the system. However, there had been some internal organizational changes with the case

company and, therefore, the number of customers had increased. Nevertheless, there was enough time to complete all tasks that come up during the day. The workload of the tasks were divided almost in the same way as during the implementation time, but with one change regarding the number of dunning notices and statement of accounts sent due to the reason that the number of customers had increased.

The collection time frame divided the users' opinions into two. One of the credit controllers feels that the time frame is too fast and the other feels that it is good. The first one would like for the system to also take into consideration the weekends, because some customers will have fewer days to be used if the due date is on a weekend. The other user feels that with some customers it can be even too much to wait for five days before sending a dunning notice. Some customers can be more difficult to deal with. With these kinds of cases the credit controller wants to be stricter and follow the defined time frame. The credit controllers have received criticism about the collection process from many of their customers. The customers feel that they are being pressed too much and that they do not have enough time to check all deliveries, invoices and other documents before paying the invoice.

The motivation level of the credit controllers is still the same as earlier because the work is also still the same and only the way of working has changed. The tool has made the work easier. None of the credit controllers would go back to the old way of working. The tool is good and if the process is being maintained in good balance then things are alright. The collection process is said to be more efficient now compared to the time before OnGuard was used. More customers can be managed now than before. Also, the level of overdue receivables have decreased during the time of OnGuard. However, it should be taken into consideration that there is currently a financial crisis that can have some effect on the receivables situation.

An overall grade given to the whole project was 8 on a scale from 1-10. The letters could be developed to be smoother and the technical problems need to be taken care of.

In the end the users want to comment that we should be more proactive in sending information to the customers and asking them if everything is correct with the invoices. It was also brought up that not all payments terms are correct in SAP but are being worked on and, therefore, the collection process cannot always be handled exactly the way as designed. Last, internal problems should be resolved before the collection process can be used properly as planned.

Summary after having used OnGuard for nine months

The fourth and last interview was held to the credit controllers when they had used the OnGuard tool and the new credit management process for nine months. The interview was held to compare the current status to what it was three months ago when they had used OnGuard for six months. The feedback received was that currently there were more customers and, therefore, also more actions. In addition, time was needed to look for customer contact details because the information is not available in SAP. Overall, it was felt that the receivable collection had developed. Nevertheless, the network companies should check with the responsible network company before sending a third dunning notice. The technical problems with OnGuard software had developed and the system was working better now than before. New things were learned between the third and fourth interview. The reports that could be taken out of OnGuard were something new and convenient to the users. The current workload had increased compared to the earlier interview because the number of customers had increased. However, it was felt that dunning notices were quick to be created and sent compared to when the same would be done by phone to the same number of customers. Regarding the division of the tasks, there had been no changes to the percentages compared to the previous interview.

The motivation level was good. The users were happy that the actions were coming automatically from the system; the same results would not be accessible through manual work. On the other hand the system gives many alarms and information but yet it was felt still to be too strong and strict.

The co-operation with sales had gotten better. A challenge for the credit controllers that remains is the internal communication. Too many times it is the customer who will inform the credit controller of a disputed invoice even though they have already informed the sales about the same. Therefore there is a lot of improvement with cooperation. Another issue that was brought up was that internal disputes should be resolved first before sending reminders to the customers.

A development idea that was suggested for the future was to be more proactive in the beginning of the customer relationship. The templates should be checked before they are sent not to be so aggressive. They could be made more polite and same thing could be said in a different way. Customers should be treated as friends and not as enemies.

6 FINDINGS AND CONCLUSION

The sixth and last chapter of the study will present the conclusion and discussion. It will also show the implications and recommendations from the thesis writer's point of view. Furthermore, it will list the limitations of the study as well as the implications for the management and further research possibilities on the topic.

6.1 Conclusion

The research of the effects of the new credit management process and OnGuard software on case company South Europe was a good opportunity for the thesis writer and the company to find out the real effects and the personal opinions of the users as the project was unfolding. The research was done at the time before the new software was implemented, during the implementation and when the tool had been used for six months and nine months. This was a moment for the users to reflect and go into detail of different aspects of the project stages. It was also a possibility to express how things could be developed and how to improve the business in general. The interviewees were open minded and positive about the research which in turn motivated and facilitated the research process.

The supporting theories used in this research paper are the Enterprise Resource Planning and Business Process Re-engineering theories. In addition, Cash Management theories are being covered.

The target of this research was to find out the effects of the new credit management process and the OnGuard software in case company South Europe.

It was decided that the exploratory business research approach would be used in this study. This included interviews and observations. It was clear from the beginning that interviews were the main way of doing the research in this case. It turned out that the used interview was a very reliable and an effective way of getting information. As there were only two people who could be interviewed in this case it was possible to have detailed discussions on several topics and go into specific examples to get more insight into different cases. The validity of the work has been covered for example by using multiple sources of evidence and theory.

The work is also reliable because the same results can be achieved if the research was repeated. Also, the interview questions were neutral, meaning that the questions were shaped in such a way that the interviewer's personal opinions would not be shown and therefore would not direct the interviewees in any direction either.

The objectives of the research were reached. It was found out how the receivables collection process was done in case company South Europe before the implementation of OnGuard software. It was positive to see that the case company already had a receivables collection process of their own that they followed very closely. Then, it was discovered how the OnGuard tool was implemented in case company South Europe. Third, the new receivables collection process was viewed. Last, the effects of the new process and tool in the case company compared to pre-implementation were discovered.

The company management is able to utilize the research results as they see necessary. Such in-depth interviews are not a part of the implementation process in the network companies. Therefore, through this thesis the management will be aware of both positive and negative detailed aspects of the implementation and the new global credit management process which they otherwise may not be. Also, in case new processes or software are taken into use in the future, the research results of this thesis can be used. This makes the research useful. In addition, the theoretical study of the thesis may bring up certain points that could be examined more closely and taken into use in practice. Consequently, this study can be used as a basis for other research assignments in the case company or the whole corporation related to the credit management topic. It would be worthwhile to research the effects and the outcome of the development process later on when more time has passed.

The main findings will be discussed and applicable recommendations and suggestions will be offered on how the new process and the software could be developed to better serve the need of the users and the company in whole.

6.2 Main Results and Applicable Suggestions for Development

The main results as well as possible suggestions that are felt to be applicable will be given in this section.

Case company South Europe had a good collection process that they followed before the implementation of OnGuard. However, due to the big number of customers and the manual work, it was not possible to collect and follow up the receivables from all customers. The change into a new process and system first created uncertainty.

Despite of the good process that the case company had followed before, the effects of the new credit management process and OnGuard software turned out to be rather high. The collection time had also decreased constantly during this time. Collection time means the time in days how long it took to collect the trade receivable. The lower the collection time the more the efficiency increases and ties up less capital. However, no process or software can ever be perfect and there are always issues that need further development.

Overall, it was said that the OnGuard tool was a good tool to be used. One of the most important effects on the case company was that with the use of the tool it was possible to reach and follow up on all of their customers compared to the time before OnGuard was taken into use. The tool generates statements of account and dunning notices in a very quick way which can be either sent by e-mail or by post. There are ready made templates from which to select from. The system also follows up and generates actions according to the due date of the invoice. The automation of different steps in the system releases more time to be used compared to before when everything had to be done manually. Also, the following up of, for example, disputes and payment plans is done automatically by generating alarms instead of manual follow up. This way all the customers can be handled and followed up at all times.

The main concerns were to modify the dunning letter templates not to be so aggressive and the internal dispute resolving process to be developed which is an

indirect development issue compared to this research paper. A second important thing was to develop the tool from the customer contact details point of view. In most cases the contact person, email address, and phone number is the same in the customer's end no matter which network company is contacting them. Therefore, it would be easier if the customer contact details could be added into one place only per customer instead of several places for the same customer.

The users also felt that the process was quite rigid and not as flexible as it could be, meaning each culture has its own factors and the users in that country know them the best. The credit controllers wished that they could use their cultural knowledge and take it into account through the process up to a point. Furthermore, they wished that company specific features such as sending out statements of accounts could be added for them as they found this proactive approach to be an important part of their collection before they started using OnGuard and would still like to keep it so.

The dispute function of the OnGuard tool was felt not to be well designed. The users felt that information could not be added onto the dispute during the development of it. Also, if some part of the dispute was resolved that information could not be inserted either.

The study shows that the training was done rather quickly and in a short period of time during which the users in this case study could not internalize all the details shown during the training. Both the process and the tool were new and, therefore, there was twice as much new information. The recommendation was to have the training in two parts, for example.

The users felt that their opinion was not listened to before the whole project started. A suggestion that came up from the users was that a survey could be made to ask for comments and opinions that could possibly affect the new process or tool. Also, more communication was desired before the project started. This is something that should be considered for new future projects. Not only is communication important regarding similar cases in the future but in general, the users should be informed of any changes/problems regarding the tool, the process

and others. The more the users are aware of different aspects the more confident they feel using the tool and the more they will respect the whole process and be willing to develop it further.

Furthermore, the users felt that there should be more flexibility in the collection receivables process regarding local cultural aspects. One example is the willingness to send statement of accounts to all the customers frequently.

In general, it was said that the communication between the credit control and the sales teams should develop because this also reflects in dispute management. Besides, the communication between the network companies should develop especially during the critical stage when moving from the local collection level to the global collection level.

The technical problems that have existed with the software have improved in the time this paper has been written. However, any possible new technical problems in the future will probably cause a negative effect on the end users as they have in the past.

From the researcher's point of view, it is good that there is a global credit management process; however, each receivable case and customer is different. The length and quality of the customer relationship varies as does the cultural background that the customers have and the country in which they are located. These factors should be kept in mind especially when the collection process proceeds to the global- and area collection levels. There the responsible network company should be able to work partly in a local way as they see is best for both the customer and the case company. That means, for example, taking a few days more time if necessary before the case is escalated to the area level, in case negotiations about a another sale are still open with the customer perhaps in another division or in the network company. Therefore, the process should not be so standardized for all customers due to the above mentioned characteristics. In addition, the case corporation should decide on the Key Performance Indicators concerning credit management.

6.3 Limitations of the Study

The study was conducted for one case company. The interviews were conducted with all the credit controllers in the case company which in this case was two persons. The whole project was implemented in about 70 different network companies and the case company was only one of them. According to that a conclusion can be drawn that the research done regarding this whole project was narrow and only presents a small percentage compared to if all the new users were studied.

Another factor which may cause a limitation is that the interviews were not done person to person. Therefore, the interviewer did not get to know the interviewees in the same way as possibly could have happened if they had met in person. Also, further limitations were caused by the, possibility to do physical observations in the case company.

6.4 Implications for Further Research

This research was the first research done in the corporation in the area of credit management and OnGuard software. A suggestion for a further research would be to make a new research after the users have used OnGuard for one and a half years to two years. The study should examine how the possible changes and development ideas have been implemented concerning the software and the new credit management process and how they have affected the collection process.

Furthermore, an extensive research could be made where all the users of the about 70 different network companies would be studied by a questionnaire or in form of interviews. This way it would be possible to get an overall view of how the new software has affected the company as a whole and what the receivables situation is. Still, it would be interesting to compare how the different organizational cultures affect the collection process and how different users feel about the new credit management system and the implementation of the software.

Finally, research could be made on how much capital has been freed by calculating the overdue days that have decreased (if so) by each entity during the use of the new receivables tool.

RESOURCES

Agarwal, O.P. 2010. Turnaround Management with Business Process Re-Engineering. Mumbai. India Himalaya Publishing House.

Ashraf, Yasir 2010. Business Process Management – A Comparison Between the Change Initiative Business Process Reengineering and the Continuous Improvement Method Six Sigma. Norderstedt, Germany. Diploma Thesis.

Angelovska, Marija 2010. Cash Management Techniques: The case of Cash Forecasting in Mercator. University of Ljubljana. Faculty of Economics. Master's Thesis.

Bragg, Steven 2005. Billing and Collection Best Practices. USA. Wiley.

Case corporation (Homepages) 2012. Company and Management. [Referred to 12.3.2012] Case corporation's homepage.

Case corporation Compass (Intranet) 2012. Case company South Europe. [Referred to 12.3.2012.]

Case corporation 2010. Process description material.

Credit controller X. credit controller, case company South Europe. Phone interviews 9.3.2012, 15.3.2012, 22.3.2012, 19.6.2012.

Credit controller Y. credit controller, case company South Europe. Phone interviews 9.3.2012, 15.3.2012, 22.3.2012, 19.6.2012.

Gallagher, Timothy J & Andrew Jr Joseph D 2000. Financial Management: Principals and Practice. Second Ed. USA. Prentice-Hall, Inc.

Garg, Vinod K & Venkitakrishnan N.K. 2003. Enterprise Resource Planning: Concepts and Practice. Second Ed. New Delhi. Prentice-Hall of India Private Limited.

Ghauri, Pervez & Grønhaug, Kjell 2005. Research Methods in Business Studies: A practical Guide. England. Prentice Hall.

Gothari, Jagdish & Barone, Elisabetta 2006. Financial Accounting: An International Approach. England. Prentice Hall.

Harwood, Stephen 2003. ERP the Implementation Cycle. USA. Butterworth-Heinemann.

Hooshang, M. Beheshti 2006. What managers should know about ERP/ERP II, Management Research News, Vol. 29 Iss: 4pp. 184-193.

Ingram, W. Robert & Albright, Thomas L 2007. Financial Accounting: Information for Decision. Sixth Ed. USA. Thomson Learning, Inc.

Leon, Alexis 2008a. Enterprise Resource Planning. Second Ed. New Delhi. Tata McGraw Hill Publishing Company Limited.

Leon, Alexis 2008b. ERP Demystified, Second Ed. New Delhi. Tata McGraw-Hill Publishing Company Limited.

Levi, Maurice D 2009. International Finance. Fifth Ed. Great Britain. Routledge.

Lindholm, Leena 2007. The Implementation of ERP-System together with Shared Services Case Wärtsilä Finland Oy. Vaasa University of Applied Sciences. Thesis.

Megginson, William M., & Smart Scott B., & Lucey M Brian 2008. Introduction to Corporate Finance. London. Cengage Learning EMEA.

Monk, Ellen & Wagner, Bret 2009. Concepts in Enterprise Resource Planning. Third ed. USA. Course Technology Cengage Learning.

Nilsson, Erik & Åström, Maria 2005. Controlling Cash Management in the context of trade receivables. A case study in large international manufacturing company. Luleå University of Technology. Master's thesis.

OnGuard (Homepages). 2012. [Referred to 16.4.2012.] www.onguard.com

Owen, Aneirin Sion 2003. Accounting for Business Studies. Manchester, Elsevier.

Ray, Rajesh 2011. Enterprise Resource Planning: Text & Cases. New Delhi. Tata MCGraw-Hill.

Sachdeva, J.K 2009. Business Research Methodology. Mumbai. Himalaya Publishing House.

Saunders, Mark, Lewis, Philip, & Thornhill, Adrian 2009. Research methods for business students. Fifth Ed. England, Prentice Hall.

Sharma, Dhiraj 2009. Working Capital Management: A Conceptual Approach. Mumbai. Global Media.

Svadimass, Paul M. 2000. Encyclopedia of Production and Manufacturing Management. Massachusetts. Kluwer Academic Publishers.

Taylor, David 2010. A Future for Credit Management. Netherlands. Verweij Printing.

Yin, Robert K 2009. Case Study Research: Design and Methods. Fourth Ed. USA, SAGE Publications, Inc.