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IMPACTS OF CUSTOMER RELATIONSHIP MANAGEMENT (CRM) ON DEVELOPMENT OF CORPORATIONS

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ABSTRACT

In markets with highly competitive pressure, like in the packaging industry, companies can only secure their existence by building and assuring long-term competitive advantages via the use of Customer Relationship Management (CRM). The primary goal of CRM is an increase of the corporate value via higher customer satisfaction. One indispensable success factor is the acceptance by its users. The identification of design features of CRM-systems, which have a positive influence on the development and profit of corporations in the packaging industry, would mean a crucial competitive advantage and enable the specifically orientation of the CRM-system on this benefit. This topic has not been discussed so far in the literature for the packaging industry. The lack of empirical contributions to measure the success of CRM-systems contrasts with the great interest in practice and encourages the desire to close this gap.

The overall goal of this doctoral thesis is the identification of design features and prerequisites for a CRM-system, which contribute to an increase in sales and the overall development of corporations in the packaging industry. Particular attention is paid to the identification of requirements of a CRM-system that contribute to an increase in the acceptance of the users. The identified criteria can be used for further CRM-implementations to ensure a proper usage and approval, and furthermore the achievement and assurance of the intended purpose of a holistic CRM-approach. The theoretical part of this thesis is based on an extensive literature research. The case study has been chosen as the overall research design, which allows an intensive examination of the research material, whereby more extensive and complex results can be derived. The data collection of the qualitative research will be done by means of guideline-based and problem-centred interviews and the material will be analysed using the content analysis. A quantitative investigation via an online questionnaire is carried out afterwards to empirically check the developed hypotheses, derived from the qualitative research, via a statistics program.

For a positive impact of CRM-systems on the profit and overall development of corporations in the packaging industry, many necessary requirements must be met first. It is important to consider possible problems in advance, and to avoid them accordingly. Only after the creation of these basic prerequisites or framework conditions, a CRM-system can unfold its intended and expected benefits, which positively influence acceptance, efficiency, and increase the profit.

KEY WORDS

Acceptance criteria

Competitive advantages

Customer Relationship Management (CRM)

Customer Satisfaction

Increase in sales

Industry 4.0

Packaging industry

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1. INTRODUCTION

"A customer is the most important visitor on our premises. He is not dependent on us. We are dependent on him. He is not an interruption in our work. He is the purpose of it. He is not an outsider on our business. He is part of it. We are not doing him a favour by serving him. He is doing us a favour by giving us an opportunity to do so."

Mahatma Gandhi (1869 – 1948)

The importance of consumers in the field of management has played a decisive role for a very long time. Even in the industrial age, corporations developed control systems that supported the effective handling of material and financial funds. The focal point was exclusively on monetary indicators (Chandler, 1977, p. 21). The upheavals from the industrial age to the information age went hand in hand with a new, tougher competition. Intangible assets made more and more of a company's value (Blair, 1995, p. 7). In the age of digitization, more and more new technologies and developments are entering the market. Sales are also affected by these innovations. In order to be competitive as a company and to meet all customer needs, the organization and, among other things, the sales organization must be optimally supported and controlled (Binckebanck and Elste, 2016, p. 48).

A survey by several companies was engaged by the Nolan Norton Institute in 1990. The goal was to strengthen the monetary key figures that were widely used at the time with other, non-monetary, key figures. The study was headed by David P. Norton and scholarly guidance was provided by Robert S. Kaplan. Members of various corporations then came across regularly and evolved an advanced model for performance measurement. At the beginning, an examination of case studies of available systems for performance measurement took place. In doing so, a procedure was discovered, which has been using a company scorecard since 1987 that supports financial indicators with non-monetary ones (Schneiderman, 1986-1992). Arthur M. Schneiderman then established the basis for the scorecard. Throughout this period, the approach was expanded into a Balanced Scorecard (BSC), when it was noticed that a match between diverse key figures (e.g. performance and result-oriented measures) was required. Key performance benchmarks were nearly solely monetary ones, while the recently enclosed indicators had a non-monetary nature. They are further known as drivers of performance. External and internal targets are also supposed to be in balance, which is represented by the four assorted frames of reference. The financial and customer perspective is to be considered in counterbalance with the process and development perspective. The investigation was

completed end of 1990 and a summary was issued two years later entitled "The Balanced Scorecard – Measures that Drive Performance" in the Harvard Business Review (Kaplan and Norton, 1992, p. 4).

Subsequently, the relevant main key figures were determined from the corporate strategy. To achieve this, the strategy was broken down to key success factors ("top-down reflection"). The study leaders published the results in a succeeding paper called "Putting the Balanced Scorecard to Work" (Kaplan and Norton, 1997, p. 21). This important measurement of performance now had to be inserted in a system for performance measurement. The BSC needs to state the strategy of the corporation in order to create organization-wide clearness and transparency. This shaped the foundation for associating the strategic business unit with the present strategy and vision and should be a vital characteristic for its positive result. An important perspective of the BSC is the customer perspective, in which the focus lies on identifying the market and customer elements on which the competitiveness should be achieved. Identified customer and market segments are then the source for the financial goals (Kaplan and Norton, 1996, p. 34).

Customer requirements are continuously rising every year, thus also in the packaging industry. A trend to an increased exchangeability of product core services of the suppliers can be observed in this market. The highest potential to generate differentiating competitive advantages lies within the qualitative arrangement of the interfaces to the customer. A differentiation from competitors through appropriate investments in a customer- and service-orientation is therefore getting more and more important (Helmke, Uebel, and Dangelmaier, 2017, p. 5). The continuously decreasing customer loyalty and the disproportionately expensive acquisition of new customers compared to the maintenance of regular customers, represent a further problem for many companies. Therefore, corporations are increasingly forced to a systematic and professional arrangement of their customer contacts. In the packaging industry, the operation of professional Customer Relationship Management (CRM) offers an opportunity to differentiate from the competition. CRM is an organizational attempt to comprehend and control customer behaviour via relevant contacts through all possible touch points to enhance customer acquisition, customer profitability, and customer retention (Swift, 2001, p. 14). Using CRM, companies can identify interesting customers and systematize their business relationships with them. Thus, valuable customers can be satisfied and bound to the company in order to increase customer value. CRM also offers benefits for customers, like individuality,

well-being, and the orientation on needs. This can increase customer satisfaction and loyalty to the company (Federal Ministry of Economics and Technology, 2009, pp. 4-5).

The packaging industry is a fast growing and modernizing industry. A company in this industry is gaining competitive advantages, when it fulfils strategically important activities more effective than its competitors. A possibility to achieve this goal is the usage of CRM. Customers in the packaging industry include both, end consumers and industrial users. CRM also describes a customer-oriented approach, which tries to win and establish valuable and long-term relationships via the assistance of IT-solutions. It can help to increase profit through cost reductions and sales increases (Stokburger and Pufahl, 2002, pp. 16-17). It is not a temporally limited project or single IT-solution, but a holistic approach and customer-oriented strategy, which needs to be implemented within a continuous and organizational learning process (Hippner and Wilde, 2004, p. 15).

An important prerequisite is the comprehensive and intensive IT-support via CRM-systems to enable the implementation of the overall CRM-strategy. CRM-systems provide members of the workforce with the instruments and facts needed to provide client and vendor understanding and allow the optimization of expenditures on evolving and sustaining profitable connections as well as optimizing possibilities. They help to catalogue data from primary marketing offensives and sales touch points by quoting, ordering, producing, shipping, invoicing, and return goods authorization rounds. They enable users to occupy, handle, and follow all interactions with clients and vendors in one spot ("Customer Relationship Management (CRM) System", 2018).

The acceptance of the employees is a decisive and mandatory factor for the success of a CRM-system, because it is only as good as the employees who implement and use it (Schüller, 2007, p. 11). Without the acceptance of the employees, the implementation of a CRM-system and the realization of associated benefits are difficult to realize. Due to the widespread use of information technology, numerous authors of sales research are investigating the acceptance of CRM-systems that support sales. Technology acceptance forms the basis of this research (Hildebrand, 2015, p. 13). Since CRM-systems can meet rejection in sales, it is important to ensure the success of such a technology. It is significant to analyse influences and factors on the use and acceptance of CRM-systems that will be used in sales (Homburg, Wieseke, and Kuehnl, 2009, pp. 159-168).

The most common reason for employee resistance is fear, resulting from insecurity. The employees are insecure, and fear being overwhelmed by innovations, the uncovering of weak points, and even the loss of their jobs (Helmke, Uebel, and Dangelmaier, 2017, pp. 280-281). It is essential that employees do not see the system as an administrative burden, but rather recognize the benefits of the CRM-system, enabling them to better concentrate on their core tasks (Dangelmaier, Uebel, and Helmke, 2004, p. 16).

There is a close connection of the topic Customer Relationship Management to various related important economic disciplines, like e.g. change management, organizational development, and knowledge management.

Change management generally deals with the optimal control of corporate change. This can be proactively initiated in order to successfully defy future challenges, or it arises from an immediate reaction to critical phenomena. Change management should not be linked too strictly to corporate change. The introduction of new technologies and processes in the area of communication, for example through a social intranet, customer management (in the form of a CRM system), Industry 4.0 applications or as part of a new product launch would be examples of processes of change (Lauer, 2019, p. 6).

Organizational development is also a relevant issue for most companies. This results from the fact that companies are growing and new and changed resources are created to cope with the tasks and because the weighting and importance of business areas and models are subject to change. Many companies are constantly faced with the question of a suitable or improved organization. Mostly there are parallel ideas and plans on different hierarchical and organizational levels to further develop the organization (Schifferer and von Reitzenstein, 2018, p. 1). Organizational development through CRM helps to strengthen the sales functions, the bundling of all sales activities in one overall responsibility, the strengthening of product management and the review of management margins (Schifferer and von Reitzenstein, 2018, p. 20).

On the way to Industry 4.0, the creation and exchange of data between machines will continue to increase ("Big Data"). The question arises as to how added value can be generated from this countless data and information. Added value is only created if it is possible to generate new knowledge from data and information. The employees and their knowledge are still the most important success factors for companies. Innovations can only arise based on knowledge.

A company's ability to innovate ultimately determines its competitiveness. This makes it clear how important the systematic use of this resource is for companies. Systematic handling of knowledge is called knowledge management (Kohl, Mertins, and Seidel, 2016, p. 1). Successful knowledge management leads to competitive advantages in fast-changing business environments, like e.g. the packaging industry. Tools for measuring, visualizing, and controlling intangible assets in knowledge management are the basis of current and accurate research. Newly adapted mechanisms are investigated with respect to their sufficiency for the strategic evaluation and development of knowledge bases in organizations (Seyr and Hoffer, 2020, p. 1).

These topics were kept in mind while preparing this thesis and conducting the respective research, but as the main purpose of the doctoral dissertation is the identification of design criteria and prerequisites of a CRM-system to contribute to an increase in sales (and an overall development of the respective corporation), the primary focus has been placed on the topic of CRM and related economic disciplines were only partially dealt with and included to avoid going beyond the possible scope of this work.

1.1 Problem statement

Many corporations are facing situations, where they need a structured CRM-approach due to continuous expansion, growth, and more complex organizational and sales structures (Stokburger and Pufahl, 2002, pp. 16-17). In markets with highly competitive pressure, like in the packaging industry, companies can only secure their existence by building and assuring long-term competitive advantages (Meffert, Pohlkamp, and Böckermann, 2010, pp. 7-8).

The identification of design features of CRM-systems, which have a positive influence on the development and profit of corporations in the packaging industry, would mean a crucial competitive advantage and enable the specifically orientation of the CRM-system on this benefit. This topic has not been discussed so far in the literature for the packaging industry.

One indispensable success factor for the implementation of CRM in an organization is the acceptance by its users or the employees of the company. Without this mandatory necessity, a CRM-system is hard to implement, and the corresponding added value cannot be achieved to the desired and needed extent. In most cases a potential resistance against a CRM-approach by the employees can be explained by uncertainties, which result in being afraid of excessive demand due to new tools and systems, the uncovering of weak points, and even by the fear for

a loss of the workplace. If employees are not convinced by the advantages and benefits of a CRM-system, they will hardly and inaccurately use it, resulting in a decreased data quality (Gomolka, 2003, pp. 1-2). Due to this fact, the acceptance of a CRM-system is considered as a mandatory prerequisite for a positive influence on the development and profit of corporations in the packaging industry. The current literature and data are mentioning many technical requirements and prerequisites for CRM-systems and their respective functionalities and processes, as well as general information about the acceptance of IT-systems. Common requirements for the effective accomplishment of a CRM-system and the acceptance by the employees and users, especially in the packaging industry, can hardly be found.

1.2 Objectives

Anticipating continuously changing customer needs, the identification of market opportunities and differentiation potentials, as well as the exploitation of new markets and target groups, are factors that will strongly decide upon the optimization of value creation (Stokburger and Pufahl, 2002, pp. 16-17).

The overall aim of this doctoral thesis is the identification of design features and prerequisites for a CRM-system, which contribute to an increase in sales and the overall development of corporations in the packaging industry. It is important to illuminate the corresponding management concepts that show the individual phases of the customer relationship and thus enable profitable and customer-oriented processing. The objective is to generate decisive competitive advantages through knowledge of the design features and prerequisites for a CRM-system, which have a positive impact on development and sales, and ensure lasting and profitable customer relationships. As a result, long-term competitive advantages and the existence of the company can be guaranteed (Stokburger and Pufahl, 2002, pp. 16-17).

This doctoral thesis is furthermore dealing with the identification of requirements of a CRM-system that contribute to an increase in the acceptance of the users or employees of corporations in the packaging industry. The identified acceptance criteria can be used for further implementations of CRM-systems to ensure a proper usage and approval, and furthermore the achievement and assurance of the intended purpose of a holistic CRM-approach. The factors influencing the acceptance of CRM-systems by its users will be identified and the goal is to derive a requirement profile for a CRM-system in the packaging industry, which will be

accepted by the employees and applied accordingly. Likewise, their motivation to use the system should increase accordingly.

Within the scope of this thesis, measures are developed based on a representative case study that help corporations in the packaging industry with the introduction of a CRM-system in sales. The focus is on finding out dimensions and factors of acceptance and assessing the influence of sales employees when introducing CRM-systems. It is also important to analyse, in which phase of the introduction of CRM-systems which dimensions of acceptance can be assigned.

1.3   Research gap and research questions

The potentials of a CRM-system with regards to an increase in sales can be achieved, when CRM is considered as an integrated approach, which focuses on a customer orientation and not solely on a product orientation. Besides of a customer-related orientation of the organization, the implementation of a CRM-system also requires the reorientation of different organizational and technological processes. The important and useful functionalities of a CRM-system will be identified within a requirement analysis. It is necessary to select those, which have the highest possible application benefit for the company (Holland, 2004, pp. 25-26).

The primary goal of CRM is always an increase of the corporate value via higher customer satisfaction and customer retention. The lack of empirical contributions to measure the success of CRM-implementations contrasts with the great interest in practice in CRM-concepts and encourages the desire to close this gap. Empirical studies, dealing with methods for the determination of financial CRM-success, have been carried out to answer the question, to what extent the promise of an increase in value could be redeemed. However, these studies haven't been executed industry-specific and over a broad range of company sizes. The methodological challenges, which have been examined in detail regarding this matter, were only partially solved (Selchert, 2004, p. 27). Varajão and Cruz-Cunha (2016) describe the main motivations for the introduction of CRM-systems in a study that was carried out in Portuguese companies, but do not examine the reasons for a possible impact on sales (Varajão and Cruz-Cunha, 2016, p. 1269). Li and Mao (2012) place the focus of their case study on internal sales management using CRM and the resulting advantages for companies. They also do not describe or focus on possible sales-affecting design features of CRM-systems (Li and Mao, 2012, p. 269).

Concluded research questions:

(1) *"Which design features of CRM-systems have an impact on the turnover of corporations in the packaging industry and which general requirements need to be fulfilled?"*

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(2) *"Which are the necessary criteria and recommendations for actions for the acceptance and furthermore the success of CRM-systems by its users to contribute to the overall goal of an increased profitability and development of corporations in the packaging industry?"*

1.4 Methodical approach

The focus is not only laying on gaining new customers, but also on the permanent retention of existing customers to the respective corporation. With the help of the methodological approach presented, the research questions will be answered, the hypotheses checked, and the results critically questioned, discussed, and put into a common context with the existing literature.

To be able to answer the research questions, the thesis is split in a theoretical and an empirical part. The theoretical part is based on extensive literature research in books, anthologies, scientific journals, and online resources.

The case study has been chosen as the research design. The case study is characterized by the concentration on a representative single social element as the object of investigation, like individuals or institutions (companies and organizations). Due to the limitation of the research object, the case study allows an intensive examination of the research material, whereby more extensive and more complex results can be derived (Lamnek, 2016, pp. 299-300).

The data collection of the qualitative research will be done via guideline-based and problem-centred interviews. The starting point for the creation of the interview guide and the associated questions will be the data and current understanding from the literature accessible about this subject. The interview guideline will consist of an opening and a primary part. The main idea behind the opening is to adjust to one another in the best possible way, and to quickly depict the significance and benefits of the investigation. In the primary part, questions will be asked regarding potential design features of a CRM-system with a view on increasing sales.

The guide categories used for the evaluation result from the thematic affiliation of the questions from the interview guide as follows: impact on customers, efficient work, experience, cost reduction, importance, turnover and most important characteristics. They are therefore based on the relevant literature summarized in the theoretical part. Since the interviews are partly in German and English, an interview guide in both languages will be created. In order to gain access to the field and a broad range of knowledge, sales employees from all sales regions as well as different hierarchy levels (regional sales manager, key account manager, account manager) of the Pharma Division of the Constantia Flexibles Group, a leading manufacturer of packaging materials, will be interviewed in an empirical setting. The selection criterion for sales employees is that they must deal directly with CRM-systems or CRM-approaches in their daily work. Fourteen employees will be selected for this purpose, who, in order to protect anonymity, are only mentioned with their job title and area of responsibility.

The data collection of the second qualitative research will be also executed via guideline-based and problem-centred interviews, which form the foundation for the empirical study. The advantage of problem-centred interviews is that the problem is determined in advance by the interviewer (Schilling, 2016, p. 5). Since the data evaluation of the second case study will take place within the framework of the structuring content analysis, certain categories for the acceptance of CRM-systems must already be defined in the theoretical part. In the second case study, six sales employees from the Constantia Flexibles Group and three external CRM-experts from providers of CRM-systems on the market will be interviewed. The interviews of the sales staff will be used to determine the needs for the acceptance of a CRM-system. Interviews with the external CRM-experts are the objective counterpart of the internal interviews and are intended to bring additional specialist and industry knowledge and objectivity. A requirement profile for a CRM-system in the packaging industry will be derived from the results of the qualitative research in order to increase employee acceptance. A criteria catalogue is created from the requirement profile, enabling a response to the second research question.

The third step is a quantitative investigation to empirically check the hypotheses, derived from the qualitative research. The starting point of every data collection is the definition of the investigation unit. The objective is to derive statements from a specific industry (packaging industry). The survey focuses on a business-to-business market, which is characterized by the strong relationship between the sales force and their customers. In order to collect valid data on

the acceptance parameters of CRM-systems and their positive effect on the development and success, the survey is ideal, since this data, which requires a deep and comprehensive insight into the organizational structure of the company, cannot be observed using secondary sources (Bortz and Döring, 2006, pp. 216-220). A pre-test concluded the conception of the questionnaire. The goal of the preliminary study was to check the uniqueness and comprehensibility of the indicators and to ensure the relevance of the content of the indicators from the perspective of the practitioner (Rossiter, 2002, pp. 320-323).

1.5 Thesis structure

This doctoral thesis is split into a theoretical and an empirical part. The theoretical part starts with general observations and a distinction of the terms "Relationship Management", "Relationship Marketing", "Customer Relationship Management (CRM)", and "Loyalty Management". After this chapter, the topic of CRM will be discussed in detail and its definition, competitive advantages, characteristics in B2B-environments (business-to-business), the implementation of competitive advantages, the requirements for the implementation of competitive strategies, its conceptual framework, the goals of the CRM-approach, as well as Industry 4.0 and Social CRM, will be explained in more detail.

Then, CRM-systems, their definition, objectives, components and functionalities, the organizational and technological prerequisites, the instruments and functionalities of CRM-systems, and the implementation of CRM-systems are dealt with in more detail.

The next chapter is devoted to the economic effects of CRM. It explains the effects of CRM on corporate success and firm performance, customer proximity, customer satisfaction, customer retention, the effects on economic value, and the efficiency criteria of CRM-systems.

Subsequently, the acceptance theory will be described more in detail with regards to its definition, dimensions, the acceptance of Business Information Systems (BIS), acceptance models, and influencing factors of acceptance.

Then, the characteristics and particularities of the packaging industry are discussed and explained in more detail.

After a description of the methodology of the qualitative and quantitative research, which includes the objectives, survey methodologies, as well as the evaluation methodologies, the execution and results of the qualitative and quantitative research are documented.

Finally, there is an interpretation and discussion of the results with regards to the acceptance and usage of CRM-systems, the performance monitoring of CRM-initiatives, the CRM-impacts on the development of corporations, as well as a summary and a conclusion. New scientific results and future research form the thematic end of this doctoral thesis.

2. LITERATURE REVIEW

In order to address the objectives, the theoretical background, starting with the basics of CRM and CRM-systems, as well as their economic effects and general information about acceptance theory, will be outlined in detail. The aim is to provide the necessary basic knowledge and the theoretical prerequisites for the subsequent methodological part.

2.1 General observations

The effective and efficient use of CRM-systems is considered as a strategic success factor. A corresponding supply of information to all people involved in the company must be ensured. The differentiation of the organization from the respective competition is achieved by providing up-to-date and decision-relevant information. Since markets are subject to constant change, companies must pursue both, a customer and a competitive strategy (Stokburger and Pufahl, 2002, p. 31). Customer-oriented CRM-systems are intended to exploit economic potential in order to increase the corporation's profitability (Buchta, Eul, and Schulte-Croonenberg, 2009, pp. 40-41).

CRM-systems not only aim to reduce costs, but also to increase sales. They help to gain new competitive strength in buyers' markets in times of industry 4.0 (e.g. through automation and optimization of order processes). Customers and prospects should be classified according to their value for the organization and treated accordingly (Hubschneider, 2007, pp. 31-32).

In the discussion about the financial advantages of CRM-systems, the Return on Investment (RoI) emerged as the dominant key figure. Possible increases in sales through up- and cross-selling and through the acquisition of new customers by means of recommendations or better marketing are considered. Successful companies that do not implement CRM-systems will lose their competitiveness compared to those that use them to make their organization efficient and customer-oriented (Schiewe, 2003, pp. 26-27).

Before CRM-systems are discussed in detail, a distinction of terms is given, and the basic knowledge is created by explaining the fundamentals of Customer Relationship Management.

2.2 Distinction of terms

In the literature, terms, such as "Relationship Management", "Relationship Marketing", "Loyalty Management" or "Customer Relationship Management", are sometimes used synonymously or not clearly marked off from one another. This chapter serves to define the individual terms, shown in *figure 1*, which illustrates the relationship-oriented marketing terms and separates them accordingly. CRM is only reduced to the relationship with the customer (Leußer, Hippner, and Wilde, 2011, p. 20).
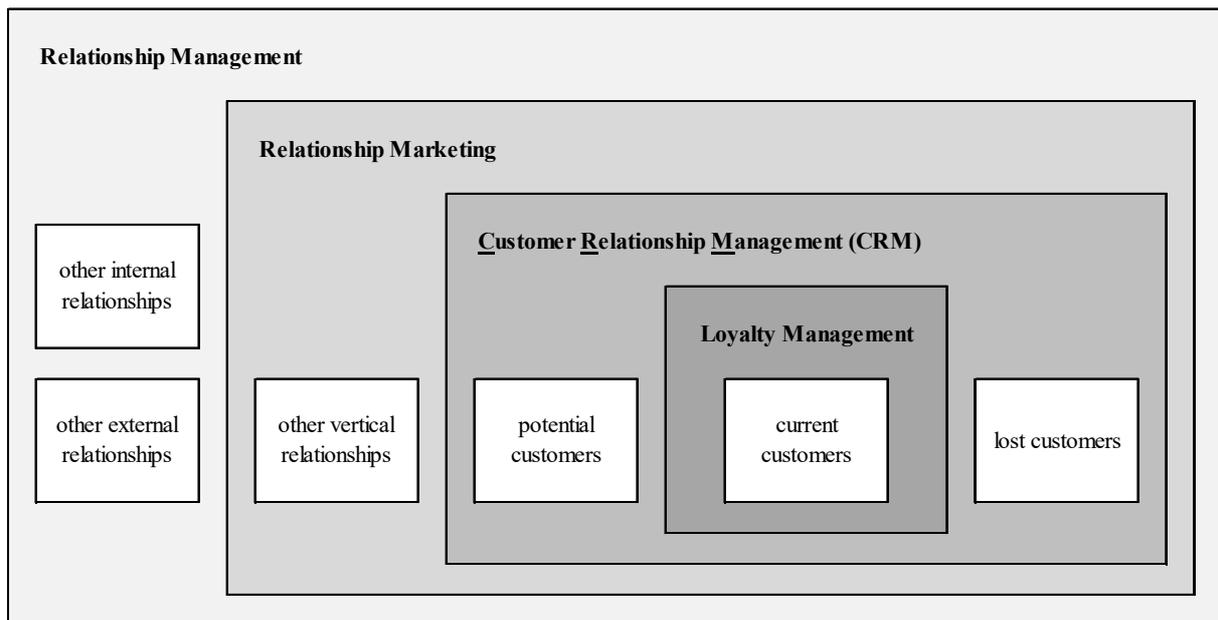
Figure 1: Distinction of terms in CRM

Source: Leußer, Hippner, and Wilde, 2011, p. 20

2.2.1 Relationship Management

Relationship Management describes the engaged and methodical examination, choice, arrangement, outline, and guidance of business connections concerning a broad notion of aims, models, individual actions, and schemes (Diller, 1995, p. 442). This is not limited to customer relationships, but also vertical (e.g. vendor connections), horizontal (e.g. sales groups), lateral (e.g. connections with officials) and internal (e.g. personnel) company communications (Diller and Kusterer, 1988, p. 212).

2.2.2 Relationship Marketing

Relationship Marketing primarily puts attention on the client, but moreover involves connections with vendors and other upstream markets. It therefore forms a part of Relationship

Management (Leußer, Hippner, and Wilde, 2011, p. 19). Relationship Marketing is understood to be a strategic marketing concept, in which the alignment of all promotional actions is aimed at creating, expanding, and preserving profitable relationships (Berry, 1983, p. 25). The concentration is no longer on transaction-oriented marketing, where the sole focus lies on gaining new customers, but on relationship-oriented marketing to create long-term, customer-oriented business relationships (Parvatiyar and Sheth, 2001, p. 9).

Better customer information enables targeted differentiation in customer service and more efficient processing of customers over their entire life cycle. This in turn leads to customer-specific cost reductions and revenue increases, and thus to a higher earning power of the client interaction. The profitability of the customer relationship, from whose value and stability – measurable in the form of customer satisfaction and loyalty – the company's use of resources over the entire customer life cycle can be determined as the central success factor of Relationship Marketing (Auer, 2004, pp. 16-17).

2.2.3 Customer Relationship Management (CRM)

CRM has developed out of Relationship Marketing and overlaps with it in many areas. The focus is exclusively on the design of customer relationships. It thus forms an integral part of Relationship Marketing (Götz, 2006, p. 13). A precise definition of the term is given in *chapter 2.3.1*.

2.2.4 Loyalty Management

Loyalty Management describes the methodical evaluation, arrangement, accomplishment, and supervision of all dimensions aspired to the current client base with the aim of guaranteeing that these clients preserve the business connection in the time to come. The focus is only on existing customer relationships (Bruhn and Homburg, 2017, p. 8). The acquisition of new customers or customer recovery are not part of Loyalty Management (Götz, 2006, p. 14).

2.3   Customer Relationship Management

Rapidly changing market conditions, such as growing competitive pressure in stagnating markets with mostly interchangeable services and the resulting falling loyalty rates, require organizations in the packaging industry to focus more on CRM. The focus lies on the interactions regarding supply and demand, as well as the long-term maintenance and further development of business relationships. It is a philosophy that does not focus on the respective product, but on the relationship with the customer. All company activities must be systematically planned, carried out, controlled, and adjusted with a view to a profitable customer relationship. In addition to customer satisfaction and customer loyalty, considerations about systematic and individualized management of customer relationships, as well as economic considerations and IT-applications, play a decisive role. The long-term goal is to manage the customer base effectively and efficiently based on a value orientation (Meffert, Pohlkamp, and Böckermann, 2010, pp. 5-6).

The implementation of CRM enables the identification of essential actions and dimensions. Due to the inclusion of the establishment of a solitary impression of the client across every interaction channel on the report of three aspects (relationship introduction, preservation, and completion), it plays a significant part. The management of knowledge across interaction and time channels to coordinate the continuous client relationship methodically is associated with it. Generally, CRM enables corporations to utilize these information and investigation to advocate their perception of how to manage clients. Corporations take advantage of the data in CRM-systems to be able to win new clients, keep current clients, and improve these associations via cross-selling and custom-built communications. The domination of previous know-how about forthcoming client projections, the opposed handling of every client, and the benefit of long-ranging interactions among clients and corporations have developed into central features of CRM for picking, gaining, preserving, and developing customers (Palmatier, Kumar, and Harmeling, 2018, p. 58).

2.3.1 Definition

CRM is the integral handling of an organization's interaction with its clients. Distribution, communication, and supply policies must be integrated in line with customer requirements. Client satisfaction is the central measure of CRM-successfulness. It is a sign of client loyalty and ultimately for the long-lasting success of an organization (Helmke, Uebel, and Dangelmaier, 2017, p. 7). In marketing science, this concept is defined in the narrower sense as

an integrated information system and in the broader sense as a comprehensive corporate strategy. CRM focuses on identifying, building up, and securing a profitable customer base and in this way contributes to the optimization of a company's customer portfolio. The profitability of the exchange relationship is the central target of CRM. In addition to the stability and value of the relationship, it also includes the company's efficient use of resources throughout the entire customer relationship life cycle (Sperl, 2016, pp. 41-43).

CRM must be understood as a holistic philosophy, which always represents the relationship to the customer as the starting point of the consideration. It requires the re-orientation of business processes and responsibilities, based on a new customer-oriented corporate strategy. Integrated information systems are needed to support this approach, as only the targeted integration and structuring of all customer-related information can provide a central view and a coordinated strategy for the respective customers of the company (Leußer, Hippner, and Wilde, 2011, p. 18). It is quite demanding to expose a primary or ordinary persuasion regarding CRM in theory and practice. CRM-systems, which will be described later in detail, are part of Information Technology (IT) instruments, supporting various administrative actions from a technological viewpoint. Instead it develops into an increased challenge to universalize what CRM combines when thinking about its correlation with humans, corporations, and procedures (Perna and Baraldi, 2014, p. 57).

When it comes to the question of what exactly is to be understood by CRM, the scientific literature has a wide variety of views, ranging from a relatively narrow interpretation to definitions of CRM that encompass almost all operational functions. It should be noted that the individual definitions partly address very different aspects of CRM (Greve, 2006, p. 15). The term has been evolving over time and several definitions attempted to incorporate the meaning of CRM, as stated and summarized in *table 1*. Exemplary authors, who define CRM in completely different ways, are Helmke et al. (2017), Bruhn (2016), Leußer et al. (2011), Homburg and Sieben (2008), Götz (2006), and Rapp (2005). The focus varies from information technology concepts to a holistic corporate strategy.

Table 1: Definitions of CRM

Author(s)	Focus	Definition
Kumar and Reinartz, 2018, p. 5	Profit	"CRM is the strategic process of selecting customers that a firm can most profitably serve, as well as of shaping interactions between a company and these customers. The goal is to optimize the current and future value of customers for the company."

Helmke, Uebel, and Dangelmaier, 2017, p. 7	Customer satisfaction	"CRM is a holistic processing of the relationship between a company and its customers, in which the communication, distribution, and offer policy is geared towards customer needs, with customer satisfaction being the central measure."
Bruhn, 2016, p. 8	Information technology	"CRM is a synonym for a purely IT-concept that is used to establish customer relationships with the help of software, i.e. programs for archiving and processing customer data, analysing, and controlling."
Glattes, 2016, p. 250	Customer experience	"CRM describes the consistent alignment of a company with its customers and the systematic design of customer relationship processes. The associated documentation and management of customer relationships enables in-depth relationship marketing and is therefore an important component and basis for building customer experience management."
Rai, 2013, p. 30	Holistic view	"CRM is a continuously updated process of identifying relative value of customers and designing customized company interaction to delight them so that they do not just remain with the company profitably, but also be the company's ambassador. Full involvement and empowerment of employees and appropriate technology are two essentials for successful CRM."
Shafia et al., 2011, p. 1107	Holistic view	"Customer Relationship Management is defined as an effective tool to achieve the objectives, such as satisfied and loyal customers, and increased market share."
Leußer, Hippner, and Wilde, 2011, p. 18	Profit	"CRM encompasses the establishment and consolidation of long-term profitable customer relationships through coordinated, customer-specific marketing, sales and service concepts with the help of modern information and communication technologies."
Laudon et al., 2010, p. 5	Holistic view	"CRM emphasizes the use of IT for targeted analysis, planning, and makeup of business relationships with individual purchasers/customers. CRM is a management concept, as well as a technological concept that utilizes application systems to support business processes for business relationship management."
Schawel and Billing, 2009, p. 61	Profit	"Customer Relationship Management includes the segment-specific support and processing of customers in marketing and sales. This is done based on a detailed understanding of customer segments, which includes customer needs and customer value for one's own company."
Lambert, 2009, p. 5	Profit	"CRM is considered as strategic, process-oriented, cross-functional, and value creating for buyers and sellers and a way of achieving superior financial performance."
Homburg and Sieben, 2008, p. 502	Holistic view	"CRM includes the planning, implementation, control, and adjustment of all company activities to optimize the customer portfolio."
Bohling et al., 2006, p. 186	Profit	"The practice of CRM is described as the process for achieving a continuing dialogue with customers across all available touch points to offer them customized treatment, based on their expected response to available marketing initiatives, such that the contribution from each customer to overall profitability is maximized."
Shang and Fen, 2006, p. 2	Holistic view	"CRM is a combination of people, processes, and technology that seeks to provide understanding of a company's customers and to support a business strategy to build long-term, profitable relationships with them."
Götz, 2006, p. 15	Holistic view	"Götz (2006) identified four dimensions of CRM: strategic, procedural, organizational, and technological."
Rapp, 2005, p. 40	Holistic view	"CRM is a scientific concept for personalization with a focus on product and process differentiation."
Hippner, Martin, and Wilde, 2001, p. 417	Holistic view	"CRM is a customer-oriented corporate philosophy that, with the aid of modern information technology, attempts to build and solidify profitable customer relationships over the long term by applying comprehensive and differentiated marketing, sales, and service concepts."
Parvatiyar and Sheth, 2001, p. 13	Holistic view	"CRM is a comprehensive strategy and process of acquiring, retaining, and partnering with selective customers to create superior value for the company and for the customers."
Galbreath, 1998, p. 14	Holistic view	"Activities an enterprise performs to identify, select, acquire, develop, and retain increasingly loyal and profitable customers. CRM integrates sales, marketing, and service functions through business process automation, technology solutions, and information resources to maximize each customer contact. CRM facilitates relationships among enterprises, their customers, business supplies, and employees."

Source: Author's table

The previously stated definitions of CRM imply the following:

- CRM is a process
- CRM requires uninterrupted emendation and updates
- CRM needs client value detection
- CRM pursues client rapture
- CRM-procedures aim at a rewarding interaction with clients
- CRM-targets on converting clients to function as an organization's representatives
- CRM-implementations require participation and procuration of employees
- CRM requires adequate technological support
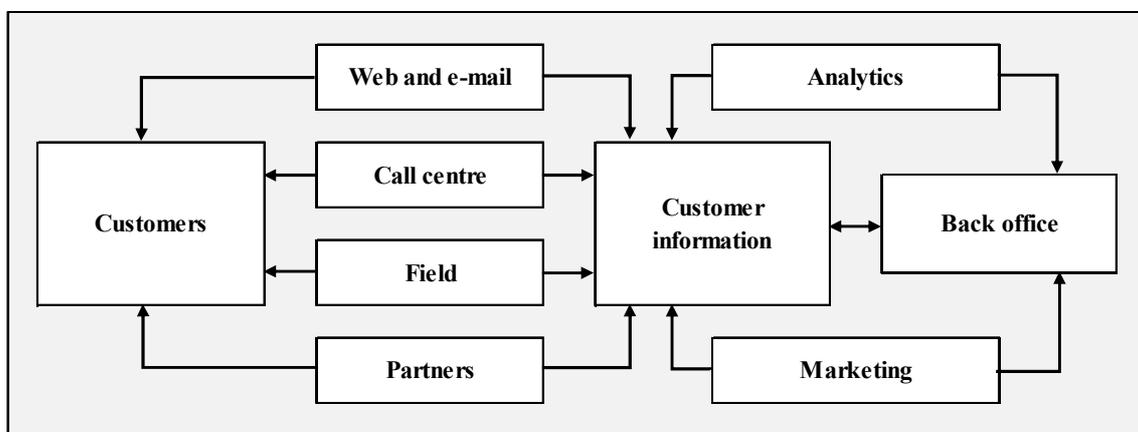
Figure 2: Customer Relationship Management (CRM)

Source: Author's figure

As shown in *figure 2*, customer interactions must be managed across multiple communication channels, like for example call centres, web applications and e-mails, dealers or partners, and field sales. The coordination and linking of purposes in direct customer processing and those that support the back-office area is significant for success. All customer information must be collected, analysed, and used in a meaningful way accordingly. Numerous corporations also keep various principles of business with several overlapping clients. The defiance lies in making it uncomplicated for clients to do commercial activities in a manner they like or prefer to do it anytime, via any channel, and in every currency or language. Furthermore, it should be achieved to give them the impression that they are interacting with a solitary corporation that pays attention at all touch points. Finally, CRM should make a directed commonly advantageous profitable interaction with clients possible (Rai, 2013, p. 31).

As it can be seen in *figure 3*, the strategic component of a holistic CRM-approach includes long-term goals and principles. These flow directly into the various main- and sub-processes of the corporation. The CRM-strategy is derived after these guidelines have been adjusted to the respective framework conditions of the organization. As a result, various building blocks that build on one another can be identified that aim at economic success. Based on an entrepreneurial orientation towards the customer, customer satisfaction needs to be achieved through CRM-activities. This creates an incentive for the customer to maintain the business relationship (customer loyalty). The longer the customer can be bound to the company, the higher its value. This is due to the falling costs of maintaining contacts and the increased consumption of services. CRM-systems represent the technological aspect (Torggler, 2007, p. 5).
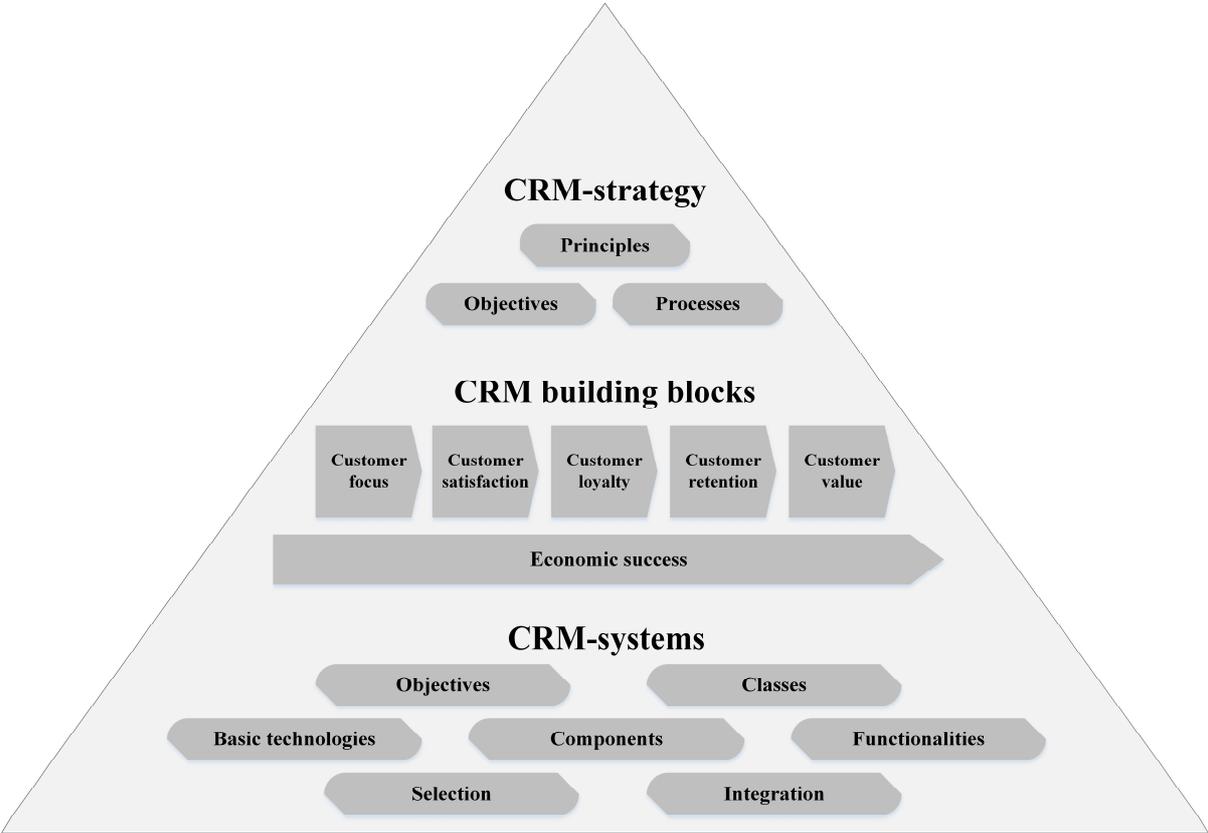
Figure 3: Holistic CRM-approach

Source: Torggler, 2007, p. 5

As shown in *figure 3*, CRM is a holistic concept that contains both, a management and technology component, and is based on the control and coordination of the interactions of a corporation with existing customers, as well as activities that affect potential new customers (Laudon, Laudon, and Schoder, 2010, pp. 533-534).

2.3.2 Competitive advantages

In immensely competitive businesses, the existence of corporations can only be secured by establishing and ensuring long-lasting competitive advantages. In addition to the cost-benefit ratio of an offer perceived by the customer, it is also necessary to consider the competitive component. Due to the usage of CRM, a perceptible advantage must arise for the customer, as well as the supplier, through efficiency- and effectiveness-advantages. On the customer side, this could lead to a risk reduction or a general cost advantage, while the supplier may have a higher intensity of the customer relationship and a resulting long-term business relationship. The literature distinguishes between cost and price leadership, differentiation by quality, time advantages, and brand preferences, which lead to a unique-selling-proposition (Meffert, Pohlkamp, and Böckermann, 2010, pp. 7-8).

On the one hand, a successful relationship management consists of the customers and the CRM-tools and, on the other, the technologies, employee knowledge, and the customer-oriented corporate structure and culture. Competitive CRM and the efficient implementation of organizational processes enable companies to deliver more value to their customers compared to their competitors by meeting or overcoming individual customer needs (Meffert, Pohlkamp, and Böckermann, 2010, pp. 7-8).

2.3.3 CRM in B2B-environments

The origins of CRM are in the B2B-environment (distribution and procurement logistics), e.g. in business relationships between corporations. Companies that have particularly stable and close collaborations with their clients achieve an increased profitability of relationships than other organizations. The primary causes are the positive effects of partnership customer relationships, which are to be brought about through targeted (CRM-) measures. The literature points out that the design of supplier-buyer relationships in B2B-environments places special demands on supplier companies and that CRM is therefore of importance (Schumacher, 2005, p. 28).

CRM is usually designed as an instrument and collection of tools for guiding salespeople and to support engineers during the development of sales projects, forming suitable business plans, handling client disapprovals, and accommodating after-sales client support (Agrawal, 2003, p. 151). Therefore, CRM-utilizations are considered as a closed-loop setup, focusing at

the client position on a collection of primary issues and features that are critical in terms of time (Ku, 2010, p. 1085).

Typical CRM-databases are designed to equip people in sales with assistance and help for searching, client accomplishment, offer establishment, handling objections, as well as closing and reinforcement. Everything is followed on the foundation of touch points, results, and conclusions with the purpose of driving the proposition forward to a successful completion (Stein, Smith, and Lancioni, 2013, p. 855).

The variety of CRM-data in B2B-environments, like the packaging industry, creates a difficulty in assembling the collected data and information in such a manner that enables a generalization among gatherings of clients. Client-specific demands and procedures make it a challenge to classify customers in a meaningful way. These classifications are therefore often not correct and logical (Narayandas and Rangen, 2004, p. 63). Clients are discovered to be solitary, whereas generalization among them is frequently perceived as preposterous (Laiderman, 2005, p. 64). CRM-systems are often seen as libraries or registers with little more reason than equipping sales staff with factual data for prospective offer establishment or providing supervisors the needed data in the occasion of settlement contradictions, whereas CRM-information and data needs to be structured accordingly to encourage significant longitudinal or cross-sectional evaluation (Zahay, Peltier, and Krishen, 2012, p. 5).

The real benefit of CRM-information lies within an availability of the premise for comprehending the disposition of the interaction among customers and the respective organization. Additional to supporting the determination of the foundation for benefit concept advancement, CRM-data can contribute to an accurate representation of the relationship of the organization and solitary clients or client/market segments, as well as among the whole client foundation. CRM is progressively employed as an ordinary data pool for the organization and its customers. Limited admittance to CRM-data can be allowed to important customers regarding dates for shipment, settlement volumes, acceptance and rejection rates, committed amounts, and cost tendencies. Many vendors are perceiving that a truthfulness that raises partnership also leads to client retention (Achrol and Kotler, 1999, p. 146).

CRM and CRM-systems help to gather relevant and important information about customers to assist in enhancing confidence as well as dedication in handling customers, for developing the organization's sensitiveness to customer's support and service requirements, for

decreasing client desertions, and for reducing promotional and other associated expenditures. The organization's value generation procedure, starting with primary client exploration directly via settlement redevelopment discussions, can be transformed by the steady endeavour of CRM-information for administrative decision-making (Stein, Smith, and Lancioni, 2013, p. 855).

All information in a CRM-system, related to CRM in general, and further origins of market intelligence, should be available for a broad collection of policymakers in the company (Rigby and Ledingham, 2004, p. 118). Just a bunch of executives in most companies are aware of the accessibility of CRM-data and do not know about its utilization. As soon as executives are exposed to the advantages and practice of CRM-data, it evolves into a precious advantage for the corporation's decision-making procedures. Consequently, the starting point needs to be the training of those who will be producing the information (sales staff) and who will be utilizing the resulting data for their decision-making goals (executives). The entire profitability of CRM is unfolded by the persistence of information gathering and the adaptability in decision-making (Stein, Smith, and Lancioni, 2013, p. 856).

2.3.4 Implementation of competitive strategies

Based on the market life cycle phases (initiation, growth, maturity, degeneration, and reactivation), three strategic options can be used to implement competitive strategies, which will be explained in more detail.

2.3.4.1 New customer management

As part of the acquisition of new customers, the company either has the option of making targeted use of incentives (e.g. special offers) or convincing them through performance tests and advertising measures. If the strategic direction of the company is more cost-oriented, the price is the decisive criterion for an initial purchase. Acquiring new customers through conviction is increasingly taking place in quality or brand-oriented corporations. The aim is always to expand the customer base or to compensate for natural customer fluctuation (Meffert, Pohlkamp, and Böckermann, 2010, pp. 12-15).

2.3.4.2 Customer retention

Depending on the product or service, the relevance of customer retention depends on various factors (e.g. product useful life, brand loyalty, user and environmental friendliness,

quality, etc.). A distinction can be made between two levels of impact. Firstly, the customer's prevention of a manufacturer or brand change due to a factual bond (e.g. through contracts or system ties), and secondly, the customer's failure to make a change due to a high level of customer satisfaction (emotional connection). In addition, three levels of customer retention are distinguished in the literature: price policy instruments on the first, business relationships based on social ties on the second, and targeted investments in customers on the third level (Meffert, Pohlkamp, and Böckermann, 2010, pp. 12-15).

2.3.4.3   Customer recovery

Customer recovery as the last strategic option for the implementation of competitive strategies focuses either on the emotional recovery of endangered customers or on those customers, who have already been lost. The process of winning back customers must therefore begin before the actual termination (Meffert, Pohlkamp, and Böckermann, pp. 12-15). In the early phases of the market and customer life cycle, primarily contractual, technical, and functional forms of customer loyalty dominate in order to protect against investment risk. Due to the stagnation and regression of the market in later phases of the market and customer life cycle, customer loyalty programs help to maintain competitiveness through their effect on customer recovery (Meffert, Pohlkamp, and Böckermann, 2010, pp. 15-16).

2.3.5 Requirements for the implementation of competitive strategies
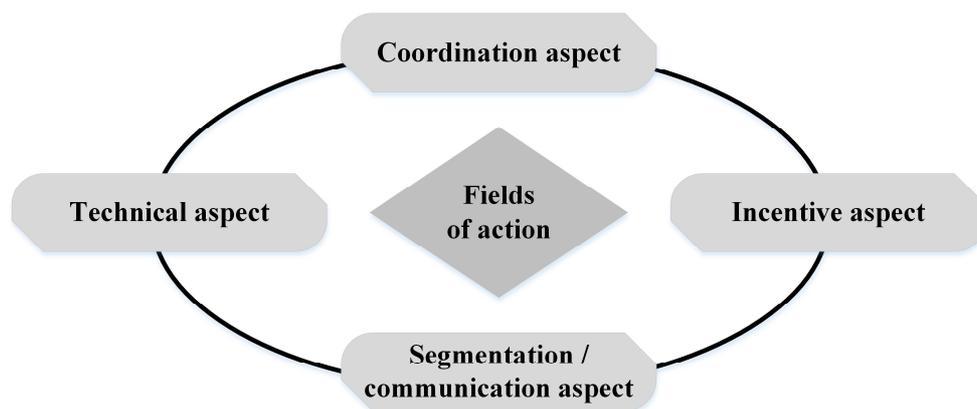
Figure 4: Requirements for CRM
Source: Meffert, Pohlkamp, and Böckermann, 2010, p. 23

There are four central prerequisites for the success of CRM and the achievement of multi-dimensional competitive advantages as shown in *figure 4*. The coordination aspect includes the management of internal and external processes and the creation of the organizational

prerequisites. Business and company units must be coordinated in a way that an overall view of all customers can be generated and used. The incentive aspect is a success-determining feature, which focuses on the attractiveness of customer and supplier perspective. Through an early and on-going integration of customer knowledge, new market entry barriers can be generated and a better differentiation from the competition can be achieved. The customer knowledge that is thus specifically available for innovations can help to fulfil their needs even better. It also helps to build change barriers and emotional ligation. This aspect is characterized using preferred communication media from the customer. The last prerequisite is the technical aspect. This includes IT- and system-requirements, along with the usage of new technologies. CRM-systems are a possibility for the specific management of customer relationships (Meffert, Pohlkamp, and Böckermann, 2010, pp. 23-24).

2.3.6 Conceptual framework

CRM serves the goal of developing profitable customer relationships and increasing company value (Homburg and Sieben, 2008, p. 503). The framework concept is largely based on a purely economic understanding. For the goal of profitable customer relationships, an increase or stabilization of the existing customer satisfaction is decisive (Leußer, Hippner, and Wilde, 2011, p. 20).

CRM supports the optimization of customer-related business processes with the aim of economic success and the establishment of profitable customer relationships. The focus is on customer value from the corporation's perspective. This is understood to be the contribution of a customer to the achievement of the respective company goals. All customer-related measures need to be based on the customer value from the organization's viewpoint and only those customer groups should be looked after sustainably and intensively with whom a positive contribution margin can be generated (Leußer, Hippner, and Wilde, 2011, pp. 21-23).

Figure 5 describes the CRM-chain of effects. About the process of the chain of effects, it should be noted at the outset that the desired monetary successes often only occur in the medium or long term. A measurable economic impact will therefore take a considerable amount of time. The result chain is positively or negatively influenced by internal and external factors, which can focus on each individual step (Leußer, Hippner, and Wilde, 2011, p. 21).
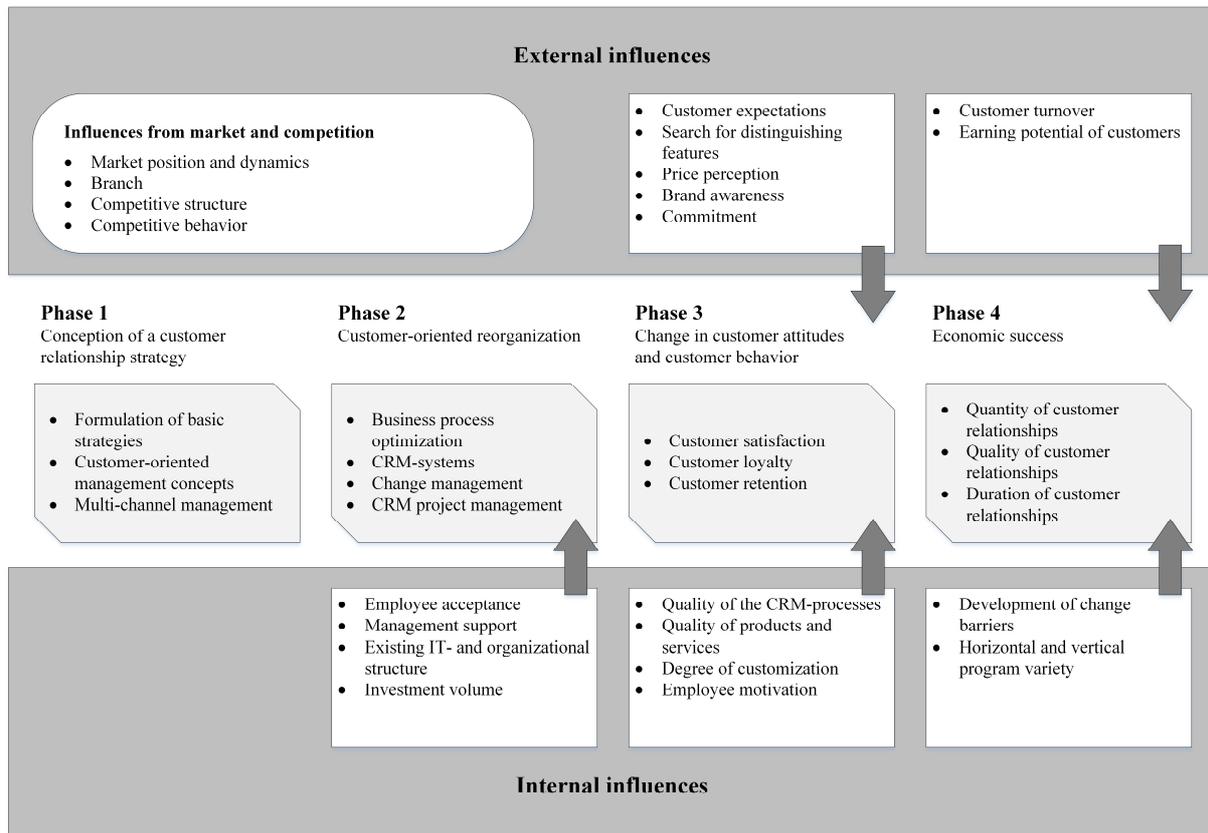
Figure 5: CRM-chain of effects

Source: Leußer, Hippner, and Wilde, 2011, p. 20

2.3.6.1 Conception of a customer relationship strategy (phase 1)

Phase 1 starts with the conception of the customer relationship strategy, for example through the formulation of basic strategies or the application of customer-oriented management concepts. The basis is a strategic CRM-concept that defines which customer groups need to be processed in which way and via which channels. In this context, multi-channel management enables targeted coordination of the communication channels to ensure a uniform view of the customer on the company and vice versa. The aim is to find an optimal combination of communication channels and a product range for the customer on the one hand, and to achieve this as cost-effectively as possible from a company perspective on the other (Neumann, 2014, p. 117).

2.3.6.2 Customer-oriented reorganization (phase 2)

To implement the CRM-strategy and achieve profitability in the corporation, a customer-oriented reorganization through the optimization of customer-related business processes is required. The respective guidelines are derived from the previously defined customer

relationship strategy. In addition to core competencies in the area of change management and commercial procedure improvement, this requires comprehensive IT-assistance via powerful CRM-systems (Leußer, Hippner, and Wilde, 2011, pp. 21-23).

2.3.6.3   Change in customer attitudes and customer behaviour (phase 3)

If the interfaces to the customer and the related business processes are consistently geared towards customer needs, a positive change in customer attitudes and behaviour can be achieved in this phase by fulfilling or over-fulfilling customer requirements (Neumann, 2014, p. 117).

2.3.6.4   Economic success (phase 4)

The visualization of dependencies and relationships within the chain of effects serves as the basis for the analysis and derivation of measures to increase economic success (e.g. reasons for a repeat purchase). Customer relationships must go through various phases before the desired customer loyalty and the associated economic success can be achieved (Bruhn, 2016, p. 412). The economic effects of CRM will be discussed in more detail in *chapter 2.5*.

Behind the phases shown in *figure 5* lies the classic chain of effects of customer loyalty, which is also influenced positively or negatively by external and internal factors and begins with the first contact. This describes the customer's first interaction with the seller of the product or service. Then the customer forms his personal satisfaction rating. If the customer's needs are met or even exceeded in this phase, it can result in customer loyalty. This is understood to mean a basic relationship of trust based on provider acceptance by the customer regarding his performance. It is likely that the customer will buy again in the next purchase situation due to the trust that has already been built up and that their willingness to switch will be correspondingly low. The following phase of customer loyalty occurs when a real repurchase takes place. The customer's conviction is also reflected in cross-buying activities and recommendations to potential new customers. If the described phases are passed through positively and successfully, the chain of effects of client retention, and generally that of CRM, ends with an increase in economic success (Bruhn and Homburg, 2017, pp. 9-10). A supposed interaction among client protests, complaint handling by a corporation, and a protesting client's on-going retention to a company was also long considered. Commercial advantages are presumed to happen for a corporation that run a protest handling system (e.g. a CRM-system) that reduces client frustration and perpetuates retention (or actually expands satisfaction and

client retention probability) between dissatisfied clients due to the previously mentioned relationship (Fornell et al., 2020, p. 126).

2.3.7 Goals of the CRM-approach

CRM is frequently diminished to its technological components or understood as a pure software project with the only tasks of acquisition, storage, and evaluation of customer data (Stauss and Seidel, 2002, p. 11). However, this single-track perspective carries the risk that the necessary framework conditions in the company will be neglected. The result is that the technological possibilities are created, but the supporting processes are not geared towards the customer (Hippner, 2005, p. 116). The aim of CRM is to take customer processing to a new level of quality through a holistic focus on customer needs. The corresponding CRM-software only offers data processing support. The concept defines the orientation of customer processing and the software helps to assimilate the resulting processes more quickly. The objectives of the CRM-approach are illustrated in detail in *figure 6* (Dangelmaier, Uebel, and Helmke, 2004, p. 5).
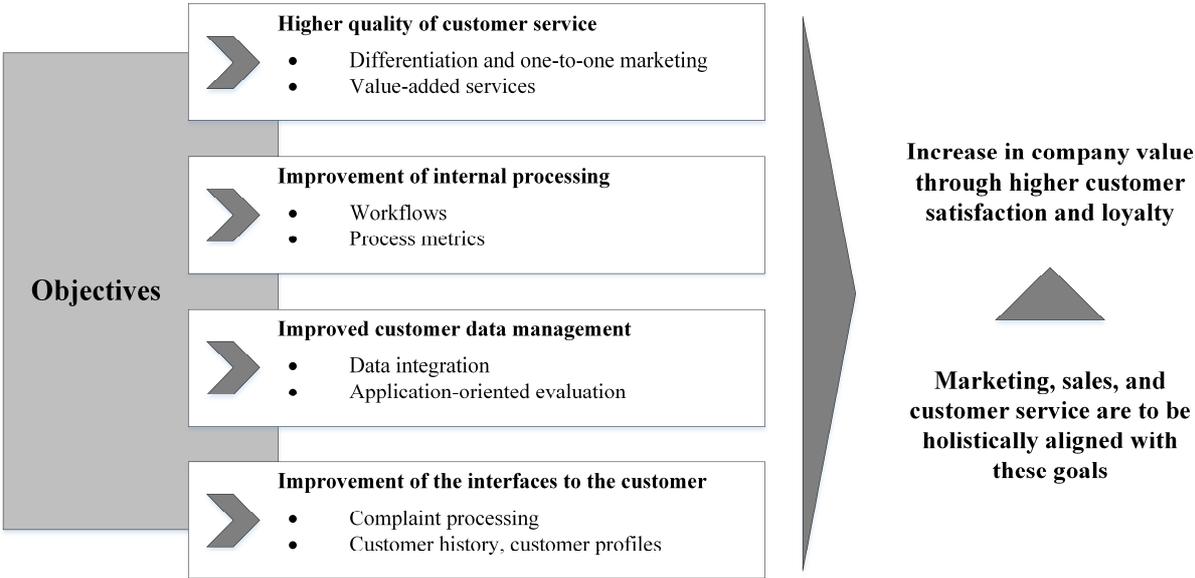
Figure 6: Goals of the CRM-approach

Source: Helmke, Uebel, and Dangelmaier, 2017, p. 7

Higher client satisfaction results in a more powerful client retention, which has a beneficial impact on company profit. To reach this target, the available funds in sales, marketing, and client service must be utilized in a focused manner. CRM-software provides the appropriate technological support for customer management in order to cope with sales,

marketing, and customer service tasks faster and better. The use of new technologies can increase the quality of customer processing and customer data management, which offers the company value-added services (Helmke, Uebel, and Dangelmaier, 2017, pp. 7-9).

The aim of the CRM-approach is to distribute the information about customers more efficiently in the company's organization in order to use it more effectively in the context of processing customer relationships. This is the basis for implementing differentiated and individual customer processing in practice and that an optimal service can be offered at the interface to the customer (Dangelmaier, Uebel, and Helmke, 2004, pp. 5-8). More efficient customer processing is desirable, but no guarantee for additional sales, as the quality of the content of customer processing has not yet been improved. Setting the goals of the sales force solely on the number of processed customer contacts and thus placing the quantity of processing over quality can be counterproductive. First and foremost, the quality of customer processing must be increased. This can be achieved through a consistent focus on customer-oriented goals, such as e.g. customer satisfaction (Helmke, Uebel, and Dangelmaier, 2017, pp. 7-10). Customer satisfaction, motivated by corporate practice, is a central construct in management research and research in the field of organizational psychology, and will be explained in *chapter 2.5.3* (Bednarek, 2014, p. 15).

Concepts for increasing effectiveness are based on the focus of generating additional sales. This also includes customer satisfaction. This should lead to increased sales through a differentiated treatment of customer needs. It is important to consider that the costs associated with increasing customer satisfaction must be in an economic relationship to the benefits expected from the customer relationship. These benefits do not only have to be of a monetary nature (Dangelmaier, Uebel, and Helmke, 2004, pp. 5-8).

Substantial instruments for increasing the effectiveness of customer processing through CRM are the introduction of innovative, value-adding instruments and processes that enable prioritized customer processing and target-oriented recording and evaluation of customer data (Helmke, Uebel, and Dangelmaier, 2017, pp. 7-10). However, the thrusts of increasing efficiency and effectiveness cannot be observed completely separately from one another, since e.g. an increase in the effectiveness of customer management can result in additional process improvements (Dangelmaier, Uebel, and Helmke, 2004, pp. 5-8).

The goal of all CRM-activities is to increase customer profitability, which can be achieved on the one hand through improved customer selection and acquisition, and on the other hand through increased efficiency in the CRM-processes. In addition, the establishment and stabilization of profitable customer relationships should result in increased customer loyalty and the acquisition of repeat buyers and should be reflected in an increased economic success. The increase in market share is therefore less important than the "share of wallet" of an individual customer. The "share of wallet" is a performance management survey methodology that helps managers understand how much business a corporation is getting from certain customers. The focus on increasing the "share of wallet" is closely linked to the objective of building and strengthening long-term relationships with customers with high future potential. Since a company contributes in the short term through intensive processing of "bargain hunters" with low loyalty, this can achieve a higher "share of wallet", which needs to be put into perspective by the high acquisition costs. Modern information and communication technologies, as implemented in the context of CRM-projects, initially facilitate the task of selecting previously and/or prospectively profitable customers or attractive target groups in the future, thanks to the customer-specific design of the business relationship and the offer of customer-specific problem solutions to be bound to the company in the long term. The individualization of the business relationship with particularly valuable customers is reflected in two aspects. On the one hand, the interaction processes between customers and the corporation can be individualized, and on the other hand, the features of the range of services can be better adapted to specific customer needs. These tasks are significantly simplified by the introduction of a CRM-system. New information and communication technologies thus serve to a certain extent as "enablers" for direct and personalized communication and interaction between the company and its customers (Hinterhuber and Matzler, 2009, p. 182).

The goals from the perspective of the company should be compatible with the goals and needs from the customer's perspective in order to ultimately achieve customer satisfaction. Individual treatment by the company can be named as a central customer-side goal. This goal requires knowing and responding to the needs of each customer. In the past, customers have come to appreciate it when they were made aware of certain products or current offers that corresponded to their needs and/or price expectations. Customers appreciate any support that is tailored to their needs (Meyer, 2002, p. 9).

2.3.8 Industry 4.0 and Social CRM

Industry 4.0 and digitization are continuously changing markets. It is not a product that matters, but the value that can be offered to the customer. This is where digitization and its use in customer-oriented services offers various options that turn products into problem solutions for customers and thus significantly increase their value, whether through individualization, better support, or sophisticated additional services (Robra-Bissantz and Lattemann, 2019, p. 3).

After e-commerce and the World Wide Web (WWW) in general, social media is considered as the next level of the internet progression. Nowadays, a big part of humanity frequently uses social media applications, which imply possibilities and defiance, as it is the case with various main infrastructure technologies. They pledge novel paths to deal with undeveloped and already present clients and are profitable origins for generating information about attitudes, manners, and thoughts of persons. Out of the perspective of CRM, it stands for a significant improvement, as interactions are getting increasingly straightforward. Social media also nearly instinctively provokes worries about the confidentiality and the utilization of information and data. A significant associated incident occurred in 2018, revealing the fraudulent use of Facebook data through the data analytics corporation Cambridge Analytica. The latter analysed intensive amounts of information about users lacking their approval and generated comprehensive profiles about them. This occurrence induced severe discussions regarding regulations and restrictions of social media. In the end, obtaining information via social media platforms has got increasingly regulated and suppliers have initiated the restriction of commercial actions and started to pay higher attention to confidentiality topics (Alt and Reinhold, 2020, p. V).

A common thought about the term "Social CRM" discloses four players as well as five components acting as the primary conceptual construction elements. Amounts of data are shared by users in the social web via social media platforms, which are provided by a single or several suppliers. Corporations and persons are interacting with other organizations and suppliers via proximities on these platforms. Additional to the four players, solutions of Social CRM provide five technological components: analyses, social media, CRM, incorporation/management, and interrelationship. The first component commits to creating an organizational existence on a solitary or on several social media platform(s), which offer a range of functions that facilitate the interaction among players (e.g. clients, employees, traders, partners, sponsors, etc.) and the withdrawal of the source entry data for Social CRM, like points

of view, knowledge, and investigations. The second component points to rational functionalities that utilize information inside social media platforms in order to obtain an understanding about markets and clients. The third component is composed of functionalities for correlations among corporations and users of social media, which are relevant to issue information concerning the organization to explain different announcements or demands and to strengthen a group via added assistance. General functionalities are already supplied via social media platforms, like e.g. alarms, timetables, and various other kinds of correlations that are potentially stretched out via extra software instruments. The fourth component is CRM. It accommodates key functionalities in the three design regions (communicative, operative, and analytical CRM), which will be discussed in *chapters 2.4.3.1, 2.4.3.2, and 2.4.3.3* respectively. The last component accommodates functions for integration and management (Alt and Reinhold, 2020, pp. 15-17).

CRM plays an important role on the path to sales excellence. The systematic evaluation of information can only really be used in practice, if it reflects the business requirements of sales. Today's technologies for systematic information evaluation offer various practical advantages for sales, like for example the seamless integration with the sales information system, which means that analytical reports are displayed directly in the user interface without the need to log in again. The reporting system is thus dovetailed with the business processes and allows a reduction in throughput times. Predefined reports are often synchronized with the data model of the operational systems from the same manufacturers, thus reducing the time span from the definition of the requirements to the active use of the reporting. Another example is the development of key figure systems based on the already existing, extensive key figure framework in the areas of sales, marketing, service, and order management. Process-related key figures can only be meaningfully represented by evaluating the information using analytical systems. The systems for systematic information evaluation are based on the internet. The information obtained is thus practically available companywide (Pufahl, 2015, pp. 172-176).

Recent possibilities that supported and increased the consideration of CRM include the digitization and interrelationship of service achievement, negotiation, and administrative procedures with corresponding distinction of information accessibility. CRM-systems act as "technological facilitators" to provide novel paths of handling client interactions by increasing the accessibility of improved technical possibilities to maintain and process mass information (Kleinaltenkamp, Plinke, and Geiger, 2015, p. 290).

2.3.9 Summary

Rapidly changing market conditions require corporations in the packaging industry to focus more on CRM, a philosophy that not only focuses on the respective product, but on the relationship with the customer. CRM is the integral handling of a corporation's interactions with its clients. All company activities must be systematically planned, carried out, controlled and adjusted with a view to profitable customer relationships. CRM assists corporations with maximizing the profitability of each client correlation and direct prevailing business performance. Customer interactions need to be managed along various communication canals. The defiance is to provide clients an easy way to do business as they prefer to do it through any canal, anytime, and in any currency or language. Furthermore, it should be achieved to give them the feeling that they are treated by a sole corporation, which identifies them at all client touch points accordingly. In an increasingly competitive business area, corporations can only secure their existence by creating and maintaining long-lasting competitive advantages. Due to the usage of CRM, a perceptible advantage must arise for the customer, as well as the supplier, through efficiency- and effectiveness-advantages. On the one hand, a successful relationship management consists of the customers and the CRM-tools and, on the other, the technologies, employee knowledge, and the customer-oriented corporate structure and culture. CRM is usually designed as an instrument and collection of tools for guiding salespeople and to support engineers in thriving commercial projects, establishing suitable commercial offers, handling client protests, and accommodate after-sales client assistance. CRM-practices are therefore considered as closed-loop setups, focusing at the client level on a bunch of prime concerns and features that are critical in terms of time. All information related to CRM, as well as further origins of business intelligence, need to be available for all policymakers in the company. Digitization and its use in customer-oriented services offer various options that turn products into problem solutions for customers and thus significantly increase their value, whether through individualization, better support, or sophisticated additional services. Social media promises novel paths to cooperate with future and current clients and is a profitable source to generate information about viewpoints, habits, and perspectives of persons. This acts for a significant enhancement, as interactions get increasingly personal from the viewpoint of CRM. The systematic evaluation of information can only really be used in practice, if it reflects the business requirements of sales.

2.4 CRM-systems

The idea connected to handling client data to comprehend who they are, how they work, their benefit as a client, and the deepness of the interaction did not started as a well-reasoned procedure or elucidation with the name "CRM-system". They find their origins in the primary requirement to handle client data within several diversified corporations. To help the requirement to engage and preserve contacts and clients for all primary functions, like e.g. service functions, sales call downs, invoicing, and simple marketing records, predecessors and inceptive CRM-solutions were evolved (Mathena, Yetter, and Hostetler, 2009, p. 4).

Information and communication technologies are playing an essential role regarding the implementation and realization of CRM. A significant prerequisite is the technological aspect. This includes IT- and system-requirements, as well as the usage of new technologies. CRM-systems are a possibility for the specific management of customer relationships (Meffert, Pohlkamp, and Böckermann, 2010, pp. 23-24).
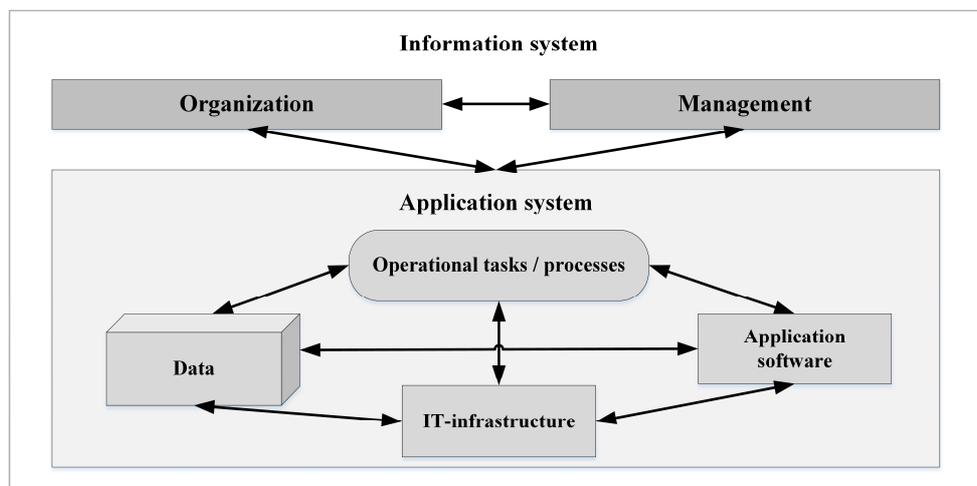
Figure 7: Correlation between information and application system

Source: Laudon, Laudon, and Schoder, 2010, p. 18

CRM-systems are information and communication systems that significantly assist a CRM-strategy. They are often seen as sheer application systems to collect information about customers and analyse this data collection accordingly. The aim of CRM-systems is the automatization of customer-oriented processes. This IT-orientation implies the risk to forget the necessary framework conditions of corporations nowadays, which are relevant and important for a comprehensive information system (Leußer, Hippner, and Wilde 2011, pp. 17-18). *Figure 7* shows the correlation between an information and an application system.

2.4.1 Definition

A continuing discussion is taking place in the literature concerning the representation of CRM (Payne and Frow, 2005; Zablah, Bellenger, and Johnston, 2004). The phrase "CRM" has been used and deployed by several exploration subjects to designate various circumstances and conceptions. The scholastic compositions on CRM emerge from the 1990s. A couple of these previous articles, like e.g. Stone, Woodcock, and Wilson (1996), put the centre of attraction specifically on the utilization of technology in handling client interactions. To be able to maintain the interactions with clients as extensively as feasible, these writers recommend the utilization of IT-instruments, like e.g. databases. A specific importance in their articles is attributed to experimental cases, where IT-tools have been implemented to handling client interactions in a B2C-environment (business-to-consumer) (Perna and Baraldi, 2014, p. 58).

BIS are socio-technical systems that include both, human and machine components. The goal of them is to provide the correct knowhow, in the correct amount and shape, to the correct individual, and in the correct situation. They support users by automating certain activities and providing relevant information that simplifies human work. Due to their environmental interaction, BIS are mostly open and dynamic, because parts of the information system can change due to these interactions. In addition, they are complex, because they sometimes consist of many elements that are related in different ways. BIS can have a major impact on the success of a corporation, because they can help to perceive developments and changes in the environment (Haslehner and Kaslatter, 2009, pp. 10-11).

CRM-systems are information and communication systems that can be utilized to assist a corporation's CRM-programme (Hippner and Wilde, 2004, p. 60). In most companies, the IT-landscape is shaped by many different isolated solutions before a CRM-system is implemented. Above all, marketing, sales, and service work with systems that do not allow a holistic view of existing customer information and that have evolved over time. CRM-systems are aimed at these isolated solutions to be able to guarantee that customer information is consistent and up to date (Helmke and Dangelmaier, 2003, pp. 123-124). CRM-systems are the technological basis of the CRM-strategy. They support the user by providing comprehensible, current, and complete customer-related information. By using a CRM-system, the optimal execution of the client relationship programme can be aimed for, as it supports the employees in customer contact and in handling customer processes. Thus, CRM-systems can be viewed as BIS (Georgi and Mink, 2011, p. 84).

CRM-systems are often understood as pure application systems that collect information and evaluate customer data. They have the task of automating customer-specific procedures. This IT-disposition causes the risk of neglecting the required prerequisites of the company that are relevant for a comprehensive information system (Leußer, Hippner, and Wilde, 2011, pp. 17-18). For this reason, the definition of a business-related understanding of the CRM-system is used for this doctoral thesis. CRM-systems can only fully exploit their potential, when the necessary prerequisites for customer knowledge, customer value, customer satisfaction, and customer loyalty are met (Bruhn and Homburg, 2017, pp. 9-10).

2.4.2 Objectives

CRM-systems are used to track and analyse the company's interactions with its customers to optimize revenue, profitability, and customer satisfaction. They simplify and support the implementation of a holistic CRM-approach (Laudon, Laudon, and Schoder, 2010, pp. 533-534). With their help, customer-specific data can be collected, stored, maintained, and made accessible to the entire corporation at any time and in a standardized manner. Intolerable objectives, such as maximizing customer service and customer profitability, can be identified and reconciled using a CRM-system. The automation of manual work steps simplifies and shortens the company's internal processes, which means that respective savings can be achieved (Neumann, 2014, pp. 115-116).

Finally, it should be noted that by improving the organizational information management system, increased customer orientation and improved competitive advantages are made possible (Torggler, 2007, p. 7). In the literature, the superior objectives and tasks of a CRM-system are the coordination and integration of individual communication channels between customers and companies, the support and synchronization of the essential customer touch-points (service, sales, and marketing), and the uniform incorporation and evaluation of all client data and facts (Neumann, 2014, p. 116).

2.4.3 Components and functionalities

The components and functionalities of CRM-systems primarily concern four main strategic targets: commercial procedure improvement in client handling, invention of novel services for the client, enhanced client data evaluation, and support of new marketing/sales-tools. In order to integrate CRM as best as possible into the corporation's internal IT-

infrastructure, CRM-systems integrate various components. This results in a correspondingly wide range of variation in functionalities (Helmke, Uebel, and Dangelmaier, 2017, p. 10).
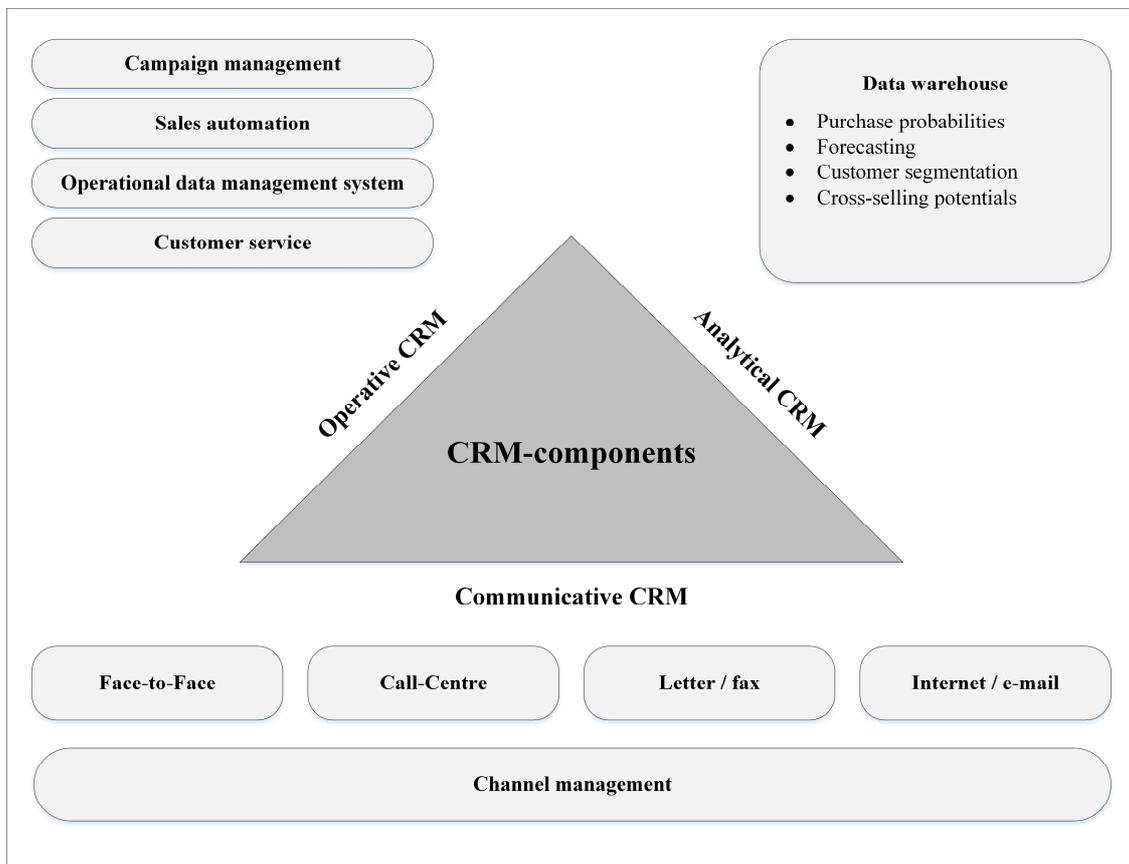
Figure 8: Components and functionalities of the CRM-approach

Source: Helmke, Uebel, and Dangelmaier, 2017, p. 11

Figure 8 shows the three CRM application areas (Communicative, Operative, and Analytical CRM). In the literature, Communicative CRM is often referred to as Collaborative or Cooperative CRM.

2.4.3.1 Communicative CRM

Communicative CRM is understood to mean all activities connected with the control, coordination, and support of the different communication channels between corporations and customers. Nowadays, customers mostly decide when and by which channel they are contacting a company. The customer expects that all data and information from previous interactions can be provided up-to-date, consistently, and through all available channels. Corporations must strive for a comprehensive and uniform customer experience. Additionally, clients anticipate complete and current knowledge about the corporation. For this reason, it is essential to receive

a single face-to-face relationship with the customer and a uniform view of the customer in relation to the company (Neumann, 2014, pp. 116-117).

In practice, so-called Customer Interaction Centres (CIC) are often set up, which serve to integrate the communication channels of a company and to organize them holistically, as shown in *figure 9*. In contrast to call-centres, CICs communicate with customers via several channels and thus enable the channels to be organized (Neumann, 2014, p. 117). Therefore, the CIC can be understood as a further development of the call-centre, because not only telephone inquiries, but also other communication channels, such as the internet, fax, and mobile technologies, are used. The advantage of such a system is that customers can reach the corporation via all communication channels and a faster and more competent response to their requests can be ensured (Hippner and Wilde, 2003, pp. 29-30).
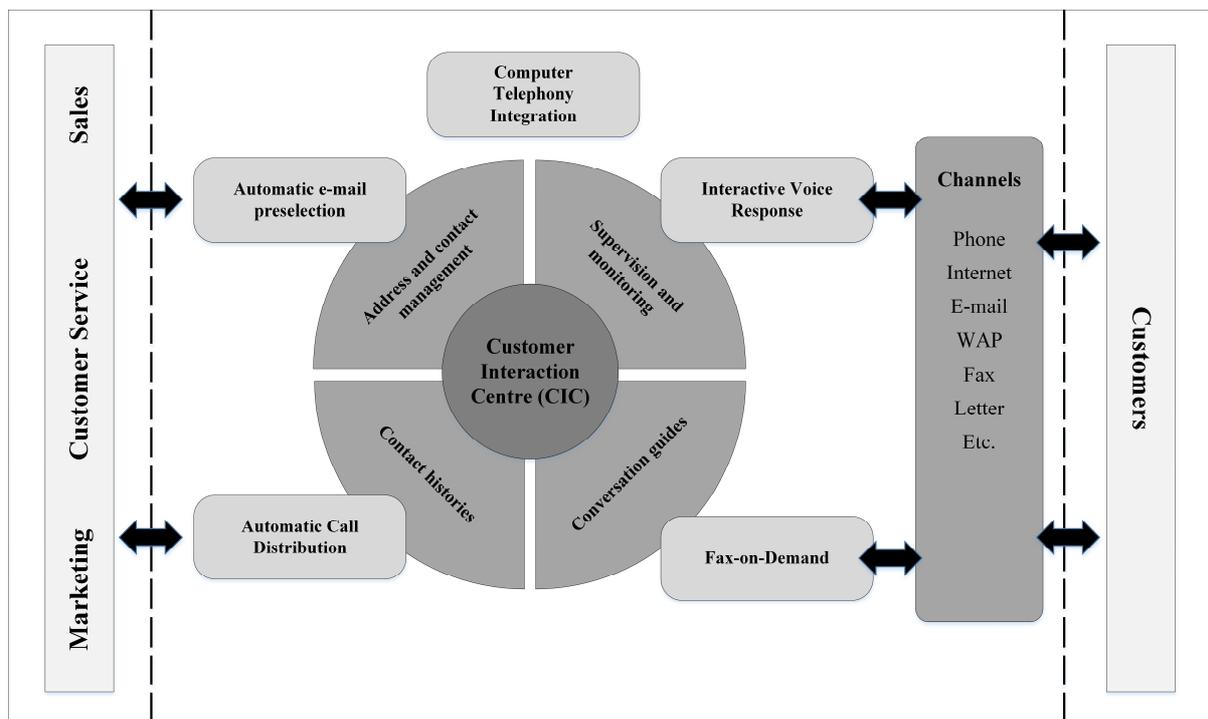
Figure 9: Customer Interaction Centre (CIC)

Source: Nicolai, 2002, p. 179

The combination of several contact points enables the specific strengths and weaknesses of the individual channel to be exploited and circumvented. In addition, it should be guaranteed that the customers receive a uniform view of the company and that the company has a uniform view of the customers across all channels (Schulze, 2002, pp. 42-43). The goal of Communicative CRM is direct one-to-one communication with customers (Teles, 2007, p. 12).

The extent and repetition of uninterrupted interrelation among clients and corporations needs to be reduced in favour of self-acting and submissive interrelation. Present electronic technologies to arrange a CIC, like e.g. e-mail-services, must be enhanced by regular means of conversation, like e.g. telephone, fax, and telecommunications service. Custom-tailored knowledge can be obtained via direct involvement of the client (Wilde, 2011, p. 46).

2.4.3.2 Operative CRM

Operative CRM combines all the activities aimed at supporting, improving, and optimizing the customer contacts. The dialogue between customer and company and the related business processes need to be supported. Operative CRM includes all hardware and software that is used to assist the employees in direct contact with the customers. It includes solutions for marketing, sales, and service automation (Neumann, 2014, p. 117), as well as the necessary business processes (Hippner, Rentzmann, and Wilde, 2006, p. 54). Operative CRM accommodates representatives of Sales, Customer Service, and Marketing with significant client and business data. Those staff members, who oversee client support, have constant admission to the gathered information. Additionally, they complete the client profile and as a result can take a broad picture of the client through each contact. Data regarding transmission time, inventory, etc. assist in making dependable declarations about clients. Operative CRM aspires the improvement of client support (Wilde, 2011, pp. 46-47).

Table 2: Sub-areas of Operative CRM

Marketing Automation	Sales Automation	Service Automation
Design of contact points between customers and companies Plan, process, and manage all marketing activities / materials	Design of a computer-aided sales control Support of sales processes in the office and in the field	Design of the service interfaces and complaint management Control and support of customer service
Functional focus		
- Campaign planning - Campaign implementation - Campaign controlling	- Order / offer management - Field service support	- Help desk - Complaint management - Service orders

Source: Nicolai, 2002, p. 179

Table 2 shows the individual sub-areas of Operative CRM. The interaction with the customer takes place via so-called Customer Touch Points (CTP), such as CICs, websites, or field staff. The functionalities aim to optimize the day-to-day business processes. On the corporate side, there are three operational CRM core processes: Marketing, Sales, and Service Automation. The most important function is the fully or partially automated handling of customers, based on information from a central CRM-database (Helmke, Uebel, and Dangelmaier, 2017, p. 11).

Marketing Automation concerns the control and support of customer-related business processes in the marketing area. The focus is on a holistic design of customer contacts and the targeted alignment of all marketing activities with the customer. In addition, contact-supporting tasks can be carried out, such as the creation, administration, and provision of marketing documents (Neumann, 2014, p. 118).

Sales Automation offers support for all sales activities and provides information about the specific sales pitch. As part of opportunity management, sales opportunities are systematically identified, processed, and pursued with the aim of converting them into an offer. The opportunity management assists sales staff in the entire selling procedure up to the conclusion of the contract. In offer management, customer-specific offers are created and monitored through the integration of SCM- (Supply Chain Management) and ERP- (Enterprise Resource Planning) approaches to be able to achieve long-term profitable deals. Sales Automation offers additional support in scheduling appointments and routes, as well as recording visit reports (Leußer, Hippner, and Wilde, 2011, p. 43).

Service Automation is used to support the entire service area in the office and in the field, for example by providing functions for preparing offers or planning routes for the field service. The office worker needs Service Automation for contact support tasks, e.g. while accepting and processing content from customer contacts. Sales and service are very similar in terms of administrative tasks and requirements, which is why many functions of Sales Automation can also be used in the service area (Neumann, 2014, p. 119).

2.4.3.3 Analytical CRM

Analytical CRM collects all customer-relevant data and information from customer conversations, records them systematically, and evaluates them. The overall goal is the on-

going optimization of customer-related business processes. It forms the central basis for Communicative and Operative CRM (Neumann, 2014, p. 119).

The essential components of an analytical CRM-system are the collection, system integration and digital processing of customer data, as well as evaluation routines, like Data Mining or Online Analytical Processing (OLAP) (Walter and Schmidt, 2004, p. 47). Analytical CRM supports the front and back office area in order to generate information about customer structures and customer behaviour. Ideally, this information provides information on the basis on which the operational instruments and channels are to be selected in order to best meet customer needs. Analytical CRM aims at the continuous optimization of operational CRM-processes in the form of a "closed-loop architecture", where analysis and operational business work together in a "learning system" (Helmke, Uebel, and Dangelmaier, 2017, p. 14). The operative system generates the customer data obtained and forwards it to the analytical system, where it is recorded and subjected for processing, evaluation, and interpretation. The findings and possible improvements are passed on to the operative system. The aim is to continuously optimize the customer-specific business processes (Neumann, 2014, p. 124).

The systematic basis of an analytical CRM-system is a solid database. In a Data Warehouse (DWH) all data from the various departments (marketing, sales, service) and application areas are brought together and consolidated. The main task of a DWH is to prepare the collected data for data analysis. The DWH is thus a central data collection and represents a database for analysis and evaluation (Leußer, Hippner, and Wilde, 2011, p. 40). Using Data Mining, huge data volumes in a DWH are automatically searched for business-relevant information. Relevant information is identified and presented from large amounts of data. These should help to anticipate customer needs and actions (Walter and Schmidt, 2004, p. 50). Based on method approaches from statistics, Artificial Intelligence (AI), machine learning, and pattern recognition, the aim is to find generally applicable and efficient methods that autonomously identify the most significant and meaningful patterns from large amounts of data and present them to the user as interesting knowledge. Data Mining extends the previous analysis approaches considerably by automatically checking possible connections between customer behaviour and the design of customer-oriented business processes (Hippner, Rentzmann, and Wilde, 2006, p. 51).

OLAP-systems map business measurement parameters in a multidimensional data cube. In this way, complex questions can be answered, and connections recognized that might have

remained undetected with a two-dimensional database query (Neckel and Knobloch, 2005, p. 80). For example, users can utilize OLAP to analyse which number of a product was sold in which store and year. This multi-dimensional view enables a more problem-adequate representation of the naturally multi-dimensional company environment compared to the two-dimensional mapping in relational systems (Hippner, Rentzmann, and Wilde, 2006, p. 50).

While Communicative and Operative CRM encourage the business procedures with clients, Analytical CRM aims on gathering, processing, and investigating client data via applications for business intelligence (DWH, Data Mining, etc.). The goal is to establish sales opportunities, including cost drivers in sales, marketing, and customer service (Wilde, 2011, p. 47).

The introduction of a CRM-system doesn't only require a client-oriented company, but also the reorientation of different personnel, organizational, and technological processes. This is discussed in more detail in *chapter 2.4.4* and *chapter 2.4.5*.

2.4.4 Organizational prerequisites

A CRM-system can only exploit its full potential, when the customer-oriented strategy is coordinated with the necessary requirements (Georgi and Mink, 2011, p. 82).

2.4.4.1   Customer relationship cycle-oriented personnel policy

As part of personnel policy, customer relationship orientation can already take place in the initial phase of customer acquisition. This is achieved through an open and trustworthy demeanour and convincing potential customers through employees. The company must set incentives for customer stimulation and primarily pay attention to reliability and constant contact persons for the customer. In the retention phase, the relationship with the customer should be individualized and intensified above all (Georgi and Mink, 2011, pp. 82-83).

Personnel policy plays a role in the individualization of customer relationships, as it must ensure and support the necessary flexibility in responding to customer requirements and a high degree of reliability and customer orientation of employees. The intensification is determined by the appropriate empathy for the identification of customer needs and a sound knowledge of the own range of services. When winning back customers, employees must be able to demonstrate critical ability on the one hand and be able to correct errors accordingly and be allowed to on the other (Georgi and Mink, 2011, pp. 82-83).

2.4.4.2 Culture

A customer relationship strategy inevitably results in changes for the employees, due to the alignment of all company activities with the customer. This manifests itself, for example, in changed work processes or the behavioural requirements when contacting customers. In order to achieve this, there must be a willingness to share customer knowledge within the corporation and not wanting to keep it exclusively for themselves. These changes must be accepted, internalized, and actively lived in order to create the conditions for a functioning CRM-concept (Georgi and Mink, 2011, p. 83).

The customer relationship strategy must be actively supported and exemplified based on the corporation's management level. Only then can employees accept and support them based on a role model and conviction. For a successful implementation of the strategy, resistance must also be reduced in a targeted manner and those responsible must be appropriately qualified and motivated within the framework of further training measures, so that ultimately all employees stand behind the strategy (Georgi and Mink, 2011, p. 83).

2.4.4.3 Organization

The process and organizational structure are responsible for creating a framework that ensures the necessary customer and relationship orientation through customer-related processes and information flows. To be able to meet the associated coordination necessities, it is essential to create and define organizational responsibilities for customer-centred processes (Georgi and Mink, 2011, pp. 83-84). The entire organization must be clear about what CRM means and what content is associated with this approach. A successful implementation of a CRM-strategy is only possible, if a coherent, customer-oriented CRM-vision or -philosophy is established throughout the company and followed-up in a credible and continuous manner for the customer (Neumann, 2014, p. 138).

Another aspect of CRM-success can be observed in the top management or its support, which is provided from the start and continues in the further course, as well as in its on-going commitment to the CRM-strategy. Management is responsible for creating the conditions for a successful project implementation. This includes ensuring that the necessary resources are made available. A CRM-project will only be successful, if the definition and concretization of the concept, strategy and goals, although with the involvement of the responsible department heads, is primarily done by the top management level. The overriding leadership and

responsibility must remain with the top management during the project. A delegation of responsibility to managers at middle or lower levels endangers the success of a CRM-project, as they do not have enough influence to implement cross-departmental changes, as necessary in the context of a CRM-project (Neumann, 2014, pp. 147-148).

2.4.5 Technological prerequisites

A functioning CRM-system must provide comprehensible, current, and complete customer-related information. The focus lies on the collection and compilation of customer data along the CTPs, the evaluation and provision of data, and the support of all activities derived from it, especially those that have a direct impact on the customer. The required storage space must be available in the system and suitable IT-infrastructures (hardware and software), and analysis tools must be provided and/or linked. The linking and coordination of applications in direct customer processing ("front office") and those that support internal processes ("back office") is decisive for success. This is due to the necessity of aligning all company processes with the needs of the customer (Georgi and Mink, 2011, p. 84).

In this context, ensuring data quality, timely provision for the analysis, and operational use of this data, as well as compliance with data protection regulations, also play a role, since the necessary decisions can only be made on the basis of correct and quickly available data and information (Leußer, Hippner, and Wilde, 2011, p. 751).

2.4.5.1 Data quality

A meaningful and correct picture of the respective customer is often prevented by poor data quality, e.g. redundant, incorrect, or missing data. As a result, there are additional costs or reduced income and lower economic success. So-called Data Quality Management (DQM) can counteract these problems. It comprises all measures that are taken regarding the collection, processing, and use of customer information in order to achieve a sufficiently high level of quality. Pro-active measures to increase the data quality start at the root cause of the error and aim to prevent gaps in the database or a reduced data quality from occurring in the first place. For example, reactive measures are the regular revision of address databases and the corresponding updating of all customer-relevant information (Leußer, Hippner, and Wilde, 2011, pp. 751-752).

2.4.5.2 Use of data

It can be assumed that the customer information obtained will also steadily lose value from the time it is generated, due to the loss of currency. The data must therefore be available as quickly as possible to guarantee a corresponding investigation and the timely implementation of measures. Providing important information (e.g. sales developments) only once a month can negatively affect the success of customer approaches, as current changes and changes that have occurred at short notice were not adequately communicated. Nevertheless, for reasons of economy, the costs of faster data provision must always be compared with the benefits (Leußer, Hippner, and Wilde, 2011, p. 753).

2.4.5.3 Privacy

Data protection law and the law against unfair competition must be considered. The latter primarily regulates direct communication in the area of customer data management. Advertising by telephone, e-mail, etc. is only permitted with the recipient's prior consent, otherwise the advertising is anti-competitive. The handling of personal data is regulated in Austria by the Data Protection Act. The processing of such data is fundamentally prohibited, unless a corresponding legal provision expressly allows this, or the consumer has given prior consent. If the handling of private data is necessary for the execution of contractual relationships, this is expressly permitted (Leußer, Hippner, and Wilde, 2011, pp. 753-754).

2.4.5.4 Data security

In connection with the explained data protection aspects of *chapter 2.4.5.3*, the corresponding data security of personal data must also be guaranteed. CRM-systems are often offered with mobile access via internet. The resulting system and data security requirements can be met through a systematic selection, as well as a coordinated and targeted use of available security measures. CRM-systems themselves also offer security mechanisms, such as password protection, functional restrictions according to user groups, or encryption for data exchange. The security requirements of integrity, confidentiality, liability, and authenticity apply to the data contained in a CRM-system (Schulze, 2002, p. 41).

2.4.5.5 Integration of information systems

Often, information in organizations is distributed across different systems and databases. The difficulty in aligning with the customer lies in the integration of existing data management

systems and the customer data they contain with the aim of creating a central view for the entire company with uniform customer contacts and business case data. The technical integration of a CRM-system with existing systems avoids redundant data storage and enables access to data from different systems. This also ensures that the advantages of each individual system are fully exploited and that cross-application functionalities can be used (Schulze, 2002, pp. 36-37).

2.4.5.6   Adaptation of the CRM-system

During a CRM-system implementation, the existing structures of the marketing, sales, and service processes need to be determined by creating flow and task diagrams. If the processes are very complex, they are displayed in several stages. The tasks of the customer processes are taken from the customer interface descriptions for marketing, sales, and service. A comparison of the target and actual status shows the corresponding need for adjustment of the CRM-processes (Schulze, 2002, pp. 158-159).

2.4.6 Instruments and functionalities of CRM-systems

For the general selection of instruments, it is necessary to decide which questions the CRM-system should answer and which tasks should be supported by CRM. CRM-software instruments provide information technology support for the use of instruments. A distinction can be made between communicative, operative, and analytical instruments (Helmke, Uebel, and Dangelmaier, 2017, pp. 12-15).

The operational instruments partially represent an image of the instrument itself and support the client facing process, while the collaborative instruments represent the channel support for implementing the instrument. The analytical instruments are used to gain new knowledge for customer management in back office processes. The operative instruments to be used are usually selected according to the knowledge gained from the analytical CRM-instruments in order to select the channel that best meets customer needs (Helmke, Uebel, and Dangelmaier, 2017, p. 14).

The success of the instruments depends on customer processing being intensively geared towards fulfilling customer needs and the importance of the customer for the company (Helmke, Uebel, and Dangelmaier, 2017, p. 16). *Table 3* provides an overview of the instruments used in communicative, operative, and analytical CRM.

Table 3: Customer management tools

Communicative tools	Operative tools	Analytical tools
Mailing, e-mail, outbound call	After-Sales-Service	Meaning / service design analyses
Communication Centre Management (channel: phone): ACD (Automatic Call Distribution) SBR (Skill Based Routing) IVR/SDS (Interactive Voice Response / Spoken Dialogue System) Etc.	Consultation	Visit frequency optimization / geographical marketing
Newsletter, e-mail, EMRS (E-mail Management Response System)	Complaint management	Budget optimization
Face-to-face conversation	Financing service	Campaign optimization
Fax	Campaign management	Purchase probability forecasts
Internet, online advice, customer forum, call-back-button, etc.	Contact / address management	Customer / sales income statement
-	Customer data management	Customer potential analysis / customer portfolio analysis / customer prioritization / customer scoring
Web 2.0	Client seminars / forums	Client segmentation / client profiling
-	Client cards / client club / client magazine	Client satisfaction analysis
-	Lead Management	Log file / clickstream analyser
-	Product configurator	Simulation of market reactions
-	Repair / maintenance service	Range optimization / category management
-	Service level agreements	Cancellation analysis
-	Tracking and tracing of orders	Shopping cart analysis

Source: Helmke, Uebel, and Dangelmaier, 2017, p. 15

2.4.7 Implementation of CRM-systems

The introduction of a CRM-system is a complex process that affects all processes in the corporation, not only technically, but also organizationally. Examinations indicated that a notable percentage of CRM-projects provide a negative RoI (Wübben, 2009, p. V). To enhance the effectiveness and efficiency of client processing, the system must be optimally integrated into the company's organization. This often requires process reorganizations in marketing, sales, and service. For a holistic CRM-implementation, it is important to view it as a strategic project, in which the future design of customer processing is determined. In an extensive CRM-audit, in addition to the software selection, the alignment of CRM to the strategic corporate goals, as well as requirements for necessary process reorganizations and the necessary change management, should be discussed. The human factor plays a significant role in the introduction of CRM. Implementing CRM means changes in daily work. Employees should not see the system as an additional expense, but as support in customer processing and administrative tasks. The added value and the personal benefit must be recognizable, which is important for the acceptance of the system (Helmke, Uebel, and Dangelmaier, 2017, pp. 267-270).
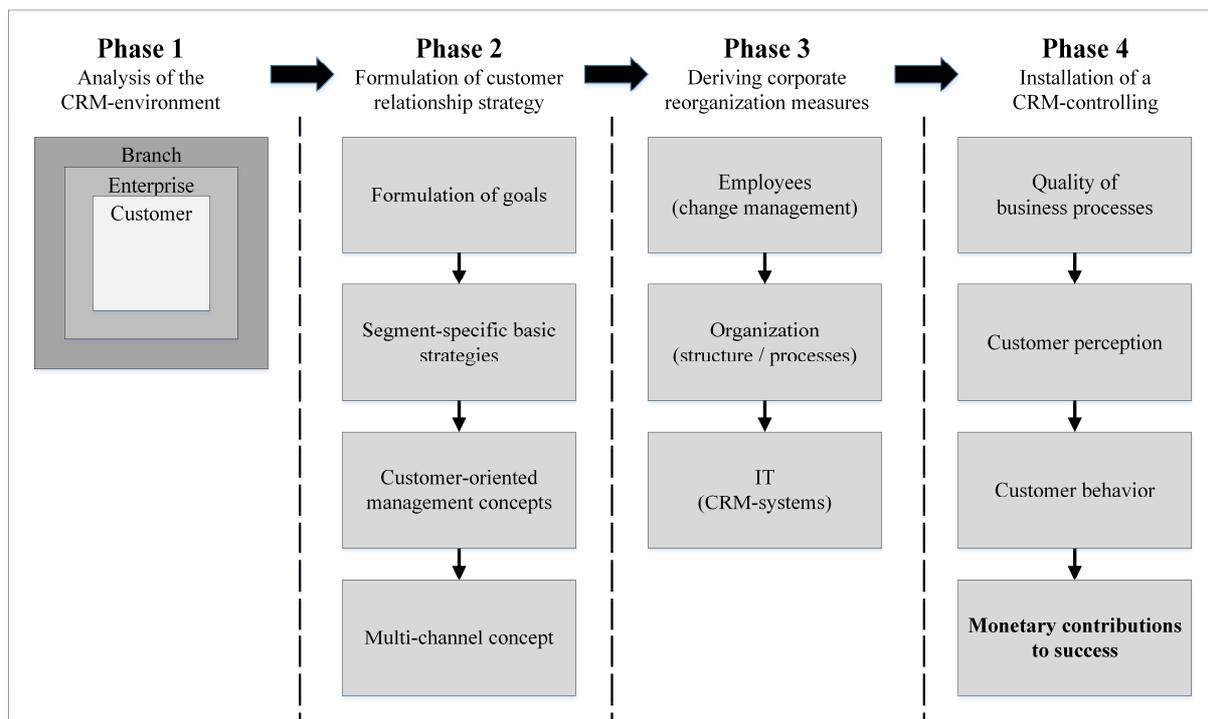

Figure 10: Phase plan for a CRM-implementation

Source: Lang and Hunziker, 2009, p. 28

Figure 10 shows a phase plan for a CRM-implementation. Phase 1 begins with the analysis of the CRM-environment (industry, company, and customer). In phase 2, the customer relationship strategy is formulated. Phase 3 derives corporate reorganization measures from this and phase 4 consists of the installation of CRM-controlling.

The shortcoming of an apportioned approach when corporations execute CRM is one of the primary recognized problems in the literature (Bull, 2003; Parvatiyar and Sheth, 2001). An integral procedure should convoy CRM over the full process of implementation. Rather seeing CRM just from either a final-user or a technology angle, corporations need to embrace a broader conception during the accomplishment. According to Boulding et al. (2005), CRM-initiatives strand in their execution primarily because of a lack of reconcilement among organizational and technological factors, containing individual's enthusiasm of IT-adoption. As referenced by Bull (2003), the selection between a programme established internally and one that has been outsourced has a decisive influence in the execution of CRM-systems. A trade-off takes place when tackling difficult resolutions among internal establishments and external sourcing. For example, the external sourcing of CRM has the potential to raise entanglement, because organizations need to handle interactions with respective suppliers. Establishing a corporation's CRM-system has the need of enough capacities and understanding to excogitate an advanced IT-explication. In choosing among in-house established and externally obtained CRM-approaches, the grade of a corporation's IT-qualifications, its dedication toward novel IT-expenditures, as well as a differentiation of the price are key components that need to be considered. Alternatively, organizations might favour the supplementation of internal potentials with external specialists. Appointing consultants to assist internal groups during the implementation of CRM is a characteristic illustration (Perna and Baraldi, 2014, pp. 65-68).

While the already mentioned refusal to accept novel technologies is one of the critical matters hindering the accomplishment of CRM (Zablah, Bellenger, and Johnston, 2004), exploration unveils that CRM is able to purvey significant benefits, like e.g. improved company profitability, when executives concentrate on increasing client usefulness (Ryals, 2005). CRM can enhance client-service dependability and service supervision according to Berkley and Gupta (1994). Mithas, Krishnan, and Fornell (2005) explain that corporations accomplish CRM-initiatives to utilize client data within the organization more successfully. In this relation it has been stated by Salojaervi, Sainio, and Tarkiainen (2010) that expenditures in CRM show the way to an increasingly methodical utilization of client understanding. These IT-instruments

can be valuable for corporations in accommodating tailor-made goods to the market, since CRM-software could facilitate the procedure of collecting client information (Rigby, Reichfeld, and Scheffer, 2002). It is specifically meaningful to use an instrument like CRM to support the handling of client interactions when connections develop gradually (Lindgreen et al., 2006). In a B2B-environment, CRM-endorsement has a forward-looking influence on client satisfaction and managerial achievement and development according to an investigation by Ata and Toker (2012). A further advantage that corporations obtain by successful CRM-implementations deals with the intra-administrative aspect. CRM helps with collapsing the hurdles among departments by fulfilling the "integrator functions" surrounding a client supervision approach (Ingram, LaForge, and Leigh, 2002).

2.4.8 Summary

Information and communication technologies are playing an essential role with regards to the implementation and realization of CRM. An important prerequisite of CRM is the technological aspect.

CRM-systems are used to track and analyse the company's interactions with its customers to optimize revenue, profitability, and customer satisfaction. It simplifies and supports the implementation of a holistic CRM-approach. By improving the organizational information management system, increased customer orientation, and improved competitive advantages are made possible. The superior tasks of a CRM-system are the coordination and integration of the individual communication channels between customers and companies, the support and synchronization of the essential CTPs, and the uniform incorporation and evaluation of all client data and knowledge.

The functionalities of CRM-systems primarily concern four main strategic targets. The generation of novel assistance for the client, business procedure improvement in client handling, enhanced client data evaluation, and the support of new marketing/sales-tools. For the general selection of instruments, it is necessary to decide, which questions the CRM-system should answer and which tasks should be supported. The success of the instruments depends on customer processing being intensively geared towards fulfilling customer needs and the importance of the customer for the corporation.

The introduction of a CRM-system is a complex process and the system must be optimally integrated into the company's organization. For a holistic CRM-implementation, it is important

to view it as a strategic project in which the future design of customer processing is determined. The employees should not see the system as an additional expense, but as support in customer processing and administrative tasks.

As CRM-practices have developed due to novel technological instruments, marketing practitioners and intellectuals have put their interest on the usage of considerable client data pools to assist companies in handling client interactions among various touchpoints and channels. The utilization of CRM-systems can generate various benefits. First and foremost, it allows corporations to automatize all factors of the client interaction cycle, like e.g. the expansion of quotation handling, prevailing understanding, sales, perpetuation, and win-back of vanished clients. Secondly, the obtainment and perpetuation of clients via an optimized resource assignment among various actions, CTPs, and selling channels can be enhanced via CRM-systems. The expansion of a resource assignment approach that thoroughly utilizes the solitary client-level data has been determined as a key indicator that identifies the profitability of CRM-expenditures. Thirdly, it amends marketing efforts and the customization of goods to distinctive clients. In the end, it improves client understanding and response, encourages novel product developments, relational benefits, and finally embellishes overall marketing efficacy. It can be concluded that corporations should handle the relationship procedure during the miscellaneous forms of touchpoints among the corporation and its clients via CRM-systems that consider the client life cycle and long-lasting client interactions (Palmatier, Kumar, and Harmeling, 2018, pp. 62-63).

With the help of CRM-systems, every business transaction can be used to obtain additional customer information, including the identification of the purchasing behaviour. In this context, market segmentations provide additional and detailed information about markets and buyers, and thus also make it easier to identify customer needs. Accordingly, segmentation analyses and customer profiles determined from them form the basis for a successful CRM-system (Rennhak, 2006, p. 53), which accommodates the programme that assists an organization in continually improving and refining the modality it obtains and handles clients. The advancing competitiveness of the commercial circles honours companies that recognize their clients and that can respond swiftly to grasp chances and take care of challenges (Kostojohn, Johnson, and Paulen, 2011, p. 11).

2.5 Economic effects of CRM

In this chapter, starting from the general effects of CRM on the corporation's success, the identification of efficiency criteria of CRM-systems will be examined theoretically.

2.5.1 Effects on corporate success and firm performance

To enable the assessment of the effects of CRM on the corporation's success, the relationship between customer proximity *(chapter 2.5.2)*, customer satisfaction *(chapter 2.5.3)* and customer retention *(chapter 2.5.4)*, as well as their effects on the economic value *(chapter 2.5.5)*, and efficiency criteria of CRM-systems *(chapter 2.5.6)*, will first be discussed. These represent an important prerequisite for the profitability of customer relationships.

The literature shows that there are still deficits with regards to the linking of customer-related topics with central economic objectives, such as e.g. company profitability. The question, whether and in what form customer relations can be measured and optimized, is the centre of the investigations.

During a value-oriented management, marketing measures are examined with regards to their positive impact on the corporation's value. The difficulty in this respect lies in the reliable quantification of the intangible assets that can be created by these measures. In addition to the reputation and specific resources of the organization, the value of existing customer relationships also plays a decisive role. By assessing customer relationships over the entire customer lifecycle (CLC), successful customer loyalty can have a sustainably positive impact on long-term company success. Business relationships are characterized by different phases. In principle, organizations gain an overview of potential customers in the first phase. The described customer value is a measure for customer profitability and results from a sustainable customer-oriented design of business relations (Krafft and Götz, 2011, pp. 216-217).

2.5.2 Customer proximity

Proximity to customers generally describes the degree of interaction between customers and companies (Schumacher and Meyer, 2004, p. 26). In the literature, closeness to the customer is understood as a corporate strategy that is completely oriented towards fulfilling customer requirements. The prerequisites for the implementation include the quality of the products or services and an open and customer-oriented information and organizational culture, which is also a basis for successful CRM. Customer proximity focuses on the opportunities to

learn more about customers and their needs and to identify areas for improvement and weaknesses in the company. It must be ensured that all customer-related information is not lost and can be used for further development and optimization of the respective product or service (Krafft and Götz, 2011, p. 218). Customer proximity can make it easier for corporations to identify their customers' expectations and needs. Building on this, products and services can be designed to meet requirements, individual customer relationships can be established, and processes between providers and buyers can be coordinated. In this way, sources of error can be reduced, and resources used more efficiently, which in turn leads to a reduction in the costs of troubleshooting or rework. In addition, transaction costs can be reduced when agreeing, executing, and adjusting business transactions (Schumacher and Meyer, 2004, p. 27).

A negative connection between specialization or formalization and customer proximity can be recognized, but a positive influence of decentralization and decision delegation (Homburg, 1998, pp. 181-184). The optimal degree of customer proximity is significantly related to characteristics of the business relationship and has positive correlations with the company's success (Homburg, 1998, pp. 130-132). Due to a high degree of customer proximity by reason of interrelationships, changes in customer requirements can be responded to more quickly and precisely, and corresponding needs can be served. The corporation is thus able to adapt its range of services to customer expectations and therefore create the conditions for a positive influence of customer proximity on customer satisfaction (Krafft and Götz, 2011, p. 222).

2.5.3 Customer satisfaction

Customer satisfaction is understood as a positive emotional reaction to a cognitive differentiation procedure among client expectations and the discovered performance status. If this is fulfilled or exceeded, customer satisfaction occurs. There are different approaches to measuring customer satisfaction, but these are not relevant in detail for the purpose of this doctoral thesis. In addition to objective indicators, such as sales or market share, there are primarily subjective approaches to quantifying customer satisfaction. So far, no method for operationalizing and measuring customer satisfaction has prevailed (Krafft and Götz, 2011, pp. 222-223).

In the literature, the service quality, technical product quality, personal relationship quality, reputation quality, and cost perception are named as influencing variables of customer

satisfaction. Furthermore, the connections between the range of services and the interaction behaviour with customer satisfaction are reported. It must be considered that this is not only justified on the quality of the experienced service or product, but that the suitability of alternative services provided by competitors also plays a decisive role. Individual effects of client satisfaction are, for example, client loyalty and positive word-of-mouth advertising. The consequences of dissatisfaction are complaints, customer churn, negative word-of-mouth advertising, or no customer reaction at all. Studies by the American Technical Assistance Research Program have shown that dissatisfied customers share their negative experiences with nine people, while satisfied customers share their positive experiences with only three people (Krafft and Götz, 2011, pp. 224-226).

Almost every corporation names customer orientation as an essential part of its strategic goals. Accordingly, customer satisfaction studies are commissioned, salespeople are trained, CRM-systems are installed, and hierarchies are flattened. The success of many efforts to increase customer satisfaction falls short of expectations or even fails completely. One reason for this is the misjudgement that customer satisfaction studies or salesperson training alone would be enough to achieve better customer orientation in the company. This is not the case, because the success of such measures first requires a mental change in the workforce. In addition, it is necessary to organize the organizational structure and processes of the corporation in such a way that the view of the customer is released again. Only when the employees in the company feel treated as customers themselves do they develop a sensitivity for the concerns of the end customer (Künzel, 2012, p. 99). The assessment of client satisfaction is among the most relevant topics regarding business corporations of all kinds. This is legitimated by the client orientation logic and the central standards of uninterrupted enhancement of modern organizations (Grigoroudis and Siskos, 2010, p. 1). Assessment represents one of the central purposes of management science (Massnick, 1997).

2.5.4 Customer retention

Customer retention is understood to mean the maintenance of a business relationship that is characterized by a non-random sequence of transactions and interactions between customers and suppliers. From the vendor's viewpoint, customers should be tied to the corporation through marketing measures. Customer retention is concretized in past, present, and future buying or ordering behaviour. Influencing factors represent economic, psychological, and social barriers to change, customer satisfaction, and the attractiveness of competitive offers. A high level of

customer retention is positively related to the intention of buying again, the attitude of the customer to the supplier, and the intention to recommend. Studies of the behaviour of new customers with a medium or high retention period show differences in terms of sales, past recommendation behaviour, the intention to recommend, and the level of required support. Longer customer retention can be combined with increased sales, more recommendations, and shorter consultation times (Krafft and Götz, 2011, pp. 226-228).

2.5.5 Effects on economic value

Key indicators for assessing the economic value of customer relationships are primarily the turnover, the margin contribution, the customer's share of the deliveries, and the customer's value. However, sales and profitability information are not enough to enable an optimal marketing and sales policy, as the effectiveness of the marketing tools used needs to be integrated into the evaluation. A review of the literature regarding the effects of customer proximity, customer satisfaction, and customer retention on the economic value proves the achievement of higher sales and RoI-values by long-term customer relationships. Moreover, there is a positively significant link between higher customer retention and the buying behaviour, the re-sale, and the further recommendation of customers. At the same time, there can be no general proof of a direct relationship between customer satisfaction and the success of the company, which is why only an indirect impact of satisfaction on customer retention can be predicted for the corporation's profitability (Krafft and Götz, 2011, pp. 231-233).

Since many previous publications on the topic of CRM focus on the technology and less on its success, an empirical study by the University of Texas in Austin investigated the influence of CRM-implementations on the success of companies. The analysis of the study shows that CRM-processes can be distinguished according to the CLC-stages (acquisition, binding, and termination). The analysis of the impact of the scope of CRM-activities in these stages shows that more extensive CRM-processes also ensure a higher commercial success. The success-enhancing effect can be increased by suitable incentive systems and organizational structures. CRM-approaches can help to ensure that customer-oriented companies systematically influence the satisfaction of profitable customers with their own service-portfolio in order to increase their loyalty and unity. Organizations that control these relationships within the framework of their CRM-strategy have proven to be more successful than their competitors (Krafft and Götz, 2011, pp. 235-237).

2.5.6 Efficiency criteria of CRM-systems

The CRM-system results in increased sales potential, when CRM is understood as a holistic approach that is less focused on a product rather than a customer orientation (Stokburger and Pufahl, 2002, p. 21). In order to be able to assess the contribution of a CRM-system to the success of the corporation, it is first necessary to analyse the useful components and competitive advantages accordingly. This can be done for CRM-systems out of the corporate context and describes external efficiency criteria. In the overall assessment, efficiency criteria can be weighted and allocated for each point. This can be used to assess the relative profitability of investments, but not the absolute ones. It is therefore possible to determine the best alternative from the number of points, but not to make a statement regarding the return or minimum interest rate (Link, Münster, and Gary, 2011, p. 165).

Figure 11 shows another possibility, in which the impact on certain monetary values is estimated for each efficiency criterion. It forms the basis for investment calculation procedures and thus for statements about the absolute advantages and the actual benefit of a CRM-system, since this procedure can be used to analyse incoming and outgoing flows. At the end of the valuation scheme shown, it is possible to analyse, whether the acquisition costs are offset by a corresponding profit. Points should therefore only be awarded instead of an assessment using monetary values, if these cannot be assessed (Link, Münster, and Gary, 2011, p. 166).
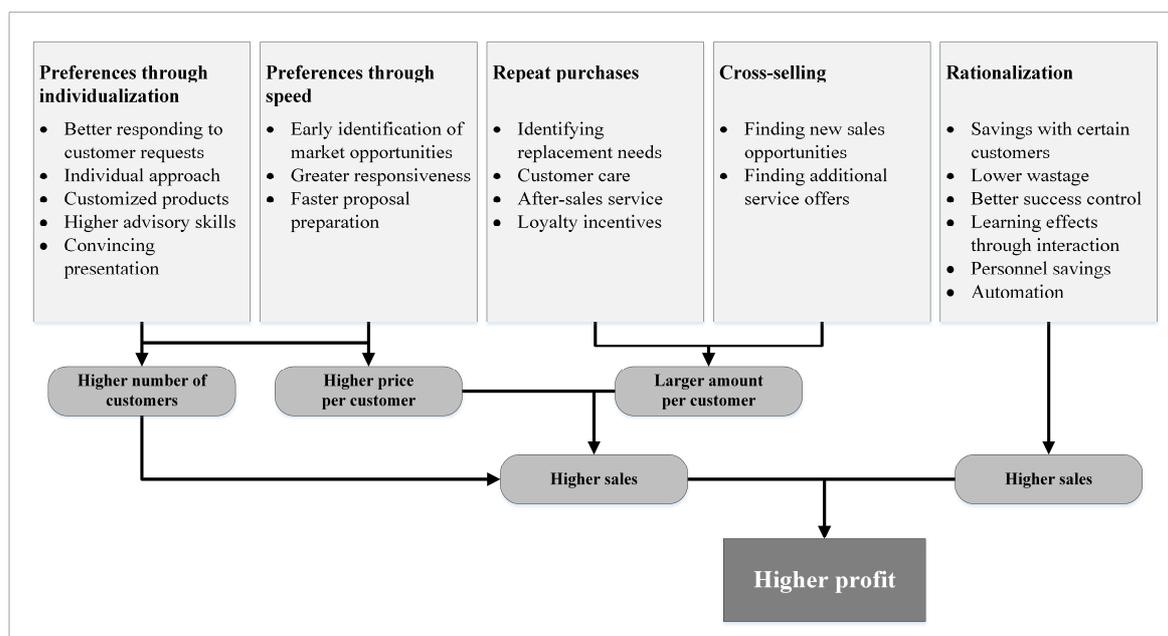

Figure 11: Implementation of efficiency criteria in monetary terms

Source: Link, Münster, and Gary, 2011, p. 166

A better and more targeted response to customer requests, an individual approach, and adapted products or services, as well as higher advisory skills and faster responsiveness, have a positive effect on both, the number of customers and the possible price per customer and, subsequently, sales. This is due to the positive execution of the previously described chain of effects. Repeat purchases and cross-selling potential (e.g. recognition of replacement needs or new sales opportunities) also have a positive effect on sales, due to increasing sales volumes. Finally, cost savings, which can be achieved e.g. through lower wastage or better control of success, ultimately result in a higher profit (Link, Münster, and Gary, 2011, p. 166).

Figure 11 also leads to considerations as to whether a customer-oriented information system and the associated higher degree of customization lead to increased appreciation by the customer. This is because on one hand more customers can be won and on the other a higher price achieved per customer. Experiences from the past, observations from competitors, but also tests with representative samples from customers can be used as a basis (Link, Münster, and Gary, 2011, pp. 166-167).

Finally, it should be summarized that a cost/benefit-assessment of CRM-systems can in principle be based on quantitative and qualitative components. The quantitative dimension of the cost-effectiveness of CRM-systems can be determined by corresponding cost accounting approaches and utility calculations. In the context of the investment calculation, the cost/benefit-ratio is determined using financial mathematics. However, the qualitative usefulness of CRM-systems can only be assessed subjectively and cannot be translated into a clear monetary dimension using business management tools. The question, whether a monetary cost overhang can be compensated by qualitative variables, such as increased customer satisfaction, is dependent not only on the functionalities of a CRM-system, but also on the underlying customer processing and sales management concepts within the company (Helmke, Uebel, and Dangelmaier, 2017, p. 323).

2.5.7 Summary

The literature shows that there are still deficits with regards to the linking of customer-related topics with central, economic objectives. During a value-oriented management, marketing measures are examined with regards to their positive impact on the corporation's value. By assessing customer relationships over the entire CLC, successful customer retention can have a sustainably positive impact on long-term company success.

Key indicators for assessing the economic value of customer relationships are primarily the turnover, margin contribution, customer's share of deliveries, and customer's value. A review of the literature regarding the effects of customer proximity, customer satisfaction, and customer retention on the economic value proves the achievement of higher sales and RoI-values by long-term customer relationships. There is a positively significant link between higher client retention and buying behaviour, the re-sale, and the further recommendation of customers.

The CRM-system results in increased sales potential, when CRM is understood as a holistic approach that is less focused on a product rather than a customer orientation. To enable the assessment of the contribution of a CRM-system to the success of the corporation, it is first necessary to analyse the useful components and competitive advantages. A better and more targeted response to customer requests, an individual approach, and adapted products or services, as well as higher advisory skills and faster responsiveness, have a beneficial influence on both, the number of customers and the possible price per customer, and, subsequently, sales.

The introduction of CRM-systems in various organizations has led to the evaluation of customers being significantly simplified or even possible without irresponsible effort (Haenlein and Kaplan, 2009, p. 89). In the course of evaluating individual customers, companies in sectors as diverse as logistics (Niraj, Gupta, and Narasimhan, 2001), retail banking (Haenlein, Kaplan, and Schoder, 2006) or the metal processing sector (Bowman and Narayandas, 2004) find that 20 to 30% of their client interactions have not been lucrative. These conclusions are also affirmed by various practitioners (Karle, 2008, p. 106).

2.6 Acceptance theory

The implementation of a CRM-system is usually a complex procedure, involving all processes of a corporation in a technical and organizational way. It is essential to integrate the CRM-system in the structure of the respective company to ensure its efficiency and effectivity accordingly. A CRM-implementation must be considered as a strategical project, which forms and develops the prospective design of customer processing. In the scope of an extensive CRM-audit, the selection of the software itself, the alignment of CRM on the strategic company goals, the identification of needs for necessary process reorganizations, as well as the needed change management must be discussed and defined. Human beings are playing the leading role during the CRM-implementation, as this process requires a change in daily work life. The system and the CRM-approach itself should not be considered as additional expenditures or a monitoring instrument of their work performance. It should be understood and function as an essential assistance and support tool for customer processing and administrative tasks. The added value of CRM, as well as the individual benefit and usefulness, must be visible for every single user to ensure acceptance (Helmke, Uebel, and Dangelmaier, 2017, pp. 267-270).

2.6.1 Definition

Acceptance is a key term used in social and sociological discussions for the description of positive and negative decisions. Several different and varying definitions of this term exist and the search for a universal and generally valid definition is relatively low (Kollmann, 1998, p. 37). Acceptance refers to the degree of willingness of a user to deal with a specific situation or system, to identify with it, and to retrieve the provided utilization potential in a task-based manner (Manz, 1983, p. 177). Colloquially, acceptance is understood to mean a generally consenting view of a person or a social group in the direction of the matter in question. The term is often used as a synonym for recognition, endorsement, approval, and affirmation. Due to its partly inflationary use, a precise definition of the term is increasingly difficult (Betz, 2003, p. 97).

Despite the different conceptions of the research areas, there is an agreement in the scientific discourse that acceptance describes the relationship between an acceptance subject (individual, group) and an acceptance object (technical system, innovation, opinion) within a subject- and object-mediated acceptance context (environment). The concept of acceptance moves in its ideal type in the analytical triangle (see *figure 12*) of subject, object, and context (Lucke, 1995, pp. 88-89).
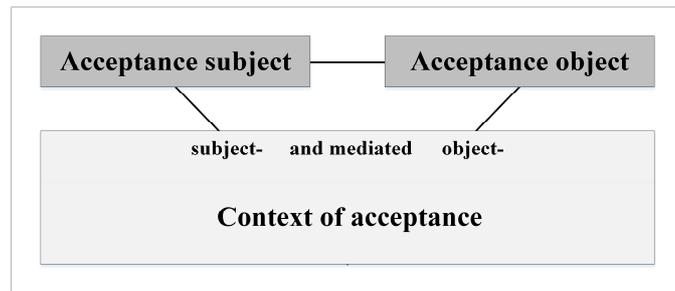
Figure 12: Acceptance triangle

Source: Lucke, 1995, p. 89

Due to the wide range of uses, an exact definition of acceptance mostly depends on the respective objective or subject of investigation (Königstorfer, 2008, p. 10). In this doctoral thesis, the acceptance of CRM-systems is based on recognition and willingness to use a CRM-system efficiently, which is a mandatory prerequisite for a CRM-system so that it consequently has a positive effect on the corporation's development and sales.

2.6.2 Dimensions

Economical acceptance research differentiates between attitude acceptance and behavioural acceptance. As a result, they offer a basic framework for the different concepts and forms of use (Rengelshausen, 2000, p. 72).

2.6.2.1 Attitude acceptance

Attitude-oriented research is characterized by equating acceptance with attitudes. Attitudes are latent variables that are not directly measurable and must be derived from verbal and non-verbal responses. Attitudes are unconsciously learned through experience, stored, and recalled in a situation (Trommsdorff, 2011, p. 159). In the literature, the attitude is made-up of three components, also called "concept of trinity" (Kollmann, 1998, pp. 51-52).

Cognitive (intellectual) component comprises the knowledge stored in long-term memory about the properties and characteristics of an attitude object and requires the weighing of advantages and disadvantages based on personal ideas, conceptions, and convictions.

Affective (emotional) component contains the emotional assessment of an object and conditions a permanent emotional state.

Conative (action-oriented) component requires the intention to act in relation to the hiring object, based on an inner willingness to act without concrete behaviour having to take place.

While initially a common correspondence of all three factors was assumed, the theory is now interpreted in such a way that the attitude is cognitively and affectively conditioned and has an indirect effect on behaviour (Fischer and Wiswede, 2009, p. 285). In addition, there are links with the concept of trinity with consistency-theoretical considerations, according to which individuals endeavour to bring individual attitude components, as well as attitude and behaviour, into agreement. Consequently, it is assumed that the attitude measurement can be used to predict real behaviour. An increasing positive attitude towards an object would therefore result in an increasing positive purchase probability. However, empirical studies of this attitude-behaviour relationship provide contradicting results (Döhl, 1983, p. 183).

Regarding the equality of acceptance and attitude, attitude acceptance is understood to mean a long-term, learned cognitive, and affective attitude, combined with an active willingness and corresponding behavioural intention towards an object. The difficulty of the attitude-oriented understanding of acceptance is the neglect of open behaviour. The willingness to act merely describes the behavioural tendency, but this does not necessarily have to result in an actual act (Rengelshausen, 2000, p. 72). Therefore, behaviour acceptance needs to be discussed in more detail *(chapter 2.6.2.2)*.

2.6.2.2 Behaviour acceptance

The characteristic of behaviour-oriented research is the equality of acceptance and measurable behaviour or effective use. Here, the acceptance is associated with a task-oriented use of an innovation. A prerequisite for positive behavioural acceptance is willingness to behave, which is seen as part of attitude acceptance. The properties of the examination object are decisive for the behaviour relevant to acceptance. In the case of consumer goods, behaviour is twofold, namely buying or not buying. They meet a need in just one act of consumption. Usable goods are characterized by permanent or long-term availability and meet a need in several consumption acts. The behaviour relevant to acceptance can therefore be described using a dynamic, situationally changing acceptance continuum (Betz, 2003, p. 109).

The definition of behavioural acceptance goes beyond the conative (action-oriented) component of attitude acceptance, but at the same time is limited to open behaviour. As a result, the internal structure of the acceptance formation is not considered, and no conclusions can be

drawn about relevant influencing factors. That is why the attitude level is always considered (Rengelshausen, 2000, p. 72).

2.6.2.3   Interdependencies of attitude and behaviour acceptance

Technological innovations are only accepted, if attitudes and behaviour are accepted at the same time. According to Kollmann, there is acceptance, when the user has a positive attitude towards the technology, so that there is a general willingness to use it and task-related behaviour can also be observed. In this context, Kollmann speaks of an "overall acceptance", which is a combination of the internal, rational assessment, and the formation of expectations (attitude level) with the adoption of usage innovation (action level), and voluntary, task-oriented use (usage level) (Kollmann, 1998, pp. 68-69). Nevertheless, based on a certain attitude or readiness for use, conclusions cannot be drawn as to the effective behaviour. Due to the interaction between attitude and behavioural acceptance, four different user types can be identified (see *table 4*) (Müller-Böling and Müller, 1986, p. 28).

Table 4: User types according to behaviour and attitude acceptance

		Behavioural acceptance	
		yes	no
Attitude acceptance	yes	Convinced user	Prevented user
	no	Forced user	Convinced non-user

Source: Müller-Böling and Müller, 1986, p. 28

Convinced users have the same attitude and behaviour. The technological innovation is fully accepted and used according to the task.

Prevented users do not show corresponding observable behaviour, because they cannot or are not allowed to use the system.

Forced users reject the system based on their setting but must use it anyway.

Convinced non-users reject the technological innovation entirely. Neither attitude nor behavioural acceptance match.

The obstacles preventing attitudes and behaviour from falling apart can be natural law (physical restrictions), system-technical (personal qualifications), or behavioural (different attitudes) (Müller-Böling and Müller, 1986, p. 26).

2.6.3 Acceptance of Business Information Systems

The concept of acceptance in the viewpoint of BIS mostly relates to the acceptance of application systems. The research concentrates primarily on the acceptance or rejection of the systems by the user and the organizational measures when introducing application systems (Amberg, Hirschmeier, and Schober, 2003, p. 575). In this context, the term "technology acceptance" is used. With modern information and communication technologies, due to their interdisciplinary task, the focus is on human action regarding developments and the use of technical innovations. In addition to the technical framework conditions at the human/machine interface, determinants from society, economics, and sociology are also considered (Dethloff, 2004, p. 18).

Simon defines acceptance in connection with technical innovations as "the positive decision to accept an innovation by the user" (Simon, 2001, p. 87). Reichwald understands the acceptance of a technology system as "the willingness of a user to call-up the usage potential offered by the technology system in a task-related manner in a specific application situation" (Reichwald, 1978, p. 31).

When using the term acceptance in connection with information systems, a positive assumption of a situation or product is generally assumed. The exact definition, however, depends on the respective objective and subject of investigation. In the technical and business environment, a concept of acceptance with an evaluative (attitude acceptance) and a conative (behavioural acceptance) dimension has become established. Accordingly, a positive willingness to use does not necessarily have to lead to the use of the technology. The specific usage behaviour is an essential part of the technology acceptance, since only a positive attitude towards an information system does not mean that it is used. In connection with information systems, it is advisable to start from a dichotomous concept of acceptance that takes both, the acceptance decision and the use, into account (Königstorfer, 2008, p. 10).

Figure 13 shows the acceptance in dealing with technology as a multi-level construct of possible characteristics between "rejection" and "consent", which is mapped within an acceptance continuum. Different levels of acceptance (usage levels) can be identified in BIS. There is a high level of acceptance, if the user assumes several roles in the system (Simon, 2001, p. 88).
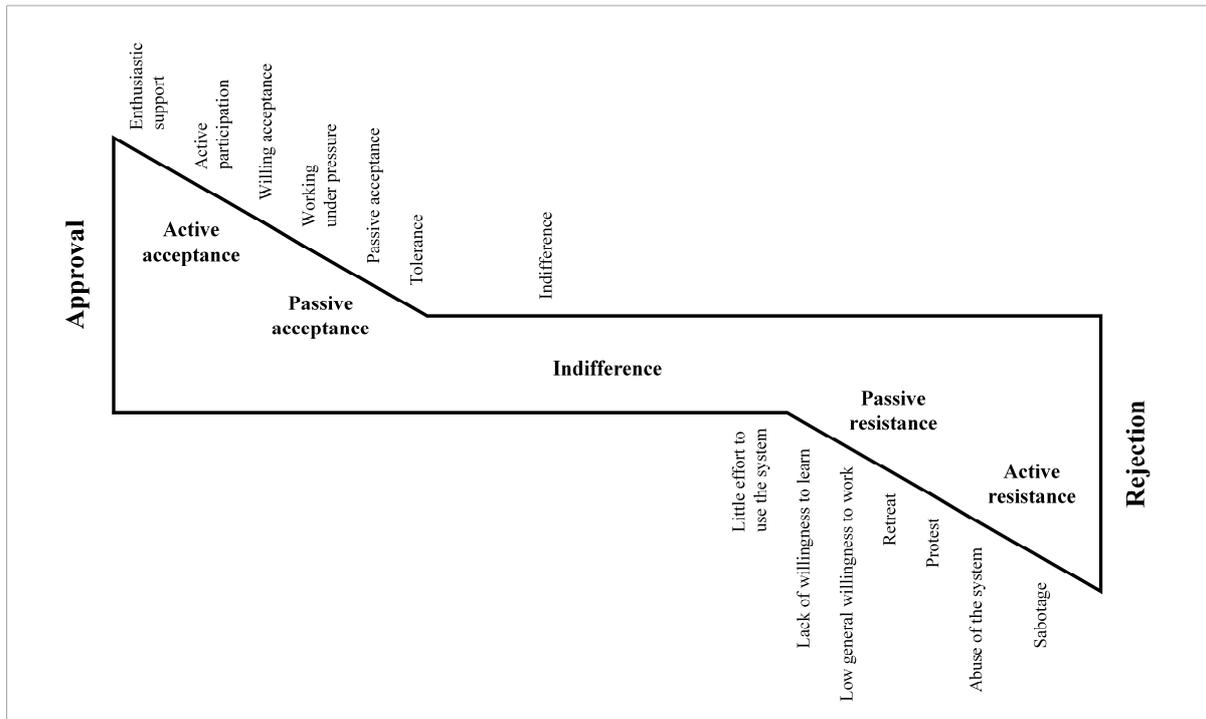

Figure 13: Acceptance scale
Source: London, 1976, p. 89

Since CRM-systems are BIS, the same acceptance term applies to them. For CRM-systems this means on the one hand use for administrative activities (e.g. contact management), and on the other hand use for active customer care (e.g. preparation of offers).

In the following, the factors that influence the development of acceptance are described and an overview is given of how influencing factors affect the development of technology acceptance. The acceptance is the result of a perception, evaluation, and decision-making process. Certain attitudes and actions result from these processes. Acceptance subject, acceptance object, and acceptance context shape these attitudes and actions. Due to changed framework conditions or perceptions, the acceptance of the subject and object of acceptance can vary depending on the time and situation. Therefore, acceptance is an inconsistent construct (Lucke, 1995, pp. 91-92). Whether a CRM-system is accepted by employees is determined by

several influences. The identification of starting points for interventions plays a major role here. For this purpose, factors that promote or prevent the development of acceptance can be examined. In principle, these acceptance factors can be assigned to the previously described acceptance triangle.

Factors that are determined by the subject of acceptance or that are predicated on this are treated in a very diverse way. Psychologically oriented, these factors form central starting points and points of reference. Factors that influence technology acceptance are attitudes, (personal) norms and values, emotions, and sociodemographic factors such as age, gender, social class, and education/occupation (Schäfer and Keppler, 2013, p. 25).

These above-mentioned factors include attitudes and feelings regarding CRM-systems, such as emotional connection, past experiences, and expectations. Attitudes can be considered as the main factor influenced by the other mentioned factors. Personal attitudes to certain behaviours associated with a CRM-system, the perceived possibilities for action, as well as the assessment of one's own possibilities of influencing the results of the CRM-system introduction are seen as influencing factors on the actions of a person (Schäfer and Keppler, 2013, p. 25).

Factors that influence the acceptance object start with its properties. These factors vary depending on the object (CRM-system). What is relevant here, however, is how the acceptance subject (sales representative) perceives and evaluates the influencing factors. The same properties can cause a wide variety of reactions depending on the employee and the context of acceptance. In relation to CRM-systems as an object of acceptance, the following influencing factors often exist (Schäfer and Keppler, 2013, p. 26):

- Costs and benefits of using the CRM-system, individually, socially, financially, socially, and ecologically in the form of the effort involved in acquiring the use of the CRM-system, acquiring skills, making work easier
- Risks associated with the deployment or use of a CRM-system, such as reliability or performance
- Ease of use and usability
- Suitability of the CRM-system to carry out the tasks to be performed
- Aesthetic aspects of CRM-system design, e.g. visual or auditory impairments or attractiveness
- General acceptance of the CRM-system

The factors that influence the context include those factors that cannot be directly assigned to the acceptance subject or acceptance object, but which shape the context and influence the assessment of the subject in relation to the object. Depending on the interaction with the properties of the acceptance subject and object, the following effecting elements of the acceptance context are mentioned (Schäfer and Keppler, 2013, p. 27):

- The work tasks to be performed or facilitated by the CRM-system
- Social processes in groups or organizations, project teams, etc.
- The social/organizational environment with its expectations of behaviour and routines
- Physical, cultural, social, and economic contexts and references
- Norms, values, legal conditions, economic situation, price development, etc.
- Design of the execution of a CRM-system in relation to the organizational introduction (training, design of the communication process, communication behaviour, opportunities to participate, credibility, etc.)

2.6.4 Acceptance models

As part of scientific research, specific models have been developed to explain the phenomenon of acceptance. The aim of the investigations was to understand, which factors lead to the acceptance of BIS in order to derive recommendations for action from them. A distinction between determinant models and process models can be made (Frenzel, 2003, p. 114).

2.6.4.1 Determinants models

Determinant models depict the dominant influencing factors on acceptance formation. Different input variables are used and networked with one another. This creates complex networks that are intended to explain the relationships between the determinants and the formation of acceptance. In principle, determinant models can be differentiated into input models, input/output models, and feedback models (Kollmann, 1998, p. 73).

The *input models* describe the simplest form of acceptance formation or composition. The structure of these models is very similar, as the authors provide a general overview of the relevant factors influencing the acceptance of the respective object of investigation (Kollmann, 1998, pp. 77-78). An example of an input model is the acceptance model according to Allerbeck and Helmreich (1984). As visible in *figure 14*, the three main influencing factors for acceptance are the technology itself, the task that is to be carried out using the technology, and the human

being as the user. The three factors are related to the organizational environment, as well as to each other in a reciprocal relationship (Allerbeck and Helmreich, 1984, p. 1080).
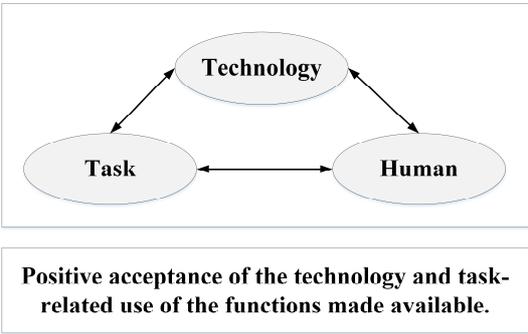

Figure 14: Acceptance model according to Allerbeck and Helmreich

Source: Allerbeck and Helmreich, 1984, p. 1080

A critical remark on the consideration of input models is that these basic representations regard acceptance as the only input variable and do not take indefinite consequences and characteristics of acceptance into account (Kollmann, 1998, p. 80).

The *input/output models* take the effects of acceptance on behaviour into account. In addition to the influencing variables, these models also contain corresponding results from the establishment of acceptance. In this way, connections between performance parameters and acceptance can be shown (Filipp, 1996, p. 27). Well-known models are the Theory of Reasoned Action (TRA) according to Fishbein and Ajzen (1975) and the Technology Acceptance Model (TAM) according to Davis et al. (1989), derived from it.
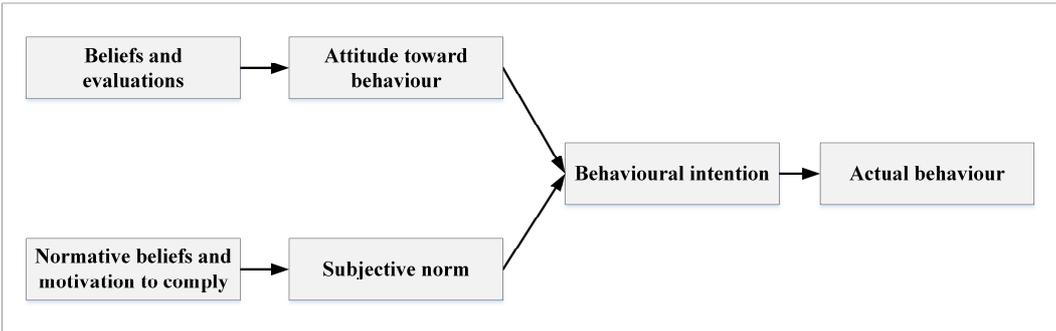

Figure 15: Theory of Reasoned Action (TRA)

Source: Fishbein and Ajzen, 1975, p. 16

The TRA assumes that every behaviour is preceded by a corresponding behavioural intention. Behavioural intention depends on attitudes towards behaviour, social norms, and the

importance of attitude and norm. Attitudes towards behaviour depend on personal convictions. Social norms are influenced by the opinions of others. For some people, these norms can be more important than personal attitudes. As shown in *figure 15*, the TRA should enable a prediction of the behavioural intention. It is assumed that a behavioural intention leads to a certain behaviour (Fischer and Wiswede, 2009, p. 330).

The TAM is among the best-known and most widely used models for explaining the acceptance of BIS. The central variables, as shown in *figure 16*, are the perceived usefulness and user-friendliness. The aim of this model is to provide a general, simple, and theoretical explanation of the usage factors of BIS (Davis, Bagozzi, and Warshaw, 1989, p. 985).
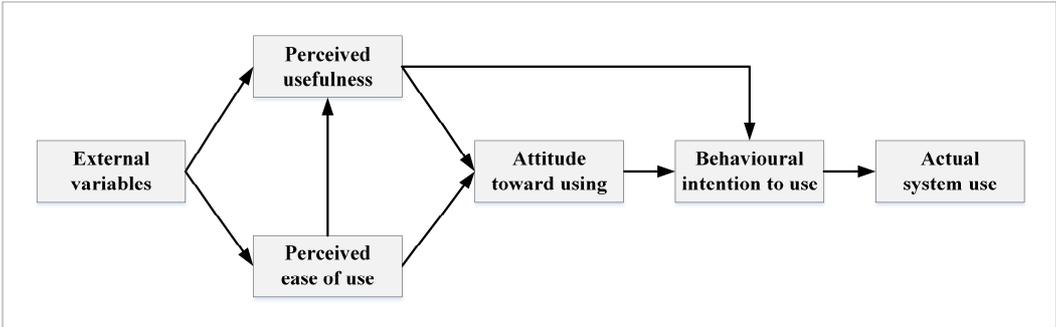
Figure 16: Technology Acceptance Model (TAM)

*Source:* Davis, Bagozzi, and Warshaw, 1989, p. 985

By perceived usefulness and user-friendliness, Davis et al. understand that the higher the expected increase in performance when using the system and the easier it is to use, the higher the acceptance and the more the user sees himself as being able to use it (Davis, Bagozzi, and Warshaw, 1989, p. 985). The TAM is widespread, because of its simple phrase structure and its generalizability to different technologies. Nevertheless, the model is often criticized, because of its simplicity, which has led to several modifications and additions (Königstorfer, 2008, p. 26). *Table 5* shows the modifications of the TAM.

Table 5: Modifications of the TAM

Acceptance model	Characteristics
TAM 2 according to Venkatesh and Davis (2000, pp. 186-190)	Additions to the TAM with external stimuli that relate to the perceived benefit and directly to the attitude to use
TAM 3 according to Venkatesh and Bala (2008, pp. 273-276)	Extensions to TAM 2 with external stimuli that relate to the perceived usability

Source: Author's table

Feedback models take not only the influencing and outcome variables of acceptance formation, but also feedback effects, into account. This creates a recursive relationship so that acceptance can be viewed as a dynamic variable (Kollmann, 1998, p. 84). An example of a feedback model is that according to Filipp (1996).
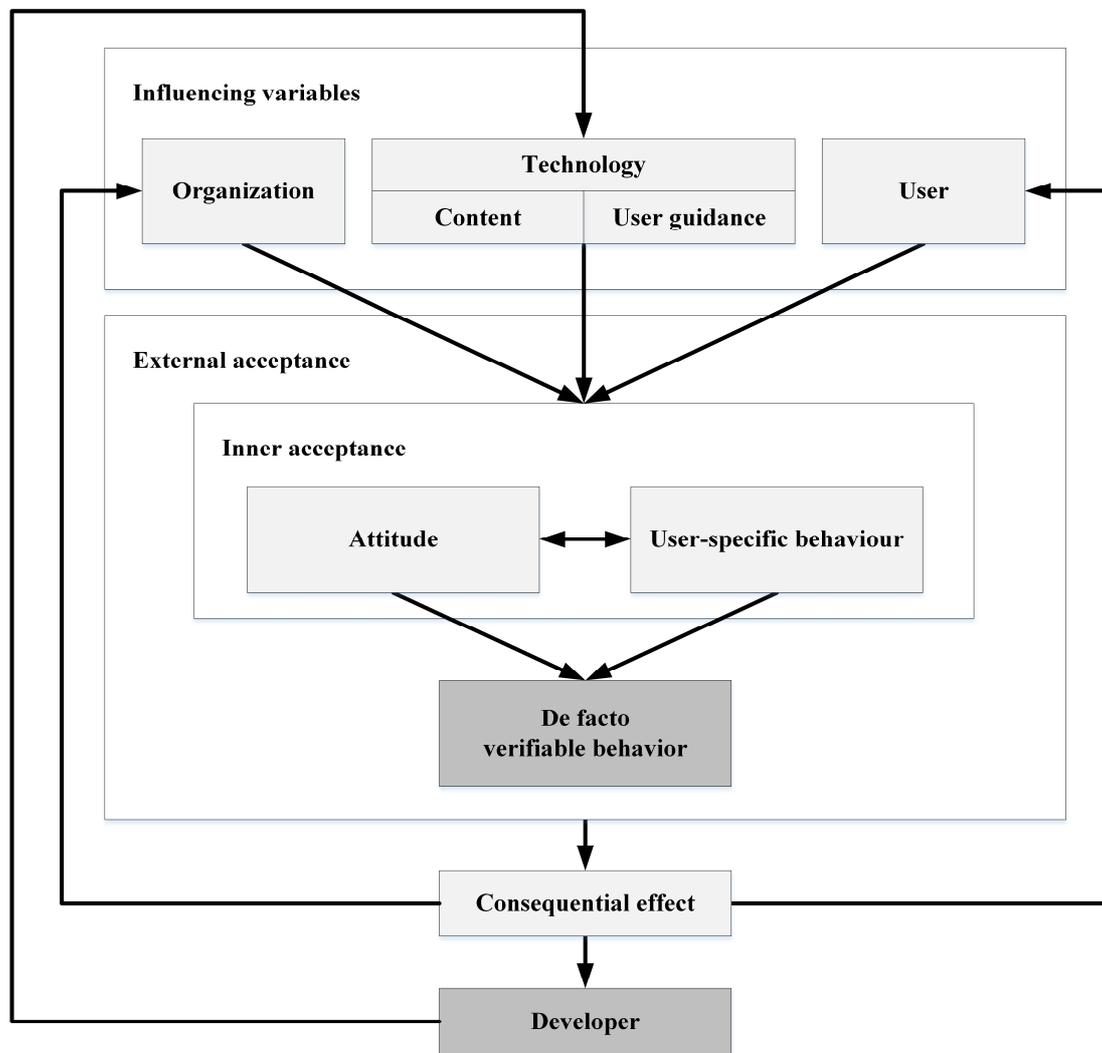
Figure 17: Acceptance model according to Filipp

Source: Filipp, 1996, p. 38

Filipp's acceptance model, as shown in *figure 17*, is based on a control loop and is influenced by the factor's organization, technology, and user. The technology factor is further subdivided into content and user guidance. Inner acceptance includes the attitude and user-specific behaviour, which are mutually related. These two factors also have an influence on the de facto verifiable behaviour. External acceptance results from the combination of internal acceptance and de facto verifiable behaviour. This model is designed in such a way that a continuous acceptance measurement can be carried out. The feedback derives, because the

continued use of the system is expected to have certain consequences, which in turn have an impact on acceptance. The task of the developer is to react to these consequences by means of system configuration (Filipp, 1996, pp. 37-38).

2.6.4.2 Process models

Process models focus on the process steps involved in establishing acceptance and on the degree of acceptance or rejection. The process steps are considered over time. Most process models are based on the findings of adoption research. The focus is on the analysis of the individual takeover process according to Rogers (2003), as shown in *figure 18*.
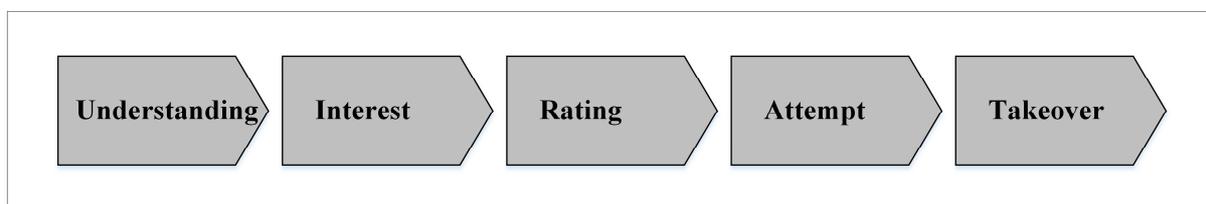
Figure 18: Takeover process based on Rogers
Source: Rogers, 2003, p. 170

In the first step, a potential buyer learns about the existence of the innovation for the first time. He then begins to be interested in the innovation and conducts an information research. After the research is completed, the knowledge gained is evaluated. In the fourth step, the potential customer decides to try out the innovation. After a positive attempt, he decides to buy the innovation (Rogers, 2003, p. 170). An example of the takeover process outlined above is the purchase of a new mobile phone.

The *dynamic acceptance model according to Kollmann* (1998) assumes a continuous use of innovations in which the development of acceptance is an on-going process. This process is divided into four levels (acceptance, construct, prognosis, and process level) on which different environmental factors (technological, macroeconomic, political, and sociocultural) have an impact. In addition to the environmental factors, there are three other influencing determinants (product-related, acceptance-related, and company-related) that influence the acceptance process. The acceptance level represents the central level for the formation of acceptance. At this level, a distinction can be made between the setting, action, and use phase. After a positive evaluation, the hiring phase results in the acceptance of the hiring process. This is followed by the action phase, the result of which, after another positive evaluation, is the action acceptance.

Usage acceptance includes the actual setting and action level and the evaluation of the actual usage conditions (Kollmann, 1998, pp. 68-69). According to Kollmann (1998), attitude, action, and usage acceptance are intermediate acceptances that signal readiness for the next phase. There is only overall acceptance when all phases have been positively concluded and the object under investigation (product, innovation) has been removed from the market (Kollmann, 1998, pp. 117-120).

The strength of process models is that they enable a detailed explanation of the formation of acceptance by examining whether different degrees of acceptance correlate with different manifestations of influencing factors (Frenzel, 2003, p. 115).

2.6.5 Influencing factors of acceptance

Based on the described acceptance models and the definition of BIS, it can be concluded that the factors human, task, and technology have a significant influence on the acceptance of BIS (Allerbeck and Helmreich, 1984, p. 15). In business context, the factors organization and management are added as influencing factors of acceptance. The operational focus can be found in several acceptance models as company-related factors (Laudon, Laudon, and Schoder, 2010, p. 18).

It is recommended that CRM systems are implemented gradually in view of a thorough change management process. This gives users the chance to use the system as early as possible in individual sections and to slowly get used to the system. It should also be noted that a good CRM-project is never finished but should be continuously improved. Since the marketing and sales strategy for a company's customers changes over time, the CRM-system and its functions must also be able to adapt to the circumstances (Stender, Göbel, and Schulz-Klein, 2003, pp. 34-35).

2.6.5.1 Technology-related determinants

The technology-related determinants represent the primary influencing factors for the formation of acceptance. They determine the properties and possible uses of information systems and influence their perception. Essential factors are the relative advantage, the compatibility, the complexity, the probability, and the communicability (Rogers, 2003, pp. 229-230). The *relative advantage* describes the extent to which a novelty for individual need satisfaction is perceived to be better compared to the technology used hitherto. *Compatibility* is

the degree of perceived compatibility of technology with existing values, norms, experiences, and needs. The *complexity* indicates how difficult it is to perceive a technological innovation and which application difficulties it presents to the user. The *probability* refers to the possibility to test the innovation before the introduction. *Communicability* describes how easily the features of the innovation can be communicated to future users. Apart from the complexity, there is a positive correlation between all determinants and the acceptance of an information system (Kollmann, 1998, p. 120).

2.6.5.2   Management-related determinants

Considering increasingly complex enterprise tasks and processes, management is given a central role in the adoption of BIS. For the employees, the efficient task fulfilment and automation of business processes is in the foreground, while the management requires structured and processed information. Although executives are also users of the information system, management sets the general framework for the use of the system (Laudon, Laudon, and Schoder, 2010, p. 27). The *planning* concerns the fundamental decision regarding the goals and the conditions of the technical application. These decisions usually mean a change in the structure and process flow of the company. Since these are complex issues, many organizations are establishing a buying centre that deals with planning and deciding on the use of technology (Kollmann, 1998, p. 127). The *management* has the task to organize the use of the technology for the task execution. The obligation to use the system specifies to what extent an information system must be mandatory in the corporation. A commitment to use does not necessarily mean a negative acceptance of the system (Hartwick and Barki, 1994, pp. 440-443). Management can grant restrictions and freedoms on system usage, affecting user attitudes to the system (Hilbig, 1984, p. 322). The *users* of the information system must be applied according to their qualifications. The task of the management is to continuously control personnel decisions and otherwise to redistribute the human resources (Picot and Reichwald, 1987, p. 170).

The management task includes the *effective control* of the tasks within the organization and the initiation of the execution of the daily work activities (Steinmann, Schreyögg, and Koch, 2013, pp. 11-12). Employee motivation is the main task of the management to ensure the acceptance of BIS. Managers serve as role models through their interest in innovations (Picot and Reichwald, 1987, p. 164). The control relates to the collection of information and the comparison of results with planning data. Due to the high complexity of BIS, continuous control

is important to enable efficient management of the business. In addition, users can also be checked whether they are doing their job efficiently and in the interest of the company.

2.6.5.3 User-related determinants

The personal experience with BIS is an essential factor for attitude and acceptance. Motivations, expectations, and opinions have a big impact, as nobody approaches new technical tools without specific pre-settings and pre-attitudes. Familiarity with the technology is therefore a significant factor for acceptance. Furthermore, behavioural psychological factors influence the acceptance of the system (Swoboda, 1996, p. 31). Expectations are related to the likelihood that a behaviour will result in a particular outcome. They represent individual yardsticks and are a central measure in the acceptance process (Kollmann, 1998, p. 123). Needs are deficiency symptoms that can be divided into primary (innate) and secondary (learned) needs. They act as personal stimuli that put a person in a general action readiness (Staehle, 1999, pp. 165-166).

2.6.5.4 Organization-related determinants

Organizational determinants relate to the company, the application situation, the organizational environment, and the social environment within the organization in which the BIS is used. They represent the organizational framework and the basis for corporate acceptance and willingness to innovate. The higher the willingness to innovate in a company, the faster the acceptance process will go through. The willingness to innovate depends on the organizational culture and structure (Rogers, 2003, pp. 411-413). Organizational culture reflects the individual character of an organization, expressed through values, norms, and collective patterns of order. The organizational culture is responsible for the fundamental attitude of an organization towards change (Schreyögg, 2016, p. 407). The organizational structure can be understood as a formal system that controls cooperation, communication, responsibilities, regulations, and processes within the corporation. Due to the different degrees of flexibility, not every organizational culture is supportive for acceptance (Jones and Bouncken, 2008, p. 42).

2.6.5.5 Task-related determinants

The task-related determinants deal with the question of whether the task can even be solved with the help of a BIS. This is understood as the actual usability of the technology in the respective sphere of influence. The more difficult the task, the higher the demands on the system (Reichwald, 1978, p. 33). The individual performance of the user and the associated acceptance of the system depend on the support during the task performance. Collaboration between

multiple organizational units requires an integrated information system that can ensure cross-unit information sharing (Goodhue, 1995, pp. 1828-1833).

2.6.6 Summary

A look at the current literature on CRM shows that there are many publications and definitions, none of which can be assumed to be generally applicable. The understanding of CRM ranges from a purely information technology concept to a holistic, customer-oriented company orientation, strategy, and philosophy. A distinction between CRM and other marketing-relevant terms is difficult at first glance, as the terms are mostly used synonymously in the literature. Nevertheless, CRM can be understood as a part of relationship marketing. The aim of CRM is to align customer processing holistically with customer needs and thereby raise it to a new level of quality. The CRM-software is the technological support. A distinction can be made between three areas of application: Collaborative, Operational, and Analytical CRM. The Collaborative CRM comprises the entire control of the communication channels to the customer, the Operational CRM supports the direct customer contact by means of sales, service, and marketing automation, and the Analytical CRM uses analytical procedures, like data mining and OLAP, to generate analyses of customer behaviour and structures.

When introducing a CRM-system, an extensive audit must be considered to guarantee the alignment of the CRM-system with the planned corporate targets. Employees must recognize the added value and benefits of the system in order to accept it. As with CRM, there is no broadly agreed abstraction of acceptance. However, there is agreement that acceptance describes the relationship between an acceptance subject and an acceptance object within a subject/object-mediated acceptance context. In addition, there is only acceptance for technological innovations, if attitude and behavioural acceptance are present at the same time. The user must have a positive attitude towards the technology, so that there is a basic willingness to use it. Task-related behaviour must be observable before the information system can be said to be accepted. Due to the different conceptual understandings and acceptance research approaches, many acceptance models exist, the aim of which is to describe and explain the acceptance phenomenon. These include, on the one hand, determinant models that consider acceptance as a point-in-time phenomenon, and, on the other hand, process models that take the individual phases of the acceptance process and thus the passage of time into account.

2.7 Packaging industry

There are various literature contributions on the definition of the term "packaging". According to DIN (Deutsches Institut für Normung) standard 55405, packaging is defined as a "unit consisting of the packaging material and the packaging good". The packaging material is the material from which the package is made. The primary packaging substances available are aluminium, plastics, paper, cardboard, steel, glass, and wood. The packaging material encloses or holds the packaged goods together so that they can be transported, stored, and/or sold (Boeckle, 1994, p. 11). Packages are among the vitally important components of life nowadays and it holds a notable position in our daily life. It is inescapable for various groups of individuals, like e.g. manufacturers, sellers, consumers, and shopkeepers. Many types of packaging are produced by a broad spectrum of materials that environ us daily. Packages have the indispensable functionality of preserving products from devastation, away from various subordinate functionalities, and it is utilized by all industrial segments (Muthu, 2016, p. V). To a considerable degree, packaging science is materials science, meaning that the correct selection of a packaging type is mostly determined by the efficiency of the used packaging materials. These performances can primarily be demonstrated and explained with regards to material chemistry but are generally associated with their physical and chemical characteristics (Piergiovanni and Limbo, 2016, p. 1). Many items need packaging to be valuable in industry and commerce. Packaging accommodates an instrument of storing, shipping, and presenting a broad range of goods from pharmaceuticals, electronic and automotive parts, clothing, housewares, etc. Packages preserve these units from contaminations (Hirsch, 1991, p. 4).

2.7.1 Characteristics

To manufacture packages, massive quantities of materials are utilized globally. In agreement with current investigations (Iascone et al., 2014), the highest percentage of used packages from 2011 to 2013 (15.2%; 1,869,856 in 2013) belongs to the Asia and Pacific area. The European Union (EU), North and South America are far-off (6.0, 4.4, and 3.5%). Eastern Europe reaches 2.9%, whereas Central Asia and the African continent make it only to 1.2%, whilst the lowest percentage is attributed to Australia and New Zealand (0.3%; 37,687 in 2013). The worldwide measure of packaging transactions is appraised to represent $ 797 billion in 2013 but is anticipated to increase at a yearly ratio of 4%. The expansion of the packaging industry is putting special importance on recycling potentials and procedures that are in a thriving correlation with material chemistry and arrangement (Wood, 2012; WPO, 2008).

The establishments of several technical and industrial communities in relation to its miscellaneous characteristics reflects that packaging has been globally identified as a vital feature by the industry. The worldwide proposition of the packaging industry to difficulties shared by people legitimately shows that the art and science of packaging technology have evolved to completion and that packaging is not considered as a necessary evil anymore. Moreover, the industry builds upon the originality and expertise of development engineers, whose on-going endeavours guarantee an endless purveyance of novel and improved packages for the goods of the world industry (Griffin, Sacharow, and Brody, 1985, pp. 10-12).

Packaging needs to be considered as a complete arrangement, which must be optimised for processing, filling, transportation, stocking, and handling by the client. Obviously, the packaging should assure a proper quality for every step throughout the entire revealed shelf-life and avoid degenerating backlashes that could decrease the quality underneath approbation for commercial transactions or consuming (Lamberti and Escher, 2007, p. 428). A packaging system is to be understood as a unit of all technical, economic, ecological, organizational, and technological elements that characterize the life cycle of packaging from conception, manufacture, and use until the disposal. Compared to the function-related optimization and design of packaging systems, a system-oriented approach gained importance. Reusable containers are used as cross-divisional design elements to simplify complex, multi-level logistics systems. They are integrated into the flow of materials and information so that the greatest possible continuity from the supplier to the customer is guaranteed. Packaging cycles thus form an essential component in the overall corporate system and support the implementation of just-in-time (JIT) principles in internal and inter-company areas (Boeckle, 1994, p. 3).

Pharmaceutical products need more comprehensive packages compared to alternative susceptible goods, even though various correspondences exist in their necessities. Nearly every form of novel packages is utilized for the broad collection of medicines, drugs, and devices accessible nowadays, but the amounts embroiled are typically diminutive than with foods. However, honesty and safekeeping of the packaging are more relevant and regulated by licensing settlements. Probably the most important function of pharmaceutical packaging is the preservation of the goods. Chemical depreciation from climatic and mechanical risks, as well as physical destruction, and alterations originating from microorganisms must be avoided. Furthermore, the goods and packages must be in harmony (Lockhart and Paine, 1996, p. 1).

2.7.2 Particularities

Packaging represents one of the most substantial industry sectors worldwide. The share of packaging in a country's gross national product is a measure of the state of development and rationalization of the respective packaging industry. All countries spend a similar share of their gross national product in the region of 2% on packaging. The more developed the packaging industry in a country is, the lower the relative packaging expenditure. For the highly developed markets of the USA, Japan, Germany, France, Italy, and Great Britain, a ratio of around 1.6 was found in 1988. Higher indicators were found for less developed countries (Brazil: 1.9; India: 2.1; South Korea: 2.2). In smaller markets, where competition and production volumes are lower, there is a tendency towards higher ratios even with a high level of development (Austria, Sweden, Belgium, and Denmark: 2.1 – 2.2). This results in a simple recipe for the economical use of packaging: high level of development and large markets (Buchner, 1999, p. 14).

Exact figures to produce packaging materials on a world-wide basis are not available, because statistical documents are lacking in many countries. It needs to be relied on experts based on statistically secured figures for large producing countries. An estimate based on the 20 most important consumption countries, which account for more than 80% of the world consumption, appears safest. In 1988, the USA accounted for about 27%, and together with Japan and Germany for almost 50% of the world-wide production of packaging materials. The world consumption of packaging has increased nominally from around € 50 to over 250 billion in 25 years. In real numbers there is an increase of around 90% (Buchner, 1999, pp. 16-17).

Investigating the causes of competitive advantage requires systematic methods of analysing a company's activities and their interactions through which a product is designed, manufactured, sold, delivered, and supported. The analytical instrument for this represents the chain of economic value added. This separates a corporation into strategically important actions to be able to understand cost behaviour, as well as available and future origins of distinction (Porter, 1989, pp. 59-63). The measures to exploit flexibility and cost reduction potential do not only concentrate on the internal area of the individual companies but extend over the entire logistical chain from the supplier to the end user (Pfeiffer and Weiss, 1992, pp. 65-67). The aim is to provide the required materials, parts, or products in the required quantity and quality, at the correct time, and in the correct place, to be able to encounter client requirements (Wildemann, 1992, p. 32). This requires a reorganization of the entire operational process, which extends to the flow of materials and information, with the aim of aligning all activities

of the value creation process with market needs. Logistic services that aim to optimize order processing along the entire logistical chain are becoming increasingly important, especially in saturated markets. Customer-oriented packaging concepts aim at the efficiency of the continuous logistics and value chain from the supplier to the own company and to the customer (Klöpper, 1989, p. 67).

Effectual packaging is an important connection between the manufacturing organization and its clients. The standing and esteem of the packed goods will deteriorate, and the favour of the clients will disappear, if the packaging process is not executed properly. Every effort that has been put into the product, like e.g. the quality, expertise, and steadiness during the phases of development and manufacturing, will be dissipated, if it will not be secured that it makes it to the end customer in an accurate shape. The primary path of guaranteeing secure shipment to the end customer in the proper condition at an economic prize is achieved via properly designed packaging (Paine, 1990, p. 3).

Producers of drugs and medicines are in opposition to a bunch of obstacles that packaging solutions can assist and support them to solve and avoid. Packaging was frequently only a subsequent thought for a lot of pharmaceutical organizations in the past, regarded as purely the last measure in production. Nowadays, corporations need to think about packaging formerly throughout the development phase. Pharmaceutical packaging is rapidly getting an important aspect of the medicine transmission system and a key aspect of the marketing mix, by which producers can distinguish their goods from those of their rivals. As a result of the fact that corporations depend increasingly on packaging and labelling as a way to secure and boost their goods, extend patient conformity, and match up to novel requirements, the demand for pharmaceutical packaging is increasing (Pilchik, 2000, p. 68).

2.7.3 Summary

Packaging is defined as a "unit consisting of the packaging material and the packaging good". A packaging solution needs to be considered as a fundamental process that should be optimized for processing, filling, transportation, warehousing, and handling by the consumer. Packaging is among the biggest industry areas worldwide with a global measure of packaging transactions of $ 797 billion in 2013. It is anticipated to increase at a yearly ratio of 4%.

3. METHODOLOGY

3.1 Objectives

The overall goal of the doctoral thesis lies within the identification of design features of a CRM-system, which can contribute to an increase in sales and the overall development of corporations in the packaging industry. Numerous practical reports show that management has a great interest in the question of how the extent of today's CRM-activities is pronounced and how the success of CRM-implementations can be measured. With the help of the presented methodologies in this chapter, the in *chapter 1.3* initially provided research questions will be answered, and the hypotheses, stated in *chapter 4.2.1*, checked, as well as the results critically questioned, discussed, and put into a common context with the existing literature. The hypotheses originally developed and set-up at the beginning of this doctoral thesis were cross-checked and substantiated after the detailed literature research had been carried out.

The case study has been chosen as the overall research design. The case study is characterized by the concentration on a representative single social element as the object of investigation, like individuals or institutions. In the respective case, a leading corporation in the packaging industry. Due to the limitation of the research object, the case study allows an intensive examination of the research material, whereby more extensive and more complex results can be derived (Lamnek, 2016, pp. 299-300). Previous methodological approaches show a tendency towards quantitative methods. However, this research methodology runs the risk of disregarding or not recognizing CRM-specific factors. Because of this problem and taking the generally exploratory nature of the research questions into account, a qualitative research has been chosen as the appropriate empirical starting point, which will be supplemented by a subsequent quantitative analysis (Quiring, 2006, pp. 2-3). The qualitative research of this work forms the basis for the quantitative survey. Adapted from the conclusions of the interviews carried out and the available literature, hypotheses are formed and substantiated, which are then tested by the quantitative survey.

3.2 Qualitative research

3.2.1 Survey methodology

The acquisition of data will be carried out via problem-centred and guided interviews. Due to the adaptability and truthfulness of this approach, the revelation of undisclosed circumstances is enabled, an increased knowledge content is initiated, and the point of view of

the interview partners is focussed (Mayring, 2016, pp. 67-69). The starting point for the development of the interview guides and the corresponding investigation are the knowledge and contemporary data base from the compositions on this topic. A key feature of problem-centred interviews is the combination of inductive and deductive research. For this purpose, a theoretical concept must be developed before the interviews are carried out, which can be modified, if necessary, using the information provided by the respondents. The focus of the interviews is thus directed towards a specific problem. Nonetheless, the respondent gets the incentive to narrate through open questions (narrative principle) and can structure the meanings of social reality accordingly (Lamnek, 2016, p. 364).

The interview guides consist of an opening and a central section. The main goal of the opening is to adjust to one another in the best possible way, and to quickly draft the importance and benefits of the investigation. In the central part of the first survey, questions will be asked about possible design features of a CRM-system with a view on increasing sales and the overall development of corporations in the packaging industry. The second survey aims to determine the elements that affect the acceptance of CRM-systems by employees, as the appropriate acceptance of the CRM-system has been already identified in the literature review as a mandatory prerequisite. Since the interviews are partly in German and English, an interview guide in both languages will be created. Special control is taken when carrying out the interviews to interrogate open questions to be able to obtain as much knowledge as achievable from the interviewee and to not steer them in a certain course (Mayring, 2016, pp. 67-68).

The problem-centred examination chooses a linguistical way to establish the situation on the starting point of prejudiced explanations. A condition of reliance among the different individuals is sighted. The interview partners respond unreservedly and short of answer possibilities, even though they are conducted by the guidelines via specific questions. This appeal has the benefits of checking the overall perception of the interviewees, as well as the revelation of prejudiced points of view and the consideration of explicit conditions of the interview scenario (Mayring, 2016, pp. 68-69). *Figure 19* shows the general process model and the individual phases in carrying out the problem-centred interviews. The areas of application of this method are primarily in theory-led research, as it unites the features of the priority problem evaluation into the examination. It is specifically useful, if something is previously recognized regarding the area of research. The standardization via guidelines promotes the comparableness of the examinations and later also the assessments (Mayring, 2016, pp. 70-71).
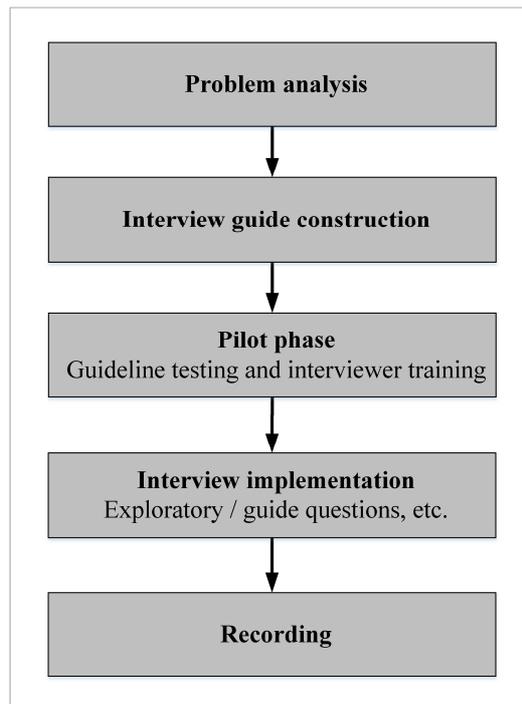
Figure 19: Process model of the problem-centred interview

Source: Mayring, 2016, p. 71

3.2.2 Evaluation methodology

The evaluation methodologies are predicated on the summarizing and structured approach of the qualitative subject matter investigation. The whole data is examined lacking any initiatory reflections and the specific records of the evaluations are taken out. In an additional action, every statement that do not alter the subject matter, are extracted, as the primary concern is placed solely on the content-grounded data (Mayring, 2016, pp. 115-116).

An extensive subject matter investigation is employed for the information analysis of the first survey. The goal is to diminish the data to its needed contents and to establish a reasonable fundamental style. To be able to consequently generate resolutions for resolving the research questions, recorded declarations will be arranged in a structured manner. For this reason, the gained knowledge is separated into classes or categories. The category system is not intended to be highly comprehensive. The outcomes will be debated afterwards and put into relation to the corresponding literature. An adaption and rework of the category system can be carried out after executing the preliminary investigation. Basically, the process model of inductive category formation (see *figure 20*) should be used (Mayring, 2016, pp. 115-116).
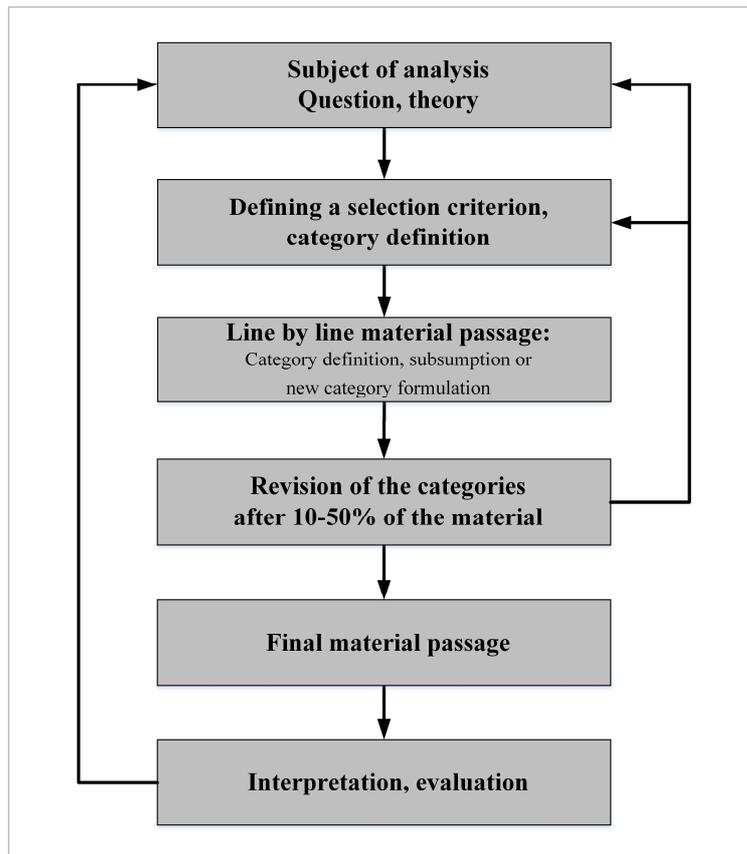
Figure 20: Process model of inductive category formation

Source: Mayring, 2016, p. 116

Concerning the second survey, for the structuring of the conducted interviews and the respective results, specific categories for the acceptance of CRM-systems must be identified and defined in advance, before the individual records of the examinations will be transliterated. During the next phase, every statement that is not altering the subject matter, is withdrawn, as the primary importance lies only at the knowledge based on the subject matter (Mayring, 2016, pp. 115-116). The categories are "person", "task", "technology", "organization", and "management" (Laudon, Laudon, and Schoder, 2010, p. 18).

The aim of the structured content analysis of the second survey is to diminish the information to its necessary subject matters and to generate a user-friendly primary formation. Recorded proclamations will be arranged according the previously defined categories to enable the subsequent drawing of resolutions for answering the research questions. Afterwards, the results are discussed and put in context with the literature (Mayring, 2016, pp. 115-116).

3.3 Quantitative research

3.3.1 Survey methodology

The goal of the quantitative investigation is to detect possible barriers to acceptance when introducing and at the same time using sales-supporting CRM-systems in the packaging industry, to define their importance for sales employees and, based on this, to filter out the best possible design features for the use or implementation of CRM-systems in sales, so that they are able to contribute to the overall goal of having a positive influence on the development of corporations. In addition, the aim is to generate an effective, acceptance-oriented technology design so that the sales employees are motivated to deal with CRM-systems and work with them without immediately encountering resistance and rejection.

The investigation has both practical and theoretical relevance. When introducing sales-supporting CRM-systems, there is a very high risk of failure. In order to minimize the risk of failures when introducing new CRM-systems, the focus must be on an acceptance-oriented technology design. Furthermore, the entire acceptance research must be considered in order to find out the causes of failure. Lack of correspondence between the product properties of the new CRM-system and the customer needs must therefore be minimized and the flop rate when implementing CRM-systems reduced. This requires employees to be involved in the implementation process at an early stage in order to be able to measure success in the system planning and system implementation stages. For this reason, a company should consider acceptance determinants early on when introducing and later using sales-supporting CRM-systems, so that acceptance is guaranteed from the point of view of the sales staff. Due to the high costs and risks, the investigation is of essential importance for other corporations in the packaging industry that have planned the introduction of new systems in sales. The theoretical relevance can be derived from the fact that there are studies that describe the barriers to acceptance of sales employees in relation to CRM-systems, but not which barriers are the greatest influencing factors on employees, especially in the packaging industry.

The target group of the quantitative survey are people in sales departments at various Constantia Flexibles locations who have already worked with or who are currently implementing CRM-systems. The quantitative survey is carried out using a standardized online questionnaire.

Online surveys are mostly carried out over the internet or by e-mail. It does not differ significantly from normal offline questionnaires. In an online survey, a hyperlink is usually used to access a website. An online questionnaire is opened by clicking on the link. The respondent clicks on the possible answer options and the answers are read directly into a statistical analysis program (Herrmann, Homburg, and Klarmann, 2008, p. 28). Since the questionnaire was created online, a link to the questionnaire can be created and this is then forwarded to the sales staff of various Constantia Flexibles sites by e-mail, including a brief introduction, and the reason for the survey. The e-mail addresses of the people surveyed are filtered using the group database.

In contrast to the qualitative research, only closed questions based on Likert-scales are used in the standardized questionnaire in order to guarantee the possibility of comparison and to filter out the importance of properties, activities, and concerns of CRM-systems. Structural data, such as age and education, are also queried.

In the sampling procedure, the following questions are asked in advance, which need to be considered when choosing the sample (Berekoven, Eckert, and Ellenrieder, 2009, pp. 43-45):

- Who should be asked whose answers are of interest?
- What is the total volume of the population? (basis for all further collection and calculation procedures)
- How can the population counting be reached? (addresses and e-mail addresses)

A partial survey is used to carry out the quantitative survey. The partial survey is divided into random selection and conscious selection. The method of conscious selection was chosen for the survey. The random selection is divided into simple selection processes, stratified selection processes, cluster selection processes, and multi-stage selection processes. A conscious selection includes the quota procedure, the cut-off procedure, and the typical selection. The quota method, a method of conscious selection, was chosen for the quantitative research. Here the sample is constructed independently, and the respondents are selected according to relevant characteristics. It is important to make the selection in such a way that the model is as exemplary as possible of the population (Berekoven, Eckert, and Ellenrieder, 2009, p. 49).

The quota procedure (conscious selection) deals with the following basic idea. It would be possible to create a representative model of the population or to develop a representative sample, if the distribution of all characteristic values across all interesting characteristics of a population is known. However, this requires knowledge of the characteristics (quotas) and their proportional distribution in the population. Corresponding quotas can be established through this proportional distribution (e.g. men 45%, women 55%). Of course, the initial consideration of the selected sample cannot be implemented in this comprehensive form. In the quantitative survey of this doctoral thesis, the quota method is therefore limited to a few dimensions that are known in the distribution of the population. In addition, it must be considered that dimensions are chosen that play a decisive role for the object of investigation (Berekoven, Eckert, and Ellenrieder, 2009, p. 49).

The quota selection in this survey relates to internal sales staff in the packaging industry. It is therefore important to consider what characteristics the sales staff, who work with CRM-systems or who deal with various IT-systems, have. Since the selection of sales employees as respondents is already an enormous limitation, they can still be assessed according to the following characteristics: sales employee in industry, sales employee in packaging industry. If these characteristics, which are regarded as relevant, are to be used for quotation, the distribution of these characteristics in the packaging industry would have to be determined, for example from statistics, and converted numerically to the intended sample size. From the resulting quota plan, there is a certain number of people to whom the questionnaire should be sent. It is characteristic of the quota selection that the respondents are selected based on the characteristics. The specific people to be interviewed can be freely selected. They only must correspond to the specified quotas, viewed in terms of the sum of the interviews.

If carried out correctly, a sample is created that corresponds to the composition of the population in terms of all individual quotation characteristics. The quota method is inexpensive, quick, and flexible to use. In such cases it is also often advisable that a random selection can no longer be used or only with a disproportionately large amount of effort (Berekoven, Eckert, and Ellenrieder, 2009, pp. 50-51). The sample of the quota procedure was calculated based on statistical data, as shown in *table 6*. The total number of all employees (white-collar and blue-collar workers) in the packaging industry in Austria, which was 14,961 in 2019, was generally used. Of these 14,961 total employees in Austria, around 4,125 are white-collar workers. The sales staff in the packaging industry in Austria are among these white-collar workers. In order

to find out how many employees are in sales; a general percentage was used for the calculation. On average, 3% are employed in sales (WKO, 2019).

Table 6: Quota procedure

Quota procedure
Number of total employees in the packaging industry: 14,961
Number of white-collar workers in the packaging industry: 4,125
Sales force approx. 3% of the white-collar workers
~ 120 sales employees to be surveyed

Source: Author's table

The representativeness is given, because all units of a predefined population have a possibility of being chosen for the spot check. In this case it applies, because everyone can be contacted and responded to via the internet, since the sales force has internet access via tablet, laptop or computer (Berekoven, Eckert, and Ellenrieder, 2009, p. 107).

3.3.2 Evaluation methodology

The statistics program SPSS was used to organize the market research data obtained, to prepare it for and to carry out the evaluation. Descriptive statistics/frequencies are used for evaluation. The focus is on the following question: "How often does a certain value or classified characteristics, such as e.g. age groups, suggest a certain class of values?".

Cross-tables are used to test the hypotheses of association. The hypotheses are derived from the analysis of the qualitative research. Cross-tables are the simplest way to visualize relationships between two or more variables. Cross-tables are suitable for the presentation and analysis of relationships between nominal and ordinal scaled features. With the help of cross-tables, all possible combinations of characteristics of two or more variables are shown using a cross-table, also known as a matrix. The frequency with which each combination occurs in the examination objects is then incorporated into a matrix. The big advantage of cross-tabulation is that no metric scale level is required. As in the quantitative survey carried out, the relationship between ordinally scaled data can also be examined using Likert-scales, which have the ordinal scale level. Whether this relationship is statistical, i.e. whether it can be transferred to the population, can be checked with the chi-square test (Berekoven, Eckert, and Ellenrieder, 2009, p. 192). The main applications consist in the examination of the deviation of an empirical from an assumed theoretical distribution and in the independence test of variables (Berekoven, Eckert, and Ellenrieder, 2009, p. 223).

4. EMPIRICAL STUDIES

In 2021 Constantia Flexibles is among the internationally biggest producers of packaging materials in the pharmaceutical and consumer market. Headquartered in Vienna, more than 10,000 employees are working in 55 plants in 24 countries worldwide. With an annual turnover of around € 2 billion, generated in 140 countries, more than 4,000 customers are served. Due to this fact the company is considered as a representative example for the packaging industry. In the following, the results of the interviews, the hypotheses formed based on the interviews, and the results of the quantitative survey are presented.

4.1 Qualitative research

4.1.1 Execution

In order to gain access to the field and the widest possible knowledge spectrum, sales employees from all sales regions, as well as different hierarchy levels (regional sales manager, key account manager, account manager) of the Constantia Flexibles Group will be interviewed in an empirical setting. The selection criterion for sales employees is that they must deal directly with CRM-systems or CRM-approaches in their daily work. Fourteen employees will be selected for this purpose, who, in order to protect anonymity, are only mentioned with their job title and area of responsibility.

1. Key Account Manager "Germany, Austria, Switzerland, Scandinavia" (pre-study)
2. Account Manager "Eastern Europe" (pre-study)
3. Account Manager "Western Europe, Turkey, Africa"
4. Account Manager "Asia, Pacific"
5. Key Account Manager "Germany, Austria, Switzerland, Scandinavia"
6. Regional Sales Manager "Germany, Austria, Switzerland, Scandinavia"
7. Account Manager "Iberia"
8. Regional Sales Manager "North America"
9. Key Account Manager "Western Europe, Turkey, Africa"
10. Regional Sales Manager "Asia, Pacific"
11. Account Manager "Asia, Pacific"
12. Regional Sales Manager "Iberia"
13. Key Account Manager "Latin America"
14. Account Manager "North America"

The data collection has been conducted in a predefined space of time. The overall readiness for the interviews and the following assessment of the obtained data was elucidated via initial communication by telephone or e-mail. Afterwards, appointments for telephone-interviews were scheduled at greater regional ranges, or appointments for individual discussions (shorter distance). A willingness for the audio recordings of the conversations has also been requested up front.

During an experimental trial of the interviews with two picked interview partners, the overall appropriateness of the interview guide was examined. Since no problems and difficulties could have been observed, the prepared guide has not been further modified and the outcomes of the interviews of the initial study were incorporated into the main research right away. In preparation of the summary content analysis according to Mayring, two category types could have been generated (main and sub categories).

In the second qualitative research, six sales employees from the Constantia Flexibles Group and three external CRM-experts from providers of CRM-systems on the market will be interviewed. The interviews of the sales staff will be used to determine the needs for the acceptance of a CRM-system. Interviews with the external CRM-experts are the objective counterpart of the internal interviews and are intended to bring additional specialist and industry knowledge and objectivity. A requirement profile for a CRM-system in the packaging industry will be derived from the results of the second qualitative research in order to increase employee acceptance. A criteria catalogue is created from the requirement profile in order to answer the respective research question.

4.1.2 Results

The starting point for the presentation of the results is an overall analysis of the main categories and the respective number of entries in the guided interviews. The sources of the statements made are the conducted interviews.

Figure 21 shows the overall analysis of the main categories (requirements, benefits, profit, problem, and efficiency). As a result of the summarized content analysis, 190 exploitable statements from the interviews, which are assigned to these categories, could have been obtained. The main category "requirements" describes the prerequisites for the successful introduction of a CRM-system with the goal that this system is appropriately used and maintained. The category "benefits" refers to the expected advantages from the usage of a

CRM-system. The initial research question of this thesis is covered by the category "profit". The main category "problem" contains possible or expected problems when working with CRM-systems or CRM-approaches and the category "efficiency" refers to the prerequisites for efficient work.
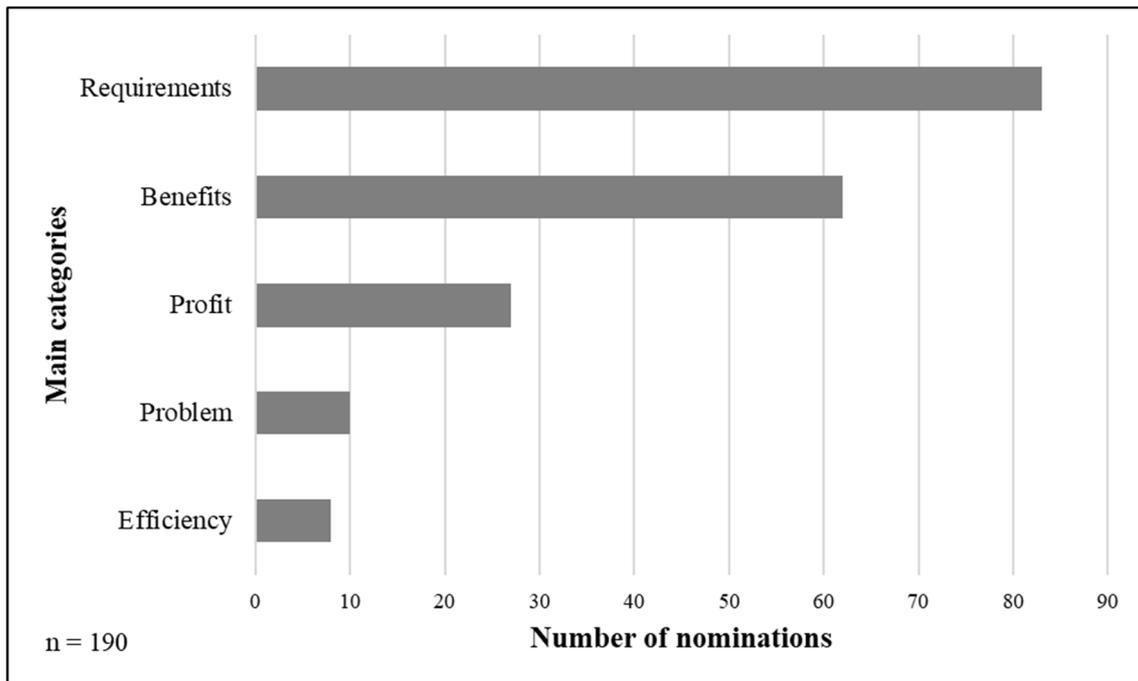
Figure 21: Overall analysis of the main categories
Source: Author's figure

When presenting the results, it must be considered that sub categories can appear in several main categories. The respective sub category is therefore always to be viewed and understood in relation to the concrete main category, since one and the same sub category can influence different aspects. An example here is the time saving that can result from working with CRM-systems. According to the interviewees, this can have an impact on the profit, but is also considered as a basic prerequisite for a CRM-system, an increase in efficiency, and thus a concrete benefit.

The identified main category "requirements" is highly belonging to the acceptance criteria of CRM-systems. As a further consequence, a subsequent detailed qualitative and quantitative analysis of this category is conducted, which is subject of this doctoral thesis. It provides additional in-depth knowledge and insights with regards to acceptance criteria for CRM-systems and furthermore its success to contribute to the overall goal of an increased profitability and development of corporations in the packaging industry.

Out of the results of the qualitative evaluation, a profile of requirements and furthermore an overview of acceptance criteria for CRM-systems in the packaging industry is generated. The starting point for the presentation of the results is an overview about previously carried out research on the qualitative identification of design features of a CRM-system, which can contribute to an increase in sales. The sources of the statements made are the conducted interviews.

4.1.2.1 Main category: "requirements"

The main category "requirements" (see *figure 22*) refers to the prerequisites for the successful introduction of a CRM-system and the goal that the system is used and maintained appropriately by the employees. Statements on this main category can be obtained mainly from the questions about the experience gained so far when working with CRM-systems and their most important characteristics.

The appropriate involvements of the users, as well as a simple handling of the CRM-system are named most. The CRM-system must bring added value to all users and integrate them fully in advance in order to take account of their needs and desires. In this context, it is important to know, who the decision-makers are in implementing a CRM-system in order to be able to incorporate all needs. It must be communicated, why a CRM-system is introduced and what exactly the concrete benefit of this system is. Only the recognition of the meaningfulness of a CRM-system and the provision of a surplus value for the daily work can lead to acceptance by the respective users. It must be easy to use and to maintain, so the chance of an on-going update is correspondingly large. A living system must be continuously updated. This must not involve too many efforts, since no one will work with the system, if this is the case.

A CRM-system must provide useful information and not just consist of entering data. It should also not only be an instrument for the management level. The import of data into the CRM-system must be done in a reasonable framework and not every small change should be updated immediately. The data input must be simple and accessible from anywhere. The system must not be used as a control function and should provide an actual benefit.

There must be training during the implementation and installation of a CRM-system. Furthermore, regular training on a CRM-system is important, as the system is dependent on the quality of the data and the better the employees are trained, the better the input and quality of

the data. The advantages of such a system need to be illustrated by clear and understandable examples.
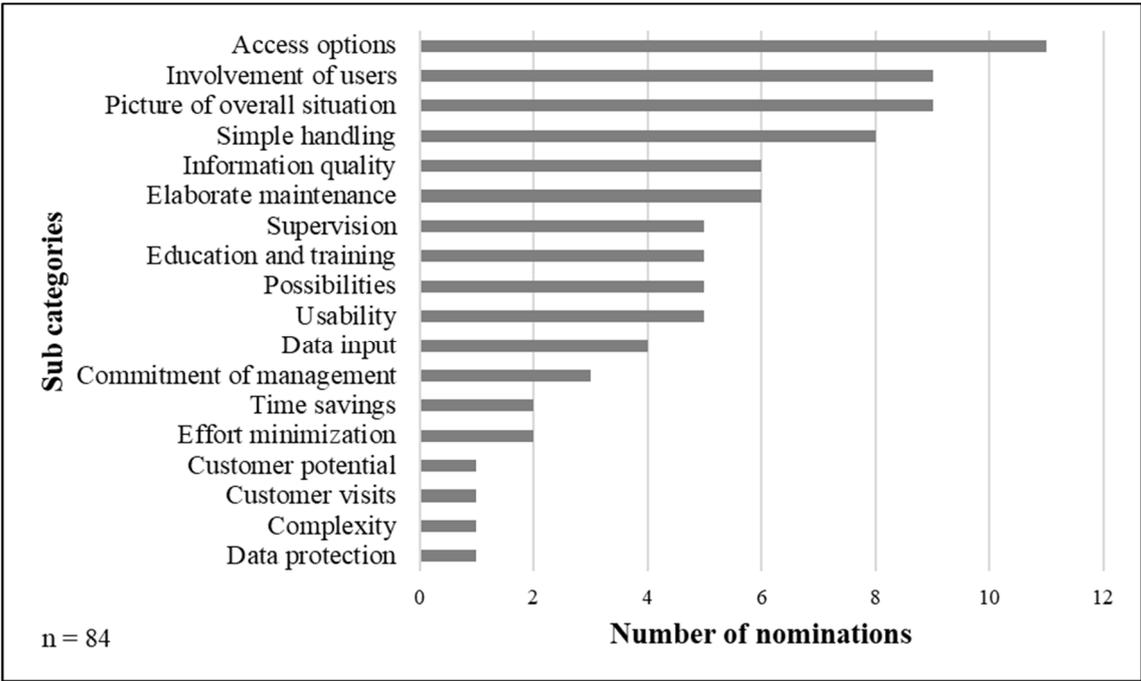

Access options
Involvement of users
Picture of overall situation
Simple handling
Information quality
Elaborate maintenance
Supervision
Education and training
Possibilities
Usability
Data input
Commitment of management
Time savings
Effort minimization
Customer potential
Customer visits
Complexity
Data protection

Sub categories

0   2   4   6   8   10   12
Number of nominations

n = 84

Figure 22: Analysis of main category "requirements"
Source: Author's figure

The employees must be convinced that the CRM-system is important in terms of their daily work and their success as sales representatives. Since some people might be not open-minded enough with regards to changes, they must be convinced that the respective change brings added value to them. Then acceptance can take place. User-friendliness plays a decisive role. If this is not the case, the system's utilization rate will be correspondingly low.

The importance of the CRM-system must be clarified throughout the organization starting from the management level. There must be a willingness of the organization to work with the system in the future. All users should be informed about the meaningfulness and importance for the corporation. Starting from an expectation, the necessary decisions must be taken.

The use of a CRM-system may not exceed a certain amount of work, since otherwise it loses its benefit. It must ensure that employees have enough time for other work. Such a system is intended to simplify work for users. CRM-approaches from the past have failed due to lack of acceptance and too high complexity. Systems are regarded as control instruments, which are associated with additional work.

4.1.2.2 Main category: "benefits"

The main category "benefits" (see *figure 23*) refers to the expected benefits from the use of a CRM-system. In this context, the respondents already mentioned possible increases in customer satisfaction and a reduction in internal costs.
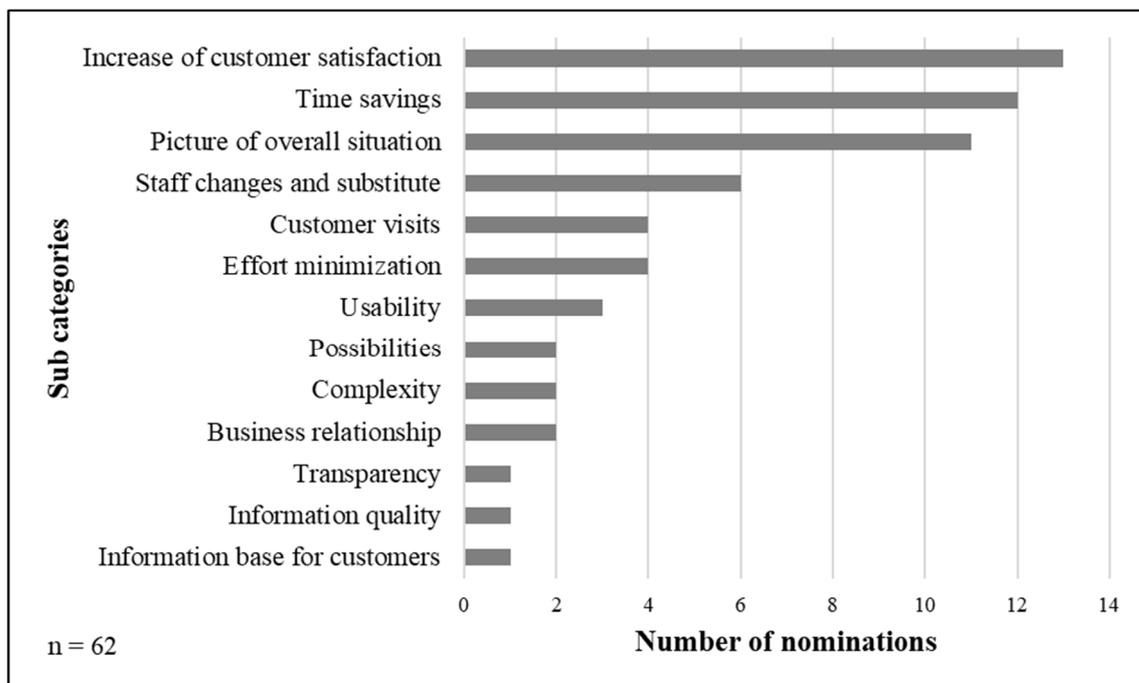
Figure 23: Analysis of main category "benefits"
Source: Author's figure

The most frequently cited is an increase in customer satisfaction through better and more efficient customer service and support in combination with numerous other relevant and related aspects. CRM-systems help to avoid errors or problems and strengthen the trust in the organization. In addition, customer visits can be better prepared and planned, and customers can be brought to the desired solution more quickly. Reaction times are thereby significantly shortened. In addition, CRM-systems, by providing a clear overview of all customer-related information, tend to think about the customer, the identification of competitive advantages, and, above all, the specific reasons for the customer's decision-making.

Time-savings for all parties involved in a CRM-system or CRM-approaches are achieved by a targeted and clear collection and centralization of information. The faster, easier, more intuitive, and more user-friendly the data is available, the less confusion must be eliminated in

advance and the higher the time-savings and thus the respective cost savings. In addition, a functioning CRM-system helps to avoid duplication, which also results in time-savings.

The benefit of a CRM-system is also seen in the improved possibility to get a corresponding picture of the respective overall situation or the depth of a commercial association with a client. This can be used to react more quickly to unforeseen circumstances. With regards to the presentation of an overall situation via a CRM-system, the following points have been mentioned in the interviews: customer contacts, order backlogs, basic data of the customer, opportunities and potentials, developments of trends, projects, innovations, customer history, customer satisfaction analyses, deliveries, price lists, quality problems, complaint ratios, statistical analyses, sales data and sales developments, special customer requirements, growth rates, a global overview, and information about competitors.

In the case of a change of employees from one department to another or into a new company or a general loss of personnel (e.g. due to illness, parental leave, burnout, etc.), a CRM-system secures the relevant information and makes it accessible for the respective substitution. The concrete use is thus the sharing of knowledge, which in general only exists in the minds of certain employees.

A CRM-system can be used to plan customer visits better and more professionally, as well as to prepare questions more precisely, which creates a concrete added value for the customer. The system must be sensible, practical, as well as easy for the user, and must not generate any overhead, because of too much complexity. It helps to deal with customers by portraying the customer's expectations. It also assists with the information management itself, and the improvement of feedback from internal and external sales force. It therefore improves the business relationship to the customer. In addition, strategic and operational benefits are achieved, transparency is created, and the ability to meet objectives is improved.

4.1.2.3 Main category: "profit"

The main category "profit" (see *figure 24*) refers to the initial research question of this thesis, namely the effects of the influence of CRM-systems on company turnover, sales, or the overall development respectively. Statements on this main category can be obtained from the specific questions regarding this influence of the interview guide.

The most frequently mentioned category is the "increase of customer satisfaction", which is mainly seen in direct connection with a positive sales impact. The more service a supplier can offer, and the more uncomplicated and comfortable the relationship of a customer with his supplier, the greater the customer retention will be. The provided services generate benefits and added value, which ultimately have an impact on sales. Price, quality, and reliability are crucial. In addition, customers can be supported in new projects and training of personnel. If the customer is satisfied with the supplier and orders or buys more, sales will increase accordingly.

A functioning CRM-system leads to a stronger customer relationship, as well as motivated employees. In general, business with customers can be increased. If certain problem situations are solved faster for the customer, a positive impact on sales can be generated.

By accessing customer-relevant data, the resulting improved service increases customer satisfaction and thus also sales. If the CRM-system influences the supply chain and the working capital, there is financial value on both sides (customer and supplier). This is due to the analysis of optimization potentials in warehousing or weaknesses in liability management.
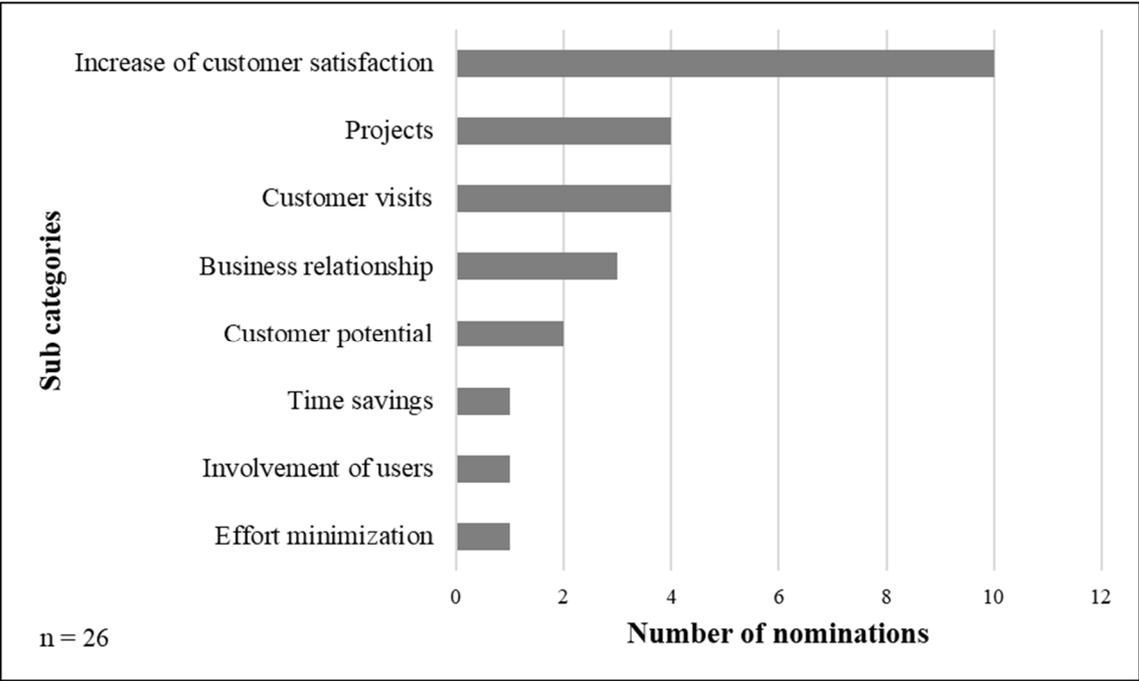
Figure 24: Analysis of main category "profit"

Source: Author's figure

If both, the internal and external customer satisfaction is increased, it leads to more sales, as more trust is created towards the customer. Furthermore, a CRM-system can interfere with

revenues when generating projects. If it helps to keep track of projects and issues that could be successful in the future, it can have a direct impact on sales. Another profit-influencing factor would be the requirement analysis. It generates opportunities to reach customers, who are not yet supplied. A CRM-system can generally lead to more opportunities, which in turn lead to higher sales, if a positive conclusion is reached.

The better customer conversations could be prepared via centralized and high-quality information, and the more analyses can be generated, the higher is the probability of a positive influence on the economic success and development of a corporation. The more competent the appearance at the customer through a professional preparation, the better the conversation with the customer, which in turn further influences the outcome of the conversation positively. Without a CRM-system, the company could be perceived unqualified and unprepared, which in turn would result in a negative effect on client relationships and therefore on the profit and development of the respective corporation.

As a CRM-system helps to expand the business relationship with a customer, sales can also be increased accordingly. If problems of the customer are solved promptly via the support of a CRM-system, it has concrete effects on the business success and the profit. The image of an uncomplicated supplier, which can provide information quickly, solve problems, provide good service and support, has a positive impact on sales and is a strategic competitive advantage. Through appropriate insight into customer developments and the identification of potentials, the profit can also be positively influenced.

With a CRM-system, the efficiency can be increased, which also has a positive effect on sales in medium term. Timesaving and the opportunity to devote the time gained to other things also generates a positive sales-influencing effect.

4.1.2.4 Main category: "problem"

The main category "problem" (see *figure 25*) refers to possible or expected problems when working with CRM-systems or CRM-approaches. Statements on this main category can be gained from the questions about the experiences with CRM-systems and efficient work from the respective interview guide.

The information quality is most frequently mentioned here. In the case of the generation of information, the relevant persons who are contacted are primarily responsible. Often the right

contacts are not known. The better the familiarity with a company location, the more targeted information can be requested.

With regards to the accessibility, it needs to be kept in mind that older employees often face greater difficulties with new systems and changes compared to younger ones. Furthermore, some failed attempts of CRM-implementations might already have been experienced, and the belief in the success of the system has already been blurred in advance of a new system implementation. It depends primarily on the open-mindedness of the respective employees, how the attitude is opposed to a CRM-system. Single problems mentioned are the complex maintenance of CRM-systems and the limitation of the benefit to a managerial level, as well as the association of such a system with control instruments, and the fear of the employees with regards to a replacement by sharing their knowledge.
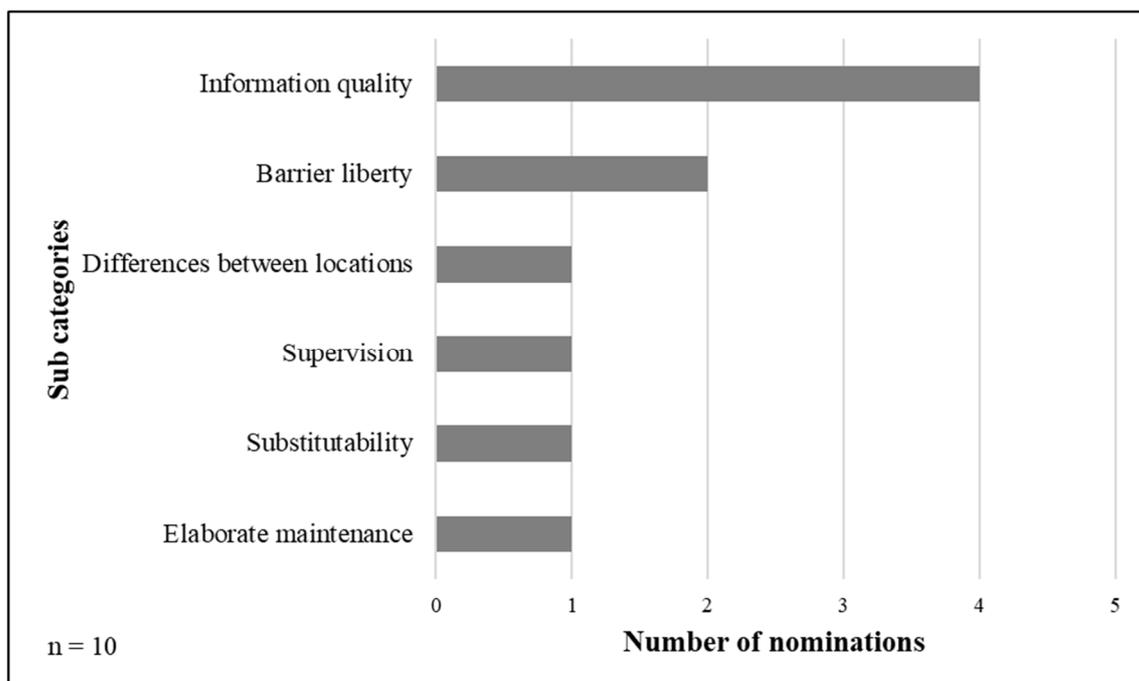
Figure 25: Analysis of main category "problem"
Source: Author's figure

4.1.2.5 Main category: "efficiency"

The main category "efficiency" (see *figure 26*) refers to the prerequisites for efficient work in general and with a CRM-system. The comparatively low number of nominations is based on the circumstance that statements on the main category "profit" could be incorporated more clearly in view of the initial research interest of this doctoral thesis.

The most frequently mentioned is the need for good networking and support with and through colleagues from the entire company group, as well as timely, professional, and above all, reliable feedbacks on inquiries. The presence of the necessary information in the CRM-system and the easy and intuitive access to it are indispensable for dealing with the daily concerns. Related to this is the sub category of information quality, where the possibility of direct forwarding of high-quality information to the customer is mentioned.

In order to work efficiently, a corresponding transparency of the existing data base for all employees is necessary, as well as the differences between the sites with regards to the provision of information. The latter are mainly due to different organizational structures, a different product portfolio, and a corresponding complexity or degree of standardization and within the respective company culture. In the case of customer inquiries concerning different locations, it results in differing efficiencies in the processing of inquiries.
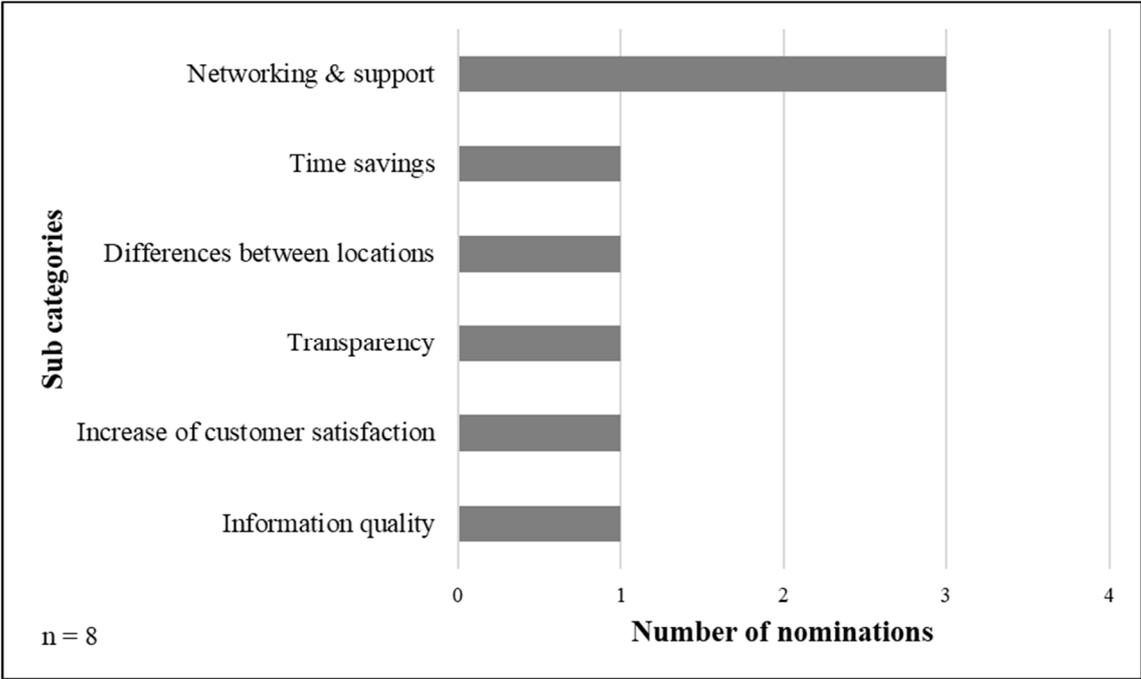
Figure 26: Analysis of main category "efficiency"

Source: Author's figure

The more information is available through a CRM-system and the higher the information quality, the faster and better the decisions can be made, and the more efficient daily work can be executed. As a result, this creates the impression of process control with customers and consequently increases a positive perception. This in turn results in a positive impact on the relationship with the client.

4.1.2.6   Acceptance of CRM-systems

Figure 27 shows the distribution of the main influencing factors for the acceptance of CRM-systems. A certain similar distribution of the determinants (person, technology, and management) can be recognized. Task-related and organizational factors account for the least amount. This means that the acceptance of CRM-systems in the packaging industry largely depends on person-related, technology-related, and management-related factors.
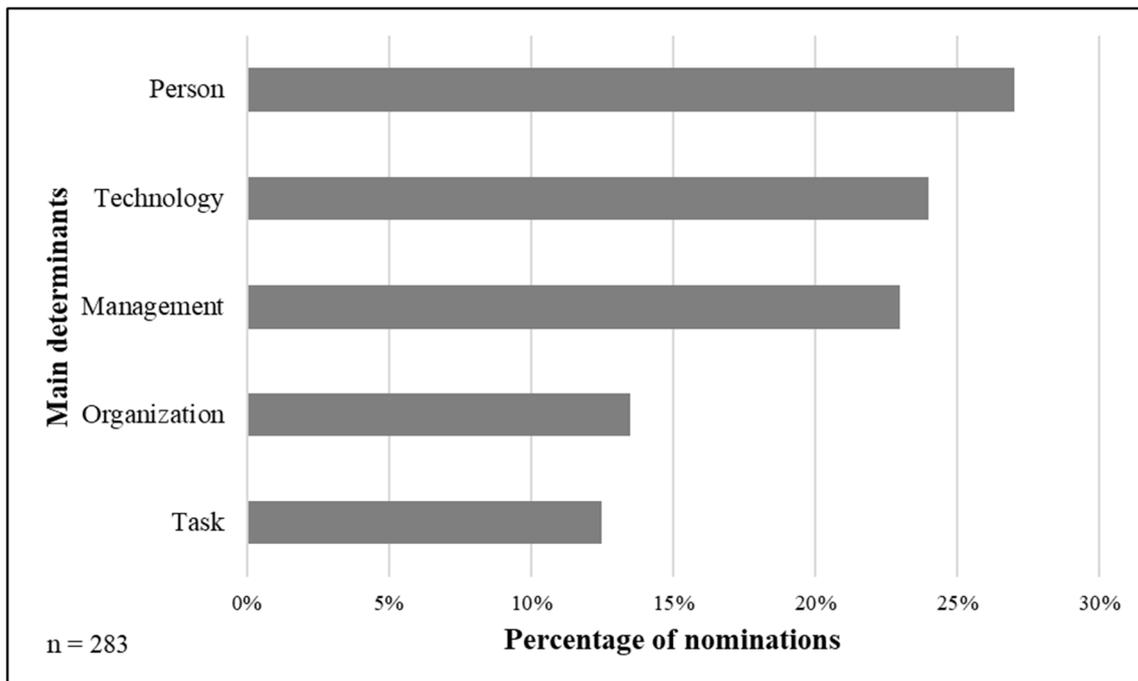

Figure 27: Analysis of main determinants for acceptance

Source: Author's figure

In a further step it has been examined into which sub categories the result of the distribution of the main determinants can be classified. The selection of sub categories was based on the sub categories of the determinants of acceptance of CRM-systems, described in the theoretical part of this thesis.

Figure 28 is indicating that the system's supportability has the biggest impact on acceptance with a level of 16%. During the interviews, the added value has been often mentioned in this relation. Only the recognition of the meaningfulness of a system and the provision of an added value for the daily work can lead to acceptance by the respective users. The employees must be convinced that the CRM-system is important in terms of their daily work and their success as sales representatives. Since some people might be not open-minded

enough with regards to changes, they must be convinced that the respective change brings added value to them (change management). Then acceptance can take place. User-friendliness plays a decisive role. The system's utilization rate will be correspondingly low, if this is not the case.
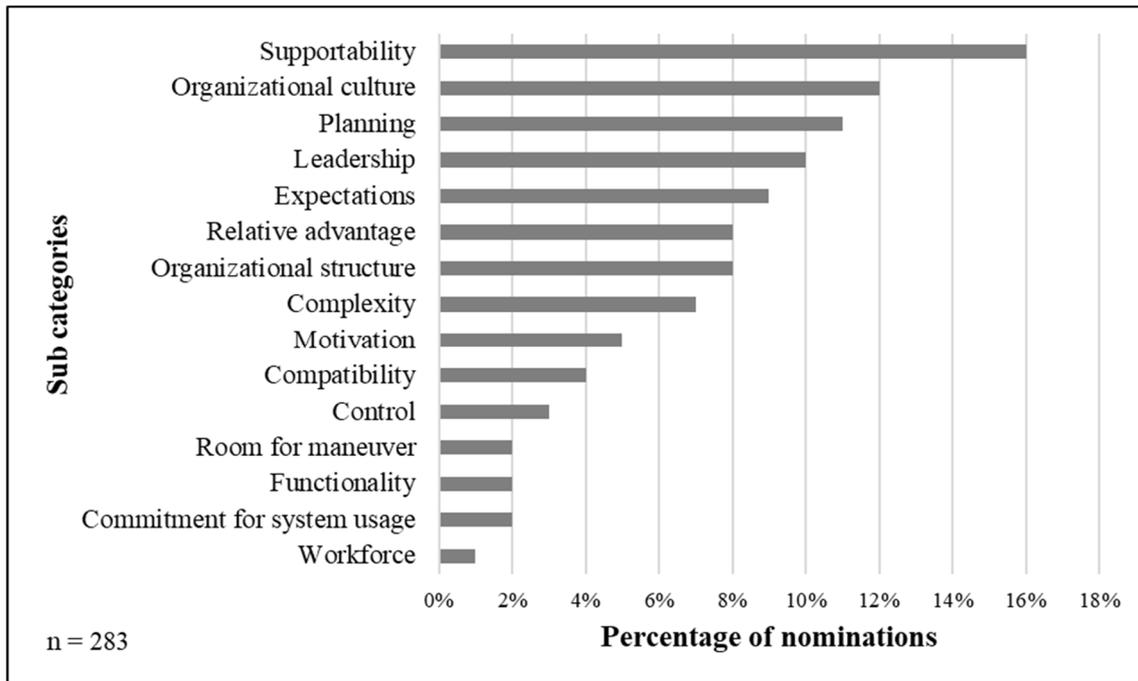

Figure 28: Analysis of sub categories

Source: Author's figure

The analysis also showed that an organizational culture that supports and is open to innovative technologies is important (12%). The willingness to innovate should therefore be correspondingly high and knowledge must be shared. The data input must be simple and accessible from anywhere. The system must not be used as a control function and should provide an actual benefit. There must be training during the implementation and installation phase of a CRM-system. Furthermore, regular training on a CRM-system is important, as the system is dependent on the quality of the data and the better the employees are trained, the better the input and quality of the data. The advantages of such a system need to be illustrated by clear and understandable examples.

The importance of the CRM-system must be clarified throughout the organization starting from the management level (sub categories "planning" and "leadership"). There must be a willingness of the organization to work with the CRM-system in the future. All users should be informed about the meaningfulness and importance for the corporation. Starting from an expectation, the necessary decisions must be taken. The use of a CRM-system may not exceed

a certain amount of work, since otherwise it loses its benefit. It must ensure that employees have enough time for other work. Such a system is intended to simplify work for users. CRM-approaches from the past have failed due to lack of acceptance and too high complexity. Systems are regarded as control instruments, which are associated with additional work.

As part of the generalization of the text passages and evaluation of the conducted interviews, the following criteria for the acceptance of CRM-systems in the packaging industry could have been identified.

- Added value
- Awareness creation
- Management, commitment, and involvement
- Planning and implementation
- Usability

For the acceptance of a CRM-system, the added value is crucial. The user must realize that the system is more than just a management control tool. They need to feel that the use of the system gives them additional value. The usability, as a technology-related determinant of the acceptance of CRM-systems, describes that CRM-systems must be easy, fast, and mobile with regards to their usage. The system must support the user in everyday life and should be logical and intuitive, as complex systems lead to rejection and demotivation. The awareness that the CRM-system is important to the company is part of the organizational culture. The system must therefore be transparent and not giving the user the feeling of being replaceable. There must be a rethink, because nowadays, many leads cannot be handled alone. CRM must be understood as part of the corporate strategy.

As part of the planning and implementing of a CRM-system, management must make fundamental decisions about goals, usage, and expectations. Employees must be involved in the process right from the start. The decision for a CRM-system is made by the top management. The management must therefore stand behind the project and support it. Employees who are not convinced by the system must be motivated accordingly by them.

During the empirical investigation it could be determined that certain influencing factors are responsible for the acceptance of CRM-systems. The qualitative evaluation of the interviews led to the development of a collection of criteria to promote the acceptance of CRM-systems in

the packaging industry. These categories must be considered so that the system can be accepted by the employees or users.

4.2 Quantitative research

4.2.1 Execution

The following hypotheses were developed based on the interviews that were carried out, analysed, and explained in the previous *chapter 4.1*.

$H1_0$ There is no connection between the age of a sales representative and the characteristic "customizability" that a CRM-system should have.

$H1_1$ There is a connection between the age of a sales representative and the characteristic "customizability" that a CRM-system should have.

$H2_0$ There is no correlation between the age of a sales representative and the "extra work" concern about a CRM-system.

$H2_1$ There is a correlation between the age of a sales representative and the "extra work" concern about a CRM-system.

$H3_0$ There is no connection between previous experience in dealing with CRM-systems and the concern "technical overload" compared to CRM-systems.

$H3_1$ There is a connection between previous experience in dealing with CRM-systems and the concern "technical overload" compared to CRM-systems.

The link to the online questionnaire was sent to 120 people. A total of 101 people from various Constantia Flexibles locations took part in the survey. The response rate is thus 84.16%. The people surveyed all come from different sales departments. As can be seen in *figure 29*, 44% of the salespeople surveyed are masculine and 56% of the informants are feminine.
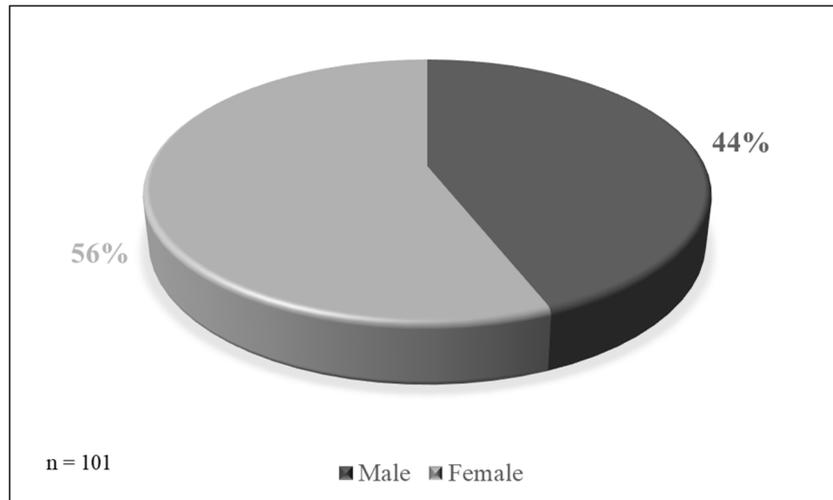
Figure 29: Division of gender
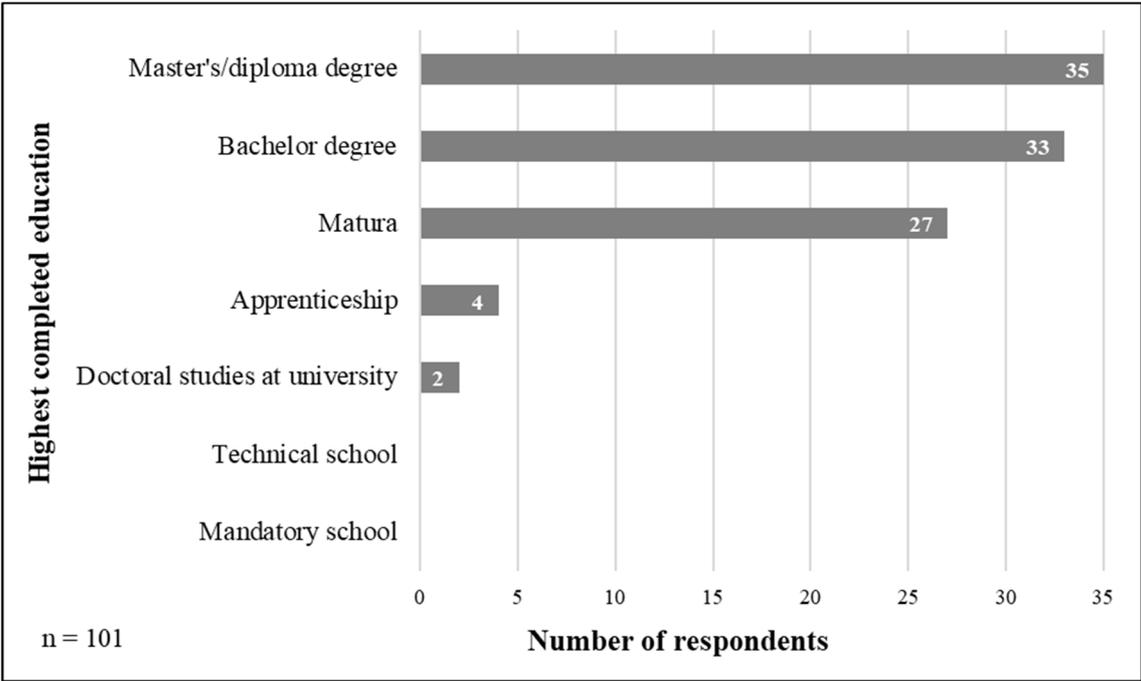
Source: Author's figure

4.2.2 Results

The outcome of the quantitative survey is described in this chapter. *Figure 30* shows how many of the people surveyed are in which age groups. 33 of the respondents are 30 years or younger. There are 28 people each between the ages of 31 and 40 and between the ages of 41 and 50. The rest of the people are over 51 years old. The mean age of the informants is 37.6 years.
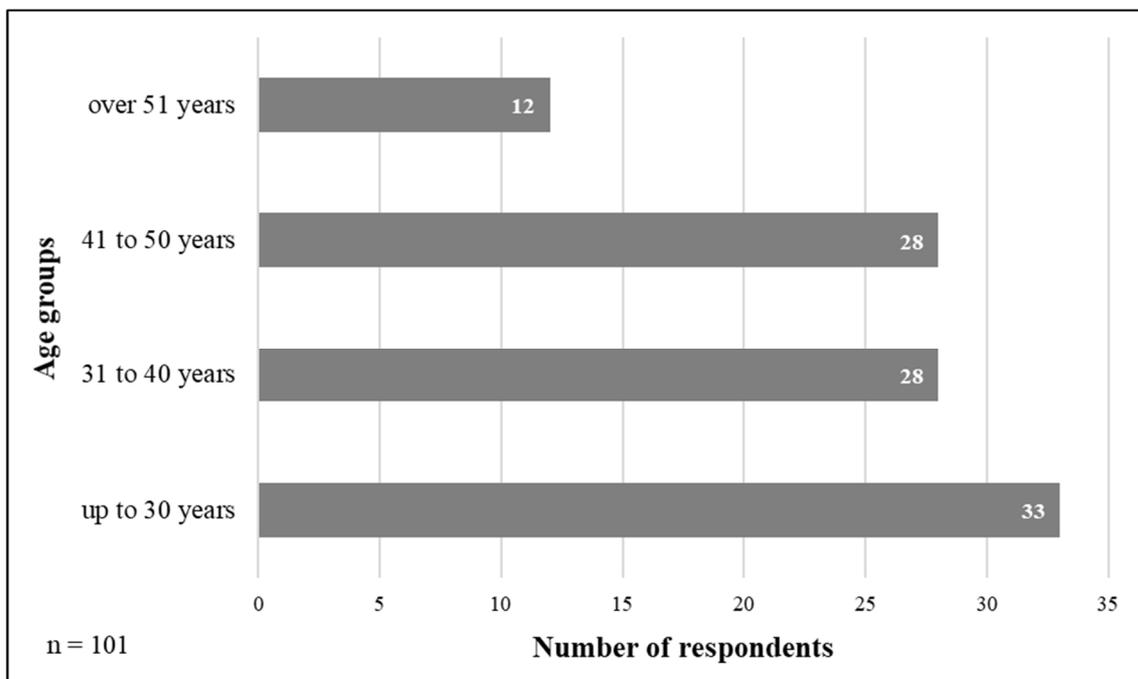
Figure 30: Age groups of respondents

Source: Author's figure

In addition, the highest level of education completed by the respondents was asked and visualized in *figure 31*. Four people have completed an apprenticeship. None of the respondents have completed compulsory schooling or a technical college. Most people have completed a master's/diploma degree at a university or university of applied sciences. The completion of a bachelor's degree at a university or technical college or the degree with a Matura are in the middle.

Figure 31: Highest completed education

Source: Author's figure

The first question in the questionnaire, as visualized in *figure 32*, relates to information on how the respondents rate their experience with CRM-systems. Since a CRM-system at Constantia Flexibles was only recently implemented or is currently in the implementation phase, only 3% of those questioned said they had very good experience in dealing with CRM-systems. 33% rated their experience as good and another 39% have mediocre experience in dealing with CRM-systems.
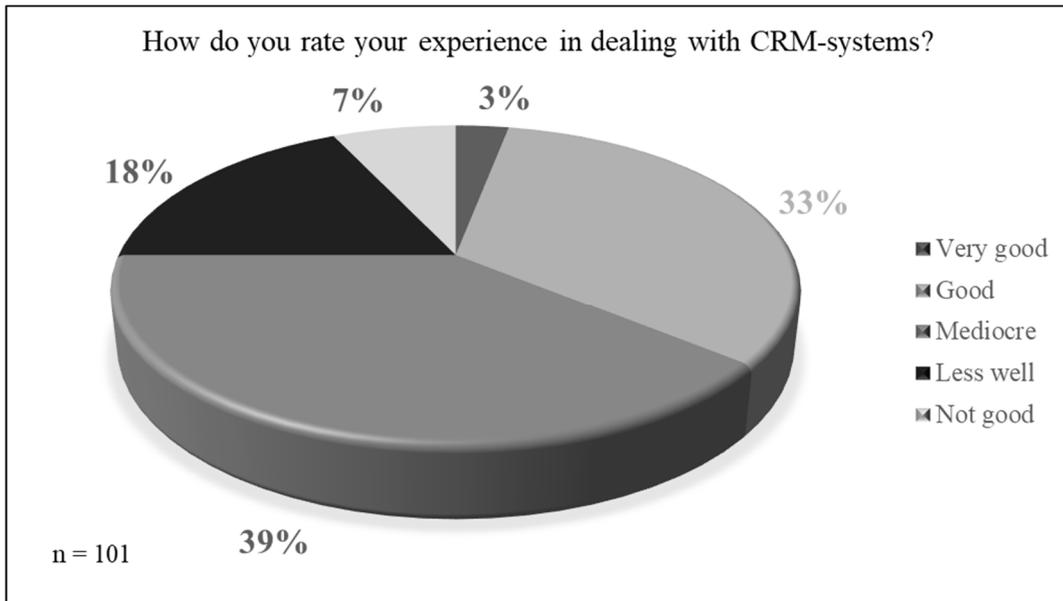
Figure 32: Experience with CRM-systems

Source: Author's figure

For the second question, "How important are the following properties that a CRM-system should have?", the most important properties were completeness, reliability, usefulness, and timeliness. As can be seen in *figure 33*, the format was least often defined as "very important" for the respondents.
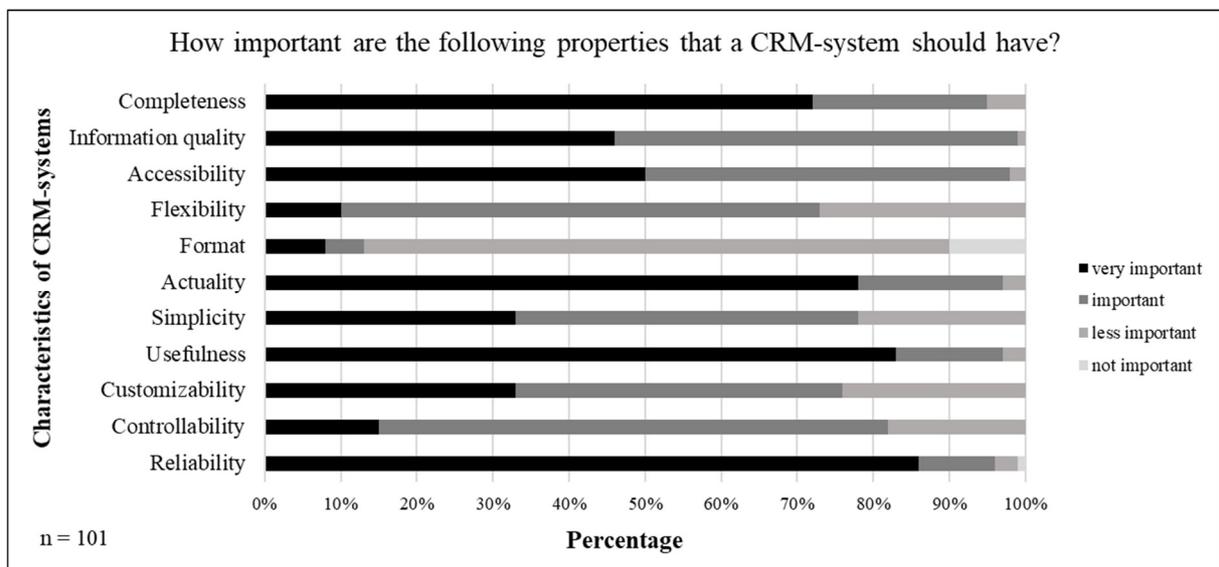

Figure 33: Importance of CRM-properties

Source: Author's figure

The third question answered the importance of various activities that a CRM-system should have and has been visualized in *figure 34*. Faster data and knowledge exchange are the

most important activity of a CRM-system for the people surveyed. More efficient customer service and access to customer data were named as further important activities. This was followed immediately by support for the sales processes and improved opportunity and lead management. Protection against data loss and misuse and transparency in customer care were often described as less important.
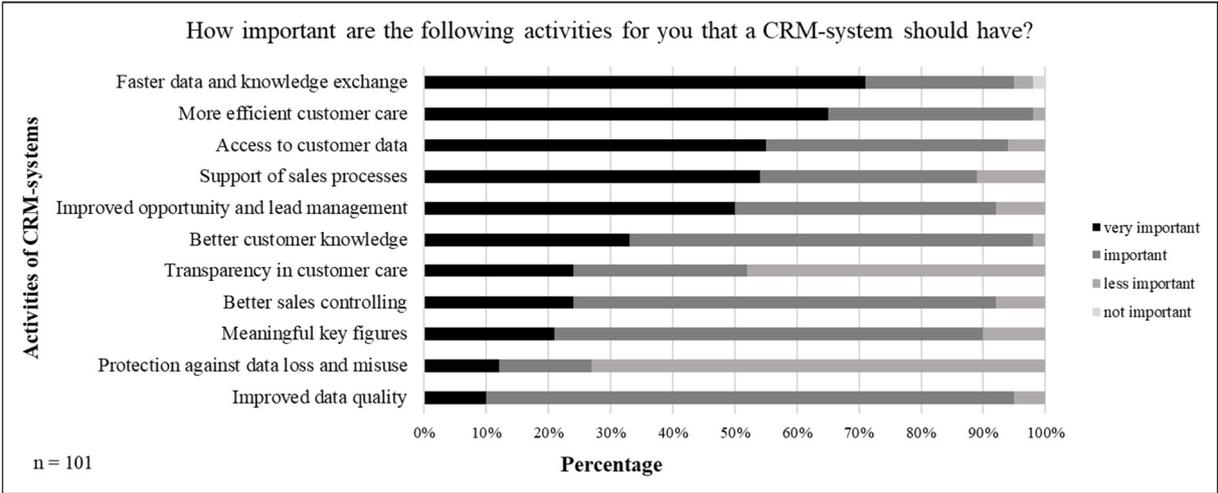

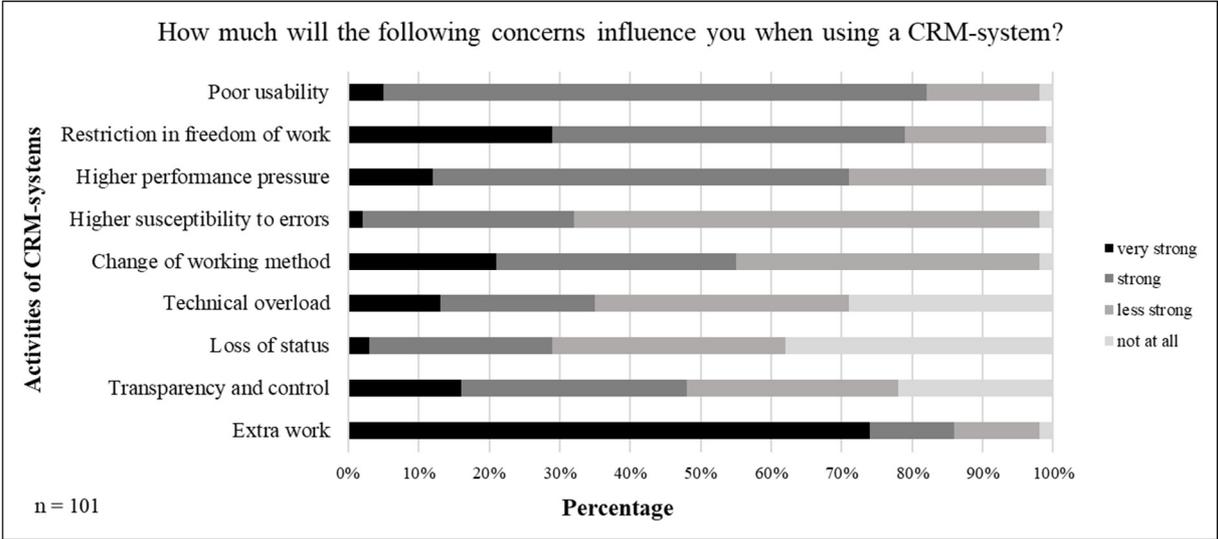*Figure 34:* Importance of CRM-activities

Source: Author's figure

Figure 35: Concerns about using a CRM-system

Source: Author's figure

Figure 35 shows how strongly the following concerns affect employees when using CRM-systems. Overtime has a strong influence on over 70% of those surveyed when using it. Restrictions on freedom of work and changes in working methods come in second and third

place. Higher performance pressure and poor usability were also cited as strong concerns of the sales staff. Loss of status and excessive technical demands have the least influence on the sales employees surveyed.
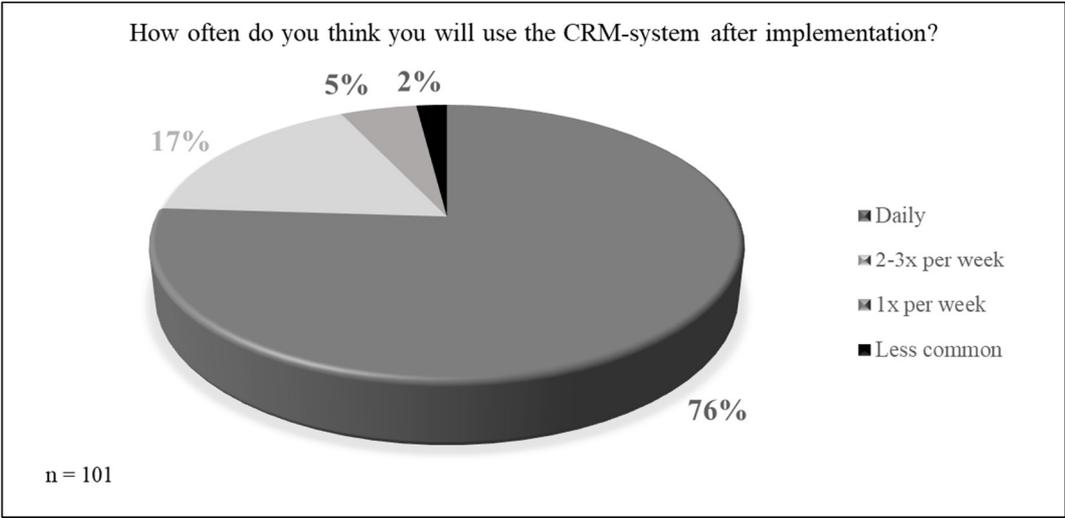

Figure 36: Frequency of use of CRM-systems

Source: Author's figure

Figure 36 shows the frequency of use after the implementation of a CRM-system in the corporation. 76% of the people surveyed think that they will use the CRM-system every day after successful implementation and only 2% assume that they will rarely use it.

The hypotheses testing is now carried out, starting with the correlation test between age and properties in relation to CRM-systems. As it can be seen in *table 7*, p is $0.001 < 0.05$ (the significance is less than alpha). It can thus be said that there is a connection between the age of a sales employee and the property "customizability" that a CRM-system should have. Therefore, hypothesis $H1_1$ is accepted.

H1₁   There is a connection between the age of a sales representative and the characteristic "customizability" that a CRM-system should have.

Table 7: Correlation test between age and properties in relation to CRM-systems

Related variables	Chi square, Pearson Asymptotic significance	Spearman
Age and reliability	0.204 → not significant	-0.289 → no correlation
Age and controllability	0.139 → not significant	0.183 → medium to strong correlation
Age and customizability	**0.001 → highly significant***	**0.417 → strong correlation**
Age and usefulness	0.073 → only 27% significant	-0.280 → no correlation
Age and simplicity	0.049 → 51% significant	0.202 → strong correlation
Age and actuality	0.035 → 65% significant	-0.302 → no correlation
Age and format	0.151 → not significant	0.190 → medium to strong correlation
Age and flexibility	0.419 → not significant	0.060 → little correlation
Age and accessibility	0.363 → not significant	-0.238 → no correlation
Age and quality of information	0.358 → not significant	-0.088 → no correlation
Age and completeness	0.046 → 54% significant	-0.152 → no correlation

*99% probability that there is a connection

Source: Author's table

The correlation testing between experiences and concerns about CRM-systems is shown in *table 8*. $p = 0.100 > 0.05$ shows that the significance is greater than alpha. It can therefore be said that there is no connection between the age of a sales representative and the concern about "extra work" in relation to a CRM-system. Therefore, the hypothesis $H2_0$ is accepted.

H2₀   There is no correlation between the age of a sales representative and the "extra work" concern about a CRM-system.

Table 8: Correlation test between age and concerns about extra work

Related variables	Chi square, Pearson Asymptotic significance	Spearman
Age and overtime	**0.100 → not significant**	**-0.289 → no correlation**
Age and transparency/control	0.222 → not significant	-0.387 → medium to strong correlation
Age and status loss	0.009 → highly significant*	-0.130 → no correlation
Age and technical overload	0.006 → highly significant**	-0.149 → no correlation
Age and working style change	0.000 → highly significant	-0.390 → no correlation
Age and higher susceptibility to errors	0.081 → only 19% significant	-0.059 → no correlation
Age and performance pressure	0.000 → highly significant	-0.468 → no correlation
Age and restriction of freedom of work	0.116 → not significant	-0.278 → no correlation
Age and poor usability	0.271 → not significant	-0.151 → no correlation

*91% probability that there is a connection
**94% probability that there is a connection

Source: Author's table

The correlation testing between experiences and concerns about CRM-systems is shown in *table 9*. $p = 0.035 < 0.05$ shows that the significance is less than alpha. It can thus be said that there is a connection between the experience of a sales employee in dealing with CRM-systems and the concern that a CRM-system is "technically overwhelmed". Therefore, hypothesis $H3_1$ is accepted.

H3₁   There is a connection between previous experience in dealing with CRM-systems and the concern "technical overload" compared to CRM-systems.

Table 9: Correlation test between experience and concerns

Related variables	Chi square, Pearson Asymptotic significance	Spearman
Experience and extra work	0.413 → not significant	-0.050 → no correlation
Experience and transparency and control	0.222 → not significant	0.144 → medium to strong correlation
Experience and loss of status	0.001 → highly significant*	0.319 → strong correlation
Experience and technical overload	**0.035 → 65% significant**	**-0.267 → no correlation**
Experience and change in working method	0.157 → not significant	-0.289 → no correlation
Experience and higher susceptibility to errors	0.000 → highly significant	-0.363 → no correlation
Experience and pressure to perform	0.001 → highly significant*	-0.030 → no correlation
Experience and restriction in freedom of work	0.057 → 43% significant	-0.120 → no correlation
Experience and poor usability	0.939 → not significant	-0.014 → no correlation

*99% probability that there is a connection

Source: Author's table

5. INTERPRETATION AND DISCUSSION OF RESULTS

CRM is the integral handling of a corporation's interaction with its clients. Transportation, correspondence, and yielding policies must be integrated in line with customer requirements (Helmke, Uebel, and Dangelmaier, 2017, p. 7). CRM includes both, a management and a technology component (Laudon, Laudon, and Schoder, 2010, pp. 533-534). The latter are CRM-systems, which can be utilized to encourage a CRM-approach (Hippner and Wilde, 2004, p. 60). With the help of a CRM-system, customer-specific data can be stored, maintained, evaluated, and always made accessible to the entire organization (Neumann, 2014, pp. 115-116).

In summary and as a result of the content analysis of the conducted interviews of the first qualitative research, the main categories (efficiency, benefit, problem, turnover, and prerequisite) and associated sub categories listed in *table 10* can be obtained.

Table 10: Main and sub categories of content analysis

Main category	Sub category
Requirement	Effort minimization, elaborate maintenance, user-friendliness, picture of the overall situation, commitment of the management, data protection, involvement of users, ease of use, input of data, information quality, complexity, customer visits, customer potential, opportunities, education and training, monitoring, time savings, access options
Benefit	Effort minimization, user-friendliness, picture of the overall situation, business relationship, information base for customers, information quality, complexity, customer visits, employee changes and substitution, opportunities, increase in customer satisfaction, transparency, time savings
Profit	Effort minimization, user involvement, business relationship, customer visits, customer potential, projects, increase in customer satisfaction, time savings
Problem	Complex maintenance, accessibility, replaceability, information quality, monitoring, differences between locations
Efficiency	Good networking and support, information quality, increase in customer satisfaction, transparency, differences between locations, time savings

Source: Author's table

In the following, the outcome of the first qualitative research is explained in connection with the research questions and relevant cross-connections to the literature are shown.

5.1 Main category: "requirements"

According to Buchta, Eul, and Schulte-Croonenberg (2009), effective and efficient use of CRM-systems must ensure the supply of up-to-date and relevant information for all persons involved in the company (Buchta, Eul, and Schulte-Croonenberg, 2009, pp. 40-41). Georgi and Mink (2011) also argue that a CRM-system can only be supported, if it provides comprehensible, up-to-date, and complete customer-specific information (Georgi and Mink, 2011, p. 84). This can be confirmed and considered relevant after analysis of the interviews also for the packaging industry.

The fact that the basic introduction of a CRM-system is only to take place after the creation of all necessary personnel requirements and necessities, since the system is otherwise at risk of not being accepted by the employees (Georgi and Mink, 2011, p. 84), this can also be confirmed on the basis of the statements of the interviewed persons.

The success of a CRM-system depends on the creation of the organizational prerequisites. Business areas must be coordinated in such a way that an overall view of all customers can be generated and used. Through an early and on-going integration of customer knowledge, a better differentiation from the competition can be achieved (Meffert, Pohlkamp, and Böckermann, 2010, pp. 23-24). Georgi and Mink (2011) describe that a CRM-strategy and a CRM-system must be actively supported and demonstrated by the executive board of a corporation to be able to gain acceptance and recognition of the project by the employees. In addition, the existing customer knowledge should be shared willingly (Georgi and Mink, 2011, p. 83). The analysis of the interviews has confirmed that the importance of using the CRM-system needs to be mentioned throughout the whole organization from the management board. There must be a concrete will of the organization to ensure that the system is accepted and used.

Georgi and Mink (2011) also mention the prerequisites for a profitable enforcement of the customer relationship approach to reduce resistances and to appropriately qualify and motivate the employees within the scope of training measures (Georgi and Mink, 2011, p. 83). The corresponding integration of the users and a simple operation are necessary prerequisites during the introduction of a CRM-system, as well as regular training courses. The system is

depending on the data quality. The better the employees are trained, the better the input of the data, and the higher the quality of the information.

The systematic management of customer information described by Leußer, Hippner, and Wilde (2011), which in this context is one of the most important requirements for the individual design of customer relations in CRM, is also rejected in the interviews. It also ensures data quality and the timely provision of information for analysis and operational use. It is only based on correct and quickly available data and information that the right decisions can be made (Leußer, Hippner, and Wilde, 2011, p. 751).

5.2 Main category: "benefits"

The main goal of CRM is always an increase in the value of the corporation through a higher customer satisfaction (Selchert, 2004, p. 27). Customer satisfaction can be achieved with the usage and assistance of CRM-systems (Torggler, 2007, p. 5). The most frequently mentioned is an increase in customer satisfaction by better and more efficient operation and support of the customer. CRM-systems help to avoid errors or problems and strengthen the trust in the organization.

Neumann (2014) describes the automation of manual workflows in order to simplify and shorten the company-internal workflows, which can lead to further savings (Neumann, 2014, pp. 115-116). The interviews also show that the use of CRM-systems can shorten reaction times. By means of a CRM-system, customer-specific data can be collected, stored, maintained, and always made accessible to the entire organization in a standardized manner. The analysis of the interviews reveals that time-savings for all parties involved in a CRM-system can be achieved via targeted and clear collection of information. It is described in the literature that a meaningful and correct picture of the respective customer is often prevented by a lack of data quality, e.g. because of redundant, incorrect, or missing data. As a result, there are disadvantages in terms of economic success (Leußer, Hippner, and Wilde, 2011, pp. 751-752). The interviews conducted underline the fact that the benefit of a CRM-system is given by an improved possibility to get a corresponding picture of the respective overall situation or the depth of an organizational association with a client. This can be used to react more quickly to unforeseen circumstances.

5.3 Main category: "profit"

Meffert, Pohlkamp, and Böckermann (2010) explain that competitive CRM and the effective and efficient implementation of company-internal processes enable the fulfilment or over-fulfilment of individual customer needs, as well as higher customer benefits (Meffert, Pohlkamp, and Böckermann, 2010, pp. 7-8). This results in a higher degree of customer satisfaction, as this is understood as a positive emotional response to a cognitive differentiation procedure between client expectations and the level of performance observed by the customer. If this is fulfilled or over-fulfilled, customer satisfaction will occur (Krafft and Götz, 2011, p. 222).

Bruhn and Homburg (2017) also describe the effect chain of the customer relationship through the initial contact, the satisfaction judgment, the customer loyalty, and the customer relationship up to the increase of the economic success (Bruhn and Homburg, 2017, pp. 9-10). A longer customer relationship, which is viewed as a partial aspect of a holistic CRM-approach, can be combined with a sales increase, more recommendations, and shorter consulting times (Krafft and Götz, 2011, pp. 226-228). The analysis of the interviews has shown that customer satisfaction is directly related to a positive impact on sales and the overall development of corporations. The more service a customer can offer and the more uncomplicated and comfortable the relationship of a customer with his supplier, the stronger the customer loyalty. The services provided generate benefits and added value, which ultimately impact on sales. The price, the quality, and the reliability were mentioned by the interview partners as decisive. The qualities of the products and services and the reliability or a corresponding trust relationship are mentioned as a prerequisite for the implementation of customer proximity also in the literature (Krafft and Götz, 2011, pp. 218-219).

The analytical aspect of a CRM-system collects all customer-relevant data and information from customer interviews, systematically records and evaluates them. The aim is to continuously optimize the business processes related to the customer (Neumann, 2014, p. 119). The content analysis has shown that the better the customer conversations are prepared by centralized and high-quality information, and the more analyses can be made, the higher the probability of a positive influence on the economic success and development of an organization.

5.4 Main category: "problem"

In the interviews, the information quality is most frequently mentioned, which has already been discussed under the main category "requirements". In this context, an elaborate information acquisition and a related error rate are mentioned.

Furthermore, the problems mentioned are the complex maintenance of CRM-systems, and the limitation of the use to the management board, as well as the association of such a system with control instruments and the fear of the employees of losing their knowledge. Georgi and Mink (2011) describe a customer relationship strategy as a result of the alignment of all company activities at the customer. This subsequently results in changes for the employees. To achieve this, there must be the willingness to share customer knowledge within the company and not to keep it accordingly (Krafft and Götz, 2011, pp. 83-84).

5.5 Main category: "efficiency"

The most frequently mentioned was the need for good networking and support with and through colleagues from the entire company group, as well as timely, professional, and, above all, reliable information. The presence of the necessary information in the CRM-system and the easy and intuitive access to it are indispensable for dealing with the daily concerns.

The more information is available through a CRM-system and the higher the quality of the information, the faster and better the decisions can be made and the more efficient the daily work can be done. A lack of information quality can be counteracted by so-called data quality management. It includes all measures taken in the collection, processing, and use of customer information in order to achieve a sufficiently high-quality level (Leußer, Hippner, and Wilde, 2011, p. 751).

Finally, it can be concluded that for a positive impact of CRM-systems on the profit and overall development of corporations in the packaging industry, many necessary requirements must be met first. Furthermore, it is important to consider possible problems in advance, and to avoid them accordingly. Only after the creation of these basic prerequisites or framework conditions, a CRM-system can unfold its intended and expected benefits, which positively influence acceptance, efficiency, and increase the profit.

5.6 Acceptance

For a positive impact of CRM-systems on the profit of companies in the packaging industry, many necessary requirements must be met. One of them is the acceptance of its users. As part of the second qualitative research and evaluation of the corresponding interviews, criteria influencing the acceptance of CRM-systems could have been identified ("added-value", "usability", "create awareness", "planning and implementation", and "management, commitment, and involvement"). The derived criteria were assigned in accordance with the determinants of acceptance, defined in the theoretical part (person, task, technology, organization, and management). The catalogue of criteria derived from the empirical study contains the items that must be met for employees to accept a CRM-system. To answer the research question, the catalogue of criteria will be used.

The quantitative research as the last empirical step of this doctoral thesis revealed that reliability, actuality, and usefulness are properties that a CRM-system must have in order to guarantee the acceptance of sales employees regarding its use. These characteristics are rated as "very important" by all age groups of the respondents. The sales force must be able to rely on the CRM-system. It is also important for sales employees that only current data is collected and entered in the system. The CRM-system is intended to enable sales staff to exchange data and knowledge about customers more quickly. The sales staff are of the opinion that the CRM-system can provide more efficient customer service. Furthermore, it is not only important that the system is up to date, but access to various customer data must be possible anywhere and at any time.

It can be clearly seen that the respondents have great concerns about overtime, if a supporting CRM-system is introduced. However, this can also be because the CRM-system was only recently implemented in the corporation or is not yet used in some departments. Therefore 76% of sales employees are of the opinion that they will use the system daily after the introduction, which in turn guarantees that the data is up to date.

The interpretation of the cross-tables of experiences in handling CRM-systems, and concerns which employees have with regard to the use of CRM-systems, showed that around half of the people questioned, which had good to average experience in using CRM-systems, are very strongly influenced by the concern of "extra work", while the susceptibility to errors says exactly the opposite. 50% of the respondents are less influenced by the susceptibility to

errors. The respondents with mediocre to good experience in dealing with CRM-systems are less affected by transparency and control, as well as changes in working methods and excessive technical demands. There is a connection between previous experience with CRM-systems and the concern of "technical overload". This means that the more experienced the employees are in dealing with CRM-systems, the less the "technical overload" factor influences them. Approximately 50% of the sales employees surveyed, who have average to good experience, would allow themselves to be influenced by the performance pressure. Another 40% of those surveyed with mediocre to good experience would be affected by the restriction in working methods. Employees are creatures of habit. A change or a restriction in the way of working causes the employee to break their habits.

The correlation between age and concerns showed that over 70% of respondents in all age groups have concerns that the CRM-system would cause them more work. Since there is no correlation between the age of a sales representative and the "extra work" concern about a CRM-system, it is irrelevant how old a sales representative is. The concern of "extra work" exists in every age group.

13% of the under 30-year olds feel less strongly influenced by transparency and control, while 28% of the 41 to over 51-year olds feel very strongly affected by them. The younger generation does not see the loss of status as a concern. Furthermore, the younger sales employees are less affected by excessive technical demands than older ones. The same applies to changes in the way of working. The susceptibility to errors would affect all age groups less, while the performance pressure would affect all very strongly. Restrictions on freedom of work and poor usability also have a very strong or strong influence on sales staff across all age groups. Regardless of whether you are young or old, a change in freedom of work and the way you work means a change in habits for everyone.

In addition, there is a connection between the age of a sales representative and the property "customizability" that a CRM-system should have. This means that the younger the sales representative, the more important it is that they can adapt the CRM-system to their individual needs. The characteristic "simplicity" is more important for those under 30. Their aim is to make work easier and less complex. The simpler the CRM-system is, the easier it is to acquire the individual activities, functions, and applications of the system.

6. SUMMARY AND CONCLUSION

Based on the qualitative research of this doctoral thesis, it can be summarized that for a positive effect of CRM-systems on sales and the development of corporations in the packaging industry, many necessary prerequisites must be met (main category 1). Furthermore, problems to be expected must be considered in advance and avoided accordingly (main category 4). Only after the creation of these basic requirements or framework conditions can a CRM-system develop its intended and expected benefits (main category 2), have a positive effect on efficiency (main category 5) and result in an increase in sales (main category 3). The acceptance of the CRM-system was identified as an imperative, which is why further attention was paid to this aspect.

Part of this work dealt with the qualitative identification of a requirement profile for a CRM-system in the packaging industry to increase employee acceptance. One aim of this thesis is to design a catalogue of criteria that reflects the influencing factors of acceptance for CRM-systems. For this purpose, a literature analysis was first carried out regarding the definition of CRM and the components of a CRM-system, as well as a definition of the acceptance term and a reflection of existing findings from acceptance research.

CRM-systems contain the organizational and technical components that relate to the interaction with the customer. They are a tool for the efficient processing and design of customer processes. CRM-systems are mainly used in sales, marketing and service, but today's CRM-systems are now all fully integrated information systems, so that other departments, such as controlling or production, also work with CRM-systems. Basically, a CRM-system can be divided into Collaborative, Operational, and Analytical CRM. The Collaborative CRM controls all communication between the company and the customer. Operational CRM supports direct customer contact, using sales, service, and marketing automation. The automation of the processes increases efficiency. Analytical CRM uses analytical procedures, like e.g. data mining and OLAP, to initiate awareness about client behaviour and structures. CRM-systems offer extensive functionalities and affect many workflows and processes in companies. In order to ensure optimal use of CRM-systems by employees in the company, it is important that employees accept the system.

Acceptance stands for a positive or negative attitude towards innovations. From the corporation's viewpoint, there is a high level of interest in employees accepting technological

innovations in the company. Acceptance research tries to explain human behaviour when using technical innovations and draws on different approaches to acceptance research. It differentiates between attitude acceptance and behavioural acceptance. There is only acceptance for technological innovations, if attitude and behavioural acceptance are present at the same time. The user must have a positive attitude towards the technology, so that there is a basic willingness to use, and, in addition, task-related behaviour must be observable. Various acceptance models can be used to examine these relationships. They describe possible influencing and acceptance factors and outline the acceptance building process. This includes, on the one hand, determinant models that consider acceptance as a point-in-time phenomenon, and, on the other hand, process models that consider the individual phases of the acceptance process and thus the passage of time. In practice, however, the determinant models are more widespread because of their simple structure and empirical verifiability.

Based on the findings of the various acceptance models, essentially five determinants were identified as influencing factors of acceptance for operational information systems: the technology-related determinant, the management-related determinant, the user-related determinant, the organization-related determinant, and the task-related determinant. To find out how these determinants express themselves in the acceptance of CRM-systems by employees in the company, an empirical study was carried out. Problem-centred interviews were carried out as part of the empirical study. As part of the qualitative evaluation of the interviews, the following criteria, which influence the acceptance of CRM-systems, could be derived: added-value, awareness creation, management, commitment, and involvement, planning and implementation, and usability. The derived criteria were assigned, based on the determinants of acceptance defined in the theoretical part. The technology-related determinant stands for the technical properties and possible uses of the information system. The management-related determinant concentrates on the central task of management in relation to building the acceptance of information systems. The influence of personal experiences on the acceptance of company information systems is the core of the user-related determinant. The organizational determinant defines the organizational culture and structure in which the company information system is used. The task-related determinant deals with the question of whether the task can even be solved with the help of an operational information system.

The catalogue of criteria derived from the empirical investigation contains the criteria that must be met for employees to accept a CRM-system. The added value relates to the fact that

the CRM-system must provide the users with additional benefits. The system must also be able to give something back to the users. Modern CRM-systems offer a multitude of optimization options in order to generate this added value. Usability is the simple, fast, and mobile user friendliness of the CRM-system. A CRM-system is accepted by the users, if the contacts and opportunities can be entered and edited easily while on the move and there is no need to fill in endless input masks on the computer. For a functioning CRM-system, a concrete definition of goals and expectations on the part of management and employees are necessary. Both parties must have the same point of view, otherwise there will be no acceptance. The organization must also be ready to share the knowledge with each other and be aware that nowadays leads can no longer be processed alone. Employees must be open to new innovations. For a successful implementation of a CRM-system, management must make fundamental decisions regarding the planning of the system use. In order to guarantee the acceptance of the system, the management can involve the employees in the planning process right from the start. The decision in favour of a CRM-system is a management decision, so it is important that the management stands behind the system deployment and is continuously involved. The management has a role model function and must motivate the employees, who are not yet convinced of the system.

Nowadays a CRM-system is not only used by one department. CRM-systems are now being used across departments, from sales to marketing, customer service, controlling, and production. For a CRM-system to be accepted by all users, it must be a central, fully integrated system. The derived criteria catalogue is used to answer the research question. The quantitative investigation of this doctoral thesis deals with acceptance factors of sales employees in relation to the use of CRM-systems in the packaging industry. Still high failure rates in the introduction of CRM-systems mean that the perspective only had to be inevitably extended to the technology and the employee factor moved into focus. Acceptance factors regarding the acceptance subject (sales employee) and acceptance object (CRM-system) were the subject of this investigation section. Nevertheless, it can be stated that the results of CRM-projects are not satisfactory and that there are still high failure rates. CRM is no longer the only focus of technical aspects. Rather, the employee is seen as a central factor. The demands to pay more attention to employees during the implementation of such a system are getting louder. However, there is still a lack of detailed, holistically oriented examination of the role, i.e. the importance as well as the tasks and functions of the employee in CRM. The quantitative study refers exclusively to socio-demographic acceptance factors such as age, gender, experience, and their connection

with ease of use (usability), properties of the CRM-system, the activities to be performed, and concerns about the CRM-system.

The CRM-system, as an object of acceptance, must have various properties in order to fundamentally facilitate sales processes and work with the system. It must be suitable for the tasks to be performed. The CRM-system must be reliable and efficient. Important aspects in relation to the CRM-system are the ease of use (usability) of the system. The employee, whether young or old, should by no means be overwhelmed by the new CRM-system. Aesthetic aspects, such as the visual or auditory attractiveness, are important for the CRM-system design, but rather secondary in relation to other acceptance factors. The inclusion of the sales staff, who will later be users of the system, is therefore important in the implementation. Sales employees, regardless of whether they are in the front office or the back office, can build up acceptance barriers against the use of CRM-systems due to certain concerns. It must be considered here that there is a connection between the previous experience of a sales employee in dealing with CRM-systems and concerns about the technical overload with the CRM-system. It is important to prevent this in the implementation phase. The sales employee should fill the system with important data after it has been introduced and thereby receive support for his tasks. After all, the CRM-system is used daily. Certain attitudes, (personal) norms, values, and emotions can create barriers to acceptance against the use of CRM-systems. Also, socio-demographic elements, like i.e. age, sex, qualification, and occupation are decisive. It was therefore possible to establish a connection between the age of a sales employee and the characteristic "customizability" that a CRM-system must have. However, no connection could be found between age and the concern "extra work". Past experiences with CRM-systems also influence the quality of use. The satisfaction of the users with the CRM-system stands for the success in the introduction of new systems. The involvement of the sales staff, the perceived benefits and usefulness of the system, as well as organizational support and support from management, influence the users. The employee decides, no matter whether old or young, experienced or not experienced in dealing with CRM-systems, whether a CRM-system is successfully implemented in the company or whether the CRM-system achieves the desired success and increase in profit and development.

7. NEW SCIENTIFIC RESULTS AND FUTURE RESEARCH

7.1 New scientific results

From the previous chapter it can be concluded that the current **possibilities of digital support** in sales are constantly increasing, which is also **largely welcomed** by the sales staff. However, it should be noted that sustainable successes, such as better consulting quality, sales performance, and a competitive differentiation based on this, can only be achieved, if all the seller's **barriers to acceptance** are taken into account in the entire conception and implementation of the CRM-system.

Based on the results of the empirical research, various recommendations for action can be given for the management of a corporation in the packaging industry that is planning the introduction of a CRM-system. Most CRM-systems are implemented based on management decisions in the company. Since the quantitative study was carried out from the operator's viewpoint, recommendations for action are given that take the sales employee into account. In addition, recommendations for action are derived based on the factors of acceptance research.

Change management is important for the accomplishment of CRM-systems from the beginning of the activity. As described in the theory and in the qualitative research chapters, employees always need the opportunity to give feedback on how to improve the system. Employees must be **involved from the early start**. The project team and management must **communicate the benefits** of the CRM-system from the beginning.

Based on the quantitative survey, most sales employees would like a **complete CRM-system**. It is therefore important that each individual sales representative knows that it is up to them to have **high quality data** inserted to ensure that the system is **useful**. Help can be given to increasing the motivation to use the CRM-system through **incentive systems**. This creates better customer knowledge, better opportunity and lead management, and meaningful key figures. This leads to a **win-win situation** between employees (users) and management.

Since every sales employee has their own habits and working methods, a **survey** can be carried out with the users before the implementation and planning of the CRM-system, which answers the following questions.

- What requirements does the sales employee have of the system?
- What is the workflow of a sales representative?
- What customer information is required?

Since more than 70% of those surveyed in the quantitative investigation expressed the acceptance barrier of **"overtime"** as a very strong concern, it is important to **communicate** to all employees that the CRM-system should not involve overtime, but that it should help to get data and information much **faster**, which leads to **meaningful key figures**, better **customer knowledge**, and **more efficient** customer service.

The entire corporation, from management to the sales force, must live the **CRM-culture**. The management must also include the executives. Even if they do not use the CRM-system, the manager must **convince** his sales staff of the advantages of the system and motivate them to use it.

Older sales staff in the front and back office, who have been with the company for a long time and who have built up significant knowledge about customers, markets, and competition over the years must not have the feeling that they are interchangeable or replaceable through the CRM-system and its provision of information.

The qualitative interviews showed that **change management** is of essential importance in order to **avoid the creation of acceptance barriers** when introducing CRM-systems. The analysis of the interviews resulted in the fact that the project team should best consist of experts, who can fully concentrate on the project and do not have to do any other work. In addition, the **benefits of the CRM-system** must be correctly **communicated** to the users of the CRM-system and an incentive must be set so that the system is filled. Humans are creatures of habit and a change in the way they work can only be done step by step and takes time. The key user concept is therefore of great value.

7.2 Future research

The first future research direction would be the connection to the field of organizational development, which has only been taken into account during the execution of this doctoral thesis on a superficial level, as the main purpose and goal of this study was the identification of design criteria and necessary prerequisites of a CRM-system for a contribution to an increase in sales and the overall (profitable) development of an organization. Widening the goal of this thesis to the general organizational development and how CRM influences the organization and its human resources would have gone beyond the possible and intended scope of this work. Future research could also deal with the details of how an organization should be developed in order to enable or facilitate efficient and effective Customer Relationship Management as well as organizational learning.

The second future research direction that needs to be pointed out is related to knowledge management. Organizational knowledge is progressively seen as a primary element of competitive advantage. Knowledge management is an important topic in customer service. It does not only affect a company's productivity and profits; it also affects the customer satisfaction. Knowledge management helps to ensure the positive perception of the various channels through the design of the various CTPs of the employees. In this context, also the evaluation of knowledge bases plays an important role.

The term "blended learning" should also be mentioned in this context. This is an integrated learning concept that makes optimal use of the options available today for networking via the Internet or intranet in connection with "classic" learning methods and media in a meaningful learning arrangement. It enables learning, communication, information, and knowledge management, detached from place and time in combination with the exchange of experiences, role play, and personal encounters in classic face-to-face training.

8. BIBLIOGRAPHY

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APPENDICES

Interview guide 1 (German)

Vielen Dank zunächst für Ihre Teilnahme zu diesem Interview!

Ich führe im Rahmen meiner Doktorarbeit eine Untersuchung zu den ausschlaggebenden Faktoren bzw. Ausgestaltungsmerkmalen eines CRM-Systems durch, die eine positive Auswirkung auf den Umsatz bzw. die generelle Entwicklung von Unternehmen in der Verpackungsindustrie haben. Diesbezüglich würde ich gerne ein kurzes Gespräch mit Ihnen führen, welches im Zuge meiner Arbeit wissenschaftlich analysiert und ausgewertet wird. Die Dauer wird zwischen 30 und 45 Minuten betragen. Wie bereits vorab per E-Mail vereinbart, werde ich unser Gespräch aufzeichnen. Die erhobenen Daten werden selbstverständlich wissenschaftlich verarbeitet, analysiert und ausgewertet, und Ihre Anonymität gewahrt.

Einstiegsfrage:

- „Welche Erfahrungen haben Sie bisher mit CRM-Systemen in Ihrem Berufsleben gemacht und welchen Stellenwert haben diese für Sie?"

Haupt- und Nebenfragen:

- „Inwieweit unterstützt Sie ein CRM-System in Ihrem aktuellen Tätigkeitsbereich?"
- „Was sind für Sie die wesentlichsten Funktionalitäten eines CRM-Systems?"
- „Was ist für ein effizientes Arbeiten (mit einem CRM-System) ausschlaggebend?"
- „Mit welchen Schwierigkeiten und Problemen hatten Sie im Zuge des Arbeitens mit CRM-Systemen bereits zu kämpfen und wie hätten diese vermieden werden können?"
- „Wie hängen für Sie CRM-Systeme mit dem Unternehmensumsatz zusammen?"
- „Welche konkreten Faktoren eines CRM-Systems könnten nach Ihrer Meinung einen direkten Einfluss auf den Unternehmensumsatz haben?"
- „Wodurch kann ein CRM-System den Unternehmenswert bzw. Erfolg steigern?"
- „In welcher Weise kann ein CRM-System zur Kostensenkung beitragen?"

Abschlussfrage:

- „Können Sie mir die drei wesentlichsten Eigenschaften eines CRM-Systems nennen?"

Vielen herzlichen Dank für Ihre Zeit und Mühen!

Interview guide 1 (English)

First, thank you for participating in this interview!

As part of my doctoral thesis, I am investigating the decisive factors or design features of a CRM-system that have a positive effect on sales and the general development of corporations in the packaging industry. In this regard, I would like to have a short conversation with you, which will be scientifically analysed and evaluated during my work. The duration will be between 30 and 45 minutes. As previously agreed by e-mail, I will record our conversation. The collected data will of course be scientifically processed, analysed and evaluated, and your anonymity will be preserved.

Introductory question:

- "What experiences have you had so far with CRM-systems in your professional life and what significance do they have for you?"

Main and subsidiary questions:

- "To what extent does a CRM-system support you in your current area of activity?"
- "What are the most important functionalities of a CRM-system for you?"
- "What is decisive for efficient work (with a CRM-system)?"
- "What difficulties and problems did you already have to contend with while working with CRM-systems and how could these have been avoided?"
- "How do you relate CRM-systems to company sales?"
- "In your opinion, which specific factors of a CRM-system could have a direct influence on company profit?"
- "How can a CRM-system increase company value or success (overall development)?"
- "How can a CRM-system help cut costs?"

Final question:

- "Can you tell me the three most important properties of a CRM-system?"

Thank you very much for your time and efforts!

Interview guide 2 (German)

Vielen Dank zunächst für Ihre Teilnahme zu diesem Interview!

Ich führe im Rahmen meiner Doktorarbeit eine Untersuchung zu den Faktoren eines CRM-Systems durch, die zur Akzeptanz seitens der MitarbeiterInnen von Unternehmen in der Verpackungsindustrie führen. Das Ziel ist die Ableitung eines Anforderungsprofils für ein CRM-System, damit es von den MitarbeiterInnen akzeptiert wird. Diesbezüglich würde ich gerne ein kurzes Gespräch mit Ihnen führen, welches im Zuge meiner Arbeit wissenschaftlich analysiert und ausgewertet wird. Die Dauer wird zwischen 30 und 45 Minuten betragen. Wie bereits vorab per E-Mail vereinbart, werde ich unser Gespräch aufzeichnen. Die erhobenen Daten werden selbstverständlich wissenschaftlich verarbeitet, analysiert und ausgewertet, und Ihre Anonymität gewahrt.

Einstiegsfrage:
- „Welche Erfahrungen haben Sie mit CRM-Systemen bisher gemacht?"

Haupt- und Nebenfragen:
- „Welche Erfahrungen haben Sie mit technischen Aspekten von CRM-Systemen bisher gemacht?"
- „Wie unterstützt Sie ein CRM-System in Ihrem Aufgabenbereich?"
- „Welche Erfahrungen haben Sie mit Managemententscheidungen bzgl. eines CRM-Systems bisher gemacht?"
- „Welche Erfahrungen haben Sie mit den organisatorischen Rahmenbedingungen zu CRM-Systemen bisher gemacht?"
- „Was ist Ihre persönliche Meinung zu CRM-Systemen?"
- „Wie ist Ihre Bereitschaft gegenüber technologischen Innovationen?"

Abschlussfrage:
- „Wovon hängt nach Ihrer Einschätzung die Akzeptanz eines CRM-Systems ab?"

Vielen herzlichen Dank für Ihre Zeit und Mühen!

Interview guide 2 (English)

First, thank you for participating in this interview!

As part of my doctoral thesis, I am investigating the factors of a CRM-system that lead to acceptance by employees of corporations in the packaging industry. The aim is to derive a requirement profile for a CRM-system so that it is accepted by employees. In this regard, I would like to have a short conversation with you, which will be scientifically analysed and evaluated during my work. The duration will be between 30 and 45 minutes. As previously agreed by e-mail, I will record our conversation. The collected data will of course be scientifically processed, analysed and evaluated, and your anonymity will be preserved.

Introductory question:

- "What experiences have you had with CRM-systems so far?"

Main and subsidiary questions:

- "What is your experience with the technical aspects of CRM-systems so far?"
- "How does a CRM-system support you in your area of responsibility?"
- "What is your experience with management decisions regarding a CRM-system?"
- "What experiences have you made with the organizational framework for CRM-systems so far?"
- "What is your personal opinion on CRM-systems?"
- "What is your readiness for technological innovations?"

Final question:

- "What do you think the acceptance of a CRM-system depends on?"

Thank you very much for your time and efforts!

Expert interview guide (German)

Vielen Dank zunächst für Ihre Teilnahme zu diesem Interview!

Ich führe im Rahmen meiner Doktorarbeit eine Untersuchung zu den Faktoren eines CRM-Systems durch, die zur Akzeptanz seitens der MitarbeiterInnen von Unternehmen in der Verpackungsindustrie führen. Das Ziel ist die Ableitung eines Anforderungsprofils für ein CRM-System, damit es von den MitarbeiterInnen akzeptiert wird. Diesbezüglich würde ich gerne ein kurzes Gespräch mit Ihnen führen, welches im Zuge meiner Arbeit wissenschaftlich analysiert und ausgewertet wird. Die Dauer wird zwischen 30 und 45 Minuten betragen. Wie bereits vorab per E-Mail vereinbart, werde ich unser Gespräch aufzeichnen. Die erhobenen Daten werden selbstverständlich wissenschaftlich verarbeitet, analysiert und ausgewertet, und Ihre Anonymität gewahrt.

Einstiegsfrage:

- „Welche Erfahrungen haben Sie bisher mit CRM-Systemen gemacht?"

Haupt- und Nebenfragen:

- „Welche Erfahrungen haben Sie bisher mit technischen Aspekten von CRM-Systemen gemacht?"

- „Welche Erfahrungen haben Sie bisher mit Managemententscheidungen (beim Kunden) bzgl. der Einführung und Verwendung eines CRM-Systems gemacht?"

- „In welchem Ausmaß und in welchem Aufgabenbereich kann ein CRM-System die Arbeit unterstützen?"

- „Welche Erfahrungen haben Sie bisher mit den organisatorischen Rahmenbedingungen zu CRM-Systemen gemacht?"

- „Was ist Ihre persönliche Meinung zu CRM-Systemen?"

- „Wie wichtig ist die Bereitschaft von Unternehmen gegenüber technologischen Innovationen bzgl. CRM-Systeme?"

- „Was sind nach Ihrer Meinung die größten Schwierigkeiten, die Unternehmen mit Ihrem CRM-System haben und wie können diese bewältigt werden?"

Abschlussfrage:

- „Wovon hängt nach Ihrer Einschätzung die Akzeptanz eines CRM-Systems ab?"

Vielen herzlichen Dank für Ihre Zeit und Mühen!

Expert interview guide (English)

First, thank you for participating in this interview!

As part of my doctoral thesis, I am investigating the factors of a CRM-system that lead to acceptance by employees of corporations in the packaging industry. The aim is to derive a requirement profile for a CRM-system so that it is accepted by employees. In this regard, I would like to have a short conversation with you, which will be scientifically analysed and evaluated during my work. The duration will be between 30 and 45 minutes. As previously agreed by e-mail, I will record our conversation. The collected data will of course be scientifically processed, analysed and evaluated, and your anonymity will be preserved.

Introductory question:

- "What experiences have you had with CRM-systems so far?"

Main and subsidiary questions:

- "What experiences have you had so far with the technical aspects of CRM-systems?"
- "What experiences have you made so far with management decisions (at the customer) regarding the introduction and use of a CRM-system?"
- "To what extent and in what area of responsibility can a CRM-system support work?"
- "What experiences have you had so far with the organizational framework conditions for CRM-systems?"
- "What is your personal opinion on CRM-systems?"
- "How important is the willingness of companies to face technological innovations with regard to CRM-systems?"
- "In your opinion, what are the greatest difficulties companies have with their CRM-system and how can they be overcome?"

Final question:

- "What do you think the acceptance of a CRM-system depends on?"

Thank you very much for your time and efforts!

Questionnaire (German)

Sehr geehrte Damen und Herren!

Im Rahmen meiner Doktorarbeit führe ich eine Umfrage zum Thema Akzeptanzfaktoren in Bezug auf die Nutzung von CRM-Systemen in der Verpackungsindustrie durch. Ich möchte Sie bitten, sich Zeit zu nehmen und an meiner Umfrage teilzunehmen.

Das Ausfüllen wird ca. 5 Minuten Ihrer Zeit beanspruchen. Die Befragung ist anonym und es können keine Rückschlüsse auf den Absender bzw. die Absenderin gezogen werden. Füllen Sie bitte den Beurteilungsbogen vollständig aus und lassen Sie keine Fragen aus.

Vielen Dank vorab für Ihre Teilnahme und Zeit!

1. Wie stufen Sie Ihre Erfahrungen im Umgang mit CRM-Systemen ein?

(1 = sehr gut; 5 = nicht gut)

| 1 | 2 | 3 | 4 | 5 |

2. Wie wichtig sind für Sie folgende Eigenschaften, die ein CRM-System aufweisen soll?

	sehr wichtig	wichtig	weniger wichtig	nicht wichtig
Zuverlässigkeit	[ ]	[ ]	[ ]	[ ]
Steuerbarkeit	[ ]	[ ]	[ ]	[ ]
Individualisierbarkeit	[ ]	[ ]	[ ]	[ ]
Nützlichkeit	[ ]	[ ]	[ ]	[ ]
Einfachheit	[ ]	[ ]	[ ]	[ ]
Aktualität	[ ]	[ ]	[ ]	[ ]
Format	[ ]	[ ]	[ ]	[ ]
Flexibilität	[ ]	[ ]	[ ]	[ ]
Zugänglichkeit	[ ]	[ ]	[ ]	[ ]
Informationsqualität	[ ]	[ ]	[ ]	[ ]
Vollständigkeit	[ ]	[ ]	[ ]	[ ]

3. Wie wichtig sind die folgenden Aktivitäten, die ein CRM-System aufweisen soll?

	sehr wichtig	wichtig	weniger wichtig	nicht wichtig
Besseres Vertriebscontrolling	[ ]	[ ]	[ ]	[ ]
Effizientere Kundenbetreuung	[ ]	[ ]	[ ]	[ ]
Schnellerer Daten- und Wissensaustausch	[ ]	[ ]	[ ]	[ ]
Zugriff auf Kundendaten	[ ]	[ ]	[ ]	[ ]
Transparenz in der Kundenbetreuung	[ ]	[ ]	[ ]	[ ]
Verbessertes Opportunity und Lead Management	[ ]	[ ]	[ ]	[ ]
Liefert aussagekräftige Kennzahlen	[ ]	[ ]	[ ]	[ ]
Unterstützt die Prozesse im Vertrieb	[ ]	[ ]	[ ]	[ ]
Verbesserte Datenqualität	[ ]	[ ]	[ ]	[ ]
Besseres Wissen über Kunden	[ ]	[ ]	[ ]	[ ]
Schutz vor Datenverlust und Missbrauch	[ ]	[ ]	[ ]	[ ]

4. Wie stark werden Sie folgende Bedenken bei der Nutzung des Systems beeinflussen?

	sehr stark	stark	weniger stark	Gar nicht
Mehrarbeit	[ ]	[ ]	[ ]	[ ]
Transparenz und Kontrolle	[ ]	[ ]	[ ]	[ ]
Statusverlust	[ ]	[ ]	[ ]	[ ]
Technische Überforderung	[ ]	[ ]	[ ]	[ ]
Änderung der Arbeitsweise	[ ]	[ ]	[ ]	[ ]
Höhere Fehleranfälligkeit	[ ]	[ ]	[ ]	[ ]
Höherer Performancedruck	[ ]	[ ]	[ ]	[ ]
Einschränkungen der Freiheit	[ ]	[ ]	[ ]	[ ]
Schlechte Bedienbarkeit	[ ]	[ ]	[ ]	[ ]

5. Wie oft glauben Sie werden Sie das CRM-System nach der Einführung nutzen?

[ ]   Täglich

[ ]   2-3x pro Woche

[ ]   1x pro Woche

[ ]   Seltener

6. Wie alt sind Sie?

7. Welches Geschlecht haben Sie?

[ ]   Männlich

[ ]   Weiblich

8. Was ist Ihre höchste abgeschlossene Ausbildung?

[ ]   Pflichtschule

[ ]   Lehre

[ ]   Fachschule

[ ]   Matura (AHS/BHS)

[ ]   Bachelorstudium (Universität/Fachhochschule)

[ ]   Magister-/Diplom-/Masterstudium (Uni/FH)

[ ]   Doktorats-/PhD-Studium

Vielen Dank, dass Sie an der Umfrage teilgenommen haben!

Questionnaire (English)

Dear Ladies and Gentlemen!

As part of my doctoral thesis, I am conducting a survey on the topic of acceptance factors in relation to the use of CRM-systems in the packaging industry. I would like to ask you to take your time and conduct my survey.

Filling out the questionnaire will take about 5 minutes of your time. The survey is anonymous, and no conclusions can be drawn about the sender. Please fill out the assessment form completely and do not leave out any of the questions.

Thank you in advance for your participation and time!

1. How do you rate your experience in dealing with CRM-systems?

(1 = very good; 5 = not good)

1	2	3	4	5

2. How important are the following properties that a CRM-system should have?

	very important	important	less important	not important
Reliability	[ ]	[ ]	[ ]	[ ]
Controllability	[ ]	[ ]	[ ]	[ ]
Customizability	[ ]	[ ]	[ ]	[ ]
Usefulness	[ ]	[ ]	[ ]	[ ]
Simplicity	[ ]	[ ]	[ ]	[ ]
Actuality	[ ]	[ ]	[ ]	[ ]
Format	[ ]	[ ]	[ ]	[ ]
Flexibility	[ ]	[ ]	[ ]	[ ]
Accessibility	[ ]	[ ]	[ ]	[ ]
Information quality	[ ]	[ ]	[ ]	[ ]
Completeness	[ ]	[ ]	[ ]	[ ]

3. How important are the following activities for you that a CRM-system should have?

	very important	important	less important	not important
Better sales controlling	[ ]	[ ]	[ ]	[ ]
More efficient customer care	[ ]	[ ]	[ ]	[ ]
Faster data and knowledge exchange	[ ]	[ ]	[ ]	[ ]
Access to customer data	[ ]	[ ]	[ ]	[ ]
Transparency in customer care	[ ]	[ ]	[ ]	[ ]
Improved opportunity and lead management	[ ]	[ ]	[ ]	[ ]
Meaningful key figures	[ ]	[ ]	[ ]	[ ]
Support of sales processes	[ ]	[ ]	[ ]	[ ]
Improved data quality	[ ]	[ ]	[ ]	[ ]
Better customer knowledge	[ ]	[ ]	[ ]	[ ]
Protection against data loss and misuse	[ ]	[ ]	[ ]	[ ]

4. How much will the following concerns influence you when using a CRM-system?

	very strong	strong	less strong	not at all
Extra work	[ ]	[ ]	[ ]	[ ]
Transparency and control	[ ]	[ ]	[ ]	[ ]
Loss of status	[ ]	[ ]	[ ]	[ ]
Technical overload	[ ]	[ ]	[ ]	[ ]
Change of working method	[ ]	[ ]	[ ]	[ ]
Higher susceptibility to errors	[ ]	[ ]	[ ]	[ ]
Higher performance pressure	[ ]	[ ]	[ ]	[ ]
Restriction in freedom of work	[ ]	[ ]	[ ]	[ ]
Poor usability	[ ]	[ ]	[ ]	[ ]

5. How often do you think you will use the CRM-system after implementation?

[ ]   Daily

[ ]   2-3x per week

[ ]   1x per week

[ ]   Less common

6. How old are you?

7. What is your gender?

[ ]   Male

[ ]   Female

8. What is your highest completed education?

[ ]   Mandatory school

[ ]   Apprenticeship

[ ]   Technical school

[ ]   Matura

[ ]   Bachelor's degree

[ ]   Master's/diploma degree

[ ]   Doctoral studies at university

Thank you for taking the survey!

BIOGRAPHY OF THE AUTHOR

General information

Martin A. Moser, born in Mödling, Lower Austria in May 1987, studied Industrial Engineering and Sales Management at the University of Applied Sciences Wiener Neustadt and the Thompson Rivers University in Canada after completing his education at the higher-level secondary technical college for Electronic Engineering and Telecommunications. He is currently completing an MBA-programme in Financial Management at the Middlesex University London and working in Austria as Pharma Hub Cluster Development Manager at one of the world's leading manufacturers of flexible packaging.

Professional career:

2019 – today   Constantia Flexibles GmbH, Pharma Hub Cluster Development Manager

2016 – 2018   Constantia Flexibles GmbH, Technical Key Account Manager

2015 – 2018   Constantia Patz Ges.m.b.H., Deputy Head of Product Development

2013 – 2014   Constantia Patz Ges.m.b.H., Application Engineer

2011 – 2013   Constantia Patz Ges.m.b.H., Quality Manager

2009 – 2011   Ing. Sumetzberger GmbH, Quality Manager

2009   Siemens AG Austria, Quality Manager

Education:

2018 – today   Middlesex University London, MBA (Financial Management)

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2010 – 2012   University of Applied Sciences Wr. Neustadt, MSc (Industrial Engineering)

2008   Thompson Rivers University Canada (Exchange Semester)

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Honours:

2018   Constantia Flexibles Sales Award Pharma for Customer Service

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2016   Scholarship of the Federal Ministry for Science and Research

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Academic responsibilities:

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Editor, Journal of Economy and Society (2009-)
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Declaration

I, the undersigned Martin Moser, by signing this declaration declare that my PhD thesis "IMPACTS OF CUSTOMER RELATIONSHIP MANAGEMENT (CRM) ON DEVELOPMENT OF CORPORATIONS" was my own work; during the dissertation I complied with the LXXVI and the rules of the doctoral dissertation prescribed by the Doctoral School, especially regarding references and citations.[1]

Furthermore, I declare that I did not mislead the supervisor(s) or the programme leader with the dissertation.

By signing this declaration, I acknowledge that if it can be proved that the dissertation is not self-made or the author of a copyright infringement is related to the dissertation, the University of Sopron is entitled to refuse the acceptance of the dissertation.

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Sopron, 26/03/2021

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(PhD candidate)

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