

IS 470 Literature Review

“Customer Relationship Management Systems Implementation”

1. Introduction

Systems implementation, in general, is one of the most widely discussed topics in IS academic literature and could be easily named one of the core areas of interests from both academic and practical perspectives.

Customer Relationship Management (CRM) system, however, is relatively new type of business process automation that deserves a closer look at arising issues and risks related to the implementation of the system.

Current review is conducted to answer the following main question of “What are the main issues and concerns discussed in academic articles in relation to CRM systems implementation?”

In this paper first, attempt was made to distinguish the CRM systems from other information systems. A broader view of issues and risks that can be related to the CRM implementation are presented afterwards, without concentrating on any of three major perspectives of CRM implementation.

These perspectives are discussed separately later. Starting with economic perspective, where CRM is presented as a tool to measure and increase customer profitability and life time value, we further move towards social and organizational side of CRM implementation bringing social exchange theory and resistance factors, and then follow to technological aspects of CRM implementation that is discussed in the literature.

Finally, for more visible and practical discussion of CRM systems implementation the paper concludes with review of industry specific articles.

Key words: CRM, Systems Implementation, Relationship Marketing

2. Challenging CRM: from relationship marketing, through data mining and towards calculating profits.

2.1. IS CRM ANY DIFFERENT FROM OTHER IS?

Most of the academics discussing “CRM Systems Implementation” were inspired with several researches that prove low percentage of successful CRM implementation cases. Bygstad, for example, draws on Tafti, (2002) research that revealed 70% failure rate of CRM projects, as did Bull 2003 citing Giga,(2001) research. On the other hand statistics show growing expenditures on corporate CRM and big growth rate of CRM software sales (Bull 2003, Rigby, 2004).

It should be noted however that CRM implementation has certain specifics and differences compared to other IS implementation.

Parties and Politics

Citing Marble (2000) paper that suggests an implied dynamic between user function and IS function as two main parties engaged in IS implementation, Corner and Hinton (2002) argue that, at least, in CRM system implementation dynamic is much more complex and engage other parties, such as extra-company contributors and project managers. These extra parties, in tandem with higher sensitivity of organizational politics surrounding sales and marketing or customer-service systems, require consideration of new risks, resulting from this complexity. (Corner and Hinton, 2002)

Non Standard Activities

Gefen (2002) add to this complexity by comparing CRM to ERP systems and arguing that customer relationship activities are not as standardized as other business activities, such as accounting or procurement. Hence CRM implementation calls for much more complex and flexible approach. (Gefen, 2002).

Privacy

Another specifics of CRM that is brought forward by Rygielski, Wang and Yen (2002), calls for increased responsibility by CRM implementers in terms of privacy rights. The authors urge

implementers to balance between respect towards the privacy of consumers and economic gains from using CRM and establish privacy policy to make sure the CRM doesn't gain opposite results. (Rygielski, Wang and Yen, 2002)

Diversity of Users

The diversity of users in CRM systems implementation is also emphasized by Fjermestad and Romano (2003), who claim that compared to homogeneous users of other traditional information systems, users of CRM may include all levels of management, permanent and temporary field customer service representatives and customers themselves. Hence the CRM should be designed to cross much more organizational boundaries and contain broader functionalities that would be used by both known and unknown users. (Fjermestad and Romano, 2003).

2.2. CRM IMPLEMENTATION RISKS

In a hope to help practitioners to adopt better implementation procedures, Corner and Hinton build their idea by examining eight sets of CRM specific implementation risks asserted by Hewson and McAlpine (1999), differing them from other IS implementations.

Hewson and McAlpine (1999) present 25 risks grouped in eight sets that cover quite wide range of aspects of IS implementation including users, processes, speed of change, politics, need for mobility and need for change, funding and reliance on methodology.

The case study that Corner and Hinton (2002) used to examine the theoretical risks is based on a software developer company that adopted and used CRM. The paper however concludes that most of the risks mentioned by Hewson and McAlpine were not viable and that other areas need to be examined that can undermine the CRM implementation process as well as, need to discover how various risk categories may impact each other. (Corner, Hinton 2002)

The paper also provides with quite valuable insight into technological, economic and organizational risks to be considered while implementing a CRM system, however its controversial conclusion leaves little hope for usage by practitioners as most of the risks

appeared to be not viable and specific for only CRM systems and risk categories listed are claimed to be inexhaustible.

2.3. BUSINESS BEFORE TECHNOLOGY

Quite simple approach is presented by Rigby (2004), who emphasizes various aspects of CRM implementation through offering the management of CRM adopting companies to answer four basic questions:

1. Is it strategic? Claiming that only the processes that are key to ensure the competitiveness of an organization need to be addressed through CRM implementation.
2. Where does it hurt? Offering to look closer at customer relationship cycle and choose from many phases, the ones that mostly harm the entire cycle.
3. Do we need a perfect data? Arguing that only areas that require highly perfect data should be considered first of all, as perfect data generation and dissemination is an expensive process.
4. Were do we go from here? Bringing practitioners attention to how the data generated by the CRM can be consequently used to extend the capacity and "power" of technology to improve other business areas and processes.

By suggesting to put business thinking before technological issues and based on the notion of customer relationship cycle Rigby (2004) provides a good material for thought to CRM adopters.

Customer Profitability

This "business before technology" (Rigby, 2004) approach is also explicit in Bull's (2003) discussion of "CRM Implementation Strategic Issues", where the author clearly distinguishes between "transaction customers" and "relationship customers" and calls the CRM to be an important tool for identification of "right" customer groups, based on their profitability. Bull's (2004) paper also uses a case study to demonstrate how miscommunication among management, IT and marketing staff, lack of engagement and empowerment of certain employees, led to

failure in addressing issues related to targeting the customer as the most important problem the new CRM was intended to solve.

Customer Lifetime Value

Business composite of CRM implementation proved to be useful also in papers, where the authors came up with a model of classifying customers based on their value and loyalty. For example Gurau, Ranchhold and Hackney, (2003) argue that technology can be used to define detailed customer profile based on their value and loyalty. However, proper advantage needs to be taken of the data insight that may require significant changes in organizational processes. The Gurau's (2003) paper uses Conway and Fitzpatrick (1999) relationship equity matrix presented in Figure 1, to categorize the customer groups based on their value and loyalty and to demonstrate where the technology can be useful to transform customers from one group to another to increase the profitability of the business and decrease costs where possible.

Thus, Gurau, Ranchhold and Hackney (2003), being more concerned with strategic planning and customer-centric approach that organizations need to follow for success in CRM implementation, ground most of their arguments for evaluating CRM efficiency from economic perspective. According to them effective CRM should give precise understanding of customer cost and revenue generation and one of the overarching aims of technology enabled CRM should be customer segmentation based on their lifetime value. (Gurau, Ranchhold and Hackney, 2003)

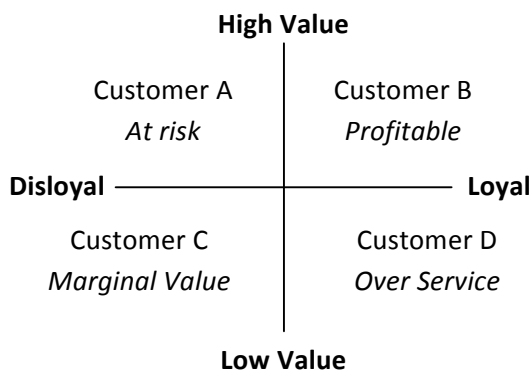


FIGURE 1. Relationship equity matrix
Conway and Fitzpatrick (1999)

Relational Economic Benefits

Relational benefits to services industries through effective relationship management suggested by Panda (2003) span from predictable sales and hence, profits, to generation of new business through sharing positive opinions and recommendations. On the other hand, customers should also feel benefits from entering a relationship with a company. In addition to security and comfort the customers would also seek economic benefits expressed in special discounts, rewarding for their loyalty, as well as time savings, and special treatment by company front line staff. And these customer expectations that are very difficult to manage, should be properly studied and reflected in company's approach towards service delivery and product quality. Panda (2002) suggests that many organizations fail to do so only because of technology involvement the CRM implementation is perceived mainly as a technological exercise rather than a strategic goal. (Panda, 2002)

2.4. ORGANIZATION AND PEOPLE AROUND CRM

An interesting organizational and social perspective of CRM systems implementation is discussed by Gefen (2002) where he attempts to extend finding of his previous research of Enterprise Resource Planning, to CRM systems implementation. As with ERP, here the author again examines the CRM system adoption against perceived responsiveness, cooperative intentions and configuration correctness. (Gefen, 2002)

By grounding his arguments on the Social Exchange Theory, Gefen (2002) describes the implementation process as an exchange of intangible values. Because there are no specific rules and regulations, against which the success of the CRM implementation can be assessed, as in case with economic exchange, social exchange heavily relies on cooperation and perception of responsiveness of the CRM implementing team. In other words, the users are more likely to willingly adopt and appreciate the value of a system if the process of development of CRM application was a harmonic cooperation and the software developer demonstrated increased responsiveness both in term of configuring the software and helping the users to overcome general problems and bugs during system introduction. (Gefen, 2002)

The practical implications discussed by Gefen (2002) contain mainly controlling elements that managers of software companies may use to increase acceptance and adoption of the CRM by users. (Gefen, 2002).

Usability and Resistance

Another set of issues in organizational dimension are related to resistance and usability of the systems presented by Fjermestad and Romano (2003). The authors revisit three basic theories of resistance, introduced by Markus (1983), to apply them to CRM systems. These theories are People determined theory, System determined theory and Interaction theory. While people determined theory is putting forward people's general resistance to change, systems resistance theory mainly develops on the idea of the features of the system or certain application. The third, Interaction theory tries to balance the previous two technological and human polarities of resistance by acknowledging the possibility of both the social context and design features to be the reason for resistance. (Fjermestad and Romano, 2003).

Usability issues of the eCRM system implementation suggested by Fjermestad and Romano (2003), are based on Nielsen's (1992) usability engineering life cycle that discusses various ways and issues the designers and system implementation managers should consider during pre-design, design and post-design stages. User involvement and their assumption of the role of stakeholder, prototyping, pilot project implementation and investigation of needs and what outcome is desired are few among many tools and ideas the CRM implementers should make use of throughout introduction of the system and considering increased user diversity of CRM systems.

After analyzing 13 case studies based on the resistance/usability and three design stages framework Fjermestad and Romano (2003) conclude that resistance and usability of e-CRM system should be always taken together throughout the pre-design, design and post-design stages of system implementation.

2.5. HOW CRM TECHNOLOGY WORKS?

To better answer the question “How CRM works?” one should study the implementation issues from the technological perspective. US and Taiwan IS academicians, Rygielski, Wang and Yen (2002), claim that development of relationship marketing in industries with extremely large number of customers and huge amount of data related to them was made possible only through advancement in technology of data warehousing, mining and campaign management. Rygielski, Wang and Yen (2002), introduce two techniques of data mining: CHAID-chi-square automated interaction detection and neural networks. (Rygielski, Wang and Yen, 2002)

By defining data mining as a sophisticated capability to search data, and tracing through evolutionary stages of “Data Collection”, “Data Access” and “Data Navigation” – the authors arrive at a state where “Finally, on-line analytic tools provided real-time feedback and information exchange with collaborating business units” as a current evolutionary phase of “Data Mining” (Rygielski, Wang and Yen, 2002, p. 485).

However the most useful insight that article provides from practitioners perspective, would be how three general categories of data mining activities of 1) discovery, 2) predictive modeling and 3) forensic analysis process can be used to solve various problems in retail, banking, telecommunications and other industries. Applications such as sales forecasting, database marketing, fraud detection and customer loyalty are described with overall concluding advice to practitioners to pay more attention to the technology of data mining while choosing an appropriate software from many CRM applications.

2.6. INDUSTRY SPECIFIC DISCUSSION OF CRM IMPLEMENTATION ISSUES

CRM implementation issues are widely discussed in sector specific literature, such as CRM in financial and telecommunications, retail and IT industries. These discussions however provide also general, non-industry specific frameworks that can be used across various sectors.

CRM in Services Industries

Efficient CRM systems are more important and can produce more tangible benefits in service industries, such as telecommunications, banking and insurance. Panda (2003) in a discussion of CRM in financial services brings three main reasons why the CRM is critical in service industries in general. First, services such as banking and insurance have more often membership nature, which implies a long term relationship. Second, even without membership, customers feel secure when establishing relationship. Third, it is more likely to establish relationship with service provider, be it a person or organization, than a product manufacturer.

Financial Services CRM and Adoption Framework

The most advanced user of CRM in UK, according to Ryals and Payne (2001), is financial sector and a lot can be learned by other sectors from CRM implementation experience in financial companies (Ryals and Payne, 2001). The authors try to use financial sector experience to theorize approaches of CRM implementation and present a framework to its adoption.

Before doing so, an attempt is made to describe the essential technological notions of information enabled CRM systems including: data warehouse, data marts, data mining and tools, such as clustering techniques, conjoint analysis, regression analysis and neural networks. These techniques are best presented in relation to marketing objectives that they need to serve.

Segmentation of customers based on their behavior or finding what patterns the relationships between customers follow, helps the companies to better profile the customer and model their needs. Mining tools provide the company with “intelligence” as opposed to a “memory”, which Ryals and Payne (2001) consider to be the data warehousing only. (Ryals and Payne, 2001, p 9).

The framework of CRM adoption that Ryals and Payne (2001) propose is built around the philosophy of Relationship Marketing, which the authors argue should be recognized by company leaders along with the role that IT can play in achieving customer oriented organizational thinking. Once leadership agrees that relationship marketing is the right way to go forward, other elements of the framework, covering economic measurability (Data Utilization for Customer Management), organizational flexibility (Appropriate Organizational Structure) and technological empowerment (Leveraging of Data Warehouse) are presented to demonstrate the

comprehensiveness and complexity of "information-enabled" CRM systems. (Ryals and Payne, 2001)

Software Development - Organizational Transformation Change

CRM systems are very popular in knowledge intensive industries, such as software development. Many practitioners and academics recognize the documentation of knowledge and its accessibility for various levels of organization and through different communication channels with customers, to be one of the biggest values of any CRM system. It is very interesting to see how the companies' structures and values are reshaped by the shared knowledge and its wide accessibility. An organizational transformation enabled by a CRM system is discussed by Orlikowski (1996). Her study of a software company that introduced an Incident Tracking Support System is a valuable piece to refer to while implementing a CRM in IT business. The five metamorphosis of organizational change associated with the introduction of new electronic system to capture, document and reuse the knowledge of incidents and their responses can broaden our understanding of how technology can impact people and business processes and more importantly what people can do and what values can be set to get the most of technology.

The author suggests three types of outcomes that can be expected from the new technology: Deliberate and Emerging changes in both managers and specialist practices and an Unanticipated outcome. Orlikowski (2001) underlines many areas of changes such as "nature and texture of work; patterns of interaction; distribution of work; evaluation of performance; forms of accountability; nature of knowledge and mechanisms of coordination" (Orlikowski, 2001, p 89). The value that practitioners can get from this example is getting prepared to any type of change, not only on the front line, where CRM considered to be operating most intensively, but also in back office business processes.

3. Conclusion

CRM is recognized to be relatively new approach in managing sales and marketing activities of an organization. One of the reasons of its emergence is businesses' understanding of benefits of building efficient relationships with customers to increase profitability and stability.

Although the subject of CRM implementation may seem quite specific and narrow the approaches various authors followed are quite different and diverse. However, most of the discussions reveal commonalities such as, discussion of certain theory based on empirical study and focusing on one of the aspects of system implementation while appreciating equal importance of other perspectives as well.

A broader question of how these articles address practical needs and answer commonly raised questions of CRM implementers in field was also discussed but still leaves place for broader and more in-depth research. Further research might also be directed at finding out which perspective of CRM implementation is of greater concern to a certain party involved in implementation, be it software company, front-line users, strategic management or project manager.

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