

# Customer Relationship Management: Implementation Process Perspective

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*Abstract: Customer relationship management (CRM) can help organizations manage customer interactions more effectively to maintain competitiveness in the present economy. As more and more organizations realize the significance of becoming customer-centric in today's competitive era, they adopted CRM as a core business strategy and invested heavily. CRM, an integration of information technology and relationship marketing, provides the infrastructure that facilitates long-term relationship building with customers at an enterprise-wide level. Successful CRM implementation is a complex, expensive and rarely technical projects. This paper presents the successful implementation of CRM from process perspective in a trans-national organization with operations in different segments. This study will aid in understanding transition, constraints and the implementation process of CRM in such organizations.*

*Keywords: Customer Relationship Management, Customer, CRM, Implementation*

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## 1 Introduction

Companies that enter to compete in a new market weaken the existing and solid ones, due to new ways of doing and conceiving businesses. One of the factors that have driven all these changes is the constant change and evolution of technology. Because of this reality, the CRM concept has evolved in such a way that nowadays it must be viewed as a strategy to maintain a long-term relationship with the customers [1]. A good customer relationship is the key to business success. Relationship building and management, or what has been labelled as relationship marketing, is a leading approach to marketing [2]. The use of customer relationship management (CRM) systems is becoming increasingly important to improve customer life time value [3]. Understanding the needs of customers and offering value-added services are recognized as factors that determine the success or failure of companies [4]. So more and more businesses begin to attach great importance to electronic customer relationship management (eCRM), which focuses on customers instead of products or services, that is,

considering customer's needs in all aspects of a business, ensuring customers' satisfaction. By providing information on customer data, profiles and history they support important areas of a company's core processes, especially in marketing, sales and service [5]. eCRM is all about optimising profitability and enabled businesses to keep customers under control, as it makes the customer feel they are really a part of the business progress [6]. When managing the transition to a customer-centric organization, it is mandatory to develop the capabilities to acquire the necessary resources, knowledge and tools to meet customer's requirements with the appropriate products and services [1]. A knowledge based system is most effective in the managing of semi-structured problems. The abilities of such systems are usually applied on the managing level of strategic planning [7]. An effective CRM system should enable an organization to gain greater insight into customer behaviour and preferences whereas ERP analytics are more likely to focus on supply and demand for key resources and materials [4].

In spite of the wide use of sales force automation systems in sales [8], a Forrester study [9] observes significant deficits in today's marketing, sales and service processes. It was found that just 22% of the companies surveyed possess a uniform customer view and only 37% know which customers are looked after by individual business units [10]. To eliminate weaknesses in customer contact, many companies are either planning or in the process of implementing CRM systems. According to Gartner survey [11], 65% of US companies intended to initiate CRM projects in 2002. In Europe, roughly 3% of companies had fully implemented a CRM project in 2001, 17% had initiated more than one local project and 35% were developing concepts for the introduction of CRM [12]. The software CRM market is expected to increase from \$7 billion in 2000 to 23 billion in 2005, even though conventional wisdom is that 30 to 50 percent of CRM initiatives fall short of meeting company objectives, while another 20 percent actually damage customer relationships [13].

Different organizations are approaching CRM in different ways. Some view CRM as a technology tool while others view it as an essential part of business. According to Verhoef et al. [14], the success rate of CRM implementation varies between 30% and 70%. According to industry analysts, almost two-thirds of CRM system development projects fail [15]. According to IDC (International Data Corporation) and Gartner Group, the rate of successful CRM implementations is below 30% [16], hardly justifying the cost of implementation [17]. Another report estimates that between 60 and 90 percent of enterprise resource planning implementations do not achieve the goals set forth in the project approval phase [18] Hence, key factors of success or failures during CRM implementation have been the subject of active research in recent years [19]. The study performed by Forsyth took a sample of 700 companies, with regards to the causes of failure to reach the CRM benefits [20]. The main causes of failure were:

- Organizational change (29%)

- Company policies/inertia (22%)
- Little understanding of CRM (20%)
- Poor CRM skills (6%)

The results show that there is no 'unique' CRM project and that successful implementations are rarely technical projects [10]. Therefore the objective of this paper is to report successful CRM implementation and lessons learned in an organization involved in many countries with operations in different segments.

CRM is a synthesis of many existing principles from relationship marketing [21], [22], [23] and the broader issue of customer-focused management. CRM systems provide the infrastructure that facilitates long-term relationship building with customers. Some examples of the functionality of CRM systems are sales force automation, data warehousing, data mining, decision support, and reporting tools [24], [25]. CRM systems also reduce duplication in data entry and maintenance by providing a centralized firm-database of customer information. This database replaces systems maintained by individual sales people, institutionalizes customer relationships, and prevents the loss of organizational customer knowledge when sales people leave the firm [26]. Centralized customer data are also valuable to firms managing multiple product lines. In many cases customers will overlap across different lines of business, providing an opportunity for increasing revenues through cross-selling.

The paper is organized as follows: Section 2 reviews the literature on CRM implementation. In Section 3 we have presented the CRM implementation in a multinational organization. Finally Section 4 draws conclusions from the case study in terms of its practical relevance and lessons learned.

## 2 Literature Review

The first requirement for the successful implementation of CRM is clarity regarding CRM terminology. From the many approaches available, the distinction between the following three areas has become generally accepted [27].

- **Operational CRM** supports front office processes, e.g. the staff in a call center. Operational integration points exist to human resource systems for user data and ERP systems for transferring order information which was captured e.g. from a call center representative [10]. From an operations perspective, Bose [28] pointed out that CRM is an integration of technologies and business processes that are adopted to satisfy the needs of a customer during any given interaction.

- **Analytical CRM** builds on operational CRM and establishes information on customer segments, behaviour and value using statistical methods. It is useful for management and evaluation purposes, the operational customer data are integrated with a centralized data warehouse which is consolidated data based on certain criteria (e.g. sales, profits). Here the data mining tool analyses defined dimensions, e.g. compares the characteristics of one customer with another, leading to the determination of a customer segment and thus providing the basis for a targeted marketing campaigns [10].
- **Collaborative CRM** concentrates on customer integration using a coordinated mix of interaction channels (multi-channel management), e.g. online shops, and call centres. Approximately 60% of the companies surveyed use internet portals in their customer communication for selected or suitable activities [10].

CRM is therefore understood as a customer-oriented management approach where information systems provide information to support operational, analytical and collaborative CRM processes and thus contribute to customer profitability and retention. While potential benefits are attractive, CRM implementation must be managed carefully to deliver results [4].

Automation refers to using technologies including computer processing to make decisions and implement programmed decision processes [29]. The CRM system is the automation of horizontally integrated business processes involving “front office” customer touch points –sales (contact management, product configuration), marketing (campaign management, telemarketing), and customer service (call center, field service)-via multiple, interconnected delivery channels. Therefore, CRM system implementation is commonly used in functional areas such as customer support and services, sales and marketing. CRM life cycle includes three stages: Integration, Analysis and Action [30]. In the first stage, The CRM lifecycle begins with the integration of front office systems and the centralization of customer-related data [19]. Second stage called Analysis is the most critical to CRM success [30]. CRM analytics enable the effective management of customer relationships [19]. Using CRM analytics, organizations are able to analyse customer behaviours, identify customer-buying patterns and discover casual relationships [30]. The final phase, Action, is where the strategic decisions are carried out. Business processes and organizational structures are refined based on the improved customer understanding gained through analysis [31]. This stage closes the CRM loop and allows organizations to cash in on the valuable insights gained through analysis. Systemic approaches to CRM help organizations coordinate and effectively maintain the growth of different customer contact points or communication channels. The systemic approach places CRM at the core of the organization, with customer-oriented business processes and the integration of CRM systems [32].

According to Gefen and Ridings [33], a CRM system consists of multiple modules including: operational CRM, which supports a variety of customer-oriented business processes in marketing, sales and service operations; and analytic CRM which analyses customer data and transaction patterns to improve customer relationships. Operational and analytic CRM modules provide the major functions of a CRM system. Successful CRM implementation often entails significant organizational transformation due to the complexity of multiple operations involved in managing customer relationships [34]. Implementing a CRM system is only part of the needed change. To adopt the new ways of interacting with customers, firms need to align various organizational aspects with their CRM systems, e.g. business processes, strategies, top management support, and employee training [35]. A typical CRM implementation can be classified into six iterative processes including exploring and analysing, visioning, building business case, planning and designing solution, implementing and integrating, and realizing value [31]. Resulting from a variety of catastrophic ERP implementation failures, research on ERP systems points to the need to reduce application complexity. The likelihood of success is related to reduced project scope, complexity, and customization of the application. Defining a reasonable (i.e., smaller) system scope by phasing in software functionality over a series of sequential implementation phases is an important means of decreasing complexity. Similarly, reducing or eliminating customization of the specific functionality of CRM application software is critical to lowering risk. It is business needs that should determine the CRM application functionality – the scope of functions to be implemented [36]. Organizations are finding that implementing CRM functionality beginning with quick, clear-cut and profitable ‘hits’ helps to insure the initial success, and thus long- term success of a CRM initiative.

Generally, the case study method is a preferred strategy when “how” and “why” questions are being posed, and the researcher has little control over events [37]. The case study method, a qualitative and descriptive research method, looks intensely at an individual or small participants, drawing conclusions only about the participants or group and only in the specific context [37]. The case study method is an ideal methodology when a holistic, in-depth investigation is required [38]. Case studies are often conducted in order to gain a rich understanding of a phenomenon and, in information systems research, the intensive nature, the richness of a case study description and the complexity of the phenomenon are frequently stressed in case study reports [39].

## **3 Case Study**

### **3.1 Organization Background**

Organization is a trans-national enterprise with operations in different segments. This company engages in the design, manufacture, and sale of precision motion and fluid controls, and control systems for various applications in markets worldwide. The company has been growing rapidly in all segments.

### **3.2 Information Technology Infrastructure**

The company has highly skilled engineers and has grown from being a small to a large company. IT in the company has been “home-grown”, i.e. systems were created using available tools to capture processes. Employee empowerment is very high in the company. This also meant that the company’s business units could decide what systems – hardware, software and networks it wanted individually. This has led to a plethora of IT systems. The CIO (Chief Information Officer) of the company started rationalizing the “basic” infrastructure to Lotus Notes for e-mail and Microsoft Office Suite for office applications. An Enterprise Resource Planning System (ERP) from QAD called MFG/PRO was implemented to take care of manufacturing, financials and logistic transactions of the company. This system was implemented individually in each country. Customization was not allowed without confirmation by a change request committee. Since reporting in MFG/PRO was weak, the company went ahead with a data-warehousing solution called “Cubes” based on a Progress database. Data needed for financial and management reporting was extracted on a daily basis from MFG/PRO into the cubes for analysis. The group is now considering moving all the disparate MFG/PRO systems to its data centre in the main office.

### **3.3 The Search for IT Solution**

The company has doubled its’ operations over the past five years. The growing number of customers in various segments calls for a solution in information technology (IT). The company has over 5,000 customers spanning various markets like Power, Plastics, Metal Forming, etc. Due to large number of customers using the company’s components in various markets for various applications and lesser profitability, it was decided to bring together senior managers in the company for determining its future strategy for the IT solution. They found that use of IT in CRM would help the company in maximizing revenues in a cost-effective manner through various applications to a consolidated database, for example, sales forecasting, decision of marketing strategies, and customer identification.

### 3.4 Impetus for CRM

CRM can be defined as a management process of acquiring customers by understanding their requirements; retaining customers by fulfilling requirements more than their expectations; and attracting new customers through customer specific strategic marketing approaches. This requires total commitment from the entire organization. CRM uses IT to track the ways in which a company interacts with its customers; analyses these interactions to maximize the lifetime value of customers while maximizing customer satisfaction. The company has a large customer base, though the value of business from each customer is currently low. CRM would help the company in identifying customers who provide the greatest revenues for every marketing or service dollar spent or customers who cost little to attract. Typically, these 'good' customers present 80 to 90 percent of the company's profits, though they are only 10 to 20 percent of the client base.

The motivation for selecting CRM in the company was to increase business value due to the following:

- Information about customers is stored in disparate applications as the employee empowerment is very high. This customer related information from various systems needed to be brought in, analysed, cleansed and distributed to various customer touch-points across the enterprise, so that the various stakeholders – marketing, sales and engineering teams see a single version of 'truth' about the customer.
- This single source of customer data can be used for sales, customer service, marketing, etc. thereby enhancing customer experience and reducing churn-rate. Churn-rate measures the number of customers who have stopped using the company's products.
- By storing information about past purchases, sales team can make customized selling or personal recommendations to the customer. Also, this helps in up-selling or cross-selling opportunities.
- Capability to improve current sales forecasting, team selling, standardizing sales and marketing processes and systems.
- Support direct-marketing campaigns by capturing prospect and customer data, provides product information, qualified leads for marketing, and scheduling and tracking direct marketing communication. Also, it helps the marketing team fine-tune their campaigns by understanding the prospect of customer conversion.
- To help engineering in understanding market demand for specific product designs and act accordingly.
- Single out profitable customers for preferential treatment, thereby increasing customer loyalty.
- Easing sales account management through consolidated information.

## 3.5 CRM Implementation Process

### 3.5.1 ERP Selection

Since there were two different ERP systems in the company, with one mail system, it was difficult for the company to choose the right CRM system. In the end, a relatively unknown system called Relavis was selected as the preferred ERP system. Relavis was chosen because it tightly integrated with IBM Lotus Notes which is the common infrastructure across the whole enterprise. Relavis is a small company. The product is more economical than a Seibel, SAP or Oracle. The system has modules to cater to eMarketing, eSales and eService.

### 3.5.2 Scoping

The scope covered sales and marketing processes and followed the ‘**service platform**’ approach. A service platform integrates multiple applications from multiple business functions (in this case, sales, marketing, engineering), business units or business partners to deliver a seamless experience for the customer, employee, manager or partner. As shown in Figure 1, the new system (Relavis) was implemented to gain integrated information from marketing and sales departments to provide input to the ERP and Data warehousing applications and finally create analytical reports to make better business decisions e.g. to understand the sales results of specific leads, recommend better selling techniques and target specific leads etc. The new application could track the status of a lead through all stages of the sales and marketing lifecycle.

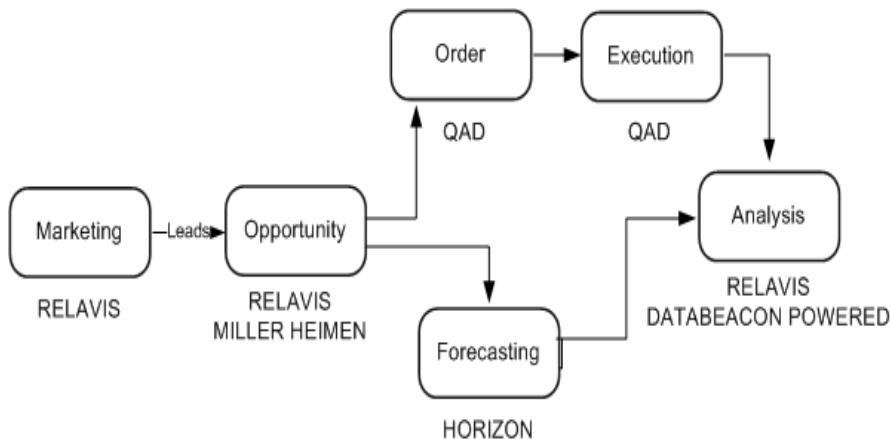


Figure 1

Enterprise's CRM Implementation Overall Process Flow [40]



Marketing was working on branding strategies and segmentation. Events were managed by marketing. These events would come up with a huge number of leads for new opportunities and marketing wanted to handover leads to sales. Sales filtered the leads from marketing and their own sources into opportunities. Opportunities were defined as those having specific sales persons assigned. These accounts were carefully evaluated to see if they fit with company's overall strategy of increasing revenue and profitability by solution selling. The Miller Heiman Process was used to capture relevant information on the opportunity and the blue-sheets of Miller Heiman were closely monitored by VP Sales and top management. The non-strategic product sale was channelled to distributors and agents. Consolidated forecast numbers were reviewed by senior management on a regular basis. Orders that were received were executed.

### **3.5.3 Design**

A "gap analysis" was conducted since the CIO (chief information officer) wanted a successful "business" implementation of the system vis-à-vis a technical implementation, the sales and marketing process was mapped. The "as-is" process described the cradle-to-grave aspects of the process. The "to-be" process incorporated Relavis, together with other tools like Miller Heiman eforms, The Horizon system for forecast, MFG/PRO system for order execution and Datawarehouse Cubes for analysis. Relavis was customized to include "Business Intelligence" – a piece of software extracting account specific information from past sales through the Cubes.

### **3.5.4 Implementation**

Implementation involved reviewing the resource requirements and availability, both in terms of hardware and software. The company had Lotus Notes skills in the organization. The system was simple. Hence the implementation was done using in-house resources. Training on the product was arranged from Relavis and its partners. The system approach involved a "big-bang" approach. After all, an audit and review should be undertaken to determine the monetary as well as non-monetary benefits against costs incurred. The implementation primarily consisted of the major steps as given in Table 1.

### **3.5.5 Impact**

The system was packaged software, with very minimal customization. The only additions to the software were the Business Intelligence part and electronic Miller Heiman blue-sheet for strategic opportunities and gold-sheets for Large Accounts.

Some key users were involved in the decision-making. The project implementation plan was received well by all. The IT department made sure that the project was driven by sales for the eSales module and marketing for the

eMarketing module. A steering committee comprised of senior managers of each country (called REPCOTE or Relavis Pacific CORE TEam) was formed to drive the implementation. IT took the role of being facilitator.

Table 1  
Major tasks during implementation and their duration [40]

ID	Task Name	Duration
1	<b>Infrastructure readiness</b>	<b>2 days</b>
2	Get Licenses	1 day
3	Synch with Lotus Notes team on training	0.1 days
4	Client PCs / Notebooks and network connecti	0.1 days
5	Give training sys implementn doc to local IT s	1 day
6	<b>Process Mapping</b>	<b>5 days</b>
7	Sales process data gathering	3 days
8	"To-be" Sales process mapping	1 day
9	"To-be" Support process map	1 day
10	<b>Data cleanup</b>	<b>15 days</b>
11	Send excel formats to countries	1 day
12	Identify account-supporting documents to be	1 day
13	Existing - MFG/PRO data	4 days
14	Update MFG/PRO customer data with lat	3 days
15	Download cust, add, contact, type ... to e	1 day
16	Contact data (non-MFG/PRO sources)	2 days
17	Update data to Relavis	1 day
18	Upload existing customer activities into Relav	5 days
19	Review business rules	1 day
20	<b>Train users</b>	<b>4 days</b>
21	Configure user profiles and relationships	0.5 days
22	Install Training Database in all users	0.5 days
23	<b>Miller Heiman eLearning</b>	<b>0 days</b>
24	<b>Notes training</b>	<b>1 day</b>
25	Calendaring, sharing calendars, to-do lis	1 day
26	<b>Relavis training</b>	<b>2 days</b>
27	Relavis Product training	1.5 days
28	Business Intelligence	0.1 days
29	Horizon screen-show	0.2 days

With the implementation, sales believe that the whole process needs to be changed. Business Process Maps with the process, key performance indicators (KPIs), responsibilities and systems were drawn up for possible scenarios. After training, in local languages (Japanese, Korean, Mandarin-Chinese), the users were comfortable. A pre-cursor course of general Lotus Notes training was offered to make sure that users were comfortable with functions such as calendaring, to-do lists, etc. An audit of the implementation is planned for the end of the year to find out key success factors and lessons learnt from the implementation. Besides facilitation of documentation about effectiveness of the new system, this audit also provides a baseline measure for future reference. It is best if the audit can provide information about monetary and non-monetary benefits. For example, a balanced scorecard (BSC) approach, a framework developed by Kaplan and Norton, can be adopted. The BSC is organized around four different perspectives: financial; customer (user, or internal customers); internal business processes; and innovation, learning and growth. This approach provides a balance between quantitative and qualitative outcome measures. This project provides company a chance to look for the potentials of virtual office, business process reengineering and knowledge management activities. Knowledge is best to capture in work groups and projects by direct definition by humans, extraction from successful practice, verification and experience [41]. The potential benefits derived here should not be underestimated.

## 4 Discussion

Whether outcomes are positive or negative, they are likely to change the organizational context in some way. For example, a successful CRM implementation should increase knowledge management capabilities, willingness to share data capabilities and to share data etc. Similarly, an unsuccessful implementation may lead to an opposite effect making staff more reluctant to collaborate or to use the new technology [4]. Sauer's model [42] classifies the list of CRM CSFs (Critical Success Factors) as follows:

- Context: knowledge management capabilities, willingness to share data, willingness to change processes, technological readiness.
- Supports: top management support.
- Project organization: communication of CRM strategy, culture change capability, and systems integration capability.

These three serve to connect the CRM CSFs to the extant body of knowledge on information systems success/failure and to provide a higher-level of abstraction to the CSF list. They also suggest a set of high-level relationships between the CSFs.

Alt and Puschmann [10] applied the following benchmarking procedure (Table 2) to investigate the use of CRM in organizations to identify successful practices. This approach has proved suitable for obtaining information on current practices and results [43]. Alt and Puschmann [10] found that benchmarking showed that CRM involves significant changes regarding the organization of marketing, sales and service activities. Most organizations reorganized internal processes and implemented them on a cross-functional and cross-organizational basis. It is also interesting to know from this study that implementing a CRM system is not mainly driven by the possible savings, 55% of the benchmarked companies agreed that strategic or qualitative goals have been the main drivers for introducing CRM.

Table 2  
Summary of benchmarks, criteria and success factors [10]

<b>Benchmarks</b>	<b>Criteria</b>	<b>Critical success factors</b>
Introduction Project	High level of implementation Running CRM system (>6 months)	Start with operational CRM and enhance with analytical and collaborative CRM Rapid evaluation of CRM information systems Medium-term projects which need to be broken down in manageable sub-projects
Organization and customer process	Customer process thinking Analytical CRM (Customer segmentation) Customer centered organization structures	Redesign of customer interaction points and orientation on customer process activities Centralized organization unit for standardization Involvement of top management
System architecture	Centralized customer database Integration of CRM applications Integration of Internet portals	Select CRM system depending on CRM focus Use standard CRM software with minimal customization Integrate systems for analytical and collaborative CRM with operational CRM systems
Efficiency	Quantification of CRM effects Availability of measurement system	Management of projects 'in time' and 'in budget' Measurement of small quantifiable benefits
Culture	CRM as corporate philosophy Availability of change management	Involve users in early stage and communicate CRM goals CRM should not conflict with established organization culture Ensure use of CRM on management level

As mentioned in section 3.4.5 information system audit and balanced scorecard (BSC) approach is underway for comprehensive evaluation. After CRM implementation, team tried to collect information via interviews with key stakeholders and found encouraging results. Quicker turnaround time, reduced internal costs and marketing costs, higher employee productivity and customer retention are some of the benefits as mentioned by stakeholders which will eventually lead to increased revenues and profitability. In terms of intangible benefits stakeholders observed increased customer satisfaction, depth and effectiveness of customer satisfaction, streamlined business processes, closer contact management, improved customer service and better understanding of customer requirements. Therefore this CRM implementation seems successful to a good extent qualitatively in this regard. A questionnaire is under development to measure the effectiveness empirically (validating the CSFs) and report this to all stakeholders as feedback towards further improvement on specific CSF's attributes. The simulation model will also be used for further research to CRM implementation and benefits. The questionnaire will provide data as initial values for the CSF variables in the simulation model. Using these values and other parameters, the simulation can move onward in time in order to explore different scenarios and the consequences of different decisions. This will provide managers with a new and powerful tool with which to exploit the potential of CRM for organizational success. King and Burgess [4] suggested that there is a need for stronger theoretical models of the entire CRM innovation process which can be used by managers to better understand the underlying causes of success and failure. Kim and Kim [44] recommended having an organizational evaluation mechanism to manage, control, and assess the effectiveness of CRM implementation and operational practices. They further argued that a practical perspective based on real experiences as well as theoretical studies is also important to build a framework for measuring CRM performance. CRM is still at an early stage regarding adoption in practice as well as the understanding of success factors in detailed level [10]. They suggested that further research is needed to derive empirically testable hypotheses as suggested by Romano [45] to embed the success factors in a methodology which guides enterprises in successful CRM implementations.

## Conclusions

Organizations face considerable challenges in implementing large-scale integrated systems such as ERP and CRM. Implementation of a CRM system was identified as a critical need to align with the overall business strategy of selling solutions, instead of products. The implementation was driven by the business users, with IT playing a facilitating role, thereby making sure that users derive maximum value from implementation. After successful implementation, the CRM system may get into an impact mode, which may challenge business strategy. Various case studies provide different findings which are unique to CRM implementations because of integrative characteristics of CRM systems. As a future plan we would like to

compare various CRM implementations in different organizations on selected significant attributes such as critical success factors and other benchmarks.

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