

Organizational Interventions and the Successful Implementation of Customer Relationship Management (CRM) System Projects

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ABSTRACT

We draw on information systems (IS) implementation, business process reengineering, and relationship management research to identify specific interventions that contribute to successful implementation of Customer Relationship Management (CRM) system projects. These interventions are examined across multiple cases, which depict varying levels of performance outcomes. The analysis not only confirms the important role of top management found in early studies on IS implementation and information integration, but provides a more granular assessment of these executive level interventions. The study also shines light on the role of CRM system characteristics and cooperative cross-functional and inter-organizational relationships in facilitating successful implementation of CRM systems. Researchers and managers need to consider these interventions in the context of information systems that not only impact multiple functional units but also external business partners. The results of the study provide managers with insights into areas where they can successfully intervene to manage the behavioral aspects of CRM system projects, make effective resource allocation decisions, and better plan for system functionality and structural issues. The propositions derived from the data will provide scholars with impetus for further research in clarifying the formula for successful CRM system implementation.

ACM Categories: K.6. Management of Computing and Information Systems

Keywords: Customer Resource Management; CRM; IS Implementation; Management Intervention; Business Process Change; Information Integration; Success Factors

Introduction

Building customer relationships is of critical strategic importance to firms in achieving success in the marketplace (Ryals, 2005). Firms are transforming their customer touch points from an order processing experience to a relationship posture that seeks to solve customer problems with unique customer experiences (Mascarenhas et al. 2004). Consequently, IT based solutions termed as customer relationship management (CRM) systems are being employed by firms to support customer centric strategies. Although investment in CRM applications continues to rise, the reported performance impact of CRM systems to date has been mixed (Boulding et al. 2005; Ryals 2005). Anecdotal evidence suggests that between 30 to 75 percent of CRM initiatives fail because organizations consider CRM systems to be

the core of their customer centric approach and implement them without assessing their overall readiness to embrace the shift in how the customers will be served (Simpson, 2002). While research such as Croteau and Li (2003) and Goodhue et al. (2002) provides in-depth discussions of how companies leverage customer facing IT based systems to increase customer satisfaction, the literature does not provide a systematic analysis of organizational interventions that facilitate successful implementation of CRM system projects (Kohli and Hoadley, 2006; Fjermestad and Romano, 2008).

Initial work in the CRM systems context suggests that successful firms follow a clear developmental process that involves using the CRM system for redesigning a customer-facing process to create value for the customer (Gefen and Ridings, 2002; Massey et al., 2001; Kohli et al., 2001). Past literature on IS (information systems) implementation has examined factors such as the need for top management support, an organizational champion, socio-technical orientation towards implementing IT, and well executed user-training programs (Goodhue et al., 2002; Gefen and Ridings, 2002; Wixom and Watson, 2001; Kwon and Zmud, 1987; Guha et al., 1997). It is fair to argue that findings of earlier research on information systems implementation success in general are applicable to the context of CRM systems as well. Our study offers value by evaluating the generalizability of interventions that have been found to work across various information systems in the context of CRM systems. Further, we evaluate these interventions at a more granular level.

CRM implementation projects differ from other IS implementation projects, presenting the opportunity to evaluate aspects peculiar to CRM type systems. Implementing CRM systems are particularly difficult when compared to other IS implementation projects because they intermingle the company's relationship management approach toward customers with the IS; in essence, they involve a direct interaction with customers. Implementation of CRM systems impacts multiple internal organizational units and external parties with high revenue consequence. Cross functional and inter-organizational process issues play a particularly critical role in CRM system implementation. Finally, the modular nature of CRM systems increases the importance of IS configuration choices influencing CRM system implementation outcomes. Too often, past IS research has taken a myopic approach toward evaluating implementation success (Larsen, 2003). As a distinctive high impact organizational system, it is important that we conduct a holistic assessment of the outcomes of CRM

implementation. This study provides an extended assessment of outcomes which are relevant to CRM systems implementation by expanding on the generalizability of interventions examined by prior research.

We examine antecedents to CRM system success through multiple cross case analysis. We recognize the richness of prior studies on IS implementation and identify interventions that show consistent results. Further, we focus on identification of actionable interventions applicable to the distinctive CRM system context. These interventions are examined consistently across multiple case studies that depict varying levels of CRM system success. Such an approach allows us to examine a variance model of organizational interventions and CRM system success, providing insights into the effectiveness of such actions.

The paper is organized as follows. The next section reviews CRM systems. This is followed by the review of relevant literature, constructs, and methodology. Subsequent sections provide findings, discussion, implications for research and practice, and conclusion.

Customer Relationship Management Systems (CRM Systems)

Customer relationship management (CRM) is a concept that centers on transforming the relationship between a firm and its customers by developing a one-to-one relationship. Massey et al. (2001) define the function of CRM as "attracting, developing, and maintaining successful customer relationships over time" (p.156). Kohli et al. (2001) define CRM as "a process through which a seller or service provider manages customer expectations to ensure long-term relationship and ongoing alignment with dynamic customer needs" (p.172). In the same vein, Payne and Frow (2005) contend that CRM "requires a cross-functional integration of processes, people, operations, and marketing capabilities that is enabled through information technology and applications" (p. 168). In examining the domain of CRM, three perspectives are dominant. The first relates to a better **understanding of the customer base** by identifying various customer segments and gaining knowledge on their needs. The second perspective involves **opening up different channels of communication** to enable the customer to access products and services whenever they want. The last perspective hinges on **building a knowledge base of information** required to provide services by aggregating customer interaction data to offer the customer an enhanced service experience. As CRM systems play a pivotal role in supporting such

customer relationship strategies, it is important to delineate the domain of these systems.

Massey et al. (2001) propose that CRM systems have three sub-components, which are: (1) customer interaction systems, (2) integrated channel management systems and (3) analytical tools. Karimi et al. (2001) classify CRM systems as operational (improving customer service, online marketing and automating sales force), analytical (building CRM data warehouse, analyzing customer and sales data, and continuously improving customer relationships) and collaborative (building web based or online communities, business-to-business customer exchange and personalization services). Gefen and Ridings (2002) propose a similar categorization. They classify CRM systems as a set of modules such as operational CRM (enables integration of customer interface with back-office transactions), analytical CRM (data warehouse for mining relationships with customers), and collaborative CRM (enables closely coordinating interactions with business partners). They also propose that additional modules can be added to support marketing campaigns and telemarketing. In a similar vein, Teo et al. (2006) view the CRM architecture as comprising operational CRM, collaborative CRM and analytical CRM. They

thus present a holistic CRM framework which links IT with the overall business processes for creating high service quality experience. Various components of CRM systems have been identified (Table 1), which can be used independently or in an integrated fashion, to form an overarching system.

Technical aspects of the CRM systems are intertwined with the process aspects. For example, implementing a call center (a component of the CRM system) may require adjustments to how customer inquiries are handled and how support services are provided to the customer. In addition, skills of the employees may need to be upgraded and decisions need to be made concerning the optimal structure for decentralized decision-making and centralized control (Adria and Choudhury, 2002). Similarly, an ordering system that permeates the boundaries of sales, marketing, and customer service departments requires that each functional unit cooperates with the other in using the system to deliver value to the customer. Thus, implementation of CRM systems requires major reorganization of existing work routines, decision structures, and inter-functional relationships.

Table 1: CRM System Components

Citation	CRM Applications
Goodhue et al., 2002	<ul style="list-style-type: none"> • CRM applications (call centers, web marketing, web self service etc.) • CRM infrastructure (integrated applications with a common and standard data infrastructure) • CRM system to support organizational transformation (applications, data, and technical infrastructure)
Gefen and Ridings, 2002	<ul style="list-style-type: none"> • Operational CRM • Analytical CRM • Collaborative CRM • Additional modules (marketing campaign management and telemarketing)
Massey et al., 2001	<ul style="list-style-type: none"> • Customer interaction systems • Integrated channel management • Analytical tools
Karimi et al, 2001; Schierholz et al., 2007; Teo et al., 2006	<ul style="list-style-type: none"> • Operational systems • Collaborative systems • Analytical systems
Cooper et al., 2000	<ul style="list-style-type: none"> • Client information system • Product profitability analysis system • Contact management system • Distribution management system
El Sawy and Bowles, 1997	<ul style="list-style-type: none"> • Customer support management system • Knowledge base system

There is considerable consensus among researchers that CRM involves creating value for the customer and developing a long-term relationship. However, *limited guidance exists on how firms can successfully move from merely implementing IT solutions with a transactional orientation to CRM applications that support a relational customer orientation. Specifically: What set of interventions are available to managers for effectively influencing and managing organizational, cultural, and technical issues to enhance the positive outcomes emerging from implementation of the CRM system initiatives?*

Literature Review

Past research consistently supports the facilitating role of top management and organizations' IT orientation in successful implementation of IS projects (Kwon and Zmud, 1987; DeLone and McLean, 1992, Guha et al., 1997; Wixom and Watson, 2001, Larsen, 2003). However, CRM systems bring forward some unique issues that relate to their structural characteristics, cross-functional nature, and support for boundary spanning processes (Boulding et al. 2005). For example, selecting CRM modules requires an assessment of how well they will serve the needs of both the firm and its customers. The firm has to make choices regarding how the CRM system will be configured and decide on features that support operations, collaboration, and analytics. CRM system related choices can impact the internal operations of the functions as well as the level of service quality offered to the customers. Also CRM systems implementation may result in shifts in the existing power structure, upgrading of skills, role re-specification, and overlapping responsibilities (Schierholz et al, 2007). Thus, the relationship between the functional units in a firm becomes an important factor that needs to be considered. The boundary spanning nature of CRM systems also raises unique considerations. The CRM system project requires collaboration from the customers so that it can be configured to meet their needs and may also require customers to adjust their own processes. Thus, the nature of inter-organizational relationships can impact CRM system implementation outcomes.

Based on the literature review, we categorized three possible intervention groups that can contribute to successful CRM technical/process implementation: **top management, IT management, and relationship management interventions** (Table 2). Some of these interventions have been discussed within the context of CRM systems by earlier studies (Massey et al., 2001; Kohli et al., 2001; Gefen and

Ridings, 2002; Goodhue et al., 2002). While prior implementation studies have consistently found top management support to be a facilitator, the role of CRM system characteristics and relationship management issues were selected because of their relevance to the CRM context. Also, while general actions such as top management support may be consistent across different IS types, how such interventions are actually executed might differ depending on the type of systems and the context. Motivated by these considerations, we discuss each intervention group below, and conclude with a set of measurable actions (summarized in Table 3).

Top Management Intervention

Top management intervention relates to the extent of top management's involvement in sponsorship and stewardship of the CRM system project. Chatterjee et al. (2002) argue that senior management can leverage the institutional structures of signification, legitimization, and domination to influence employee behavior and actions within organizations. They define these actions as meta-structuring actions and segment them into top management beliefs and top management participation. Sponsorship of the project is a meta-structuring action that manipulates the structure of signification wherein top management actively promotes the CRM project and is synonymous with top management beliefs (Rainer and Watson, 1995; Anderson et al., 1995; Massey et al., 2001; Wixom and Watson, 2001, Chatterjee et al., 2002, Croteau and Li, 2003). Thus, the top management acts as a change agent (actively promotes the CRM project), provides a vision, and effectively communicates the importance and significance of the CRM project throughout the organization (Kotter, 1995; Lau and Hebert, 2001). The credibility of the project is further strengthened through a project champion that actively takes ownership of the project and works towards getting necessary resources and political support (Tushman and Nadler, 1986; Beath, 1991; Guha et al., 1997).

CRM system projects like other IT based projects may cause changes in organizational structure and work processes. Effective change management is required to overcome resistance to change (Kohli and Hoadley, 2006; Hong and Kim, 2002). Thus, stewardship of the project requires that steps be taken to effectively manage the change and is similar to what Chatterjee et al. (2002) refer to as top management's participation.

Table 2: Factors Influencing Implementation Success of IT Systems

Citation	Top Management Intervention	IT Management Intervention	Relationship Management Intervention
Goodhue et al., 2002	<ul style="list-style-type: none"> Organizational sponsorship and commitment 	<ul style="list-style-type: none"> Incremental approach Scope of the CRM project 	
Chatterjee et al., 2002	<ul style="list-style-type: none"> Top management beliefs Top management participation Strategic investment rationale 		<ul style="list-style-type: none"> Extent of coordination
Gefen and Riding, 2002		<ul style="list-style-type: none"> System configuration 	
Massey et al., 2001	<ul style="list-style-type: none"> Executive level support 	<ul style="list-style-type: none"> IT as an enabler System features 	<ul style="list-style-type: none"> Customer's point of pain
Kohli et al., 2001			<ul style="list-style-type: none"> Effective relationship management
Wixom and Watson, 2001	<ul style="list-style-type: none"> Management support Champion 		
Hong and Kim, 2002	<ul style="list-style-type: none"> Manage resistance to change 		
Lau and Hebert, 2001	<ul style="list-style-type: none"> Ongoing management support Champion 	<ul style="list-style-type: none"> Compatibility 	<ul style="list-style-type: none"> Team work Cooperation
El Sawy and Bowles, 1997		<ul style="list-style-type: none"> Integrated system 	<ul style="list-style-type: none"> Cross functional teams Customer relationships
Guha et al., 1997	<ul style="list-style-type: none"> Change agents Champion Change management 	<ul style="list-style-type: none"> Dominant, enabling or socio-technical 	
Rainer and Watson, 1995	<ul style="list-style-type: none"> Top management support Executive sponsor Manage organizational resistance 		
Anderson et al., 1995	<ul style="list-style-type: none"> Visionary leadership 		<ul style="list-style-type: none"> Internal and external cooperation
Kwon and Zmud, 1987	<ul style="list-style-type: none"> Top management support 	<ul style="list-style-type: none"> Compatibility 	<ul style="list-style-type: none"> Informal networks Inter-organizational dependence

Meta-structuring actions that manifest themselves through structures of legitimization and domination can facilitate effective stewardship of the CRM system project. This may require laying out acceptable behavior at various layers of management such as total commitment to supporting the CRM system project. Top management can also enable open communication within the organization regarding the strategic importance of the project (Harkness et al. 1996). This encompasses communicating the progress that has been made and addressing any grievances that the employees may have regarding the project (Beers, 1987). *The actions highlighted in prior studies within the context of top management intervention are: the extent of top management support (change agents), existence of a champion (existent vs. non-existent), management's approach towards change (resistant, participative, and committed) and extent of open communication regarding the CRM system project.*

IT Management Intervention

Depending on the extent to which IT is the dominant factor in CRM projects, several alternative perspectives on the role of IT can be discerned: technological, organizational, and emergent perspectives (Markus and Robey, 1988). The emergent perspective that views the relationship between IT and the organization as mutual and bi-directional is consistent with the socio-technical change theories (Cherns, 1976; Mumford, 1994). Research in business process reengineering has found that successful reengineering projects took a socio technical perspective towards using IT (Guha et al., 1997).

Another IT issue relates to the characteristics of the CRM system. An effective CRM system caters to multiple needs of the customer through a single point of access (Kohli et al., 2001). Having access to a 360⁰ view of the customers with requisite information to

service their needs is important (Pan and Lee, 2003). This requires a centralized data architecture that acts as a repository and interacts with various applications for data capture. Consolidated data based on the centralized data architecture can then be tied to different processing mechanisms and interfaces. It enables the firms to create common repositories of data on the customer's background (profile), their transaction and interaction history, and service requirements.

Application functionalities may include order taking, displaying order status, knowledge bases for getting answers to problems, account maintenance, and more. Functionalities also support the internal employees in better servicing the customers. Such functionalities provide the employees with the required information on the customers, their relationship with the firm, cross selling opportunities, and meeting their service needs. An integrated system with functionalities that enhance the customer's interaction experience with the firm may increase system related performance outcomes expectations (El Sawy and Bowles, 1997). Similarly, such systems also augment employee satisfaction through streamlining communication links and providing relevant information (product information, information to respond to service requests, etc.). As outlined in the prior section on CRM systems, the scope of functionalities spans operational, collaborative, and analytical features. The decision regarding which set of functionalities is appropriate rests with the organization. *Under the IT Management Intervention, the role of IT (dominant, enabling, or socio-technical) and the characteristics of the CRM system (integrated vs. not integrated; scope of functionalities (operational, collaborative, and analytical)) are critical interventions that are examined.*

Relationship Management Intervention

Social exchange theory elaborates on both intra-organizational and inter-organizational relationship issues (Blau, 1964; Granovetter, 1985; Tsai and Ghoshal, 1998). Mutually trusting relationships facilitate cooperative behavior between functional units within a firm and also between a firm and its Thompson (1995). They argue that system utilization can be measured by "the extent to which the information system has been integrated into individual work routine". Thus, successful implementation of a CRM system may be reflected in how well it is integrated into the day to day work routines of the personnel affected by the system. Similarly, if employee concerns are actively addressed and

business partners (Frey, Jr. and Schlosser, 1993; Crosby, 1994; Zaheer and Venkatraman 1995; Tsai and Ghoshal, 1998). Cooperative behavior among functional units can induce openness towards mutual adjustment of activities and acceptance of new roles and responsibilities arising from implementation of the CRM system. A similar argument can be made in the context of the relationship between a firm and its customers.

CRM system projects require considerable reorganization of customer facing processes. This may result in redefinition of roles and structural changes that effect functional units (Johnson and Johnson, 1989). For example, if sales and marketing functions are affected, each function with its own incentive structure may not cooperate resulting in failure of the overall project. Cooperative cross-functional interaction within the firm can increase the probability of successful implementation of CRM projects (Tjosvold and Deemer, 1980). In addition, CRM projects are boundary spanning and often focused on synchronization of processes with the customers. An important element in CRM system success is an implicit understanding between the firm and its customers that integrating processes through CRM systems will benefit both organizations (Massey et al., 2001). Existing close ties between the firms is an important factor in this implicit understanding. Close relationships can enable the firms to leverage CRM systems to facilitate future innovative interactions. Both organizations may also be more committed to the success of these innovative interactions. *In this category, the nature of existing cross-functional relationships (competitive vs. cooperative) and inter-organizational relationships (loosely coupled vs. integrated) are two factors that are probed.*

Performance Outcomes

Various performance outcomes of system implementation have been suggested in IS research. DeLone and McLean's (1992) model on IS success proposes IS use, user satisfaction, individual impacts and organizational impacts as performance outcomes. In measuring CRM system use, we follow the approach suggested by Goodhue and support services such as training are provided, it may result in an improved work environment for employees and increase employee job satisfaction (user satisfaction).

The direct impact of IT based systems is on intermediate process performance (Guha et al., 1997; Kohli and Hoadley, 2006). Thus, successful

implementation of a CRM system may result in process improvements such as cycle time reduction, customer satisfaction, and sales force productivity (Hammer and Champy, 1993). Sales force productivity relates to the individual impacts, while cycle time reduction and customer satisfaction reflect organizational impacts. The latter two measures also reflect the extent to which how well the customers are being served (Boulding et al., 2005). As most IS implementations are project-based, completion of the project within the prescribed time, budget, and functionality is an important aspect of performance that needs to be considered. Another approach towards examining the performance outcomes is to review the subjective assessment of the gap between pre-implementation expectations and post implementation gains of the CRM system. This

approach considers the difference between initial expectations and post implementation assessment of the executives involved in the implementation of the CRM system (Staples et al., 2002). *CRM system use, employee satisfaction, project completion, process improvements (sales force productivity, cycle time reduction and customer satisfaction), and the gap between executives' subjective assessment of pre-implementation expectations and post implementation outcomes are captured to assess the performance outcomes related to implementation of the CRM system.*

Method

A strong accumulative tradition in IS research supports the case based approach.

Table 3: Variables and their Measurement

Variables	Measurement
Top Management Intervention Top management support Champion Senior management approach Middle management approach Open communication	Acted as Change agent or Not Existent or Non existent Committed, Participative, or Resistant Committed, Participative, or Resistant High, Medium, Low
IT Management Intervention Role of IS CRM system characteristics	Socio-technical, Enabling, or Dominant Integrated or Not integrated and Scope of functionalities
Relationship Management Intervention Cross-functional relationship Inter-organizational relationship	Cooperative or Competitive Integrated or Loosely coupled
Performance CRM system use Project completion Employee satisfaction Process improvement	High, Medium, or Low Achieved or Not achieved High, Medium, or Low Sales force productivity, Cycle time reduction , Customer satisfaction
Overall Performance	High, Medium, or Low
Subjective Performance Employee satisfaction Improvement and expectation Customer satisfaction Total	1 (low) to 5 (high) 1 (low) to 5 (high) 1 (low) to 5 (high) 1 (low) to 5 (high)
Overall Subjective Performance	High, Medium, or Low

For complex and evolving areas such as CRM research, Benbasat et al. (1987) and Lee (1989 and 1991) validate the legitimacy of the case based approach. Thus, a multiple case analysis approach was considered to be appropriate for this study by following the methodology proposed by these studies and by Yin (1989a, b). A literature search of practitioner magazines and CRM related websites was conducted to identify major CRM system initiatives. Over 100 firms were identified based on this initial search. Efforts were made to select relatively similar CRM system initiatives with differences across the cases on performance outcomes (Eisenhardt, 1989). A set of selection criteria was developed to ensure that the cases selected were homogeneous in nature to facilitate cross-case analysis and to enhance external validity. The criteria for selection of cases are as follows:

1. The CRM project was implemented.
2. The initial assessment of outcomes related to a CRM system project should be unequivocal.
3. The CRM system project should have major organizational implications and breakthrough performance expectations associated with it. Therefore, the target CRM system projects should fall within the "CRM infrastructure" and "organizational transformation" targets, as proposed by Goodhue et al., (2002).

Projects at fourteen firms met the selection criteria. Participation in the study was then solicited and 5 companies made a commitment to participate. Over the course of the study two companies did not follow through with the initial commitment because of time requirements and sensitivity of the information requested. Yin (1989a) recommends selecting sites that will allow measurement of a phenomenon. The selection of sites across the ranges of success and failures allows researchers to measure the role of any construct and its relationship to CRM system effectiveness. To classify the cases by performance, we probed potential cases by asking the key individuals responsible for their CRM system effort to assess their view on the degree of success relative to their expectation. Once the cases were selected, they were then classified based on the three performance categories as high, moderate, or low by analyzing actual performance metrics collected during the case study¹.

¹ A subjective rating using a scale of 1-5 was used to get managers' assessment of each dimension of outcome. For example, if the case met or exceeded all goals and they were measurable and observable, the case received a score of 5. If the case did not meet or had no measurable performance gains then a score of 2 or 3 was given. Customer satisfaction was measured using actual customer satisfaction ratings provided by the

Of the three final cases, one was classified as having "low" levels of success and the other two as "high" and "moderate" levels. This was also validated through secondary sources, by reviewing published results regarding the CRM system initiatives.

Data Collection

In each firm, documentation regarding the CRM system projects was collected prior to the interviews. In addition, other data regarding company performance prior to and after the implementation of the CRM system project were also studied. Data collection methods included a semi-structured protocol, a quantitative questionnaire, multiple documents, archival records, and telephone interviews. This approach improved richness and depth of findings and enhanced the construct validity of the study. Interviews provided the major source for primary data.

Data triangulation methods helped in reducing bias as recommended by researchers (Denzin 1978; Yin, 1989b). Sample data from each case was triangulated using multiple sources of information (Table 4). This included company public information such as 10Ks, letters to shareholders, and annual reports. Several case respondents provided the researchers with reports, presentations, and memorandums directly related to the CRM project. These included overviews of the project, consultant recommendation presentations, system or business plan, and notes compiled by the project teams.

To ensure reliability, a standard case study protocol, was used to conduct each interview. The protocol contained major questions regarding "how" and "why" the CRM system project was conducted. The interviews were semi-structured and all responses were solicited in an open-ended fashion (refer to Appendix 1 for a sample of the protocol). The major point of contact in all cases was a senior level manager who was directly responsible or integrally involved with the CRM system project. To eliminate possible bias due to a single respondent, we attempted to ensure triangulation of data from multiple sources in the organization.

companies. The scores on each dimension were then averaged to get a score for overall performance.

Table 4: Profile of the Interviewees and Company Documents

Company	Title	Role	Documents
Computer Co.	Process Consultant Process Design and Order Configurator	CRM team leader and consultant for process design Functional member on cross functional teams	10K, letter to shareholders, annual reports, published articles on the CRM initiative, consultant recommendations, customer satisfaction survey results, organizational structure of the project team, documents related to cascade communications methodology, process flow charts, and documents stating the performance outcomes and future goals.
Tire Co.	Manager Electronic Commerce Customer Services Manager Customer Services Manager	Cross functional team leader Order management Functional member	10K, letter to shareholders, annual reports, published articles on the CRM initiative, consultant recommendations, organizational structure of project team, order process design, data on the mediums of order receipt, documents related to focus groups, information on assessment of customer value added, information on project goals, and performance metrics (pre-CRM, actual, and goal)
Hard Goods Co.	Director Electronic Commerce Customer Services Manager	CRM champion Functional member	10K, letter to shareholders, annual reports, published articles on the CRM initiative, consultant recommendations, organizational structure of project team, project proposal document, results of group sessions on problem solving, process design document, and information on performance metrics (pre-CRM, actual, and goal)

Therefore, other senior managers, process champions or CRM team leaders, and functional associates were also interviewed (Table 4). All interviews were taped with the permission of the respondents. An expectation of the involvement and duration of the interview was provided up-front. CRM system projects tend to involve a radical deviation of corporate strategy, which some firms are reluctant to divulge. Therefore confidentiality of the data was assured. This was essential to the integrity of the research, as it allowed respondents to answer more openly to the various probes. A total of 7 interviews were conducted over the course of about two months. Multiple interview sessions were conducted with each respondent and the taped interviews were transcribed on 55 typed pages.

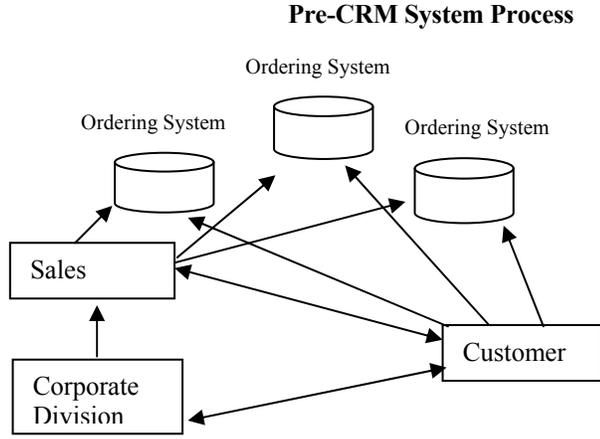
Data Analysis

As indicated by Yin (1989b), analyzing case study evidence is difficult, and every investigation should begin with a general analytic strategy. The two most commonly used strategies are: 1) relying on

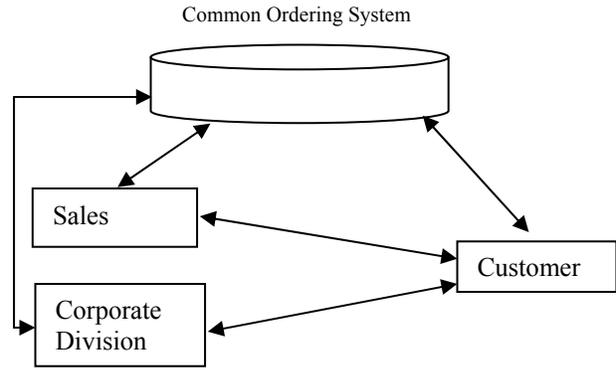
theoretical propositions, and 2) developing case descriptions. Explanation building was the primary mode of analysis used in the current study, which supports Yin’s strategy. In addition, the use of pattern matching between cases is recommended. In this study, use of explanation building and pattern matching were useful in providing evidence of the presence or absence of each construct. Through cross case analysis, one can then understand whether the presence or absence of any construct facilitated or was detrimental to the success of the CRM system initiative. The qualitative data also provided content and discovery of elements that surround each construct providing insights on facilitating and inhibiting factors that led to CRM system outcomes. Each construct was analyzed based on the qualitative data from the interviews, as well as other data gathered during the protocol (Appendix 1). Information obtained from other documents in each company was also used in this process. The systems are depicted in Figure 1.

Figure 1: Pre-implementation and Post-implementation CRM Processes for the Three Companies

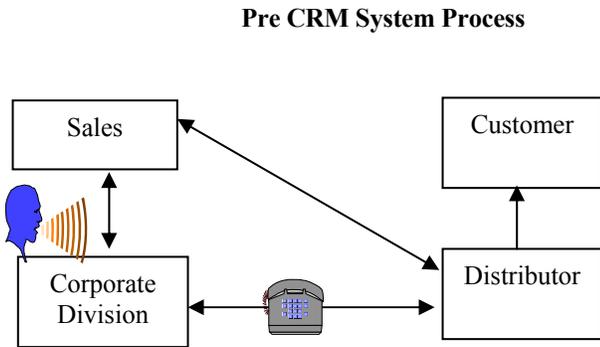
Computer Co.



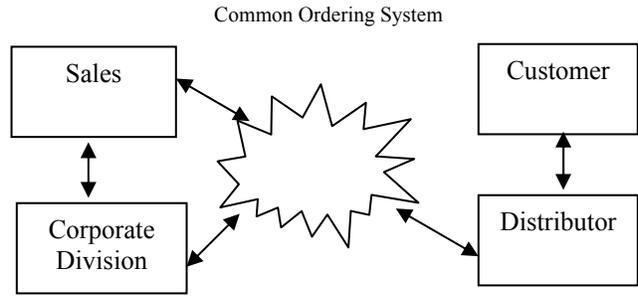
Post-CRM System Process



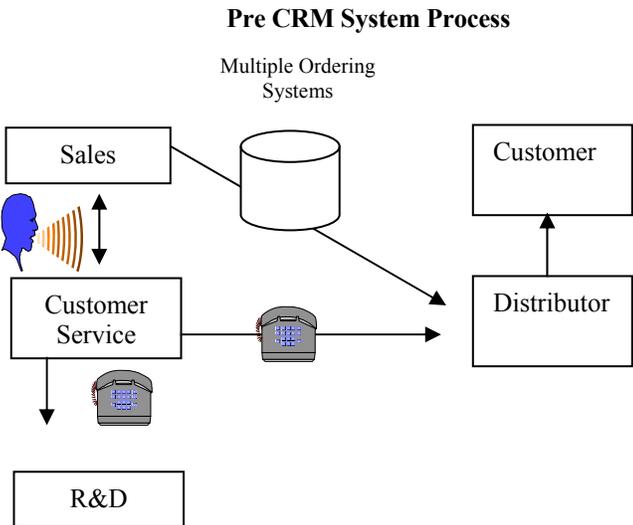
Tire Co.



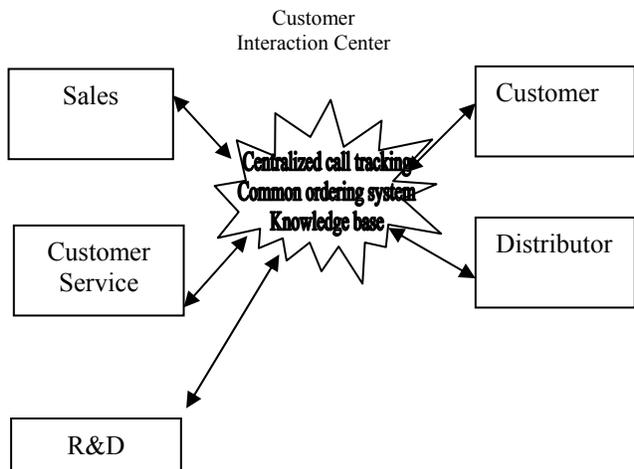
Post CRM System Process



Hard Goods Co.



Post CRM System Process



Actual company names are disguised in order to maintain confidentiality.

Company Descriptions and Project Information

Computer Corporation

Computer Co. is a large manufacturer and producer of computer products with a global customer base. The CRM system project focused on the *Sales Process* which included order management, pre-sales and post sales activities, order delivery, accounts receivable and sales support. The process involved the world wide sales teams and their interactions with their customers and dependence on internal systems; interactions with manufacturing plants and corporate product marketing; financial, accounting, and sales management. Computer Co. had several independent ordering systems deployed worldwide that were not integrated allowing no single view of all customers. This also led to long lead times from order placement to receipt of cash, long sales cycles, and customer dissatisfaction. The company went through two phases of its CRM system implementation project with the initial attempt focusing on consolidating 60 ordering systems into one and simplifying the order to receipt process. The second phase of the CRM system project radically changed the project scope to encompass the entire sales process to dramatically improve the problems in the areas of sales productivity, cycle times, and customer satisfaction. Based on a benchmarking study the Computer Co. conducted, they were rated below industry norm in all of these areas, which in turn impacted the bottom line negatively. Several cultural, sponsorship, and project management issues arose in the project. The preliminary contact at Computer Co. indicated that all goals had not been met but they were in the process of improving goals in the second phase of the CRM system project.

Tire Co. Inc.

Tire Co. is one of the world's largest manufacturers and distributors of automotive tires. The CRM system project focused on the customer service process to serve all interactions with Tire Co.'s distributors and customers. These included pre- and post-sales related services. The interactions in the process involved the customer service department with sales and distributors who were serving the customers. Tire Co. was experiencing low customer satisfaction by their dealers because of the manner in which they were serviced. There were several manual edits and not enough information captured from end-customers. This led to long cycle times in the order to receipt cycles. The major focus was to electronically connect

a group of dealers in a specific channel so that they may perform day-to-day business processes electronically instead of using the telephone and the traditional customer service interactions. Tire Co. created a Business-to-Business electronic commerce solution for their dealers to automate and radically change all interactions with dealers. Tire Co.'s initial representative for the case study indicated an increase in customer satisfaction and cost reductions. Respondents felt that the CRM system project was a major success.

Hard Goods Corporation

Hard Goods Co. is a multinational corporation and provides industrial hard goods to major corporations. The CRM system project at Hard Goods Co. focused on the entire customer service process. This included all interactions with sales, distributors, and customers for pre- and post-sales related services. The interactions in the process involved the customer service department with sales and distributors who were serving the customers. In addition, any technical questions not being addressed by the department were then transferred to the R&D group product experts. The customers and wholesalers had numerous contacts for pre- and post-sales inquiry with no global capture of interactions. This prevented the company from identifying customer issues and making proactive changes to address customer dissatisfaction areas. In addition, several phone calls were being forwarded to a product specialist in the R&D division providing an additional hand off and more time to resolve customer problems with virtually no audit trail of the resolution for learning purposes. The company underwent a project to improve customer service through new IT by allowing a single point of interaction and resolution of all customer service needs. The company developed a centralized call tracking system, order management system, and intranet knowledge center to streamline and close all customer interactions at the Customer Interaction Center (CIC) and to capture all interactions for future process improvements. The initial contact at the firm during case selection processes stated that the CRM system project was successful as it exceeded all of their goals.

Results

Table 5 provides the overall results for the constructs. Analysis of performance outcomes reveals that Computer Co. had a low level of CRM system use and medium levels of employee satisfaction.

Table 5: Summary of Results

Variables / Company	Computer Co.	Tire Co.	Hard Goods Co.
Top Management Intervention			
Top management support	Change agents (not all stages)	Change agents	Change agents
Champion	Champion emergence	Champion emergence	Champion emergence
Senior management approach	Participative	Committed	Committed
Middle management approach	Resistant	Committed	Committed
Open communication	Medium	High	High
IT Management Intervention			
Role of IS	Enabling	Socio-technical	Socio-technical
CRM system	Integrated (Ordering system)	Integrated (Ordering system & customer service)	Integrated (Centralized call tracking, central ordering system and knowledge base)
Relationship Management Intervention			
Intra-organizational	Competitive	Cooperative	Cooperative
Inter-organizational	Loosely coupled	Integrated (supplier side)	Integrated (internal and external)
Performance			
CRM system use	Low	Medium	High
Project completion	Achieved	Not achieved	Achieved
Employee satisfaction	Low	Medium	High
Process performance improvement	Sales force productivity (D)**	Processing cost: (\$929,000 cost savings) (A)	Single point of contact (90% at CIC) (A)
	Cycle time reduction (D) 50% below plan	Cycle time (A) (8 days to 3 days)	Credit processing (A) (13 days to 8 days)
	Customer satisfaction (C)	Customer satisfaction (A)	Customer satisfaction (A) (Increase from 59% to 72%) Customer service (A) Industry best (80% or higher)
Overall Performance	Low	Moderate	High
Subjective Performance*			
Employee Satisfaction	3 / 1	4 / 4	5 / 4
Improvement and expectation	4 / 2	3 / 3	5 / 4
Customer Satisfaction	3 / 2	4 / 4	5 / 5
Total	2 / 2	3 / 3	5 / 5
Overall Subjective Performance	Low	Moderate	High
<p>* Rating scale of 1-5 was used. For employee satisfaction 3 / 1 means the subjective rating of 3 out of 5 was provided by the Project Leader and the rating of 1 out of 5 was provided by the functional member of the team.</p> <p>** (A) Exceeded goal, (B) Met goal, (C) Marginal improvements, but did not meet the goal, (D) No success. No items had 'B' rating.</p> <p>The highlighted areas show the variables that differ across companies with low, medium, and high overall performance. Respondents also highlighted that these variables had a positive impact on overall performance.</p>			

However, the project met the time, budget, and functionality objectives. Computer Co. did not realize benefits in the area of sales productivity or cycle time reductions, but there were marginal improvements in customer satisfaction. Tire Co. had major cost reductions and improvements in customer satisfaction, but was behind in a few areas with respect to the goals of the project. This was primarily related to the length of time to implement the system with all the functionalities and getting all the dealers online. Metrics for Hard Goods Co. indicated unequivocal success in all areas of performance and dramatic customer satisfaction improvement (customer satisfaction jumped from 53% to 73%).

To further validate these outcomes, respondents were also asked to provide a subjective rating in four areas of outcomes related to the CRM system project. The ratings were provided by the team leader and by a functional member to measure any deviation. The respondents were asked to rate on a scale of 1 (low) to 5 (high) the degree to which they perceived the CRM system project met their expectations based on current actual performance. The subjective rating by respondents matched closely to the analytical assessment, which took a more objective view of the results in each area. Computer Co. did have a degree of variation between the two respondents in the overall project performance. The functional member perceived the extent that overall project performance met their expectation to be much lower than that perceived by the team leader.

Below, we examine the interventions that contributed to the deviation in performance outcomes among the firms.

Top Management Intervention Change Agents

In all the cases, we found that top management acted as a team of change agents, provided vision for the project, and supported the CRM system initiative. The CRM system project at Computer Co. started with a mandate from the CEO and then evolved to a new CEO as the Champion. The new senior management leadership initially supported the project but the commitment level dropped during implementation as push back from functional management occurred. The driving force at Tire Co. was a steering committee that consisted of the executive VP (small tire and large tire), CEO, Director of Customer Services and Director of IT. The CRM system project team had their full support throughout the project. Hard Goods Co. also had a steering committee consisting of the top 5 executives of the firm and three

Senior Vice Presidents acted as the project sponsors. They empowered the Director of Electronic Commerce to be the change agent and carry out the project with sound business cases.

Existence of a Champion

All cases depicted existence of a champion who spearheaded the CRM system project. In the case of Tire Co. the VP for Sales championed the CRM system project, while in the case of Hard Goods Co. the Director of Electronic Commerce was empowered to be the project champion.

Senior and Middle Management Approach towards Change

Differences were found among the cases regarding senior and middle management's approach toward the CRM system initiative. Tire Co. had a culture that promoted change and provided a supportive environment for CRM system implementation. Similarly, in the case of Hard Goods Co., there was a lot of proactive support from the senior and middle management in terms of providing their input and help to make the CRM initiative successful. However, in the case of Computer Co., there was a lack of commitment from the functional management team to the changes recommended by the CRM team. Even the senior managers who had initially supported the project resisted the subsequent changes. Such an approach became a major obstacle during the project execution stages and subsequently impacted realization of the full potential of the CRM system project.

Open Communication

Subtle differences were found among the cases regarding the extent of open communication on the CRM system project. Computer Co. initially did not have a culture of open communication due to its rigid management structure. However, with a new CEO and management staff, the company embraced a higher level of associate involvement and open communications only *after* the CRM project was complete. Tire Co. and Hard Goods Co. exhibited a high degree of open communication regarding the CRM system project from the onset. The need for open communication was identified early on by Hard Goods Co. as a key success factor. They were aware that employee dissatisfaction might occur with the change and the CRM champion took time every month to provide feedback to the organization on project status, progress, areas of improvements, and benefits of the program. This was considered a key

reason for the success of the project as they received full buy-in from all functions. As stated by one of the respondents from Hard Goods Co.: "I can't tell you how many emails and phone calls I got from middle management who said 'tell me what you need and how can I help in any way.'" Companies conducted focus groups and developed joint teams to open up the channels of communication. It is visible from the successful cases that open communication regarding the implementation process through solicitation of feedback on issues and concerns along with active efforts to alleviate the concerns was pivotal.

In summary, active involvement of the top management at *all stages of implementation* of the project, total commitment from the senior and middle management, and extent of open communication regarding the CRM system project were found to be the differentiating factors between low and high performers. Massey et al. (2001) also found that executive level support for the CRM project was one of the important factors that contributed to successful implementation of CRM systems in IBM. However, existence of a project champion did not seem to play a role in the successful implementation of the CRM system project. This is consistent with what Wixom and Watson (2001) found in their study. They attributed the result to the large scope and far reaching impacts of the data warehousing system and contend that broad based support from multiple sources may be required for such systems. However, an alternative explanation for such a finding could be the difference in the actual role played by the project champion as the differentiating factor rather than the mere existence of a champion. This issue is visible in the cases of Hard Goods Co. and Tire Co. wherein the project champions facilitated open communication and actively got involved in not only promoting the project, but also addressing concerns of the affected parties. An alternative explanation could be the extent to which the project champion is empowered to make decisions, especially in cases where there are disagreements and conflict.

The analysis further points out that sponsorship of the project existed in all cases. However, stewardship of the CRM system project by the top management showed divergence among the cases and thus could be the pivotal intervention. Brown and Vessey (2003) assert that in the context of ERP systems success, top management intervention needs to expand from mere support to active engagement in the planning and actual execution phases. This further strengthens the case for the importance of effective stewardship by the top management as a contributing factor to CRM system implementation success.

IT Management Intervention Role of IS

One clear pattern that emerged from the cases was that although IS played a supportive role, it also became a barrier to the implementation of the project due to the conservatism in the culture of the IS department. In the case of Computer Co., for example, the CRM system project initially started off as an IT consolidation project (*Dominant role*). Later, the focus moved to a full process change of the entire sales process. The role of IT required additional tools and systems to support the new process. Tire Co. also experienced barriers from IT to adopt new technology options from some smaller vendors rather than the traditional vendors they normally dealt with. Further, the IS group resisted certain radical changes as they focused on system constraints rather than identifying new ways to improve process with radically new technologies. In the case of Hard Goods Co., the IS group was proactive in identifying new technologies and tools to improve processes even further. This balance of business process and IT proved to be invaluable in selecting new technologies to provide new services and process enablers.

CRM System Characteristics

Interesting observations emerged regarding the characteristics of the CRM system (Figure 1). All cases depicted a move towards integrated systems, while differences existed in the scope of the CRM system that was implemented. At Computer Co., 60 systems were integrated into a single CRM system and this was complemented with an intranet for the sales teams that provided relevant information on sales and products. However, the CRM system was primarily confined to automating transaction and payment processes conducted by the sales department. The intranet supported the sales processes conducted by the sales team. The corporate division maintained its interactions with the customers with minimal coordination with the sales department. Tire Co. created a CRM system to manage its interactions with the dealers. The system enabled the company and its dealers to conduct day-to-day business processes through the system. The system also enabled the company to support the service requirements of the dealers that were traditionally conducted through telephone systems.

Hard Goods Co. on the other hand was able to successfully transform the integrated system into an information hub called the Customer Interaction Center (CIC) that processed and forwarded information to all the relevant parties. The goal was to

centralize all ordering systems into a single system based on centralized data architecture, establish an automated call tracking system to retain a detailed history of all customer interactions, and set up an intranet knowledge center to provide service representatives with instant information on products and solutions. These systems were also available to the wholesalers and customers so that they could at any time check order status and get answers to questions.

In the Computer Co. case, the IS group took a more dominant role, and the CRM system project that was initially pursued as an IT consolidation project (integration of different sales systems) eventually evolved to a redesign of the entire sales process. A more socio-technical role was visible in the case of Tire Co.; however, an emphasis on system constraints rather than leveraging new technologies to improve the process was a limiting factor. Hard Goods Co. viewed the CRM system project as a process change initiative. IT played an enabling role, and the IS group also took initiative in identifying cutting edge technologies that could better support the transformed processes. The overall pattern for IT management intervention shows that successful cases took a socio-technical approach regarding the role of IT and depicted a clear focus on leveraging appropriate CRM system functionalities to support the process change initiatives.

The successful cases also show a shift towards developing and successfully implementing an information hub based on centralized data repositories that provide a single forum for parties to interact with each other and use functionalities that draw on common knowledge bases to address issues and solve problems. However, none of the cases showed that they utilized the analytical features offered by the CRM systems. In terms of system functionality, the core focus was either on operations or collaborative capabilities with business partners on the customer side of the supply chain. Perhaps, it is important to first streamline operational and coordination processes, before venturing into analytics. Such a progression is likely because firms have to make sure that relevant and accurate data is available prior to pursuing analytics based initiatives.

Relationship Management Intervention Cross-functional Relationships

The Computer Co. had a large amount of friction between functions, as they did not share the same goals and objectives. Sales, division, and corporate had different cultures, compensation, incentives and a

history of distrust among each other. This led to increased resistance and resulted in finger pointing when certain problems arose. The following response is evidence of this: "...There was cross functional friction between the field (meaning sales people) and their management and the BU's (Business units). You had cross-functional friction between sales and professional services and also between professional services and customer services. And then you had groups who were caught in the middle like order management and contract management, who were unable to perform effectively due to this cross functional competition. Even within a function there was competition. I think this was very pervasive in the company." Tire Co. and Hard Goods Co. depicted a high level of cooperation among the functional units. Functional units were open towards adjustments that were required in terms of cross-functional interactions aimed at serving the customer.

Inter-Organizational Relationships

At Computer Co., the CRM system project was mainly focused on the sales processes, which were loosely coupled and did not have a tightly integrated linkage to the supply chain. As a result, there were several silos of activities. For example, the sales divisions were behaving independently even though guidelines were provided on the customer supplier relationship between the sales functions and corporate divisions. Tire Co. and Hard Goods Co. cases were focused primarily on leveraging tight integration of the customer supplier relationships across the entire business process. The distributors were provided client software to ensure access to Tire Co.'s ordering and service systems to better inform them of the inventories and status of orders. This empowered the distributors to become more proactive in offloading tasks the company typically conducted, allowing Tire Co. to focus on providing better service to their customers. In the Hard Goods Co., the CRM system was exposed to customers and wholesalers to allow them to get quick answers.

Computer Co. depicted competitive orientation towards cross-functional interaction and loosely coupled relationships with trading partners. Tire Co. and Hard Goods showed active cooperation among the functional units. However, integrated relationships with trading partners were visible in the case of Hard Goods Co., while Tire Co. only depicted integrated relationships on the supply side. For example, Hard Goods at the initial phase of the implementation set up teams consisting of company employees and their wholesalers. Each team was presented with a series of process problems and asked to come up with

solutions. Thus, relatively successful cases depicted close cooperation among the functions within the firm and integrated relationships with the supply chain partners.

Discussion

The results of this study consolidate findings from various studies that examine the interventions that impact the successful implementation of CRM systems. The case based approach enabled us to provide an expanded assessment of each factor and divulge into processes that were employed to implement the interventions. The following section elaborates on the findings and propositions related to the issues that were investigated. To enhance the external validation of the results, we also elaborate on some additional company cases that substantiate what was found in this study.

The results for top management intervention and IT management intervention are consistent with what Chatterjee et al. (2002) found in the context of web technologies, Wixom and Watson (2001) found in the context of data warehousing projects, Rainer and Watson (1995) found in the executive information system projects, and Guha et al. (1997) found in the context of business process change projects. Interestingly, we found that, in terms of top management intervention, the difference between the high performing and low performing cases were more subtle than initially expected. At a broad level, we found that all cases depict top management acting as change agents, existence of a champion, and open communication regarding the CRM system projects. A more in-depth analysis reveals that active involvement and total commitment from the top management and middle management in all stages of implementation are necessary for the success of the project. Also the orientation of the personnel towards the CRM systems project played an important role. People involved in the project took it as an improvement opportunity rather than a change that will affect their work or result in downsizing. This orientation translated into total commitment to the project, which was complemented with proactively opening channels of communication for soliciting creative inputs for betterment of the project. For example, in the Hard Goods Co. case, at the initial stages of the CRM system project, the top management provided the vision for the project as fundamental to success of the firm. Subsequently, this support later transformed into managing resistance to change, soliciting input from concerned parties about ideas and concerns, facilitating cross functional cooperation, disseminating information

about project status, and inculcating the strategic importance of the CRM system in supporting the overall customer centric orientation of the firm.

External validation for the results is supported by the experiences of ACL Services Ltd and Procter and Gamble (Simpson, 2002). ACL created a steering committee that included personnel from all functional units to spearhead the CRM system project. A formal change management team was assigned the responsibility of managing the transition. This team conducted demonstrations and feedback sessions. Procter and Gamble's efforts in redesigning its customer related processes involved creation of a new unit at the corporate level called the customer business development unit that consisted of personnel from various functional units (Koch, 2002). However, this development created friction between the newly developed business unit and the sales department. Effective interventions by the top management were required to manage this friction and legitimize the reorganization to the point where both units started cooperating with each other. Based on our findings and the discussion above we propose:
P-1: Active involvement (inculcating the vision, getting buy-in from all layers of the management, fostering opening communication, and engaging in the ongoing implementation process) of the top management and the CRM champion in all stages of implementation of the CRM system project is associated with a high level of CRM system implementation success, measured in terms of CRM system use.

Results for IT management intervention were explicitly in favor of adopting a socio-technical approach. This result is also consistent with what other studies have found in the context of large scale system implementations. The results for CRM system characteristics revealed that an integrated system is a necessary but not a sufficient condition for the success of the project. The CRM system becomes a hub that caters to the communication, transaction, and service needs of the participants. Such a system, by simplifying the interaction process between the customer and the firm, elevates customer satisfaction. Access to relevant and timely information and tools required to serve the customer also raises employee satisfaction. El Sway and Bowles (1997) elaborated on the functionalities of a system called TechConnect at Storage Dimensions Inc. TechConnect provides a single interface to users (customers and employees) and its functionalities include escalation paths for problem management, closed loop problem resolution, automatic cross triggering capabilities, analysis and reporting capabilities, and shared knowledge creation through adaptive learning.

TechConnect through interaction with the users not only builds the knowledge base but also dynamically upgrades it to better serve the needs of the users. Overall, an integrated system captures the data in a common repository or facilitates access to data through other approaches (adaptors, import/export utilities). The functionalities reflect the learning and adaptability characteristics of the system. Similar functionalities were observed in the CRM system implemented by Hard Goods Co. The firm deployed a customer interaction center that included a centralized call tracking system, order management system, and intranet knowledge center. The system served as a single interface for employees and customers and captured all transactions and interactions in a central data repository. This approach contributed to the development of the knowledge center that supported both the customers and employees and also facilitated its future development. Based on our findings and the discussion above we propose:

P-2: A socio technical orientation towards implementing the CRM system projects is associated with high level of CRM system implementation success measured in terms of CRM system use and employee satisfaction.

P-3: An integrated CRM system that acts as a service hub by providing a single point of access to users for multiple services and dynamically adapts to emerging needs of the users is associated with high level of CRM system implementation success in terms of CRM system use, employee satisfaction, and customer satisfaction.

Strong differences were detected between the cases in terms of relationship management issues. Hard Goods Co. had close and integrated relationships with the customers. This facilitated the amicable management of the issues arising from the restructuring of the interlinked processes. Hard Goods Co. was proactive in involving the customers in the implementation process. Thus, customers

P-4: A high level of cross-functional cooperation between departments is associated with CRM system implementation success measured in terms of CRM system use. A high level of trust between the functions within a firm and/or an incentive and reward system that encourages adherence to policies and procedures for cross-functional interactions may strengthen this relationship.

P-5: A high level of inter-organizational cooperation between the firm and its customers is associated with CRM system implementation success measured in terms of CRM system use. A high level of trust

provided critical external information and played a facilitating role in the success of the project. Both firms realized the mutual benefits that can be gained from the CRM system project. So, they were more open towards accepting redistribution of roles and responsibilities that came about due to implementation of the CRM system. In the case of Tire Co., the implementation of the CRM system resulted in transferring activities to the distributors that were traditionally undertaken by the firm. The integrated relationship that existed between Tire Co. and its distributors was instrumental in smoothly managing the redistribution of activities. The case of Wal-Mart and Procter and Gamble provides corroborating evidence for our findings (Koch, 2002). Both firms initially conducted a pilot test for using IT in managing their relationship. These pilot tests were not only instrumental in validating the positive outcomes that could be achieved by using CRM systems but also established a level of trust between the two firms. However, the implementation of the full-blown system to support a continuous replenishment process required a complete reorganization of the transportation process at both firms. Procter and Gamble had to reeducate their plants to follow the just-in-time approach, while Wal-Mart on the other hand had to develop the ability to accept small batch sizes and restructure the warehouses accordingly.

Similarly, intra-organizational relationships portray a similar picture. In Computer Co., there was a long history of mistrust among the various functional units. This along with local incentive schemes created intense competition between the functional units impeding the effective implementation of the CRM system and later adversely affected realization of its true potential. A strong cooperative orientation towards cross-functional interactions was visible in the Tire Co. and Hard Goods Co. Such an orientation facilitated the acceptance of new roles, modified interaction needs, and joint coordinated effort towards serving the customer. Based on our findings and the discussion above we propose:

between the firms and/or an explicit understanding of mutually beneficial outcomes may strengthen this relationship.

Limitations

Some limitations of the study should be noted. First, the study investigates the CRM system projects within a business-to-business relationship context. Thus, results may not be directly applicable to systems that target the business to end-customer level relationships. Specifically, relationship management issues and characteristics of the system may require

reexamination. Second, the case based approach limits the external validity of the results. However, the use of multiple cases and an active effort to corroborate the findings of the study with previously published literature and case examples available in the public domain was done to address this issue. Third, the results of the study may only be applicable to the category of CRM system projects that Goodhue et al. (2002) have classified as “CRM infrastructure” and “Business transformation”.

Contribution to Practice and Research

This study provides prescriptive guidelines to managers interested in or currently implementing CRM systems within their companies (Table 6). Implementation of the CRM system should be conducted within the context of the overall strategic thrust of the firm. It is important that the firm articulates how the CRM system relates to the overall corporate strategy. Once that is done, top managers must sell the idea to their employees and customers. Total commitment and involvement from the top management at all stages of the CRM implementation is required. Before implementing the CRM system, barriers to change need to be identified and later effectively managed. This process needs to continue at later stages of the implementation by encouraging active involvement through presentation of improvement ideas and disseminating information about project progress and how stakeholder concerns are being addressed. Thus, both effective sponsorship and stewardship of the CRM system implementation process is pivotal.

Information systems, such as CRM systems, that transcend functional boundaries within the firm have the potential to trigger political maneuvering aimed at defending existing power structures, roles, and responsibilities. This, along with conflicting local incentive schemes of different functional units, may contribute to failure of a CRM system implementation effort. Managers need to actively address these issues by inculcating a customer centric orientation within the firm. If such an orientation is complemented with incentives that encourage functional units to cooperate in serving customers, this can increase the likelihood of CRM system use and eventually lead to enhanced performance gains. Another important insight for managers is developing trusting relationships with the customers. Within the CRM

system context, this can be done through demonstrating the mutual benefits attainable from the project. Involving customers in the piloting phases to demonstrate the potential of the system and the mutual benefits both firms can gain contributes to trust building. Finally, managers need to make careful choices regarding CRM system configuration and features. The organization that implemented the system with multiple functionalities (central call tracking center, common ordering system, and knowledge base) and an information hub structure with a common information repository depicted better performance outcomes. Thus, choices related to both system integration and system functionalities are important in determining the implementation outcomes.

In terms of contribution to research, in addition to generally validating earlier findings related to top management support and the role of IT, we provide further granularity with respect to these factors within the CRM context. First, we segment top management support into sponsorship and stewardship. The case analysis reveals that sponsorship is required but is not enough. Stewardship throughout the implementation process is pivotal for implementation success. Further, we also elaborate on and justify specific steps that constitute good stewardship. Second, this study reveals the unique role that CRM system characteristics play in the implementation process. We elaborate on the domain of the CRM systems by aggregating functionalities highlighted in earlier studies and examine it as a key factor in the implementation process.

Third, given that CRM systems are cross functional as well as inter-organizational, this study proposes that cooperative cross-functional relationships and supplier-customer relationships play a pivotal role in successful implementation of CRM systems. Finally, the study shows that performance outcomes need to be evaluated from multiple perspectives because trade-offs may exist among performance outcomes. For example, increase in sales force productivity may come at a cost of reduced customer service. Strict adherence to project completion deadlines may be achieved at the cost of limited training resulting in lower employee satisfaction. Examining performance outcomes from different perspectives helps in getting a holistic assessment and thus enhances the validity of the results.

Table 6: Insights

Interventions	Prescriptions
Top management intervention	<ul style="list-style-type: none"> • Inculcate customer orientation as the key to long term success of the firm. • Perform stewardship of the CRM system project in which top and middle management actively get involved in the CRM system project from concept to actual implementation. • Create an environment in which CRM system initiative is viewed as an opportunity rather than a change that will have adverse consequences. This will generate commitment and enthusiasm in personnel involved in the project. • Foster open communication regarding the CRM system initiative. This can be done by informing (through meetings, newsletters, etc.) stakeholders on a regular basis about the project status, system benefits, and addressing questions about the impacts of the implementation.
IT management intervention	<ul style="list-style-type: none"> • Use CRM systems as an enabler for customer facing process redesign. • Integrate systems to build central data repositories that provide visibility into interaction with the customers, enable data mining for customer segmentation, assist in providing customized interaction experience, and support customer service initiatives.
Relationship management intervention	<ul style="list-style-type: none"> • Proactively address issues emerging from the implementation of the CRM system that are related to re-distribution of work among the functional units and new internal interaction protocols to effectively service the customers. • Reconfigure incentives available to functional units within the firm in the context of the likely changes brought about by the implementation of the CRM system. • Take steps to build trust with the customers before embarking on a major B2B CRM system initiative. • Evaluate and address issues emerging from the relationship between system features, division of work between the firm and its customer, and the required process changes.

In sum, the study draws much from the significant research base on IS implementation. By closely examining specific interventions that are useful in a CRM context and examining their patterns across multiple cases, an attempt was made to enrich prior findings. The various propositions derived from the data provide fertile grounds for further testing using broader research samples. Another interesting avenue is to evaluate the relative importance of the different interventions examined in the study. Examining this issue from the perspective of the CRM project life cycle can provide insights on aspects that need greater emphasis at the different stages of the CRM system implementation project. The inter-organizational nature of the CRM system implementation raises some interesting issues as well. Specifically, future studies can explore the effectiveness of different process redesign approaches that involve multiple parties. The nature

and process of involvement, incentive alignment, and their subsequent impact on decisions regarding process configuration and system functionalities can be examined. The characteristics of the information system are often not explicitly examined by prior implementation studies. Information systems characteristics are a unique aspect that influences implementation outcomes and thus needs to be examined in more detail.

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Appendix 1 Case Study Protocol Example Construct: Top Management Intervention

Probe:

How committed was top management to the CRM system project? Can you also explain their level of involvement in the project?

Response:

Top management was 100% committed to the project. Without that we would have had a miserable failure. Without their commitment it is not worth your time. And when I mean commitment I mean financial commitment, empowerment commitment, and human resource commitment. Such commitment empowered the project leader to make decisions because everyday scope and things were changing.

Probe:

Who initiated the need for the CRM project? How was consensus reached, and who was involved in the decision (Champion emergence)?

Response:

That was reached by the senior executive management based on our proposal. We made a long term proposal and a short term proposal. I was assigned as the person leading the analysis team and when it was done, there were 2 projects (short term and strategic projects). We recommended a project leader and champion for each project. They liked our recommendation and accepted the project champions.

Probe:

How did management handle the change in organizational processes due to the CRM system project? Did senior management support open communication regarding the project?

Response:

There was a lot of proactive support and constant communication of the vision. I drafted whatever management sent out and every month I met with the joint senior management team that was a lot more than the senior executive management and rolled out "Here is our vision, here is our mission; here is our problems to date and here is our commitment; here is what we have accomplished in the last phase and what obstacles have presented themselves".

The senior management pretty much supported open communication of the project. We encourage an environment that supports intelligent risk taking not just risk taking.

Considering the role of issues discussed above, what would you consider the top factors that facilitated or inhibited the outcome of the CRM system project?

Facilitators / Inhibitors	Outcome Impact	Degree of Impact
All aspects acted as facilitators.	The impact on project outcomes was positive	Low 1 2 3 4 5 High

Timeline changes: Was there any changes in these areas over time?

Onset of the project	During Implementation	After Completion
All stakeholders were committed to the project from the onset. Top management provided the vision, accepted our recommendation for the project leader, and promoted open communication about the project.	No Change	No Change

Construct	Evidence
Top management support	Change agents
Champion	Champion emergence
Senior management approach	Committed
Middle management approach	Committed
Open communication	High