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# Adoption of a CRM System in SMEs: A framework

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## ABSTRACT

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To become more competitive in today's market environment, companies must put their customers as their primary focus. It is critical for companies to keep customers satisfied while their demands for high-quality service are being met. Adopting a Customer Relationship Management strategy has recently spread throughout organizations, including B2B companies. As a result, this research aims to understand better how organizations can adopt CRM systems successfully.

Companies must integrate ICT into their daily operations and business strategies, especially Finnish companies. This is critical for comprehending the significance of information technology adoption in supporting a company's processes, particularly customer relationships management (CRM).

The need to obtain tangible benefits drives investment decisions in ICT innovations, particularly in small and medium-sized enterprises (SMEs), where resource availability is typically limited. Various authors have extensively studied the practices of information technology adoption, which gave different perspectives and theoretical models in pursuance of identifying common issues that influence the decision-making process of innovation adoption.

Nonetheless, despite the advantages of CRM, the evolving dynamics of information technology, and the increasing opportunities offered, particularly over the Internet, CRM systems have yet to be widely adopted by companies, raising the question: How can an SME company effectively adopt CRM?

To achieve this goal, this study provides a framework of preparation for CRM implementation based on well-known and validated theories from authors such as Nolan, Davis, Clemmons, and Row.

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Keywords: CRM, relationship marketing, B2B, Strategic management, ICT innovations

**CONTENTS**

## ABBREVIATIONS AND TERMS

| | |
|---|---|
| AMA | American marketing association |
| B2B | Business-to-Business |
| COO | Chief Operations Officer |
| CRT | Contract Research and Technology |
| CRM | Customer research management |
| EDI | Electronic data interchange |
| ES | Enterprise system |
| ICT | Information and communication technologies |
| IS | Information system |
| IT | Information technology |
| OEF | Official Statistics of Finland |
| PEOU | Perceived ease of use |
| PU | Perceived utility |
| RM | Relationship marketing |
| RJT | Remote job tickets |
| RBV | Resource-based view |
| SMEs | Small and medium-sized enterprises |
| TAM | Technology acceptance model |
| TOE | Technology–organization–environment |
| TRC | Theory of resources and capabilities |

# 1 INTRODUCTION

The current economic environment is characterized by increased competitiveness, technological innovation, and the global nature of the markets (Castells, 1997). Faced with this dynamic, discontinuous, and ambiguous, companies must adopt new management practices that ensure their survival and competitiveness in the market. Therefore, in the face of the growing complexity of the company and its environment, Strategic Management is presented as a discipline of vital importance when guiding companies in the search for competitiveness, giving quick answers to ambiguous situations and not routine.

In this area, the vision of the company based on resources has had a profound impact on the way of understanding strategic formulation, defending that the strategy's ultimate goal is the achievement of a competitive advantage that lasts over time. According to this theory, establishing competitive advantages means formulating and implementing a strategy that exploits the company's unique resources and capabilities (Grant, 2005).

From this perspective, to survive in the competitive environment, companies must transform their management philosophy and focus on achieving a sustainable competitive advantage based on the knowledge that differentiates them from their competition. To attain such differentiation, companies must generate added value in their services. They need to know their client in-depth to understand their needs, so it is essential to establish personalized relationships with them that allow them to achieve said knowledge.

Therefore, in this new environment, relations with the market take on fundamental importance, completely changing the marketing strategies of companies from a transactional approach to a relational one (Gronroos, 1994). This new relational approach focuses on establishing and developing personalized relationships with customers, which are beneficial for both parties and allow their long-term loyalty.

On the other hand, Information Technologies (IT) is presented as an essential tool to improve the competitiveness of organizations since it will make it possible

to establish personalized relationships in today's complex markets. Thanks to advances in this area, particularly in aspects such as data management and storage and the capabilities offered by the Internet, individualized relationships with customers and substantial knowledge of them are made possible.

In this context, the concept of Customer Relationship arises, which in this study will be translated as Customer Relationship Management and is referred to using the acronym CRM.

CRM will be considered in this research work as a business strategy enabled by IT, which implies establishing and developing valuable relationships with clients oriented to the retention and loyalty of said clientele. In this sense, research on the subject highlights that it is more profitable for companies to retain their existing customers by developing long-term relationships that meet their needs than attracting new customers.

However, despite the recent birth of CRM, which dates to the 1990s, in less than a decade, it has become a vital tool for today's business management. Implementing this strategy entails the orientation of all the company's processes towards the client, who is situated in a central position, outlining himself as a fundamental asset of the company. Therefore, CRM becomes a business philosophy that uses new technologies as tools that allow managing new forms of relationship with the client to maximize its value for both parties.

At the research level, CRM has experienced notable progress in recent periods (Ngai, 2005), although the relative novelty of the concept means that there are research needs in different areas: search for a generally accepted conceptual definition or delimitation, analysis of its essential dimensions, the study of the impact of CRM on results, barriers to its successful implementation, development of valid and reliable scales to study its degree of implementation and success, conducting rigorous empirical studies on the matter (Colgate & Danaher, 2000; Parvatiyar & Sheth, 2001; Romano & Fjermestad, 2002; Hart, Hog & Banerjee, 2004; Sin, Tse & Yim, 2005). Therefore, it can affirm that CRM is an emerging research paradigm (Parvatiyar & Sheth, 2001) that requires further theoretical and conceptual development to be configured as its research discipline.

On the other hand, although it is accepted that the development of CRM strategies seems to be an observable and beneficial fact for all sectors, SME companies must be differentiated. SMEs, in which the importance of customer service is fundamental, is ideally positioned to take advantage of CRM's strategic advantages (Piccoli et al., 2003). When carrying out a strategic analysis of the sector's current situation, it can be observed how SME companies face an increasingly competitive environment in which price competition is increasing and decreasing customer loyalty.

For all these reasons, companies like TamCent Oy, to remain competitive, must develop a series of strategic measures aimed at differentiating and segmenting their offer (Claver et al., 2007). In other words, faced with this new scenario, SME companies must analyze the instruments at their disposal to achieve a level of competitiveness that guarantees their survival, evolving towards a more differentiated and higher quality offer.

In this context, CRM can be a vital tool for the industry by enabling effective differentiation and enhancing customer loyalty and, therefore, the profitability of the company (Piccoli et al., 2003; Sigala, 2005). Furthermore, despite the strategic importance of small and medium-sized enterprises in the economy, there is still a research gap regarding the analysis and implementation of CRM strategy in this sector. No specific studies analyze its degree of implementation, the variables that affect it, or the main benefits this strategy brings to companies implementing it.

### 1.1. Case company and background

TamCent Oy was founded in 1988, and its business is the wholesale of communication equipment. In the company's last fiscal year, 03/2022, TamCent Oy made EUR 2,744,000 in turnover, and its profit was EUR 323,000. The company's net profit percentage was 11.76%.

TamCent OY is a limited company based in Tampere, and its main business is Access control and access control devices. Importer of Comelit products since 1988, the history of TamCent Oy goes back almost 35 years. Comelit Group SpA

is an Italian industrial company operating worldwide and specializing in the design and manufacture of video entry, video surveillance, anti-intrusion, home automation, access control, and fire protection systems. Comelit has recently expanded its product range by acquiring an English company, PAC GDX.

TamCent is well established in the Finnish market owning around 85% share of the market, but with Comelit's acquisition of Pac whole new range of products will be included in their offer. For this reason, they want to optimize their sales process by implementing a CRM platform; the main aim is to improve the sales team's performance, refine the communication with customers and make the sale cycle more profitable. The object of our study is to provide TamCent with a framework that will ensure the successful adoption of CRM throughout the organization.

As for choosing the topic for this thesis, the topic was chosen by combining the need the company has currently and, finding an area of interest in which the writer had enough competence.

### 1.2. Motivation for the research

This thesis examines employee perceptions of acceptance and attitudes about introducing a CRM system at TamCent.

Building a theoretical framework to comprehend CRM ideas and the driving forces behind various attitudes and acceptance rates would help achieve this goal. In doing so, the fundamental context for the practical analysis carried out in the empirical section is built.

The research objective is to determine what can be a factor in successfully adopting a CRM. The final goal of this research is to provide a framework for SMEs to follow before introducing a CRM and formulate recommendations for the overall adoption strategy.

### 1.3. Research questions

For these reasons, the present research work will consider the objective to delve into the concept of CRM, analyze the state of the research, and examine the main factors that will affect successful adoption.

In addition, this study will examine how these factors are related and interact with each other and their effect on the introduction of CRM. Therefore, the core of this research work is specified in the following general and specific objectives.

The main question of this thesis is: **How can an SME company effectively adopt CRM?** This opened the following research questions:

1) How can the adoption of CRM be improved?
2) Why should an SME adopt a CRM strategy?

### 1.4. Structure of the thesis

This thesis work has been divided into seven main chapters: introduction, literature review, research methods, data collection and analysis, recommendations, conclusion, and references.

The thesis starts with the ‘Introduction,’ where the author briefly describes the research's topic, background, motivation, and relevance.

The introduction follows the ‘Literature review’ part in chapters two, three, and four, where the author presents relevant literature. The chosen literature provides a conceptual foundation and demonstrates how the study adds to the previous research in the field.

The ‘Research Methods ‘chapter presents the methods applied for data collection to solve the research questions.

In the chapters ‘Data collection & Data analysis, the author presents the data analyzed and the research findings, which helps to conclude.

In the ‘Recommendation’ chapter, the author provides recommendations to help TamCent adopt a CRM solution successfully. These recommendations are based on the theories reviewed and the company’s employees’ insights.

Finally, the ‘Conclusion’ is presented, consisting of the author’s answers to the research questions, practical implications, the limitations of the research, and recommendations for further research.

# 2 LITERATURE REVIEW

The literature review of this research work will focus on three key concepts relevant to the object of the study . However, the author will start with an introduction to strategic management and information technologies in this chapter. Several theories supporting the research will be discussed later in chapters three and four.

## 2.1. Strategic Management and the search for competitive advantages

The current economic environment, referred to as the new economy, is undoubtedly characterized by globalization. It can be affirmed that society is immersed in the Information Age (Castells, 1997), characterized by the technological revolution and networks of digital information, the emergence of networked social structures, and the global interdependence of economic activity. Castells defines this era as a new technological, economic, and social system in which the increase of productivity will not depend on the quantitative increase of the factors of production (capital, labor, and natural resources) but on the application of knowledge and information to the management, production, and distribution, in both the processes as well as products. Therefore, a new global, interdependent, networked economy based on information and knowledge is being encountered.

In this sense, it must be considered that globalization has increased the conditions of competition and modified its forms (See Figure1), mainly due to the unique impact of technological development and, above all, of Information Technology (IT), which has caused the construction of the so-called network society, which continues to develop and penetrate all the processes of the economic system (Bueno, 2004).

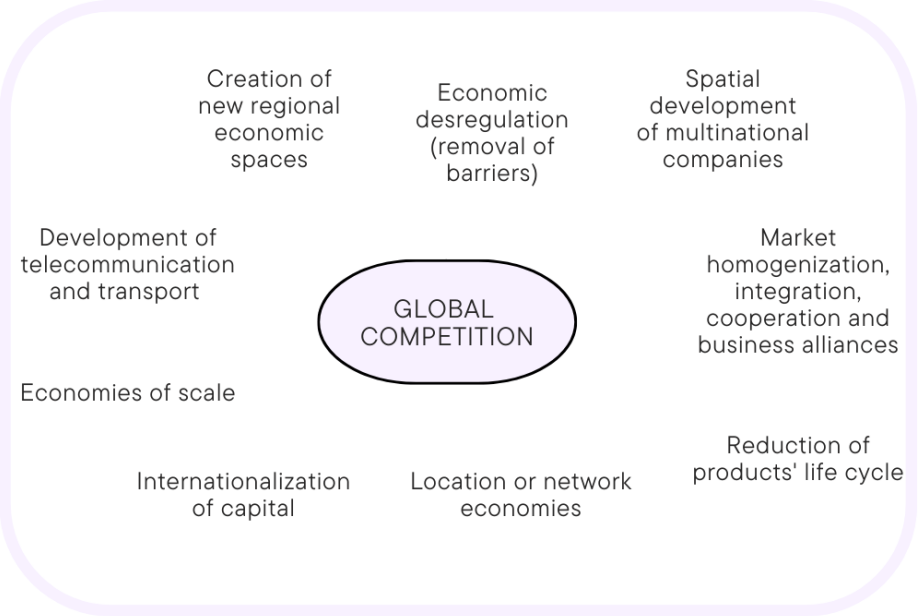



FIGURE 1. Global competition diagram. Own elaboration from Bueno (2004)

For all these reasons, globalization opens a historical stage in which the convergence of economic, financial, communicational, and migratory processes accentuates economic interdependence and generates new flows and supranational interconnection structures (Porter, 1990). The main economic effects of the phenomenon significantly highlight the mobility of productive factors and the search for competitive advantages, the rapid diffusion of knowledge and technology, productivity gains, and the transition from the real economy to the virtual one.

## 2.2. Information Technology

An Information System (IS) is an IT-based solution of interrelated components for gathering, processing, storing, and distributing information to support an organization's decision-making, coordination, control, analysis, and visualization (Laudon & Laudon, 2007). Historically they have been an essential tool in the transformation of business processes, in particular, electronic data interchange (EDI), which since its birth in the late 1960s, has facilitated the flow of information between companies of all kinds.

Information management through more or less complex systems is an intrinsic need of the company itself. The confusion between the terms technologies and information systems derives from their necessary connection since information

technologies automatically carry out the functions of an information storage, processing, and distribution system.

Some authors, however, add communications to the concept of IT, expanding the definition to what they call Information and Communication Technologies (ICT). In other words, ICT can be understood as computing and a company's hardware, software, and telecommunications needs. ICTs provide straightforward solutions to specific problems that the implementation of any information system presents. Data storage and subsequent access according to difficult-to-anticipate patterns, fast and error-free data processing, automatic communications, and others. (Sieber et al., 2006).

### 2.2.1 Adoption of ICT innovations in companies

Carr (2004), in his article “IT Doesn't Matter,” argues that ICT has become a simple factor of production: an element in the production process, which is necessary for competitiveness but not sufficient to obtain advantages. This is not an affirmation that can be strictly applied to all types of technologies. However, it can be affirmed that certain technologies, as is the case of the Internet, have become a competitive necessity, although it no longer provides a strategic advantage to support business processes. Technologies of "competitive necessity" offer no benefit other than following the industry. Unless they can be presented as an innovation, competitors reproduce it, which is considered part of the costs of doing business (Lucas Jr., 1999).

For the specific case of sales management, ICT and the Internet have unleashed a significant revolution in relationships between companies (B2B) and retailers. Nevertheless, the degree of assimilation of these technologies is still incipient, especially in SMEs, which in many cases continue to make their offerings by traditional methods or are in the early stages of adoption (Wagner et al., 2003; Cater-Steel, 2004).

ICT innovations, like other innovations, have always maintained a dynamic and evolutionary character, but, despite the relative pressure exerted by the environment for the adoption of CRM, there are still generalized limitations that prevent

SMEs go ahead in the adoption of ICT in their purchasing processes. Limitations such as the lack of financial resources and appropriate infrastructure or the lack of technical skills and experience (Lewis & Cockrill, 2002; Jones et al., 2003; Pranato et al., 2004), or simply due to ignorance, lack of vision, or good advice and support (Jones et al., 2003).

Smaller companies do not necessarily require the exact powerful solutions as larger ones to achieve similar benefits, as their organizational structure is far less complex. Many case studies show that SMEs effectively use information and communication technologies and electronic commerce, sometimes in response to customer demands and other times preventively, to remain competitive and support their growth strategies (European Commission, 2008b).

The business world is immersed in the process of business transformation, motivated by the opportunities offered by ICTs, and forcing SMEs to adopt technological innovations gradually. Innovation at a general level is a complex, diversified activity with many components in interaction, which act as sources of new ideas. It is challenging to discover the consequences that a new fact can offer, so its success depends on adequate planning and execution of ICT investments, detailed analysis of the cost-benefit ratio for purchases to be automated, and their adaptation to the particular strategy.

# 3 ANALYSIS OF THE PERSPECTIVE OF THE PROCESS OF ADOPTION OF ICT INNOVATIONS

Starting in the 1990s and based on the dynamic diffusion of the Internet, a series of evolutionary models adapted to the assimilation of ICT in companies have emerged, finding that most of them classify companies from initial levels associated with a first approach from the company to the resources offered by the Internet, up to advanced levels of network-based organizational transformation (Nambisan & Wang, 1999; Daniel et al., 2002; Teo & Pian, 2004; Alonso & Fitzgerald, 2005).

Each of these authors has contributed to the study of the ICT adoption process in the company, so it seems interesting to present the stages proposed by some of them, as shown in summary Table 1.

Table 1. Proposals of models of ICT adoption stages in the company. Own elaboration based on the proposals of different authors

| Author | Proposed stages |
|---|---|
| (Nolan, 1973) | Initiation, Contagion, Control, Integration |
| (Nolan, 1979) | Initiation, Contagion, Control, Integration, Data Administration, and Maturity |
| (Nolan 1993) *et al.*, | It maintains four stages: Initiation, Contagion, Control, and Integration. A concept of eras appears associated with the chronological evolution of ICTs (data processing era, microcomputer era, network era) |
| (Nambisan & Wang, 1999) | Access to information, Collaboration at work in real-time, Essential business processes |
| (Pranato 2001) *et al.*, | Non-presence, Static online presence, Interactive online presence, Internet commerce, Organizational integration, Extended enterprise |
| (Daniel 2002) *et al.*, | Under development, Communicators, Web presence, In operation |
| (Nolan & Bennigson 2002) | It maintains four stages: Initiation, Contagion, Control, and Integration. It can be linked to three eras, whose transition is affected by technological discontinuities: Data Processing Era, Microcomputer Era, Network Era |
| (Teo y Pian, 2004) | Non-presence, Static online presence, Interactive online presence, Internet commerce, Organizational integration, Extended enterprise |
| (Department of Trade and Industry - DTI, 2002) | Email, Web Site, E-commerce, E-business, Transformed Organization |
| (Su-Houn 2005) *et al.*, | Internet presence, Portals, Integration of transactions, Enterprise integration |
| (Ramdani & Kawaiek, 2007) | Early adoption, In exploration, Laggards |

These models reflect different approaches according to what each author considers necessary to determine the evolutionary process of ICT penetration in companies. However, although the provisioning process in Finnish SMEs does not fit precisely into any of the theoretical proposals studied, it is close enough to the approach studied by some authors. Hence, the adaptation of the theory to this process is perfectly viable.

Once the revised models have been analyzed, it is found that they involve varied parameters and have common elements that allow them to be classified into two main approaches, the organizational processes approach and the technological resources approach. The focus on the organizational process is evident in the first authors who worked on the subject and some later ones based on them. According to this approach, the stages proposed to characterize technological evolution on the examination of all the activities of the company and how these activities can be influenced and supported by the use of ICT.

Some of the authors classified in table 1, in general, consider that the adoption of ICT follows the process that any other innovation within a company would follow. This diffusion process of innovations understood as the practices or objects perceived as new by an individual or group of individuals, has been extensively studied by Everett Rogers (2003) and seeks to explain how people, groups, organizations, communities, and societies adopt an innovation of any kind. The process of diffusion of innovations follows an “S” curve based on the speed of adoption and the number of adopters. It explains how new ideas and products are distributed and why some very good ones fail or cannot stay long enough to be successful (Rogers, 2003).

According to this approach, ICT resources are tools that support the process of organizational transformation and are considered innovations that must be gradually diffused in companies through predefined stages; what makes these evolutionary proposals consider all kinds of technologies, from hardware to software, databases, and networks; as part of the ICT adoption process.

As for the authors framed in the technological resources approach, they are more current chronologically and base their proposals mainly on how companies have

adopted and adapted to the facilities offered by ICTs and the Internet. The authors try to understand and describe the different levels companies go through regarding the ICT resources used in their processes.

Although according to this approach, the process of entering the Internet world supposes for companies to have a minimum of ICT resources, the description of the evolutionary stages proposed by most of the authors classified here (Nambisan & Wang, 1999; Teo & Pian, 2004), basically focuses on ICT resources, especially the Internet, its sophistication and how companies use it in their daily activities.

### 3.1. Characteristics

Associated with the evolutionary nature mentioned above, the different models studied assume the existence of consecutive and perfectly differentiated stages, which companies must go through in their evolutionary process, and some authors such as Nolan, Pranato, et al., Danielet al.l and Noland & Bennigson, even describe their model as a "Stage Mode.”. This model, in general, assumes that companies undergo a defined number of stages (which are usually not less than three nor more than six). Each of the stages reflects a particular level of maturity regarding the usage and administration of ICT to support and facilitate activities and business operations processes of a particular company.

At the same time, regarding the models focused on ICT resources, although less explicitly, they also follow a model of stages that allows describing the levels at which companies are located concerning the sophistication in the use of these resources (Nambisan & Wang, 1999; Teo & Pian, 2004; Su-Houn et al., 2005). The authors suggest a clear description of the proposed stages, including ICT processes or associated resources, which means that a company should be able to identify the stage clearly when analyzing its use of ICT resources. TIC. However, the fact that this description is often not precise or detailed enough could complicate this process, especially in micro and small companies with incipient investments in ICT resources.

It is also clear that at a general level, the proposed models evaluate the stages of evolution throughout the organization without differentiating the sub-processes with which the ICTs used are associated. On the one hand, this fact allows us to see the evolution integrally. However, on the other hand, it prevents us from identifying the technologies associated with each electronic business thread, which would be very useful in companies that invest in ICT resources in a segmented manner or improve their priority processes.

In conclusion, stage models assume that organizations progress through a successive number of identifiable stages and that each stage reflects a level of maturity in terms of the use and management of ICT/IS to support and facilitate business activities, processes, and operations.

### 3.2. Resources

Resources are input to the production process and constitute the basic unit of analysis; These can be capital, equipment, employee skills, patents, trademarks, Etc. (Grant M., 1999). Although the resources themselves do not have a direct positive influence on the value created, they do play an essential role in the creation of value through the creation of e-business capabilities. Today, it can be said that companies create value by integrating ICT resources, including the Internet (Website, Extranet, Intranet, etc.), with other valuable organizational resources embedded in business routines and processes.

In general, the authors studied consider ICT resources, whether tangible or intangible, as a criterium for the characterization of the evolutionary stages, given their intrinsic nature and the rapid and sometimes forced adoption of ICT in the daily activities of the companies, associating this incursion to the process of technological development.

Although the Internet is an ICT resource, it seems essential to analyze it separately, given the great importance that its use has gained in the business environment. Internet technology is currently considered an undifferentiated product, based on standards, that all companies can use freely.

The first ICT growth models did not contemplate this technology –which appeared around 1990- they quickly evolved into what they are. Currently, it is impossible to ignore their impact on the ICT adoption process. It can even be stated that having an adequate Web infrastructure can make it easier for companies to process internal transactions and, in this way, have a positive influence on business results.

Regarding Nolan's stages model, even though in his first approach, he only focused on the growth of the ICT budget (Nolan, 1973), his later revisions already consider the Internet's vital role in the adoption process of ICTs innovations. Given that most of the models studied are subsequent to the diffusion of the Internet, it can be clearly understood that all of them take into account the necessary connection between ICT and the Internet and, of course, that they assume that the evolutionary process is permeated by the benefits offered by the network to companies.

Finally, the influence of Rogers' (2003) innovation diffusion theory can be highlighted not only in Nolan's stage proposal (1973; 1979; 1993). This important theoretical support, added to the other aspects analyzed, can be the starting point to evaluate the possibility of adapting an e-procurement adoption model from a perspective according to the characteristics of the ICT resources and the needs of the SMEs.

### 3.3. Nolan Six Stage Model for Information System

In the 1970s, Richard Nolan, a well-known author and professor at Harvard Business School, developed a theory that impacted the planning process of resources and activities in Informatics due to its importance and application in this context. Based on this theory, he developed a model to analyze the evolution of a company’s IT function. However, this model does not appear as a single model in the literature, but multiple versions of its evolution are presented. According to the version published in 1973, Nolan assumes that the function of information technology in organizations evolves through growth stages which capture the major trend of most tasks in computer management (planning, organization, and control). This model concentrated on investments in computers and development in

centralized data processing departments. The four stages in the assimilation of the initial data processing technology were: Initiation, contagion, control, and integration, and were represented graphically, showing the annual expenditure on ICT adjusted to a classic learning or experience curve.

A year later, changes were made to the model, the most evident change being in the last stage of the model, which went from being called integration to being called maturity, to refer to the phase in which the company can reach a state of equilibrium in which proper management would bring growth and the computational budget under control (Gibson & Nolan, 1974). During this decade, the model continued to have modifications until reaching a new proposal in which the model is expanded to six stages: Initiation, Contagion, Control, Integration, Data Administration and Maturity, and the use of the concepts " control" and "laxity" in their redefinition (Nolan, 1979).

Subsequently, Nolan proposes an alternative model where he dispenses with the stage of maturity by presupposing that it is not possible to achieve it in reality due to material lack of time due to the vertiginous pace of technological innovations and finally returns to his proposal of four improved stages, as shown in Figure 2 and described below.

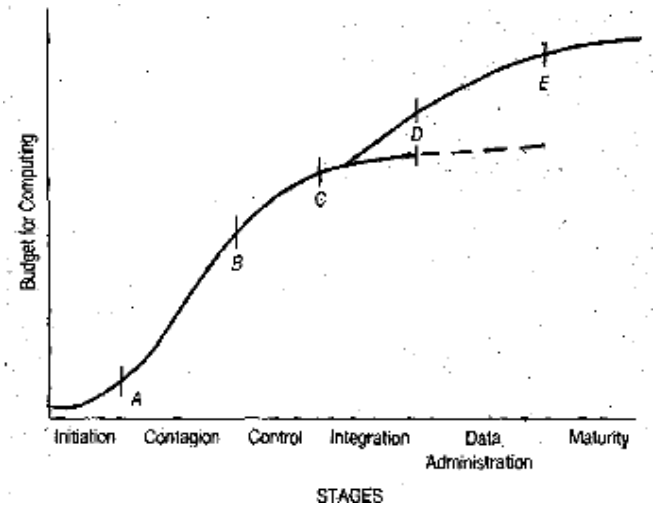



Figure 2. Model of growth stages of the Nolan model (King & Kraemer, 1984)

The general characteristics associated with each stage can be summarised as follows:

- **Stage I - Initiation**: Characterized by limited investments, acquisition of the first computer, and experimentation to test ICTs focused on cost savings.

- **Stage II – Contagion:** Period of high learning in the organization, where technology has proliferated in a relatively uncontrolled way

- **Stage III – Control:** Uncontrolled growth leads to inefficiency, so control is required to slow down this process towards a more manageable rate, maintaining an orderly growth of ICT investments.

- **Stage IV - Integration:** The accumulated learning leads to a balance between control and growth, and the information is integrated with databases.

- **Stage V - Data administration:** It is based on adequate storage and maintenance of data that allows users to use and share this resource.

- **Stage VI - Maturity:** Applications are developed with databases, integrating communications networks with terminals in remote locations. Expert, strategic, and decision support systems are designed based on knowledge.

This approach was deepened and complemented later (Nolan et al., 1993), studying the same stages proposed but this time from a more specific perspective by considering how the different factors involved in this growth process affected their development going through these stages. The factors involved in the study are the application portfolio, resources, management, and users, as seen in Figure 3.

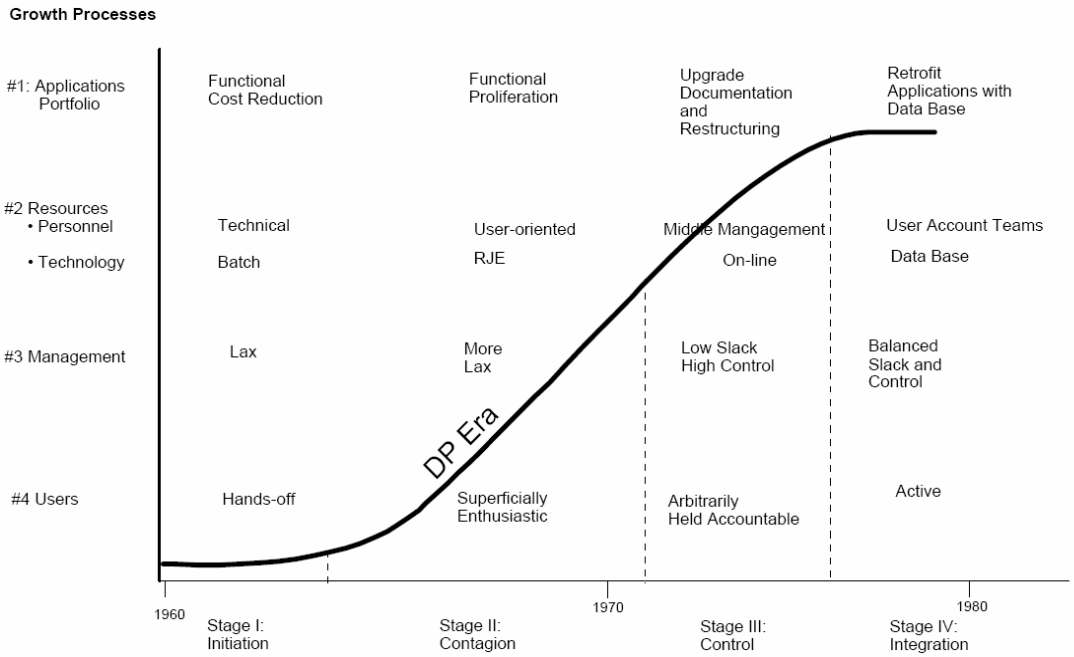



Figure 3. Model of growth stages in the era of Source Data Processing (Nolan et al., 1993)

The evolution of the model corresponds to the application of the stages to the "organizational growth processes," and the richness of this graph lies in the contribution of essential elements for the detailed analysis of the growth process around the adoption of ICT. The segmentation of the growth process into four threads allows a more precise understanding of the characteristics associated with each evolutionary stage, framed in the context of the company globally. The four threads mentioned are:

- ✓ A company invests in ICT to obtain a portfolio of computer applications for different functions to support the company's objectives by properly managing the information. This portfolio evolves with the emergence of new technologies and possibilities.

- ✓ Resources are necessary to apply ICT to the company: money, technology, and people. As for human resources, it begins with work with technical personnel; in contagion, it is oriented to users, in control to middle managers, and finally, it works with user teams during the integration stage. Concerning technological resources, the initiation stage begins by automating sequential and repetitive processes; when remote access is

included in contagion, online processes are controlled, and databases are managed in the integration stage.

- ✓ The management processes change for each stage, the objective being to gradually improve budget control without stopping the evolutionary process until an adequate balance between control and laxity is found.

- ✓ Similarly, the ability of users to effectively apply ICT to their work grows according to the four stages from the "disconnected" to the "active" role in the design and development of applications appropriate to their needs.

Therefore, to achieve a controlled evolution, it is necessary to maintain an adequate balance of growth so that none of the four processes is far ahead or far behind the others.

Another relevant contribution of this proposal lies in the inclusion of the concept of "ICT organizational learning eras, represented by an "S" shaped curve that describes the different "eras" of ICT development and their assimilation through the weather. These eras are (Nolan et al., 1993). The so-called "DP Era" was governed by data processing technology with the help of microcomputers (mainframe). This era began, for many companies, in the early 1960s and ended around 1980. The "Micro Era" was approximately from 1980 to 1995; in it the overall concept was the introduction of the silicon chip in computers, which brought substantial technological improvements associated with the explosion of various computational technologies, thanks to which the microcomputer was implemented everywhere within the company. The integration of mainframes and users reached a point of sophistication that allowed integration between the era of mainframes (DP Era) and that of users (Micro Era), converging in what is defined as the “Network Era”.

The chronologically consecutive eras are separated by a technological discontinuity associated with permanent technological developments, which ultimately lead companies to move from one era to another, abandoning the apparent comfort of adopting one type of technology to start a new process with new technology.

Subsequently, Nolan and Bennigson (Nolan & Bennigson, 2002) propose a new adaptation of the model to consulting processes where the evolution of ICT continues to be associated with the three eras of organizational learning. According to this adaptation, the third era, or "Network Era", is currently being transited, characterized by the use of the network in integrating the first two eras. Although these eras mark technological differences, the evolutionary behavior of companies within them follows the sequence of growth stages initially proposed as part of their ICT adoption process, as seen in Figure 4.

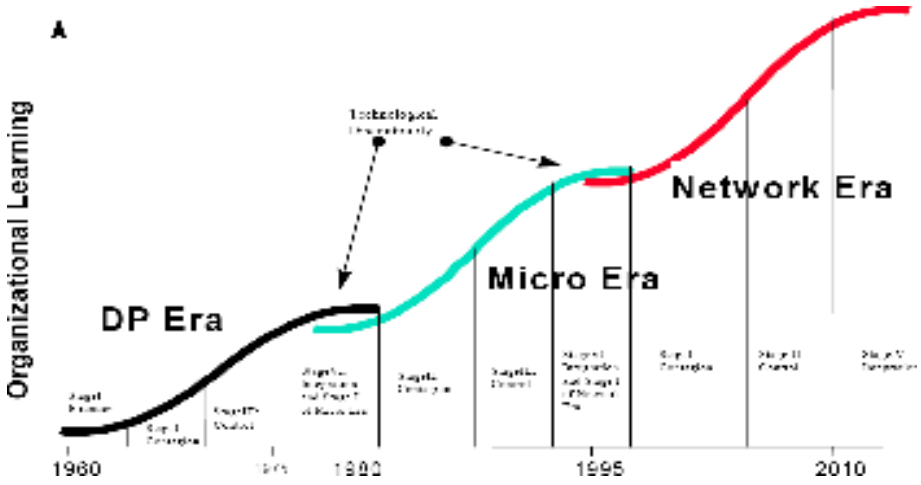



Figure 4. Model of growth stages for three eras (Nolan & Bennigson, 2002)

As seen in the graph, this new proposal considers the stage theory. It describes the model followed by organizations in the ICT assimilation process, which the organization has adopted through three eras that represent organizational learning associated with data processing (DP) technologies, microcomputer technology, and network technology. Likewise, Nolan considers that the initiation stage will only be present in the first era and that it is not convenient for an organization to skip stages since each one of them is a precondition for the development of the next one if there is no experimentation there will be no first users either that facilitate contagion, and if going directly to control, there will be no spread. Although a company can be considered in its integration stage within an era, its transition to the next supposes a disturbance associated with technological discontinuity that requires an internal readjustment that forces it to restart its ICT adoption process from the second stage or stage of contagion (also called evolutionary stage).

The innovative contribution of this approach concerning its first approach is based on evaluating the model's behavior within a dynamic technological environment by involving the unavoidable effect of technological development in the process of ICT adoption by companies. In short, and after the model's changes, the characteristics associated with each of the four evolutionary stages can be described: initiation, contagion, control, and integration.

### 3.3.1 Initiation

It begins with an initial approach to ICTs thanks to the acquisition of the first computers, which are usually justified by the savings in labor and document handling; therefore, functional-type computer applications are usually adopted with the specific objective of reducing costs. The typical applications implemented are Transactional Systems such as payroll or accounting or specific technologies for carrying out repetitive activities requiring specialization.

The staff involved during this stage is mainly computer technicians who are sometimes linked to a provider of computer applications, given that the companies in this stage do not have an ICT area. As for the users, they usually do not have much intervention in the process. The resistance to change (cyberphobia) of the staff and users involved in the first developed systems is evident since these systems are essential in saving money in the workforce. This stage ends with the successful implementation of the first SI and is characterized by reasonably lax behavior in terms of ICT investments.

### 3.3.2 Contagion

As a result of the success of the first SI, the organization continues implementing computer applications such as billing, inventories, control of customer and supplier orders, etc. An outstanding aspect is the proliferation of applications throughout the organization, sponsored by the more significant laxity typical of this stage.

At this stage, the hiring of computer personnel and programmers who carry out their user-oriented work developing RJE (remote job tickets) type applications is already being considered. Nevertheless, this rapid diffusion sometimes lacks

standards and adequate infrastructure, and it is carried out disorderly manner, without control and with few work standards, which leads to poor quality implementations which may lack automatic interfaces or require more work or rework by users, which frequently causes problems and negatively impacts productivity. IS/IT expenses begin to grow significantly, setting the tone to rationalize the use of resources within the company. This problem and the beginning of its solution mark the passage to the next stage.

### 3.3.3 Control

Given the rapid evolution in the previous stages, companies recognize the exigency to control the use of ICT resources, which is why planning ICT requirements becomes essential. In this stage, ICT applications are restructured to facilitate the control of business operations to become more efficient. Information technology is essential in the organization, forming part of the middle management and focusing on administrative control and the economic justification of the applications to be developed.

Setting priorities and criteria becomes necessary while creating new applications. At the same time, the portfolio of pending applications to be developed begins to grow. The development and implementation of work standards, automatic interfaces between systems, document updating, and the use of online ICT resources start. As for the users, it is usual that they tend to be accountable arbitrarily since there is still little commitment to the ICT cause.

### 3.3.4 Integration

The integration of data and systems arises directly from the centralization of the systems department under a single administrative structure that promotes teamwork with both end users and the IT area.

ICTs related to databases, database management systems, and state-of-the-art languages make integration possible and, at the same time, change the attitude and role of the end user towards a more active and committed participation. The main characteristic of this stage is the achievement of systems integration in the

company, maintaining an adequate balance between the control of investments and ICT-based processes, and the endless possibility of improving these systems.

At this stage, the organization drives the design of the technology, providing the foundation for introducing the next evolutionary dimension of the next S-shaped curve. These four stages are presented as consecutive stages, where the first two stages are learning (test and experimentation), while the other two are integration (standards and dissemination) (Calvo and González, 2006).

Although Nolan's model was proposed before the Internet revolution, it has had several modifications (Nolan, 1973; Gibson & Nolan, 1974; Nolan, 1979; Nolan, 1982; Nolan et al., 1993; Gibson & Nolan, 2000; Nolan, 2001; Nolan & Bennigson, 2002) and seems to be still valid today. Thanks to constant revisions, the latest version of the model consider that organizational learning in ICT goes through stages of growth (Nolan, 2001) and not the IT budget as proposed in his first model (Nolan, 1973), additionally introduces the concept of “ICT organizational learning eras” and the concept of “technological discontinuity” when passing from one era to another (Nolan et al., 1993).

This is a model of remarkable influence in the ICT field (King & Kraemer, 1984; Alonso & Fitzgerald, 2005), probably because it was the first to introduce a structural scheme to explain a highly complex phenomenon, such as the growth of information technology in organizations. However, this same condition does not allow for conveniently capturing internal and external aspects that may affect adopting ICT innovations in organizations.

Nolan's evolutionary model analyzes how companies progress from using essential technologies to more complex ones. Assuming that this progress occurs through several identifiable and successive stages, each stage reflects a particular level of maturity in terms of the use and management of ICT to support and facilitate the company’s business processes. Although Nolan considers that it is not convenient for an organization to skip stages (Gibson & Nolan, 2000), later proposals show that not all companies go through all the stages sequentially

(Alonso & Fitzgerald, 2005), mainly due to the nature ICT dynamics and especially the Internet. Thus, a company may not start the adoption process in the first stage and may skip entire stages, depending on its resources, needs, and priorities (Department of Trade and Industry - DTI, 2002). Despite its limitations, Nolan's model has a strong influence and is widely accepted to explain the process of adopting ICT innovations in organizations since it provides important theoretical elements for understanding this process.

Although it cannot be considered that all companies follow the process of adopting ICT innovations proposed by Nolan, his model, based on concepts from the innovation diffusion theory of Rogers (2003), provides significant theoretical contributions that allow classifying companies according to the ICT innovations they have adopted.

### 3.4. Innovation

For Rogers (2003), the success of adopting a technology lies in the very nature of innovation; he defines innovation as an idea, practice, or object perceived as new by an individual or adoption unit. This act of perception implies that the innovation may or may not be objectively new as long as it is perceived as new by the adopter. The novelty of innovation, on the other hand, does not only imply new knowledge since someone may know that innovation exists, but have yet to develop a favorable attitude towards it, have adopted it, or rejected it. The "newness" of innovation can be expressed in terms of knowledge, persuasion, or a decision to adopt.

The attributes that could influence the adoption rate of innovation (Rogers, 1962):

- Relative Advantage: The degree to which the innovation is considered better than the idea, practice, program, or product it replaces.
- Observability: The extent to which the innovation provides tangible or visible results.
- Compatibility: How compatible the innovation is with the values, habits, experience, and needs of the people who might adopt it.
- Complexity: How difficult it seems to understand or use the innovation.

- Testability: To what extent the innovation can be tested/experimented on before a commitment to adopt it is made.

### 3.5. Communication channels

Communication channels are how messages get from one individual to another. Rogers' diffusion theory considers communication as a process that occurs through social networks, interpersonal channels, and broadcast media.

Rogers conceives a network of communication channels that encompasses not only the information of the so-called mass media (whose information is filtered by some people) but also the subjective judgments of certain individuals that can significantly influence the decision process of adopting a technology (Rogers, 2003).

### 3.6. Time

Regarding time, Rogers (2003) considers that the adoption of any innovation runs through five stages that every user must go through: knowing the innovation, being convinced of its relevance, deciding to adopt it, implementing it for the first time, and finally confirming the decision to use it. This process requires having information that allows the individual to reduce their level of uncertainty regarding the innovation and determine whether or not it is convenient for them to adopt it. Once the adopting entity passes the innovation adoption stage, this process could be reversed and interrupt the adoption of the innovation, either due to dissatisfaction or because another innovation with superior advantages emerges.

Regarding the decision period on the innovation, understood as the time required to go through the entire process, some adopting individuals or units will require longer times while others will move quickly from knowledge about the innovation to its implementation, depending on the complexity of the process. the structure that the innovation adopts, for which two other concepts then arise, which are the speed and the rate of adoption of the innovation. Rogers refers to the speed with which innovation is adopted through the concept of “innovativeness,” defined as

the degree of readiness with which the individual or adopting unit enters the process of adopting new ideas compared to others. as do other members of the system, which leads him to identify five groups that result in the different stages of adoption of an innovation (Rogers, 2003).

Innovators are the first individuals to adopt an innovation. Extremely adventurous in their purchasing behavior, they are comfortable with a high degree of complexity and uncertainty. They usually have access to substantial financial resources (and thus can bear the losses incurred in unsuccessful adoption decisions). Although they are not always embedded in a particular social system, innovators play an essential role in the diffusion of innovation because they are individuals who bring new ideas to the social system. Rogers estimated that 2.5% of individuals who adopt new technology are innovators (Rogers, 2003).

Early adopters are well integrated into the social system and have the most potential for thought leadership. Their peers respect them, and their peers respect them, and they know that they must make sound innovation adoption decisions to retain this respect. Other potential adopters look to early adopters for information and advice, so early adopters make excellent missionaries for new products or processes. Rogers estimated that 13.5% of individuals who adopt an innovation, after innovators, fall into this category (Rogers, 2003).

Rogers identifies the next 34% of individuals in a social system to adopt innovation as the early majority. The early majority adopts innovations somewhat earlier than the average member of a social system. They are not usually opinion leaders but frequently interact with their peers.

According to Rogers, the next 34% of individuals in a social system to adopt an innovation make up the late majority. Like the Early Majority, they make up a third of the individuals in a social system. Those in this majority view the innovation with a skeptical air and may not adopt it until they feel pressure from their peers. They may have scarce resources, making them reluctant to invest in adoption until most of the uncertainty about innovation has been resolved.

The last 16% of individuals in a social system to adopt an innovation are called laggards. They may base their decisions primarily on experience rather than being influenced by the social network and have almost no opinion leadership. They are very skeptical about their innovations and the innovators and must be sure that innovation will not fail after adoption (Rogers, 2003).

The graphical distribution as an adoption curve would be as follows in Figure 5:

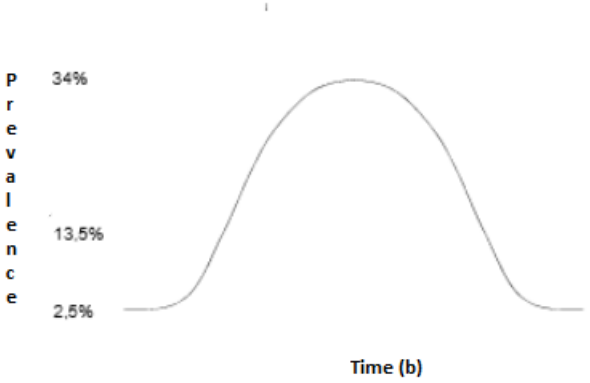



Figure 5. Innovation adoption speed curve (Rogers, 2003)

The adoption rate is generally measured as the time required by a certain percentage of members of a social system to adopt an innovation. In a way, this rate measures how many users adopt an innovation in a given period and is considered only concerning social groups and not to particular individuals or units of analysis (that would be innovativeness). Innovation is considered to move slowly through a social group in its initial phases. Then, as the number of individuals (the adopters) experience the innovation, the diffusion of the new idea increases, and the adoption rate grows faster (Rogers, 2003).

Graphically, this behavior can be seen in the “S” shaped curve of Figure 6.

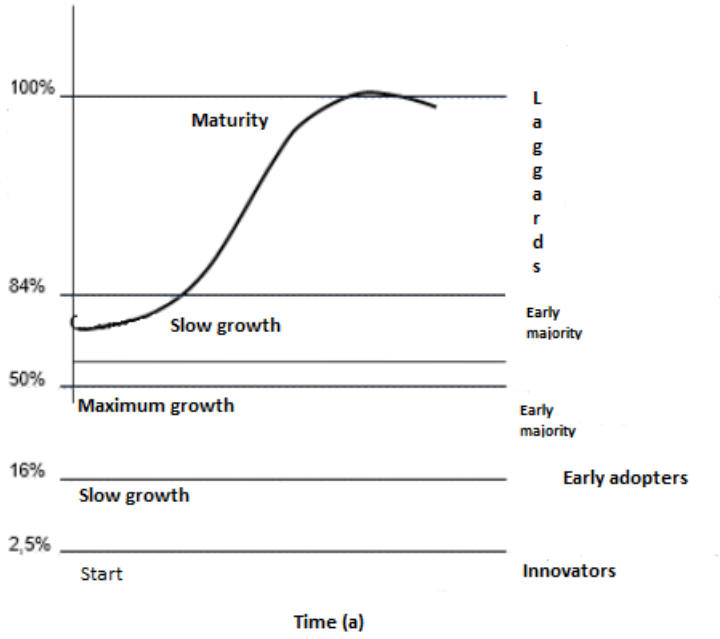



Figure 6. The curve of diffusion of innovations in the form of "S." Adapted (Rogers, 1995, 2003; Schilling, 2008; Rogers et al., 2008)

The curve in the form of "S" shows the slowness of the adoption of an innovation and can be elongated or flattened, depending on the time it takes for the adoption of the innovation (Schilling, 2008); therefore, in the case of ICT a more elongated than flat curve can be expected, given the rapidity of its popularity among individuals and companies.

### 3.7. The social system

The role of context in which an innovation spreads is a determining factor in its adoption, which is why Rogers (2003) defines a social system as a group of interrelated units committed to solving problems to achieve common goals. The members or units of the social system can be individuals, informal groups, organizations, and systems. Diffusion occurs in social systems, and the structure of the social system affects the diffusion of innovations in different ways, so he proposes to consider different environmental variables:

- ✓ The structure of the social system
- ✓ The norms of the social system
- ✓ The opinion of leaders and agents of change

- ✓ The types of the decision on innovation
- ✓ Consequences of innovation in the social system

The innovation diffusion theory has been widely apply to analyze the process of adoption of information and communications technologies innovations (Nolan, 1973,1979; Nolan et al., 1993; Pranato et al., 2001; Calvo and González, 2006; Ramdani and Kawaiek, 2007), since it allows us to understand how organizations involve ICT in their business processes, being Nolan's model (1973), a reference for subsequent stage growth models.

An adaptation of the basic categorization proposed in Rogers' innovation diffusion theory was used by Ramdani and Kawaiek (Ramdani & Kawaiek, 2007) to analyze the process of adopting enterprise systems –SE17 in SMEs in the Northwest of England. According to his proposal, SMEs can be classified into three large groups according to the relative anticipation with which they adopt business systems concerning other companies. These three groups are (Ramdani & Kawaiek, 2007):

- ✓ Early adopters are companies that have already adopted and implemented business systems.
- ✓ Seekers are companies that have not yet adopted enterprise systems but intend to adopt at least one of these systems within the next three years.
- ✓ Laggards are companies that have neither adopted business systems nor intend to adopt them in the future.

According to this study, no SMEs can be classified as “innovative,” probably due to the limitations of this type of company, especially financial ones, which do not allow them to make decisions with high degrees of complexity and uncertainty. Those closest to having technological leadership are classified as “early adopters,” although they must take the risk; their decisions are based on the results of innovative companies that are likely to be more significant.

At a second level are the so-called "seekers," who can include both the early and late majority since they base their decisions on the results of others but with actual probabilities of adopting ES.

Finally, the skepticism and distrust of the "laggards" probably will not allow them to invest in ESs, and if they do, it will be with a long delay due to the express demand of the environment.

## 3.8. Influencing aspects of the process of adopting an ICT innovation in a company

According to the literature on the diffusion of innovations (Rogers, 2003), technological innovation refers to the adoption of new methods, procedures, or production systems. ICT/IS researchers contend that its use can help businesses enhance operational effectiveness, cut expenses, and develop interactive relationships with their business partners (suppliers, wholesalers, distributors, service providers, and end customers).

Companies are increasingly employing ICT innovations that support their business processes, facilitate transactions, improve customer service, strengthen their relationships with business partners and improve their performance throughout the value chain (Lin & Lin, 2008). Consequently, taking into account that e-procurement refers to the performance of operational and strategic activities associated with supply processes in companies and their relationships with suppliers, using ICT and the Internet for this, relationships with suppliers are one of the main components of this value chain and that the use of ICT in specific procurement activities provides benefits at all levels.

Many authors have studied the adoption of ICT as support for business processes from different perspectives, contexts, and theoretical models, not only at the organizational level but also as a support for supply processes. The study of the factors that influence the adoption process of ICT innovations by companies is a topic that has drawn the attention of different authors worldwide, who have studied this process in different contexts.

Early studies were carried out mainly in the United States, as is the case of the analysis of the adoption of EDI carried out by Iacovou et al. (1995). They are increasingly arousing scientific interest, as shown by many studies in recent years, not only in the United States but also in developing countries, Europe, and

Asia. This particular interest has spread to companies of all sectors and sizes, and more importance is given to SMEs, with various authors who have conducted empirical studies on SMEs from different sectors and in different countries.

Regarding the study of the adoption of ICT innovations in specific customer relationship management activities, in general, they can be considered relatively recent, which demonstrates not only the scientific relevance of the subject of study but also the fact that companies of all sectors, sizes and countries are increasingly aware of the importance of using ICT in their daily activities and communications, as well as taking part of virtual networks.

### 3.8.1 Technology Acceptance Model - TAM

The Technology Acceptance Model (Technology Acceptance Model), introduced by Fred Davis in 1986, is an adaptation to the field of information systems of the "Theory of Reasoned Action." Its objective is to explain the determinants of acceptance of computers at a general level, justifying user behavior concerning a wide range of technologies (Davis et al., 1989).

The TAM model proposes that the aspects that influence users' decisions about how and when they are going to use a new technology that is presented to them are as the perceived usefulness and the perception of ease of use (see Figure 7).

According to this model, perceived utility (PU) is defined as the degree to which a person believes using a certain system would improve their performance at work. Perceived Ease of Use (PEOU) is defined as the degree to which a person believes that a particular system would be effortless (Davis et al., 1989).

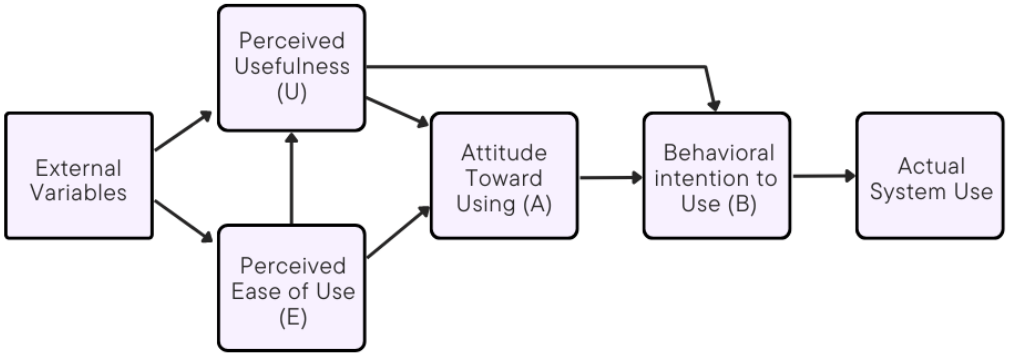



Figure 7. Technology Acceptance Model TAM (Technology Acceptance Model). (Davis et al., 1989)

New information technologies are complex. They involve a certain level of uncertainty, so decision-making regarding the potential success of their adoption leads users to configure attitudes and intentions regarding using these new technologies before using them (Davis et al., 1989). This model has been successfully tested by authors such as Adams et al. (1992), who empirically demonstrated the reliability and validity of the proposed scales to measure the factors: of ease of use, and perceived usefulness, concerning the use of technologies such as mail or electronic systems at an operational level.

Grandon and Pearson (2004), through their empirical work with North American SMEs and based on the TAM model, showed that ease of use and perceived usefulness, organizational preparation, and external pressure influence the e-commerce adoption process in SMEs. Although this model focuses mainly on the cognitive characteristics of decision-making, it is frequently used to analyze process automation in the early stages of information technology diffusion or to understand the processes of adopting simple IT forms such as computers and process automation. Chronologically, this model was widely used before the TOE model, and considers the aspect of personal decision-making characteristics in the adoption process, which is very useful in SMEs where decision-making is usually in charge of a single person (Ordanini, 2006).

### 3.8.2 Strategic Necessity Hypothesis - SNH

The theoretical model of Strategic Necessities (Strategic Necessity Hypothesis) was proposed by Clemons and Row (1991). According to the author, information systems are strategic tools for business; this technology (equipment and services) is available to all companies. However, innovative companies sometimes enjoy the same advantages as companies that are not, so many of the advances that large companies achieve, thanks to the early adoption of ICT, are quickly neutralized by competitors. In this sense, ICTs can lead to a sustainable competitive advantage when used to leverage strategic resources (Clemons & Row, 1991).

Thus, according to the SNH model, ICTs have negligible value as an independent or autonomous resource and can improve the competitive potential of other vital resources if integrated into the business model. Therefore, the consequences of adoption can be direct marginal effects on results and potentially significant spillover effects through combination with other existing resources (Ordanini, 2006). In short, this theory makes it possible to identify and analyze opportunities to develop ICT to leverage the discrepancy in structural resources between companies, both at the level of vertical integration and diversification, as well as differences in the quality and organization of primary resources (Clemons & Row, 1991).

Although Ordanini (2006) used this model to analyze the adoption of ICT innovations in business procurement activities, it is more focused on the effects ICT may have on organizations rather than on the aspects that can influence decision-making.

### 3.8.3 Technology-Organization-Environment Model - TOE

The TOE model developed by Tornatzky and Fleischer (1990) examines the decision-making process related to adopting new technologies and analyzes the evaluation process until an adoption and implementation decision is made. According to the authors, the influence factors in this decision-making process can be technological, organizational, and environmental.

The technological context comprises the internal and external technology relevant to the company. This includes equipment and methods or practices currently available to the company internally and available external technologies. Associated with belonging to a particular industry, a company has different IT needs; however, companies do not necessarily need to have all the innovations, nor can they take advantage of new technology in the same way as other companies. TOE framework considers the technologies the company uses and analyzes the benefits of these technologies and new technologies in parallel. Required skills, infrastructure, complexity, use cases, Etc, can characterize these technologies (Tornatzky & Fleischer, 1990).

The organizational context defines the different characteristics that describe the company, such as the type of company, size, complexity, organizational structure, degree of formalization and centralization of business processes, communication processes, quality of human resources, and availability of resources in general, internal aspects of the company and its management (Tornatzky & Fleischer, 1990).

Regarding the environment, this context can also impact the decision-making process and includes all types of inhibitors (barriers) and facilitators (drivers) of the business environment, such as decisions by business partners, competitors, or the government (such as legal issues or potential subsidies). The business environment includes factors such as the characteristics of the industry, the availability, and cost of trained personnel, shifts in the market demand, and competition pressure.

In conclusion, the model proposes that the factors that affect organizational decision-making in terms of technological innovation can be grouped into these three contextual blocks, technological, organizational, and environmental, which are related to the intention of a company to adopt or not a new technology, as well as the impact on performance concerning the assimilation of ICT in their business processes.

### 3.9. Foundations of the theory of resources and capabilities

CRM is one of the areas where the Internet has been widely disseminated in recent years in SMEs. However, the applications of the theory of resources and capabilities in customer relationship management are relatively scarce, and little is known about it. To determine the results of the supply management processes, it is necessary to identify the key resources in this process and how the resources can be organized to create competitive advantages (Ordanini, 2006).

According to the theory of resources and capabilities (TRC), to generate actual competitive advantages, the capabilities created from resources must be valuable, inimitable, rare, and without strategic substitutes (Barney, 1991), therefore the company must have a proper knowledge of the resources it has and, based on this, define its strategy based on its strengths and key points and, based on them, develop truly valuable capabilities in the company (Grant M., 2004).

Although, according to this approach, resources do not generate value in themselves (Grant M., 1999; Ravichandran & Lertwongsatien, 2005). For the company to establish a competitive advantage, resources must work together to create organizational capabilities, which constitute the resources in the basic unit of analysis (Grant M., 2004). In this order of ideas and given the importance of resources in business performance, it is necessary to take them into account within the analysis of the adoption of CRM since it will allow not only to evaluate the state of ICT in companies but also to characterize the stages of the evolutionary process and the investments that each of these stages implies for SMEs interested in integrating ICTs into their business processes.

Edith Penrose contributed to the field of CRT in 1959 when she proposed, in her resource-based view (RBV), that: “a firm is more than an administrative unit; it is also the meeting of productive resources arranged among the various users and over a certain period according to administrative decisions. The heterogeneity of services from these resources gives each company its unique character. Resources provide multiple services; the effective use of those resources occurs when the resources are combined with other resources” (Penrose, 1995).

Based on this approach, various studies, both in the field of IS information systems and strategic management, have shown on numerous occasions that the

competitive potential of companies lies in their resources and capabilities and that the study of the process of creating the latter is relevant in any field. Ravichandran and Lertwongsatien (2005) define ICT capabilities as the ability to mobilize and develop ICT-based resources in combination or the presence of other resources and capabilities; this improvement in capabilities is a potential source of improvement in company results, as has been shown in numerous studies on the subject (Ravichandran & Lertwongsatien, 2005; Pham & Jordan, 2007).

According to the theory of resources and capabilities (TRC), resources do not create value for the company by themselves but by creating organizational capabilities, as seen in Figure 8.

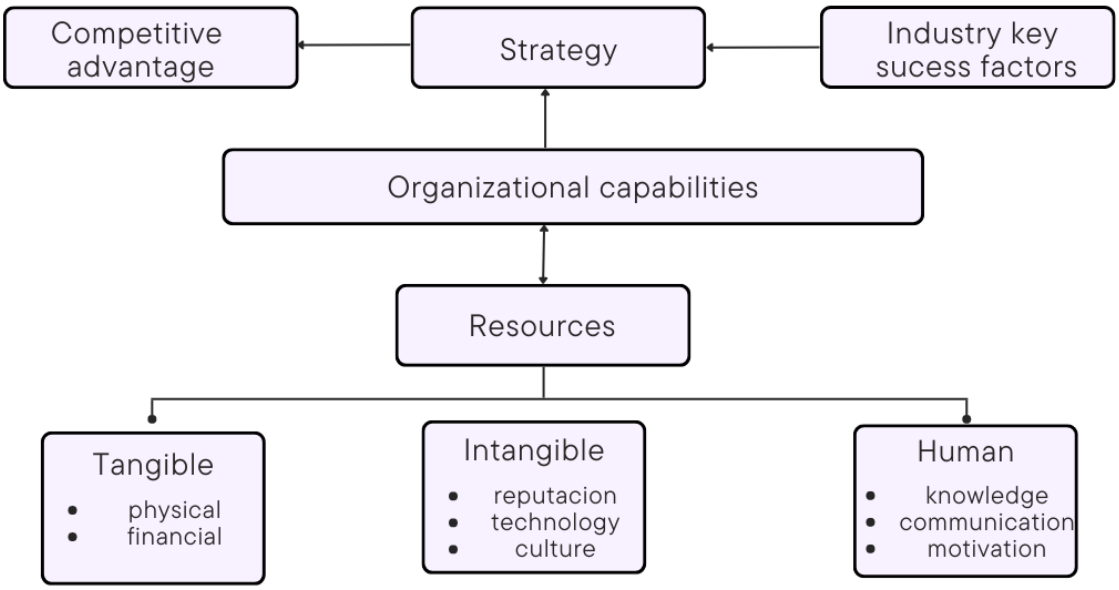



Figure 8. Relationship between resources, capabilities, and competitive advantages (Grant M., 2004)

For the company to establish a competitive advantage, resources must work together to create organizational capacities, which refer to the condition of a company to undertake a specific productive activity (Grant M., 2004) and contribute to the creation of competitive advantages.

According to Makadok (2001), companies can improve their competitiveness and, therefore, the performance they obtain through the choice of resources and the construction of capabilities. Both methods are related since the selection of

resources affects the subsequent capacity building. As the firm's resource theory was understood at the time by Barney (1991), the different approaches proposed to assume that resources and capabilities can be unevenly distributed throughout the companies and that these differences can be long-lasting and that the relationships between resources can be the source of the creation of competitive advantages. These approaches motivate the study of resources as a starting point in the analysis of the ICT adoption process in companies.

Despite the above and considering that it is not ubiquity but scarcity that makes a business resource truly strategic and the basis of a sustained competitive advantage (Carr, 2004), it should be taken into account that precisely this evident difficulty that SMEs have to immediately access resources that allow them to create the necessary capacities to consolidate their strategy, reduces the concrete options for improving their efficiency. Developing the necessary resources and capabilities within the company requires a real investment of time and capital, which becomes a determining factor for SMEs to utilize the increasing the opportunities offered by ICTs and the Internet to grow their markets.

### 3.9.1 The Theory of Resources and Capacities and ICT

Carr's (2004) statements have created some controversy, given the utilitarian character attributed to investments in ICT resources when he states that ICTs have become a simple factor of production, an element in the production process, which is necessary for competitiveness but not enough to obtain advantages (Carr, 2004). However, Carr's arguments are appropriate when he says that not all ICT investments have strategic value for the company and that some ICT investments only serve to survive in the business without offering opportunities to differentiate themselves from the competition. With this approach, Carr (2004) does not generalize this behavior to all ICTs, implying that he assumes the existence of different types of ICT resources. Indeed, it is then possible to understand why an appropriate choice of the resources in which the company intends to invest will then be one of the ways to achieve competitive improvements and improvements in performance (Makadok, 2001); The most relevant issue would be to understand what leads companies to start an ICT investment cycle and the levels that drive this process.

Resource theory argues that to generate true competitive advantage, the capabilities created must be valuable, inimitable, rare, and without strategic substitutes (Barney, 1991). It is essential to understand that the basic requirement for formulating the strategy based on resources is that the company seeks a deep and complete knowledge of its resources. This provides solid criteria to select a strategy that exploits its strong and key points and, from them, develops valuable capabilities in the company (Grant M., 2004).

As discussed above, the literature has highlighted that there are different types of ICT investments, each of which has a different pattern of possible returns. Laudon and Laudon (Laudon & Laudon, 2007) differentiated according to their strategic nature. Henry Lucas (2000) demonstrated with his "Investment Opportunities Matrix" that ICTs can produce value for the organization depending on the type of investment being considered. Weill &Aral (2006) support the existence of a positive relationship between the level of investment in ICT and the results of the companies, provided that the investments are managed according to an ICT portfolio directed by the company's objectives.

Thus, not all companies can expect the same return on their investments, nor ICT resources in general. However, these concepts must necessarily be studied in a differentiated way, taking into account not only the type of resources that each company has but also the degree of evolution and interpenetration of these within the organizational processes, so that, although all resources can have their contribution in the creation of capacities, not all of them create the same type of capacities.

The CRT has been used to analyze the adoption of ICT in organizations by different authors, mainly to understand the role of resources and capabilities in creating value, performance, or business results (Zhu, 2004; Ravichandran & Lertwongsatien, 2005; Huang et al., 2006), or to analyze the success of ICT implementation, its antecedents, and consequences (Caldeira & Ward, 2001). From these findings, it is feasible to deduce the significance of effective management of ICT resources and the necessity of integrating them gradually into the business and by the other investments involved in the process.

# 4 CUSTOMER RELATIONSHIP MANAGEMENT (CRM) AND RELATIONSHIP MARKETING

The analysis of the CRM concept will start after the theoretical foundations of this research project have been examined; initially, it will delve into the field of relationship marketing, which is offered as the origin and foundation of the object study.

In this context, this study will first examine the development of relationship marketing within the marketing discipline, moving from a transactional to a relational approach, before concentrating on its definition and key features.

## 4.1. From transactional marketing to relationship marketing

As discussed in previous sections, businesses' competitive environments have changed recently, impacting every aspect of their operations. Marketing, however, has not been unaffected by this transformation. When it comes to managing the marketing mix and the four Ps (product, price, promotion, and distribution), transactional marketing was once thought to be the current paradigm. However, this approach is now under scrutiny because it is seen insufficient to satisfy the changing demands of the market.

It is therefore possible to state that there has been a paradigm change in marketing, moving from a transactional to a relational strategy, as a result of the contributions of outstanding specialists in the field, like Grönroos, Berry, or Kotler (Grönroos, 1994; Berry, 1995; Kotler, 1992).

By comparing the many definitions of the discipline provided by the American Marketing Association, it is possible to examine how the marketing function has evolved (AMA). 1985, the AMA defined this discipline as “the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational goals” (AMA Board, 1985, p. 1).

In September 2004, the AMA suggested a revised definition that considers the importance that building relationships with clients has come to hold in modern marketing approaches. The new definition advocates that “marketing consists of an organizational function and a set of processes for creating, communicating, and delivering value to customers and managing customer relationships through procedures that benefit the organization and all stakeholders” (AMA Board, 2004, p16).

Among the leading causes of the paradigm above shift is questioning the marketing mix's usefulness as a general marketing theory. In this sense, Grönroos (1994) analyzes the weaknesses of this approach, including the negative effect of considering the marketing function as an isolated department and not as a philosophy assumed by the entire organization. Another weakness mentioned consists of the character of mass marketing and product orientation that this theory entails, without considering the characteristics and needs of the individual customer.

In addition to the weaknesses mentioned above of the transactional approach, there have been a series of changes in the environment that have favored the appearance of relational marketing: globalization of markets, the evolution of the consumer and recognition of the importance of retention, changes related to the product and to distribution channels, the decline of traditional forms of communication and the appearance of advanced technological tools that allow companies new forms of relationship. Given that these changes are of great importance and involve many factors, the following different authors' perspectives will be analyzed.

In the first place, Grönroos (1994) highlights the following factors as causes of the appearance of the new paradigm: the globalization of business, the recognition of the importance of various aspects such as customer retention, market economies, as well as the economics of consumer relations. At the same time, the importance of service as a vital component of the product offering has also increased overall, along with the growth of service-based sectors (Gummesson, 1987). The grounds for these developments can be summarized as (Denison &

McDonald, 1995; Doyle, 1995; Grönroos, 1994; Hunt & Morgan, 1994; Sheth & Parvatiyar, 1995; Tapscott & Caston, 1993; Turnbull, Ford & Cunningham, 1996):

- The decreasing use of conventional mass marketing strategies as consumers become pickier and more demanding.
- Markets saturation as they mature.
- The rising importance of pricing as differentiation diminishes.
- The emergence of technology innovations that offer fresh items and solutions.
- The shifting nature of markets, in particular, the rise of competition and the emergence of fragmented, regional, and international markets and businesses.

In this sense, it can be highlighted as the determining role of the increase in the costs of attracting new customers and the phenomenon of fragmentation parallel to the globalization of markets. In other words, companies must respond to a globally competitive environment but operate in increasingly fragmented markets where consumers demand personalized products and a more significant service component. This fact, together with the need for in-depth knowledge of the non-explicit needs of customers, can only be achieved through ongoing relationships with them.

## 4.2. Relationship marketing concept

In general terms, relational marketing is articulated around the idea of developing relationships with a long-term vision and a special assessment of the loyalty of the company's current clients as opposed to obtaining new clients.

However, to deepen and delimit the concept's meaning, different proposed definitions will be analyzed, allowing us to observe the critical aspects of this discipline and its evolution over time. It must be taken into account that although relationship marketing is a young discipline, various proposals for its conceptualization can be found, which differ in the breadth of the approach's limits and the different perspectives with which it is applied.

The conceptual antecedents of this new proposal can be found in works developed by the Nordic School of services, with authors such as Grönroos and Gummesson, and by the Industrial Marketing Group, with authors such as Johanson and Mattson (Barroso & Martín, 1999).

The first work that introduced the term relational marketing was developed by Berry in 1983 and considers that this discipline consists of attracting, maintaining, and intensifying customer relationships (Berry, 1983, p. 25). Also, from the perspective of services, other authors such as Christopher, Payne, and Ballantyne (1994) associate the concept of relationship marketing with the synthesis of customer service, loyalty, and marketing. In the context of the Nordic School and under a relational perspective, Grönroos (1996) argues that marketing is the process of identifying, establishing, maintaining, and increasing beneficial relationships with customers and other agents involved so that the objectives of the involved parties are met.

This is done through the mutual delivery and fulfillment of promises (Grönroos, 1994, p. 9). This author highlights the need to consider the marketing strategy as a continuum, as opposed to what the principles of transactional marketing advocated. Table 2 compares the transactional and relational approaches as a reference.

TABLE 2. Marketing strategy as a continuum: some implications. Own elaboration from Grönroos (1994).

| | **Transactional marketing** | **Relationship marketing** |
|---|---|---|
| *Temporal perspective* | Short-term focus | Long-term focus |
| *Dominant marketing function* | Marketing mix | Interactive marketing |
| *Price elasticity* | Clients tend to be more price sensitive | Clients tend to be less price sensitive |
| *Dominant quality dimension* | Output quality (technical dimension) | Interactions quality |
| *Client satisfaction measurement* | Supervision of the quota Market (indirect approach) | Customer base management (direct focus) |
| *Client information systems* | Satisfaction surveys | Real-time information feedback system |
| *Internal marketing role* | Not a success factor | Has a substantial strategic importance |

On the other hand, Shani and Chalasani (1992, p. 59) offer a definition with characteristics similar to the one stated by Grönroos. For them, “relationship marketing is an integrated effort to identify, maintain, and build a network with consumers on an individual level and to continually strengthen the network to the mutual benefit of both parties through interactive, individualized, and value-added contacts over an extended period of time”.

For its part, an integrating definition is the one provided by Alet (1996, p. 35), who conceives relationship marketing as a social and managerial process of establishing and cultivating relationships with customers, creating links with benefits for each of the parties, including sellers, prescribers, distributors and each one of the fundamental interlocutors for the maintenance and operation of the relationship.

Finally, Kotler (1992) insists that the new marketing approach must be focused on attracting and retaining customers. Therefore, following this relational approach, companies should direct their marketing efforts toward building lasting relationships with their most profitable customers. In other words, the company must know its customers' expectations to satisfy them, improving the service quality optimally. This author also highlights that the key to relationship marketing consists in delivering value to customers. To remain competitive in the current environment, companies must continuously improve and expand the added value they offer their customers.

This same author, in subsequent works (Kotler, 2004a; Kotler, 2004b), delves into the new relationship marketing paradigm, pointing out its strategic, holistic nature and the fundamental role IT plays as enablers of this new marketing as its main characteristics. First, the marketing function must be strategic, be integrated throughout the organization, and therefore guide the business strategy. On the other hand, the marketing function must provide a holistic view of the target market, communication channels, interests of the agents related to the company, etc. In addition, another critical component of the new marketing will be the efficient use of technology since new tools will play a determining role in building customer relationships technologies and Internet-based marketing.

For all these reasons, Kotler (2004b) highlights the following as principles of new marketing, among others: recognizing the growing power of the consumer; developing marketing offers from the perspective of customers, generating differentiated offers for the different segments; focusing on delivering value to the customer; develop IT-based marketing initiatives and develop metrics that analyze the performance of marketing activities.

Once the concept of relational marketing has been analyzed, it will be observed how this discipline is positioned as one of the conceptual foundations of CRM. So much so that CRM is considered by some authors as a strategic bridge between IT and the implementation of relationship marketing strategies (Ryals & Payne, 2001).

### 4.3. Definition of CRM and analysis of the concept

First, the above confirms again that there is not only one definition of what a CRM is, and there are various approaches to its concept. Some define CRM as a business strategy and those who define CRM as an application that allows a business strategy to be put into practice that involves the relationship between customers and the company. There is no widely agreed-upon definition of CRM; instead, it can be understood in a variety of ways. Some authors see CRM as a strategy, while others see it as a computer tool, for this reason definitions from different authors are mentioned below.

CRM is a business approach that allows knowing the behavior of customers and influencing it through consistent communication to increase their level of acquisition, retention, loyalty, and profitability. Due to the iterative nature of the process, information about the client can be transformed into a profitable relationship. The technology, through advanced data conversion and graphic presentation techniques, speeds up administrative decision-making and increases its usefulness. It empowers customer-facing staff, information workers, sales and marketing departments, and administrative employees (Swift, Ronald S. 2002, p. 13).

A CRM can be defined as “a term from the information industry that is applied to methodologies, software and, in general, Internet capabilities that help a company to manage relationships with its customers in an organized way.” (Rousse, 2015). Bose (2003) defines a CRM as "the integration of technologies and business processes used to satisfy customer needs during any interaction with them.

CRM can be defined as "the combination of people, processes, and technology that seek to understand the companies' customers,” as seen in Figure 8 (Chen & Popovich, 2003, p. 672).

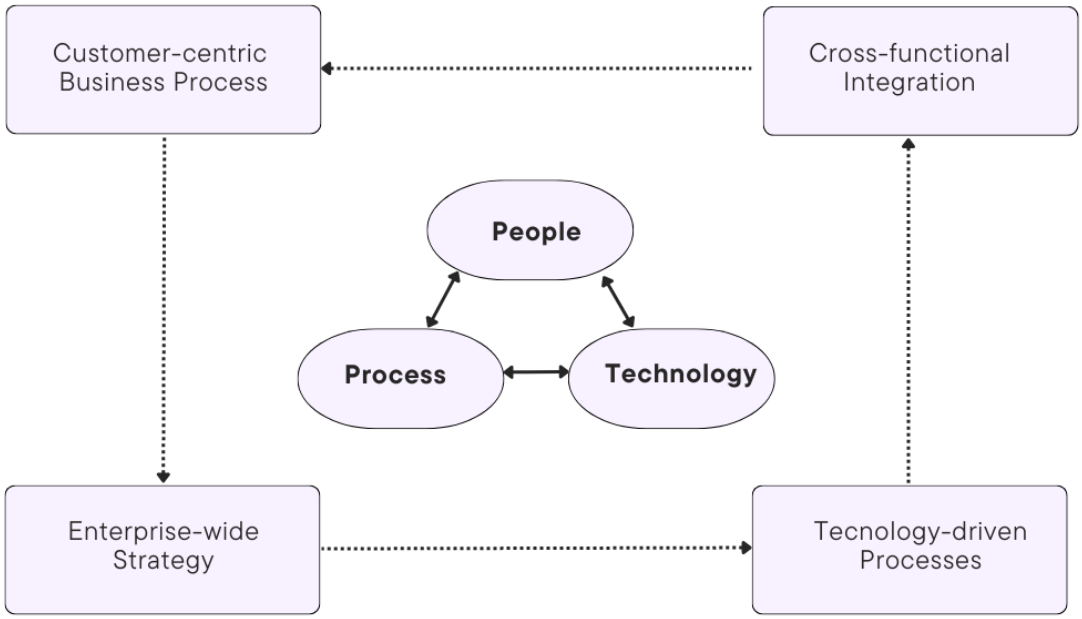



Figure 9: CRM implementation model (Chen & Popovich, 2003, p. 676)

After all the definitions given by the various authors, one of the results obtained must be made, concluding that all the definitions have CRM characteristics in common. By learning about the customer's preferences and tailoring offers to suit them, the CRM's primary goal is to provide value for the customer. CRM strategy is a long-term business plan that is beneficial to the organization adopting it as well as the client. The end outcome being that the entire organization, including the redesigning entity, has a new business model geared toward the consumer.

CRM is a customer-only approach in which all divisions of the company must cooperate to achieve the shared objective of retaining and gaining new customers. CRMs embrace a new way of approaching negotiations with clients in addition to new technology capabilities.

Customer Relationship Management is a business strategy that enables the organization to identify, attract and retain customers by applying effective processes that help provide better customer service. Likewise, it uses information technology as a support tool that facilitates its application by capturing data in a single data repository that allows it to obtain statistics for better decision-making.

In conclusion, bringing together all the above, a definition of the CRM concept is proposed:

*A CRM is a long-term business strategy focused exclusively on obtaining new customers, loyalty, and retention of old ones, and achieving permanence over time for all the entity's customers, achieved through closeness and knowledge of the client, which provides added value to the attention given to clients and provides benefits for both the entity and the clients, which is achieved by the implementation of information technologies.*

### 4.4. CRM apply as business strategy

The concept of strategy is subject to many definitions, which indicates that there is no universally accepted definition.

H. Igor Ansoff, in 1976, defined strategy as the dialectic of the company with its environment. This author considers that planning and strategic management are different concepts; he posits the superiority of the second. K. J. Halten: (1987) states, "It is the process through which an organization formulates objectives and aims to obtain them. Strategy is the means, the way; it is the how to obtain the organization's objectives. It is the art of intermingling internal analysis, and the wisdom leaders use to create value from the resources and skills they control to design a successful strategy; there are two keys: do what I do well and choose

the competitors I can defeat. Analysis and action are integrated into the strategic direction."

"Strategies are general programs of action that carry commitments of emphasis and resources to put into practice a fundamental mission. They are patterns of objectives that have been conceived and initiated in such a way as to give the organization a unified direction (Koontz, 1976). CRM systems are often considered a business strategy that helps the company or organization to improve certain areas. Furthermore, the CRM strategy focuses on analyzing each company's interactions with the client and the response that this presents to each stimulus.

A CRM strategy deals with specific points or steps to be effective. It must identify Customers; being essential always to know who they are. There is a need to differentiate customers; it is necessary to classify the customer according to their needs and the value they present to the company. Being able to assign previously identified customers to defined groups and characterized by common patterns, the type of need, and the value they add to the company. It is required to interact with customers; this involves maintaining contact with customers based on the information collected about them, their interests, and their needs for more personalized communication. The strategy should adapt the product or service to each client. The most challenging step in the CRM strategy requires great integration and optimal functioning of the previous steps; this sews to cover the customer needs more efficiently through the knowledge obtained. Moreover, must attempt to forge long-term relationships, this is directly related to customer loyalty to the company.

### 4.4.1 Benefits of CRM

Implementing a CRM solution can be seen in the increase in revenue, customer satisfaction, productivity, and the reduction of operating costs.

The introduction of a CRM solution makes it possible to identify and get to know the company's customers better and, therefore, to personalize the offers and the treatment received with greater precision and success. (Renart, 2007). Some of

the general benefits that the application of a CRM provides to an organization are:

- Acquisition of new clients.
- Retain potential customers.
- More effective marketing.
- Increase customer loyalty.
- Customer recovery.
- Increased sales.
- Increase references from current clients.
- Reduce interaction and transaction costs.
- Improve the effectiveness of marketing campaigns.

### 4.4.2 Objectives of CRM

A company's CRM primarily serves to identify, through the information obtained and managed by information technologies, what generates value for the client in order to then offer products or services that genuinely require, at the right time, increasing this way your sales that lead to an increase in turnover, satisfying customer needs and reducing costs.

### 4.4.3 Types of CRM

Three primary divisions may be made while discussing CRM:
1. Strategic
2. Analytical
3. practical

The management and technological definition disputes surrounding the concept of CRM can be resolved by dividing them into three main groups (Buttle & Maklan, 2015, p.4)

Strategic CRM is strategically related to all the company’s organizational operations. Kumar & Reinartz, 2012, pp. 35-36). Customer-oriented management, in-

formation gathering, technological adjustment, adjustment and integration of organizational processes, and the implementation of a CRM strategy make up the four core components of strategic CRM (Kumar & Reinartz, 2012, p. 36). Building a business culture dedicated to creating value for the customer is the foundation of strategic CRM. By providing this value and satisfaction, the business can be more competitive, attract new clients, and retain current ones. Customer centricity is the definition of the strategic approach to CRM (Buttle & Maklan, 20015, p.5).

Analytical CRM uses several methods for gathering and processing customer-related data to create value for customer and the business (Buttle & Maklan, 2015, p. 11). Strategic customer metrics used in analytical CRM help businesses understand the worth of each customer (Kumar & Reinartz, 2012, p. 89).

Operational CRM entails leveraging technological technologies to integrate and automate corporate activities. Operational CRM automates sales, service, and marketing tasks (Buttle & Maklan, 2007). These procedures are CRM viewed from a functional level (Kumar & Reinartz, 2012, p. 35).

### 4.5. The role of CRM in the sales management process

According to Chiesa C., 2005, from the IESE Business School, to successfully introduce Relational Marketing or CRM strategy in the company, the commercial cycle must be adjusted at five levels:

a. Personal quality and emotional intelligence: The success of a relational marketing strategy will not depend mainly on the methodologies applied or on the information systems. To a large extent, it depends on the entire organization being aligned in offering the best service available in the market to the client. For this, the organization must have personnel who are involved, motivated, and identified with the objectives and mission of the company. Personnel with a very high emotional intelligence must be maintained, that is, with a positive attitude and a strong sense of responsibility (proactivity). It is a must to have teams in the company prepared in three aspects, the knowledge of its processes, the skills needed, and a positive attitude.

b. Employee satisfaction: The relationship marketing strategy is based on customer loyalty. To retain customers, first, the company must retain staff, who, satisfied with the organization, will transmit this satisfaction to the customer, building loyalty with the organization.

c. Excellence in the commercial process: Customer loyalty is achieved throughout the business cycle to offer an excellent business process to the customer, adequate and correct sales management must be carried out. The company should not end the commercial cycle with the client once the product is placed but continue over time with a series of loyalty actions seeking new purchases by the client that keep them longer in the organization; that is, offer the client a consultative sale where the commercial process begins with a preparation phase before having the client in front where the employee is informed of what the client's possible needs are and with this information establishes an approach strategy that allows yourself to be a consultant at the time of the sale, proposing to the client the product that suits him best according to the knowledge of the employee (consultant). Once the sale is closed, post-sale actions must be continued to keep the client happy with the organization.

d. Value for effort: To build customer loyalty, the customer must be given more for less, which is the customer's perceived value for their purchase. This means designing a competitive value proposition that exceeds customer expectations.

d. Relationship marketing strategies: Loyalty to a customer already in the company is more profitable than acquiring a new one since the sale of the current product can be repeated, or one can be offered, with a greater probability of success. This repetition of the sale with the same client works only if it is loyal, which means that it maintains an excellent image of the company. To achieve loyalty, internal plans must be developed to make the client feel comfortable with the organization from the moment they need the product until after they have already acquired it (post-sale).

### 4.6. Usage of CRM in Finland

McKinsey's article “What the future science of B2B sales growth looks like”, published in January 2018, highlights three important points regarding future B2B sales. According to McKinsey, the three most important competitive factors in the future will be encountering customers in the channels where they want to be encountered, using advanced analytics and machine learning to make better and faster decisions, and finally, continuous finding and development of the best talent.

All these three dimensions need functioning systems and practices for their utilization as a background. It is impossible to meet customers if sales processes are not viewed as a whole and defined in systems at the level of individual processes. At the same time, analytics cannot be used if high-quality data is not collected in the system or there is no data at all; the development of talent is impossible if no data of any kind is collected about people's skills and current activities.

These issues raised by McKinsey are an excellent comparison basis for the study conducted in Finland by Taloustutkimus in 2018. The findings of a 2018 study conducted by the Finnish consulting company Biit and Taloustutkimus were very much in line with Torggler's (2008) study. The survey investigated the use of CRM systems by small and medium-sized Finnish companies; according to it, 61% of the companies that participated in the survey had a CRM system. According to the study, the use of systems in companies was insufficient not only on a collaborative and analytical level but also on an operational level: only 21% of the respondents had defined all their sales processes in the system, 29% of the respondents used the system to collect customer feedback on the seller's activities, and 18% of the respondents had utilized the artificial intelligence features of the systems in their customer management. In the same study, 40% of the sales managers surveyed said that they use their CRM system more than once a day, which also suggests that the usage of a CRM system is not necessarily a very significant part of practical sales work (Bit 2018). More than 250 sales managers participated in the survey, and the research result shows there is still some space to grow in the use of CRM by Finnish SMEs if they want to remain competitive in a rapidly changing world.

One of the most surprising results was that in almost 39 percent of Finnish SMEs, sales are managed using something other than CRM — for example, Excel. Admittedly, even those who had adopted CRM did not do much better, as less than a third of the respondents reported that they did not record sales processes in the CRM system daily. Furthermore, only one-third collect customer feedback about salespeople's performance in the system.

Official Statistics of Finland (OSF) data will be presented to finalize this chapter. According to the OSF, only 40 percent of companies use software for managing customer information (so-called CRM).

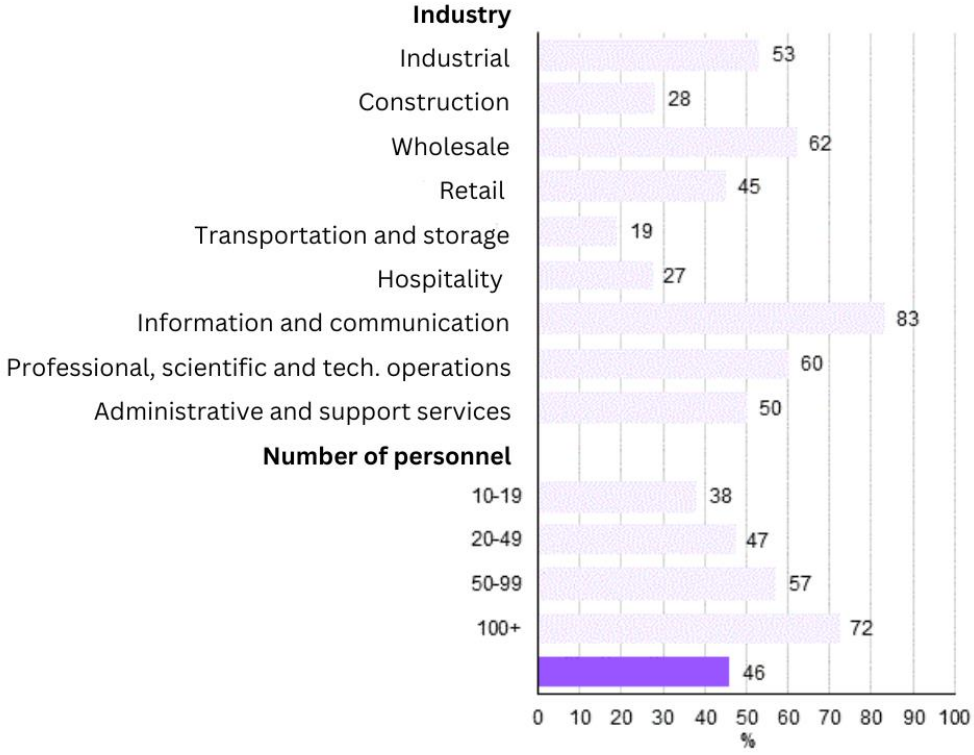



Figure 10: Customer relationship management information system (CRM) used at companies (Statistics Finland, 2021)

By size category, the prevalence of CRM software varies from 32 percent of the smallest companies to 70 percent of the largest. By industry, CRM software is mostly used in the information and communication (78%), professional, scientific, and technical activities (62%), and wholesale trade (58%) industries.

# 5 RESEARCH METHODS

This chapter's objective is to defend the study's methods chosen. The overview in Figure 11 depicts each stage discussed in this chapter:

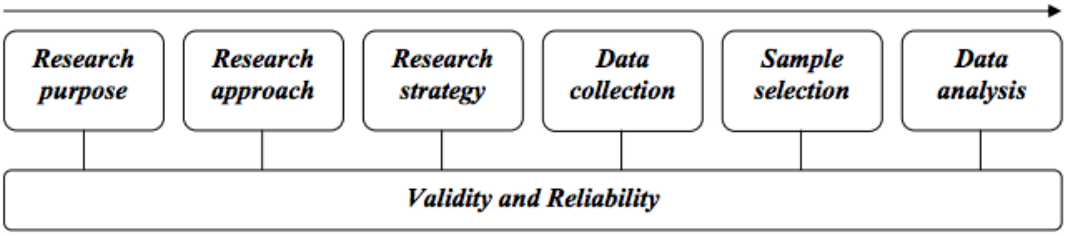



Figure 11: Overview of methods. Adaptation from Foster, 1998, p.81

## 5.1. Case study methods

When conducting research, using methodology sing will be beneficial as it is a tool for problem-solving and discovering new information. (Holme, 1997)

This study uses a case study technique and qualitative approaches to assess the pre-conceptions and attitudes towards the adoption of CRM. A case study is empirical research that explores a current issue in-depth and in the context of real-world events. A case study uses knowledge and experience to answer the how, who, and why questions (Rashid et al., 2019; Farquhar, 2012).

This qualitative case study has a subjective epistemology and a relativist ontology. According to relativist ontology, several socially produced realities may not be subject to natural rules. Nature, sources, and knowledge creation are all considered in epistemology. Epistemology is regarded as subjective when considered that knowledge is a person's interpretation of the facts (Rashid et al., 2019).

It was decided to use qualitative approaches for this research case study for a few reasons. First, given the nature of the issue, a conceptual understanding of the staff's perspective on CRM adoption was necessary. Second, the qualitative approach was appropriate for this study since TamCent has a small sales team. Additionally, qualitative methods are acceptable when examining meanings or

individuals in a social environment (Rashid et al., 2019). This research brings out the individual experiences of the staff and their perception towards the adoption of an ICT innovation.

A case study's lack of generalizability is one of its drawbacks (Allen, 2017). However, if the study aims to advance general knowledge, a different strategy should be considered. Lack of generalizability is not a problem as this research aims to provide TamCent, the example company, with a framework to ensure the successful adoption of the CRM.

## 5.2. Data collection methods

This study’s research is empirical in nature. The material for the study was gathered through academic writings, conversations within TamCent, and interviews with the COO and three employees of the company.

### 5.2.1 Secondary data

Secondary data is data collected by someone else and for other purposes than for the research in question (Allen, 2017). Literature sources are common secondary data in qualitative research, as well as reports, meeting minutes, marketing data, etc. (Rashid et al., 2019).

The literature review is the main secondary data source for this study.The framework's literature review primarily emphasizes contemporary academic books and articles that have been published within the last ten years. Reading secondary sources can be a valuable source of dissertation assistance. Once the dissertation topic has been determined, the researcher conducted a keyword or subject search in the university library’s catalog and on the internet to locate books on the subject.

Articles were found in databases such as Sage Journals and ResearchGate. The researcher used this type of website to look up keywords or topics related to the topic. OA keyword or subject search on these sites will yield scholarly articles containing the search terms. These search results were sifted through to find

those that closely related to the dissertation topic. The keywords researched were CRM, ICT innovations, strategic management, CRM in B2B, among others.

### 5.2.2 Primary data

The original data the researcher gathers from original sources is known as primary data, especially for the abovementioned study. The researcher hopes to shed new light on the research concerns by gathering primary data (2012 Farquhar).

According to Winter (2000), qualitative researchers become involved in the study, whereas quantitative researchers disassociate themselves from it. The goal of qualitative research is to get people involved in the study. According to Melles (2005), "qualitative interviewing emphasizes obtaining authentic data about respondent's subjective world through establishing rapport and empathy with participants using researcher sensitivity strategies." (p. 21).

For this study, a qualitative research approach was judged appropriate because it allowed for follow-up questions deemed necessary by the researcher. It also allowed for more accurate responses than a quantitative research method, where the researcher might not be able to build trust and empathy with the participants (Melles, 2005).

Interviews are a typical technique in qualitative research to get information about a particular area of interest (Tuomi, 2018). Because this research aims to learn about and comprehend the employees' experiences, semi-constructed interviews were used. Employees were able to share their thoughts and experiences before the adoption of the CRM was in place.

Because this research aims to learn about and comprehend the employees' experiences, semi-constructed interviews were used. Employees were able to share their thoughts and experiences before the adoption of the CRM was in place. The interview took place in the company's facilities during work hours to ensure that the interviewees felt comfortable and at ease.

### 5.3. Data analysis method

Interviews will detail how customer relationships are managed in the company and the staff's pre-conceptions and expectations towards implementing a CRM. The literature analysis will determine the standard for successfully adopting the same. Based on the research questions and the results of the literature analysis and interviews, the study will provide a framework for a SME organization to successfully implement a CRM system. For this study's data analysis, deductive logic is used in the theory-guided analysis. This indicates that theory guides and supports the investigation's conclusions (Tuomi, 2018). In actuality, the interview results were contrasted with the theory of the experience and expectations for the adoption process. To compare theory and actual findings, which were categorized in accordance with the study topics.

All staff interviews were recorded, and transcriptions were done either manually when the interview was conducted in English or utilizing the Microsoft Team transcribe option. To provide a broad overview of the interviews. Understanding the empirical data is the initial step in the data analysis process. Forming an understanding of developing themes was the first step in the process. The information was then was separated into concepts related to the research topics.

# 6 DATA COLLECTION

The results of the interviews with TamCent's staff are presented in this chapter. First, a detailed description of TamCent's sales & customer relationship process is provided, as discussed with the company's COO. A general overview of the staff interviews is conducted while outlining the results and interview limitations.

## 6.1. TamCent sales and customer relationship process

At TamCent, relations with their customers are one of the critical elements of their success in the industry. Customer satisfaction with their products and services is critical to the TamCent family in the context of their commitment to offering high quality based on their mission, vision, and fundamental values.

Through in-depth research, policies to enhance customer relations processes, and the participation and assistance of all relevant departments, they continuously carry the priority to place customer satisfaction further to deliver the finest service for their clients. Therefore, TamCent considers it an honor to offer service with the highest level of customer orientation in the industry.

TamCent uses a customer-oriented approach to give their clients high-quality service and support, fully meeting their expectations possible. The staff is empowered to take the initiative and make necessary decisions to meet client needs as quickly as feasible and maintain the most outstanding level of customer satisfaction. The organization uses its professional employees and a professional approach to meet the demands of the clients. Years of experience have helped the company develop its services to meet its customers' needs in the best possible way at every stage of the process. Their goal is to provide the best tools for system design, installation, and maintenance.

Their clients can contact the firm through the many communication channels that the business has set up and submit their information requests, support, or maintenance. The company takes customer requests very serious pays them the immediate necessary attention. If any research, effort, development, or improvement

is required, necessary action is taken by the allocated personnel. TamCent's clients may get the information they need as soon as feasible and as quickly as possible; just entering their website, they can find brochures, installation manuals, Etc. Furthermore, the confidentiality principle is upheld, and all private information about our clients, including personal information, is use-restricted. TamCent sincerely complies with and assists its customers' audit demands if needed.

When discussing practicalities, the TamCent sales team uses emails to communicate with the clients during all the stages of the sale process. After-sales, emails are still the chosen method to keep in contact with the client and support them if required. Even though the company uses a sales program to enter the offers made, they do not have a customer relationship system. As the activities of the sales team are not recorded in the system, it becomes difficult for them to track all communication with the customers and do a follow-up if the situation requires it.

It is imperative for the sales team to know precisely when customers need to be contacted, for example, for technical support, a sales offer or bidding, or an upsell to a new product or service. Also, the sales team needs to synchronize their activities and base them on best practices which will be easily handled by adopting a CRM.

### 6.2 Interviews with TamCent's sales team

When the objective of this thesis is to determine how the adoption of a CRM could be easier for a company, it is logical to contact the sales team and dig deep into their pre-conceptions and attitudes towards the possible implementation of the system. To perform this study, semi-constructed interviews with individuals who integrate the sales team.

Primary data was also gathered through interviews and conversations with the COO at TamCent Oy. This person oversees the company's operations and is interested in implementing the system in the short run.

Face-to-face meetings were used for discussions and interviews with the COO, although a questionnaire and a short discussion were used to gather information from the sales team. The questionnaire consisted of 11 questions covering topics of the sales process, preconceptions about CRM, previous experience with this system, and overall attitude towards adopting a customer relationship management system.

Three individuals handle the sales in the company, one being the Sales manager and two sales agents. The sales manager has years of experience in this position and has been in the company for four years. The sales agents have a technical background and have worked in TamCent for over ten years.

In September 2022, staff interviews and questionnaires were conducted. Each interview was semi-structured, including open-ended questions for the participants. The narrative of the possible implementation of a CRM was the main topic of the 20-45 minutes discussion. All the interview process was recorded and transcribed, and the questionnaires save. The interview with the COO consisted of a few broad questions to state the current status of their sales process and a further discussion about why he believes that the implementation of the CRM will benefit the organization's sales process, among other relevant questions.

### 6.2. Interviewee profile

As mentioned above, the interviews and discussions were held individually at the company’s building for each interviewee. Four interviewees were interested in participating in the research and giving opinions about their sales and customer relationship process. The participants utilized in the interview were between 23 of to 66 years of age, with at least a couple of years of experience and part of the sales team of TamCent. One of the interviewees is the current sales manager of the company, the other two are sales representatives, and lastly, the COO, who also participates in the company’s sales activities.

# 7 DATA ANALYSIS

In this chapter, the findings of the data collection will be presented. First, TamCent's current customer relationship management process is examined from the staff's perspective. Then, based on the literature analysis and data acquired during the interviews, the sales team's attitude towards CRM is discussed, and Nolan's Stage of Growth Model will be applied to the TamCent case. Furthermore, the value-added components from the literature are contrasted with those mentioned by the team in this chapter.

To examine the pre-conceptions and perceptions of the employees of an organization about the possible adoption of a CRM system, a questionnaire was created based on the literature review previously.

## 7.1 Key Employee Perceptions of a possible adoption of a CRM solution

A questionnaire is a research instrument consisting of a series of questions to gather information from respondents. Based on answers to the survey, it will be defined the perception and attitudes TamCent's sales team has about the adoption of a CRM.

The first question of the questionnaire was to find out about the employees' knowledge of the company's sales process. A traditional sales process is a company's infrastructure to assist its salespeople in guiding prospects, from researching a product or service to purchasing it. The sales team needs to clearly understand how the process functions and how it supports sales.

*Do you know what the company's sales process is? Explain it briefly.*

Employee 3: We review the desired product for the customer according to the original plans. We will then contact the customer and make sure that it corresponds to the intended use, after which we can make an offer for the products that will be used.

The above was the only answer that responded to the inquiry. It can be interpreted that the sales team does not have a clear idea of the company's sales process. As mentioned before, knowing the process is crucial for the adequate performance of the employee. A standardized sales process gives the actions of selling structure and accountability, resulting in a higher win rate and shorter sales cycles.

The next question, "*What do you like about the current way you handle sales?*" was developed to see if the employees were content with how customer relationships and sales are handled within the company. All the employees responded positively, stating: "The method of delivery is good in relation to the resources and results are produced" and "I think our sales method works well at the moment, but we can always improve.". For the company, having the employees' support is decisive when implementing new solutions. A committed employee will give their entire effort to the company's objectives and will be eager to go above and beyond for the sake of the business.

The question *What could be improved?* followed the above where the employees give out more information to be considered:

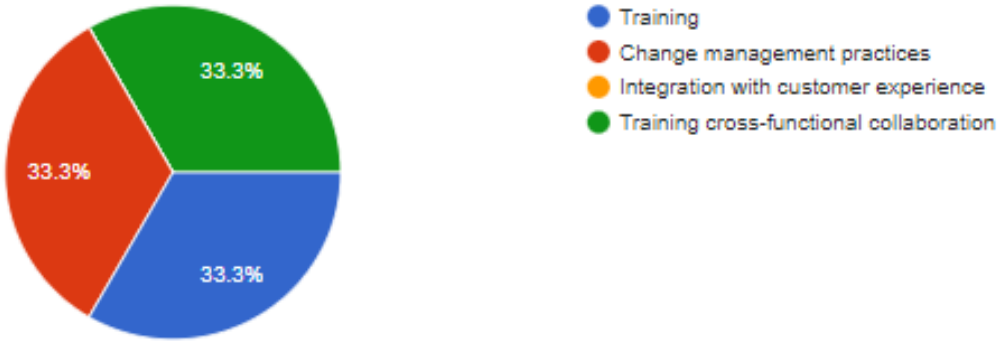
*Employee 1: "Collaboration and communication between sellers."*
*Employee 2 "Improving the cooperation of the sales team in all areas. Implementing more team meetings."*
*Employee 3: "Facilitating and improving the cooperation of salespeople to work even better as a team."*

These answers indicate that the employees believed there was room for improvement in their processes. The company should consider this information when introducing the CRM system to the team. It would be beneficial to explain to the team that adopting a CRM will improve all those activities described above.

In the following questions, the survey introduces the idea of a CRM. An exciting discovery is that the employees have zero to little experience using CRM systems, and all the employees say to be open to using a CRM "*as long as it is useful*

*for us.*" Many companies and employees have misconceptions about CRM regarding assessing customer satisfaction to enhance business. The misunderstandings concerning Customer Relationship Management should be resolved before the implementation; otherwise, these may cost the organization revenue and profits.

When asked *Which factors will assist TamCent's adoption of a CRM?*, the employees had different opinions, as seen in the graph below.




Two employees believed training would make the adoption easier, and one saw the need for changes in management practices to ensure successful adoption of the CRM.

Change management aids in the preparation of organizational evolutions in order to reduce and avoid resistance to change. Even the best CRM system will appear to be the worst if not properly implemented. As a result, great care should be taken to plan and manage the change. A successful CRM implementation integrates change management and end-user training, resulting in a more effective training program showing end-users "what is in it for them."

Communication is essential. Salespeople should not be micromanaged by management. The company should give them better information and a framework for using it. High-quality CRM training involves planning, mapping training resources, setting standards, and evaluating results.

### 7.2 Management insights

The discussion with the COO provided exciting insights into why the adoption of a CRM system is a priority for the company at this stage.

Considering the current sales process of the sales team, the COO expresses the following: “Our sales process is okay but not efficient enough. Considering the advantages CRM software can offer, it is simple to understand how we will ultimately save time and resources by adopting it. Among the issues that must be considered are clarity and streamlining between the sales team members.

Currently, we are not using any type of software to manage our customer relationships; all is done through email and phone calls. Which sometimes difficult the interaction of the sales agent with the customer, as the email could get lost in the mailbox, for example.”

In the case of TamCent, the decision to adopt a CRM system came solely from the COO, who observed that now more than ever is essential to have an all-encompassing CRM solution that could bring all the information into one place.

Their CRM strategy aims to create more awareness on the front of their sales, to grasp the opportunities they might be missing out on, and to be able to allocate larger projects better and keep the whole team on track with the latest communications and actions. The company’s primary drive for adopting customer relationship management is to improve team collaboration and increase revenue in the long run.

Ideally, the organization would like the team to use the CRM in their workflow daily until it becomes part of their regular daily routine.

Lastly, the organization believes that adopting a CRM solution will benefit the organization significantly. “Spreadsheets and simple databases are no longer sufficient to keep track of our clients and their pertinent information as our organization expands. It is sometimes difficult to manually analyze, maintain, and interpret client records to boost lead generation and conversion rates. We hope implementing a CRM will allow us to capture key customer details, follow the outputs of the reach and enhance the sales team's capabilities.

Based on the insights provided by the COO, TamCent, it can be confirmed that TamCent is ready to introduce a CRM strategy in the company. The commercial cycle of TamCent is adjusted at the five levels required. First, the company's personal quality and emotional intelligence, we can affirm that the personnel have the skills needed and a positive attitude, which aligns the organization offering the best service possible. The employee satisfaction level is high, TamCent's employees seem satisfied with the organization, and a sense of loyalty and comradery can be sensed in the environment. The company has reached excellence in the commercial process. As a market leader, TamCent proves that its sales and customer process is adequate. The sales team makes sure to give the best service possible to the clients in all the steps of the process. Their value for effort is an asset for TamCent, offering customers the best product in the market at a reasonable price, accompanied by the best technical support for their needs. Moreover, in their relationship marketing strategies, TamCent's sales team follows directives that ensure the client's needs are met from the moment they make a quote, until they have acquired the product.

### 7.3 Applying Nolan's Stage of Growth Model in TamCent case

Nolan's stage model explains the progression of information system development within an organization. The Nolan model describes a growth pattern that an organization must go through before reaching maturity.

There is learning at every stage. There is no way to skip any of the growth process' stages. The organization must go through each step before moving on to the next one. For instance, to get to level 4, one must first pass-through stages 1, 2, and 3.

TABLE 3: Nolan's Stages of Growth model (Nolan,1979)

| Stage | Description |
|---|---|
| Stage 1: Initiation | In this stage, technologies are introduced to the organization for performing administrative functions, such as payroll or general ledger automation. |
| Stage 2: Contagion | In this stage, the learning curve moves up sharply, ad use of technology becomes widespread, and the organization becomes confident with the use of the technologies. Also, in this stage, top management encourages the rest of the team to embrace computing and innovations. |

| | |
|---|---|
| Stage 3: Control | In this stage, managers realize the need for control due to rising expenditure, late delivery of projects, and unsatisfied needs. Users feel frustrated about the systems. |
| Stage 4: Integration | This stage is seen as an acceptance point, where the users start to accept the system and realize its benefits. At the end of this stage, users demand better control to provide more efficient systems. |
| Stage 5: Data administration | Data administration is introduced to enhance the control of the systems. |
| Stage 6: Maturity | In this stage, organizations begin to be confident in managing the technologies. |

The Nolan model will be used to analyze the TamCent case step-by-step and demonstrate how TamCent has applied the Nolan model to its system development process. Moreover, identify and discuss in which stage TamCent is now.

The Nolan Stages of Growth Model explains can be applied to TamCent. The model summarizes the sales process development and experience. The assumption is that the model's stages cannot be skipped since the organization requires time to gain expertise before gearing up for the subsequent activity stage. TamCent development process is very similar to Nolan's concept. Its fundamental concept for building a customer relationship management solution is instructional. Organizations may manage the process more successfully if they thoroughly understand the Nolan model.

TamCent had already experienced the first two stages, “Initiation” and “Contagion,” before Kari Kopra was named COO. TamCent was founded in 1988 in Tampere, Finland. The computers were introduced a couple of years after the company started operating. The computers are necessary equipment for the company because the essential information of the company and finances are stored there. However, sales were managed only by phone and face-to-face meetings. Later, financial software and data-based were adopted.

Eunet Finland began commercial sales of Internet connections in Finland in 1984. However, it was not until 1999 that the internet became available for the sales team's use in TamCent. The sales team started using their computers to manage

quotes and answer emails, becoming an essential part of the sales and prospecting of the company. Thus, sales began to increase in demand, the projects began to get bigger, and the sales team collaboration became more difficult. The company then bought its first CRM, which was a blind purchase that lacked planning. Hence, as the application level was none, the overall effectiveness of IT cannot be highlighted, as Nolan (1974) has discussed in his paper.

Until Kari Kopra started his work as COO, he recognized the problem from the second stage (Contagion), such as low collaboration, data inconsistency, and the inability to get reports from the sales team. He realized that using computer applications was not enough for the market's demands; it needed to grow faster to be satisfactory. He tried to begin to control the overall development of the sales process, such as reorganizing the sales team, creating a communal email, and changing the reporting relationship. However, TamCent was still stunted at the beginning of the third stage.

The third stage, Control, began when Kari Kopra realized that there was an ineffective investment in the CRM. The solution was installed and never used. He realized that the sales team still needed a tool that would improve team collaboration and facilitate managing the company's customer relationships. He thought the first CRM failed because the team needed a centralized plan for implementing and learning this solution. As Nolan (1974) discusses the need to control the data processing cost, Kari began to convene with the CEO and sales team to plan the adoption of a CRM that would cover the needs of the team and the management.

### 7.4 Summary of the finding on the case company

The interviews revealed that TamCent is ready to introduce a CRM system to its organization. The team feels confident enough about their sales and customer relationship processes but is open to improving them using a CRM solution. A sales process is built on a strong customer relationship management strategy. For this reason, it is crucial to have the team on board before implementing any new strategies.

Management as well is on the right track. It has increasingly realized the need for a CRM. Without one, competing and growing the business in the current environment is more complicated than ever. It is essential to be aware of the organization's long-term goals before deciding on a CRM strategy.

The organization is going through the end of its 'Control' stage. The idea is that this study will help TamCent start its 'Integration' stage without drawbacks, facilitating the CRM adoption process. The sales team has also accepted the need for the system and will realize the benefits this solution will give them with good training.

# 8 RECOMMENDATIONS

The following recommendations intended to improve TamCent's CRM adoption process. To implement a CRM, the company must not only clearly understand everything it entails, such as the infrastructure, development process, etc., but also be very clear about the objective for which it will be carried out.

Promoting the importance of CRM and highlighting that it is necessary to plan and analyze a comprehensive organizational process and not be limited only to developing computer tools.

The company needs to have a solid grasp of its business and how it works together to meet the needs of potential customers to make its CRM deployment worthwhile. CRM is more than just a piece of software. Customer relationship management is a method of engaging with its customers through clever communications that necessitate a comprehensive strategy. It is a system that integrates people, procedures, and technology to manage business connections with its clients.

Since the employees will be using the CRM, they are crucial to implementing the CRM software effectively. Therefore, involving the staff from the very beginning of CRM deployment is usually a good idea. The organization must explain how the new system will reduce the employee's workload and let them see how CRM will approach their work positively. Encourage the staff to provide their thoughts and opinions on the CRM as an additional gesture to promote early adoption of the system. These measures will assist in reducing software-related uncertainty and help the organization get the support it needs to use the CRM system correctly.

Having a CRM project manager on staff is usually smart because they can serve as the company's technical representative and go-to person for employee issues relating to the CRM system. The CRM project manager will oversee the overall deployment and operation. Therefore, they need to be proficient in both IT and communication. The staff must follow the project manager's lead because s/he

will oversee the project and track how well the CRM-related objectives are achieved.

It is recommended not to apply the customer relationship solution haphazardly or try to do too many activities with the CRM at once after the software is purchased. As it is only natural, the team could always get carried away and find it exciting to adopt the new system that will streamline the business processes. However, the organization must remember that all complex projects must be divided into manageable, measurable phases with attainable targets. Therefore, set up the platform and execute the program one step at a time, without rushing, for a successful CRM implementation.

It is generally advised that the set-up training sessions for every employee because every person in any firm has a varied capacity to comprehend and accept adjustments. Additionally, each department's representative should be trained on their unique requirements during the training, including those in marketing, sales, accounts, and customer support. Appropriate training on the CRM's features frequently generates grind momentum and staff excitement for the CRM's adoption.

The organization must establish rules with the help of the CRM project manager regarding the type of information the employees should include in the CRM per the objectives of the business. Since all duties and activities must possess a suitable reporting structure as part of the rules for adequately utilizing the customer relationship software.

Finally, if the sales force comprises sales representatives in the field, the organization must choose a CRM with a mobile application in addition to the platform's web-based version.

Only when the sales force realizes that the CRM enhances their ability to close deals and that using the platform presents little to no challenges will the adoption of the CRM increase.

Remember that adopting a CRM is a journey and it requires time. By simply following the above recommendations, the company will find it simple to go past the

initial CRM adoption challenges and guarantee that it takes full use of CRM's advantages.

## 8.1. Framework of Preparation for CRM Implementation

In order to implement a CRM development methodology in a company, it must be necessary to follow a series of fundamental steps in which all the main concepts that revolve around CRM can be applied. It is essential to clarify once again that there is no universal methodology to implement CRM, and each implementation may vary depending on the of company in question.

That is why, after extensive research, the researcher gives himself the task of defining a series of general steps, which from his point of view, should be followed to develop and formalize a CRM in any company.

In the figure below it is displayed every stage comprising a CRM implementation. Later, each stage will be detailed in depth.

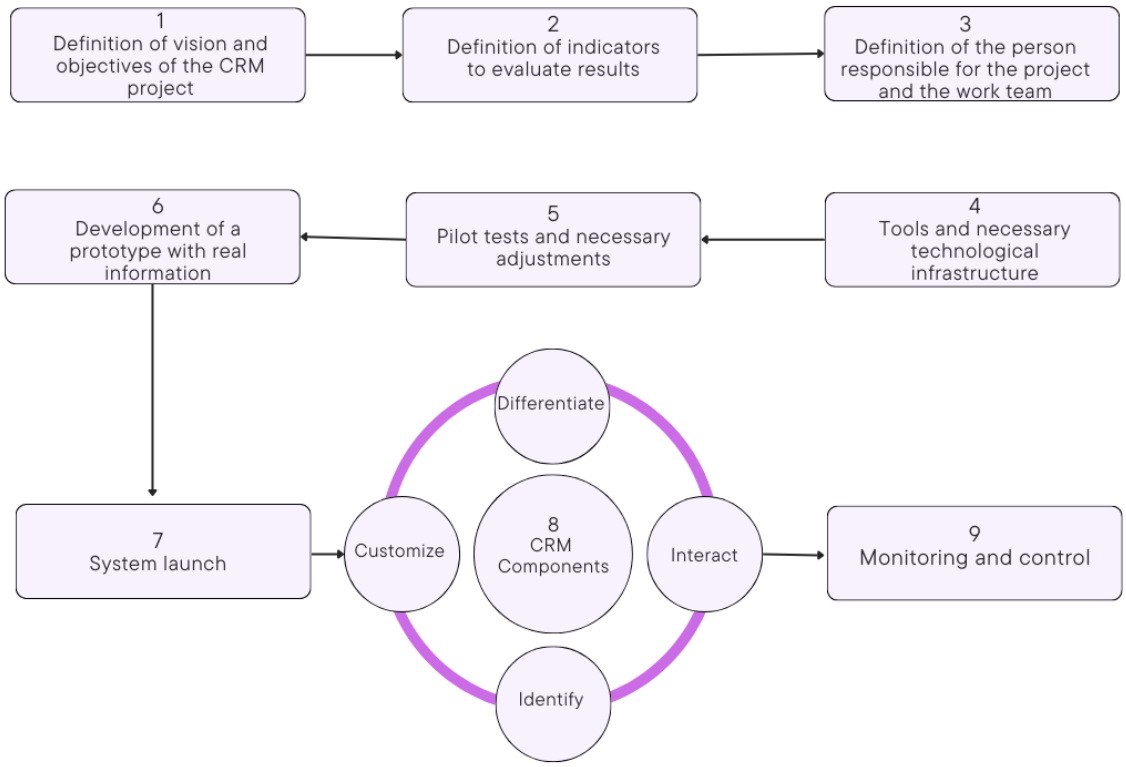



Figure 12: Framework of preparation for CRM implementation. Own elaboration.

**1. Definition of vision and objectives of the CRM project**

The first step for implementing a CRM in a company will be to define a vision. This is with the objective that you can visualize what the organization will be like after successfully implementing the CRM project. Likewise, it is essential to define global objectives to be later able to deepen and base our strategies on these objectives and to be able to monitor them.

In this first stage, it is also essential that the company has a notion of its current situation. The most important thing is that the company knows itself and knows what its primary needs are. Based on this, it will be necessary to define the degree of importance for the company to implement a CRM and why it is desired. It is convenient to develop an initial analysis to know both the strengths and weaknesses of the organization and, later focus on its CRM.

The objectives to be defined at this stage must be specific. In other words, the objectives would be, for example, “reduce the rate of customer loss by 25%”. Goals like “improve customer relations” are generally ambiguous, being of very little use.

**2. Definition of indicators to evaluate results**

In this stage, the organization must define how the results will be evaluated, which must be measurable through indicators such as customer retention, recency, the RFM model, and the conversion rate, among others.These indicators will be significant for the monitoring and control stage since they will demonstrate whether the objectives are met or chanages must be made.

**3. Definition of the person responsible for the project and the work team**

This stage is crucial because the results depend on the project leader's performance and the work team's disposition. The entire team must have the commitment and adequate skills to function correctly during the project. They should also be aware of the objectives to follow and their roles and duties in this project.

Remember that the collaboration of several departments, or even all the departments that make up the company, will almost always be required. That is why the defined work team must cover all the departments involved.

**4. Tools and necessary technological infrastructure**

This stage consists of the company's resources and the search for the correct tools for effective implementation. Thus, managers must be open to implementing technology necessary to launch the CRM.

Here the company considers whether the purchase of CRM software solutions is feasible. As well as analyze the requirements for creating a new historical database and all the necessary technological infrastructure to achieve a successful CRM.

**5. Pilot tests and necessary adjustments**

At this stage, a test of the CRM implementation must be carried out, how it will work, what tasks it will carry out within the company, the correct use, and give proper training to employees so that they can carry out their work correctly.

Once the pilot test is done, it will be necessary to analyze what adjustments are necessary to ensure the success of the CRM.

**6. Development of a prototype**

Once the results obtained from the pilot test have been seen, the same procedure should be implemented but with the accurate information of the clients, that is, to create and shape the company's database.

**7. System launch**

Once the CRM prototype has been made with accurate information, we will be ready to implement it in the company and continue training employees so that they can do their jobs correctly.

At this point, the database that will store the customer information must be ready since, in the next stage, the interaction with them will begin. The organization must be prepared to record all this in a database-independent from the database of company data.

**8. Application of CRM Components**

In this next stage of the Application of CRM Components, it will be necessary in most cases to modify the organizational structure and processes to achieve a customer-focused company. The processes must be redefined to improve their effectiveness and efficiency. As we mentioned before, the top priority will be given to those with the most significant impact on customer satisfaction. Nevertheless, for this CRM application to be successful in the company, it must be strictly necessary to generate and introduce customer-oriented organizational values into the culture.

Once this is understood, the 4 CRM components that must be applied will be explained. The four components are: Identify, Differentiate, Interact and Personalize.

a) Identify: The objective of this first component is for the company to identify its customers. Moving from a set of anonymous clients, or almost nothing is known, to a set of identified clients about which many of their elements are already known.

The methods for this identification should make it easier for the company to interact with customers. It will require systems that make the customer accurately and voluntarily identify themselves.

b) Differentiate: In this second phase, what will be sought is to guide the company's behavior toward customer service. From the database, the organization will process information from each client identified in the first phase. This aims to generate a profile that allows us to estimate and calculate each client's value for the company. For this, the use of metrics is essential.

Once the value of the clients has been established, the company will proceed to classify them, either by their value or by the objective intended to manage their relationship, and then begin to differentiate them by what they require from the company.

c) Interact: This third phase is intended for the company to relate to those best customers previously identified and differentiated, to propose a series of possible ways of relating to them.

The important thing here is to consider what relationships the client will allow the organization to maintain with him and which relationships the client perceives as adding value.

d) Customize: This last phase will give those key customers the benefits they want. In this phase, it is vital to exploit the accumulated information of the client to personalize the services later. Additionally, the organization must take advantage of and learn from all past experiences. Other systems such as Supply Chain Management, modularization, and flexible manufacturing, among others, can be used, allowing the company to adapt to the customer's requests.

These four components analyzed have as their primary objective to know more about customers, a crucial step for the success of the CRM strategy based on customer knowledge and the development of customized products and services.

**9. Monitoring and control**

Finally, the last step in this methodology will be Monitoring and Controlling to keep track of the results based on them, to make decisions that support the fulfillment of the objectives.

It is essential to highlight that even if we have a global development plan for the project, it is imperative to take short and safe steps. This will continue to motivate the company towards the long path of being a customer-focused organization.’

# 9 CONCLUSION

The researcher's goals for this study included exploring the concept of CRM, studying its theoretical delimitations, and looking at the major lines of existing research on the topic.

Additionally, based on the concept's relatively new and the identified gaps in the literature, we investigate the key factors that influence the strategy's performance in order to create a viable framework for CRM adoption.

On the other hand, based on the strategic relevance of the B2B sector and the value of customer relations in the field, we have focused our empirical study on this sector, examining the degree of adoption of CRM and validating its proposed success model.

In this regard, below are outlined the key general findings of this research work:

1)Given that our first main objective was to study the idea of CRM, further defining it and establishing its theoretical background to progress toward an integrating definition and conceptual framework, first will be discuss the primary contributions made in relation to the concept's analysis. As a result, there are different approaches to conceptualizing CRM, including a technology approach, a strategic approach, or an approach to CRM as a business strategy. In this regard, the literature analysis has showed that there still needs to be a generally acknowledged delimitation of the term.

CRM was taken into consideration as a business strategy in this research project. After analyzing many definitions, the researcher is ready to offer its own definition conceptualizing: “CRM *as a long-term business strategy focused exclusively on obtaining new customers, loyalty, and retention of old ones, and achieving permanence over time for all the entity's customers, achieved through closeness and knowledge of the client, which provides added value to the attention given to clients and provides benefits for both the entity and the clients, which is achieved by the implementation of information technologies”*.

When considering CRM as a business strategy, we have framed our analysis of the concept in the discipline of Strategic Management. In this sense, as fundamentals of CRM were analyzed, placing particular emphasis on the resources and capabilities approach, which underlines the importance of the internal and organizational aspects of the company (resources and capabilities) as fundamental determinants of its strategy. Therefore, following this approach, for a company to be able to establish a competitive advantage, its resources must work together to create organizational capabilities that are intangible and difficult to imitate and replace.

2) The research, however, examined the specialized literature on IT in Business Organizations and discovered a variety of studies that analyze the strategic potential of IT as a source of competitive advantage given the essential nature of IT as a strategy enabler.

These studies showed that for these technologies to give the company a competitive advantage, organizational modifications including training, new strategies and business processes, and adjustments to the organizational structure are all required. To put it another way, only the company's IT management competencies (the method for organizing and controlling IT within the organization) appear crucial for delivering such benefits. Consequently, the idea of a strategic initiative based on IT emerges. This notion is described as competitive movements that rely on the usage of IT to be launched and that support the development of value in the company by enhancing its efficiency and productivity as well as your customer service. CRM is thereafter thought of as an IT-dependent strategic initiative.

The discipline of relational marketing, on the other hand, is examined in-depth as the founder and precursor of CRM since it advocates the development of beneficial connections with clients as the cornerstone for the creation of a durable competitive advantage. In other words, a paradigm shift in marketing has occurred as a result of the environmental changes that have occurred recently, advancing the discipline toward a relational approach. Companies must continuously increase

and improve the additional value they provide to their customers in order to remain competitive, and this is done through developing individualized connections with them.
For firms looking to boost revenues and preserve performance, CRM technology has become indispensable. It enables businesses to monitor service responses, stay on top of client concerns, and appropriately handle consumer enquiries. CRM still has conceptual and procedural issues, despite receiving a lot of attention. Furthermore, research on CRM's role in this situation still must be made available. Few research on CRM adoption among SMEs have been conducted, most of which have concentrated on big enterprises.

Therefore, the purpose of this study was to investigate the intrincasis between the success factors influencing CRM adoption among SMEs in Finland. The results demonstrate that the intention to implement CRM is significantly influenced by management support, employee involvement, information policies, competitive pressure, and attitude toward technology adoption. This study also benefits academics and business professionals by shedding light on unresearched aspects that influence the adoption of ICT innovations in Finnish SMEs.

### 9.1. Limitations of the study

Although there are many publications, the result of theoretical and empirical studies related to the e-procurement adoption process, those that jointly study the adoption process and aspects of influence are still scarce. For this reason, this study is considered exploratory in nature, which suggests the need for more specific future studies to confirm or reject the current results.

The sample did not include more than one company, so although it is a representative sample of SMEs, it may not be representative of the overall population of B2B Finnish companies. Additionally, the subjectivity of measurements is influenced by personal points of view, among other aspects.

The objective of collecting the survey information was to analyze the adoption of ICT in e-business in general, not in specific CRM activities. Given the multiple

aspects that the authors have studied and that are somehow related to the adoption of CRM, it is indisputable that the need to consider other variables that affect this relationship and that, for various reasons, were not considered in the present work.

## 9.2. Suggestion for further studies

It would be interesting to focus further studies in how CRM technology affects different industries and economies. It is appropriate to analyze other aspects related to adopting ICT innovations in customer relationship management which were not considered in this study, given the empirical limitations.

Considering the possibilities offered by the theoretical model, it is possible to consider the possibility of extending the study to companies in the retail or banking industry which may use CRM in a completely different and probably more intensive way, as well as to other economic sectors of or countries, which will undoubtedly contribute to broadening the knowledge of the subject.

Adapt the theoretical model proposed in this work to adopt ICT innovations as support for subcontracting, outsourcing, or relocation activities, and analyze the aspects that may influence this relationship. As described above, other variables that may affect CRM adoption should be investigated further by academics who may find the research topic fascinating, given Customer Relationship Management's broad scope.

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# APPENDICES

Appendix 1. Tamcent sales and customer relations process discussed with Kari Kopra (COO)

Current customer relations

At TamCent, relations with their customers are one of the key elements of their success in the industry.

Customer satisfaction with their products and services is critical to the TamCent family in the context of their commitment to offering high quality based on their mission, vision, and fundamental values.

Through in-depth research, policies to enhance customer relations processes, and the participation and assistance of all relevant departments, they continuously carry the priority to place customer satisfaction further to deliver the finest service for their clients. Therefore, TamCent considers it an honour to be able to offer service with the highest level of customer orientation in the industry.

Customer service and support

TamCent uses a customer-oriented approach as a strategy to give their clients high-quality service and support, fully meeting their expectations possible. The staff is empowered to take the initiative and make decisions as needed to meet client needs as quickly as feasible and maintain the most outstanding level of customer satisfaction. The organization uses its professional employees and a professional approach to meet the demands of the clients.

Solution-focused strategy

Years of experience have helped the company develop its services to meet its customers' needs in the best possible way at every stage of the process. Their goal is to provide the best possible tools for system design, installation, and maintenance.

Accessibility

Their clients can simply contact the firm through the many communication channels that the business has set up and submit their information requests, support, or maintenance. The company takes customer requests very seriously and pays them the immediate necessary attention. If any research, effort, de-elopement, or improvement is required, necessary action is taken by the allocated personnel.

Reachability of Information

TamCent’s clients may get the information they need as soon as feasible and as quickly as possible; just entering their website, they can find brochures, installation manuals, Etc.

Confidentiality and Accountability

The confidentiality principle is upheld, and all private information about our clients, including personal information, is use-restricted. TamCent sincerely complies with and assists its customers' audit demands if needed.

Practicalities

TamCent sales team uses emails to communicate with the clients during all the stages of the sale process. After-sales, emails are still the chosen method to keep in contact with the client and support them if required. Even though the company uses a sales program to enter the offers made, they do not have a customer relationship system.

As the activities of the sales team are not recorded in the system, it becomes difficult for them to track all communication with the customers and do a follow-up if the situation requires it.

It is imperative for the sales team to know precisely when customers need to be contacted, for example, for technical support, a sales offer or bidding, or an

upsell to a new product or service. Also, the sales team needs to synchronize their activities and base them on best practices which will be easily handled by adopting a CRM.

Appendix 2. Employee questionnaire

Employee 1 - M.A

Do you know what the company's sales process is? Can you explain it briefly.
Janne works as a sales manager. Mika and Matti help in both sales, bid calculation, and act as technical support.

What do you like about the current way you handle sales?
This works well in a small sales team, because each salesperson has his own customer base

What could be improved?
Collaboration and communication between sellers.

Do you think you have the right software to serve your customers?
Maybe

Do you have previous experience using CRM software?
No experience

Are you open to start using CRM software? Why or why not?
Yes, if there is a need to use it.

How would you rate your skill level with CRM software?
No experience

How often you think you will use it in your workflow?
Once a month

Which factors will assist TamCent's adoption of a CRM?
Change management practices
What are the primary drivers for adopting a Customer Relationship manager?
Improve team collaboration

Do you believe the adoption of a CRM software will benefit the organization?
Maybe

Employee 2 - J.M

Do you know what the company's sales process is? Can you explain it briefly.
I work as a sales Manager myself, and sales are also handled by Matti Alarotu and Mika Kopra.

What do you like about the current way you handle sales?
The method of delivery is good in relation to the resources and results are produced.

What could be improved?
Improving the cooperation of the sales team in all areas. Implementing more team meetings.

Do you think you have the right software to serve your customers?
Yes.

Do you have previous experience using CRM software?
Some experience.

Are you open to start using CRM software? Why or why not?
Yes.

How would you rate your skill level with CRM software?
Some experience.

How often you think you will use it in your workflow?
Once a week.

Which factors will assist TamCent's adoption of a CRM?
Training cross-functional collaborations.

What are the primary drivers for adopting a Customer Relationship manager?
Improve team collaboration

Do you believe the adoption of a CRM software will benefit the organization?
Maybe

Employee 3 - M.K

Do you know what the company's sales process is? Can you explain it briefly.
We review the desired product for the customer according to the original plans. We will then contact the customer and make sure that it corresponds to the intended use, after which we can make an offer for the products that will be used.

What do you like about the current way you handle sales?
I think our sales method works well at the moment, but we can always improve.

What could be improved?
Facilitating and improving the cooperation of salespeople to work even better as a team.

Do you think you have the right software to serve your customers?
Yes.

Do you have previous experience using CRM software?
Little experience.

Are you open to start using CRM software? Why or why not?
I am ready to use CRM in my daily work as long as it is useful for us.

How would you rate your skill level with CRM software?
Little experience.

How often you think you will use it in your workflow?
Daily.

Which factors will assist TamCent's adoption of a CRM?
Training.

What are the primary drivers for adopting a Customer Relationship manager?
Improve team collaboration

Do you believe the adoption of a CRM software will benefit the organization?
Maybe

Appendix 3. TamCent sales and customer relations process discussed with Kari Kopra (COO)

1.Do you consider your current sales process efficient enough?

Not enough, as every business depends on sales, our process must be more precise. Technology develops regularly and opens new chances to raise the output and efficiency of your sales force; defining and optimizing our sales pro-cess is a never-ending problem.

Our sales process is okay but needs to be more efficient. Considering the advantages CRM software can offer, it is simple to understand how we will ultimately save time and resources by adopting it. Among the issues that must be taken into account are clarity and streamlining between the members of the sales team.
To handle the volume growth and properly qualify leads, it's crucial to streamline our sales process to improve closing rates and boost our sales team's output and effectiveness.

2.Does the team use the right software to serve your customers?

Currently, we are not using any type of software to manage our customer relationships; all is done through email and phone calls. Not having software difficult the interaction of the sales agent with the customer, as the email could get lost in the mailbox, for example. At this point of growth, we need more than this to manage our customer relationships effectively.

3.What is your perspective on what a CRM strategy is? (The purpose of the system)

A CRM strategy is a plan for how to make the relationship between your customers, sales, marketing, and customer service teams. The purpose is basically to find the right software for my employees to serve our customer's needs better.

4.Were you involved in the decision concerning the CRM implementation?

Yes, now more than ever is essential to have an all-encompassing CRM solution that could bring all the information into one place. And that is why I suggested our organization should adopt a CRM at this stage.

5.According to you, what is the goal of your CRM strategy/system?

Our goal with the adoption of the CRM aims to create more awareness on the front of their sales, to grasp the opportunities we might be missing out on, and to be able to allocate larger projects better. Also, keeping the whole team on track with the latest communications and actions.

6.Which factors could assist TamCent's adoption of a CRM?

Good training is essential; having a training plan or system in place can make all the difference to CRM success. I know that CRM training takes time and re-quires employee and management effort. That's why a strategic plan is a must to succeed in training the organization and making we get the best return on investment of our CRM system.

7.What are the primary drivers for adopting a Customer Relationship manager?

TamCent's primary drive for adopting customer relationship management is to improve team collaboration and increase revenue in the long run.

8.How often would you like the team to use CRM in their workflow?

Ideally, the team should use the CRM in their workflow daily until it becomes part of their regular daily routine.

9.Will the adoption of CRM software benefit your organization?

Yes, definitely. Spreadsheets and simple databases are no longer sufficient to keep track of our clients and their pertinent information as our organization expands. At some point, it will be difficult to manually analyze, maintain, and interpret client records to boost lead generation and conversion rates. We hope im-

plementing a CRM will allow us to capture key customer details, follow the outputs of the reach and enhance the sales team's capabilities