Towards a Definition of a CRM System Life-cycle

Luis H. Bibiano, Information Systems and Software Engineering Research Group, UPC - Technical University of Catalonia. Barcelona, Spain. lbibiano@lsi.upc.edu

Joan A. Pastor, Information Systems and Software Engineering Research Group, UPC - Technical University of Catalonia. Barcelona, Spain. pastor@lsi.upc.edu

Abstract

In recent years, the interest on research in Customer Relationship Management (CRM) systems has grown notoriously. Many authors have made individual proposals of interesting topics to be researched around CRM systems, but no overarching research agenda has yet been proposed. Based upon a recent research literature review that we have undertaken, which includes several real case studies conducted in order to learn from CRM experience within specific companies and industries, we propose and detail what appears to be a natural CRM Systems Life-cycle. Although a more focussed cycle has been mentioned for CRM systems implementations, we propose and define in detail a CRM Systems Life-cycle which covers other phases preceding and following implementation. We believe that such a well-defined cycle may help in future proposals of research agendas around CRM systems, as well as in the contextualization of more specific research themes.

Keywords: CRM, information systems, life-cycle.

1 INTRODUCTION

Customer Relationship Management (CRM) systems are a sort of information system technology which is part of the more general category of Enterprise Systems, that also includes ERP and SCM systems. CRM systems have gained prominence among academics and business sponsors in the recent years, with many dedicated studies and analyses with the purpose of understanding better this technical domain (Bose, 2002; Bull, 2003; Zablah et al., 2004.). Very briefly, a CRM system can be viewed as an information system aimed at enabling a particular organisation to realise a customer focus (Bull, 2003).

According to our own CRM research literature review, it appears that a proper life cycle for CRM systems is not yet defined, although there are some example processes proposed by software companies to address CRM development as an information system. Thus, our purpose in this paper is to propose a tentative definition of a life cycle, comprehensive enough to cover both CRM system implementation and other previous and latter phases. With this definition, we pretend to contribute to a better understanding of CRM systems as an expanding information system technology.

Based upon our CRM literature review, which includes several real case studies conducted in order to learn from CRM experience within specific companies and industries, we propose and detail what appears to be a natural CRM systems life-cycle. In particular, we have reviewed in detail all those case studies in order to achieve this goal. From the analysis of these cases and the rest of the literature, we agree with Paulissen et al. (2005) that a proposal of a CRM system life-cycle can be based upon a previous one presented for ERP systems by Esteves and Pastor (1999). However, while Paulissen et al. (2005) have slightly adapted to CRM the ERP life-cycle as a basic taxonomy for classifying CRM academic literature, in this paper we go further and present a richer explanation of such a CRM systems life-cycle.

The paper is organised as follows: in section two, we present an overview of CRM systems; in section three, we define the proposed life-cycle presenting each phase and the corresponding stages; in section four, we relate the reviewed case studies with the phases of our proposed life-cycle; and in section five we give concluding remarks and ideas for further work.

2 CRM OVERVIEW

CRM has its roots in Relationship Marketing, which is "an over attempt of exchange partners to build a long-term association, characterized by purposeful cooperation and mutual dependence on the development of social as well as structural bonds" (Pulde, 1999). Light (2003) stated that CRM evolved from business processes such as relationship marketing and the increased emphasis on improved customer retention through the effective management of customer relationships.

A CRM system can be viewed as an enterprise information system that includes all business processes in sales, marketing, and after-sale service that involve the customer. Levine (2000) points out that CRM systems use customer-related information or knowledge to deliver relevant products or services to the company's customers.

One of the most significant definitions of a CRM system has been given by Davenport et al. (2001), stating that CRM systems are "all the tools, technologies and procedures to manage, improve or facilitate sales, support and related interactions with customers, prospects, and business partners throughout the enterprise". In the same way, Parvatiyar & Sheth (2002) speak of CRM systems as "a comprehensive strategy and process of acquiring, retaining, and partnering with selective customers to create superior value for the company and the customer. It involves the integration of marketing, sales, customer service, and the supply-chain functions of the organization to achieve greater efficiencies and effectiveness in delivering customer value."

The research area of CRM systems is wide, and in the last years the academic interest has produced significant results in particular domains. In this way, some authors have explored and reviewed domains such as Electronic CRM (Pan and Lee, 2003); Romano Jr. and Fjermestad, 2002), CRM implementation risks (Corner & Hinton, 2002) and Relationship Marketing (Ryals and Knox, 2001). The results have contributed to a better understanding of the CRM systems field.

After reviewing the existing research literature in the area, we share with the above authors that CRM projects involve a complex combination of many business and technological factors. This situation calls for the formulation of adequate strategies for the adoption and implementation of CRM systems within a company (Bull, 2003). Developing a CRM system life-cycle can contribute to the better comprehension around this type of enterprise system.

3 CRM SYSTEM LIFE-CYCLE DEFINITION

After our extensive literature review, which includes several real case studies, we propose in this section a tentative CRM systems life-cycle. To achieve this goal, we have reviewed in detail the most significant articles and case studies. From their analysis, we agree with Paulissen et al. (2005) that a tentative CRM system life-cycle can be based upon a previous one presented for ERP systems by Esteves and Pastor (1999). As for this case, we have included not only the general phases of the life-cycle, but also detailed stages within each phase identifying the particularities that make the CRM systems different to other types of information systems. In the next paragraphs we describe our proposal.

3.1 Adoption phase

The adoption phase is the beginning of the whole project, since it is the one in which executives and other management sponsors, as well as project team managers, question the need of a new CRM system for the company. They analyze the critical business challenges and goals; defining how this decision can improve the company's activities and its organizational strategy. In this phase of the project the people involved define the CRM system requirements, estimate benefits and costs, and try to foresee the impact at the organizational level of such an adoption and the subsequent phases.

Within this phase, the following stages are included:

3.1.1 Analysis of the enterprise needs and requirements for adopting a CRM system: this implies to make a throughout analysis and justified statement of why the company needs a CRM system.

3.1.2 Analysis of the expected costs of, and benefits from, the CRM system implementation: the managers should make an analysis describing what they expect to obtain with the implementation of the system, such as customer profitability and retention, and at what costs.

3.1.3 Feasibility analysis of the CRM system implementation: the project team elaborates a report of how feasible it is to introduce a CRM system in the organization, including tentative impacts in work processes in marketing and sales departments, and human resources.

3.2 Acquisition phase

In this phase the evaluation and selection of the CRM product that best fits the requirements of the organization is carried out; aiming at the minimization of the need of customization. The project team may require the advice of a consulting company in order to evaluate and select the most suitable software for the CRM needs of the enterprise, analyzing factors such as price, training and maintenance services. Once the selection is made, a contractual agreement is defined between the enterprise and the product vendor. While often the same consulting company takes charge of the implementation project, this does not need to be the general case. Some enterprises prefer to separate the evaluation and selection of the implementation consulting company from that of the acquisition consulting company.

We include in this phase the following stages, where the execution order may be different from the presentation order, depending on the particular case:

3.2.1 Vendor and product evaluation: this stage consists on the process of evaluating, comparing and deciding which software tool product and vendor are the best for the company's CRM requirements of customer caption, retention and data analysis.

3.2.2 Implementation consultant evaluation: here it is decided which consulting company is best suited for implementing the selected CRM software.

3.2.3 Analysis of the company's current technology: this stage makes a report of the current underlying information systems and information technology infrastructure of the company in order to know if and how it can support the requirements of the system.

3.2.4 Detailed impact analysis of the introduction of a CRM system within the organization: the project team makes a report of the possible organizational and technical changes of the affected areas the company will experiment with the implementation.

3.3 Implementation phase

The implementation phase means the customization, parameterization and adaptation of the CRM software purchased according to the needs of the enterprise. This is usually done with the help of implementation consultants, and of documentation, technology support and user training from the vendor. Implementation must not be taken lightly since it is a very risky phase. Many companies have invested large sums in CRM projects, and many of them are not getting what they expected.

Within this phase the project team has to carry out the project as planned, once the executives have agreed to execute the introduction of a CRM system. This is a good opportunity for identifying and improving the CRM processes that may lead to business benefits and drive the organization's business success. While being a risky effort, a successful implementation will help the enterprise encompass a coherent business strategy in which people, processes and technology are organized around delivering value to their customers.

The implementation phase contains the next stages, their presentation order being different from possible execution order:

3.3.1 Implementation plan: this plan defines the project goals, develops a strategy for achieving them and explains how the application supports the strategy; it also addresses the vision, business goals and technology considerations for the implementation.

3.3.2 Organizational alignment: this stage carries out the activity of bringing together executives, IT professionals, managers and users to understand the business objectives of the CRM project and to support the implementation initiative.

3.3.3 Risk identification and management: the project team points out and evaluates the main risks for the implementation, and delineates contingency plans for those risks.

3.3.4 Implementation process management: refers to the overall coordination and follow of the implementation project.

3.4 Use and maintenance phase

This stage corresponds to the use of the product in a way that returns expected benefits and minimizes disruption. It is recommended to be aware of the issues related to functionality, usability and adequacy, and how they interact with the organizational and business processes.

After system implementation, it must be maintained in order to fix and prevent malfunctions, to optimize special functions and to improve general system procedures. Also, another important activity that may be carried out is measuring the progress, to see how well the implementation of the CRM system is supporting the business goals. Usage strategy should not only focus on technology, it should also rely on business strategy, people, process and components of change management.

The next stages were detected in this phase:

3.4.1 User training: the stage where the software vendor trains the employees of the enterprise in the profitable use their system. Users of the sales, marketing and customer service departments should be the first to be trained.

3.4.2 Implementation evaluation: managers analyse and determine the impact of the implementation once it has been completed.

3.4.3 User satisfaction and usage intention: determines the degree of acceptance or rejection from the user to the CRM system, and how well they are using it.

3.4.4 Return on investment: the project team presents a report analyzing the expected ROI of the CRM system to the executives and CEO.

3.5 Evolution phase

Once the CRM system is already in use, this phase corresponds to the integration of more capabilities into the CRM system, providing new benefits such as the interaction with other enterprise information systems like supply-chain management and business intelligence. Also the enterprise may decide to expand the system across its frontiers for external collaboration with other partners.

We can find the following stages in this phase:

3.5.1 System maintenance: the software vendor is in charge of providing the corresponding maintenance to the system so that it may function properly.

3.5.2 Integration with other enterprise systems, such as ERP, SCM or BI.

3.5.3 Migration: this means changing the version of the system to a most recent release, in order to receive the most current and best possible support by the vendors.

3.6 Retirement phase

The retirement phase corresponds to the stage when, with the appearance of new technologies or the inadequacy of the CRM system to reach business goals and needs, managers decide if they will substitute the CRM software with another information system technology approach eventually more adequate to the organizational needs.

Within this phase we identified the following extreme situation, which unfortunately is not exceptional:

3.6.1 Implementation failure: if the CRM system cannot help the company to reach its CRM goals, the managers should decide to retire it and go back to the previous information system, or to start out another implementation project, eventually with other vendor or product or consultants. Obviously, no second trial should be addressed without a troughout shared analysis of the reasons behind the failure of the first CRM project.

4 CASE STUDIES AND THE CRM SYSTEMS LIFE-CYCLE

For a better comprehension of the previous section we show in the next table the correspondence between the published case studies reviewed and the stages of the proposed life-cycle. With this we can identify which life-cycle stages are mentioned in these articles.

Phases	Stages	Bose (2002)	Kotorov (2003)	Corner &Hinton (2002)	Lindgreen. (2004)	Parvatiyar & Sheth (2002)	Hart et al.(2004)	Bull (2003)
Adoption	3.1.1		✓	✓	✓	✓	✓	✓
	3.1.2	✓			✓		✓	✓
	3.1.3		✓		✓	✓		✓
Acquisiton	3.2.1	✓	✓			✓	✓	✓
	3.2.2			✓	✓		✓	✓
	3.2.3			✓				✓
	3.2.4	✓	✓		✓		✓	
Implementation	3.3.1	✓		✓	✓	✓	✓	✓
	3.3.2	✓	✓	✓	✓	✓	✓	✓
	3.3.3	✓		✓	✓	✓	✓	
	3.3.4			✓	✓		✓	✓
Use and Maintenance	3.4.1				✓	✓	✓	✓
	3.4.2	✓	✓	✓	✓	✓	✓	✓
	3.4.3	✓			✓			✓
	3.4.4	✓		✓			✓	✓
Evolution	3.5.1			✓		✓	✓	
	3.5.2	✓						✓
	3.5.3	✓					✓	
Retirement	3.6.1	✓				✓	✓	✓

Table 1. Reviewed articles and life-cycle stages included within.

We can appreciate that the initial phases of the CRM project have been widely addressed in most of the case studies, while some of the cases point to the importance of the use and maintenance of the CRM system. As we can see, the implementation phase has taken the most attention in all studies, since this is the most risky phase in the whole life-cycle. In the same way, the relevance of CRM systems integration with other Enterprise Systems is highlighted in most cases. The failed projects described in the results of the studies confirm the failure rate of CRM implementation given by professional research groups (Forrester, Gartner).

5 CONCLUDING REMARKS

With the elaboration of our proposal for a CRM systems life-cycle, we may say that, although CRM systems are a particular case of Enterprise Systems, and thus with similarities with ERP and SCM systems, they bear special issues in their deployment, since there are inherent factors to the CRM domain within the implied process. The domain extends to other areas, such as marketing and strategic decision making as the concept is not limited to a simple software solution or implementation, given that the primary goal of CRM is to build solid and long-term relationships with the company's customers supported by an adequate information system.

This work was made by means of analysing the existing literature of CRM, and extracting the most relevant and commented topics within the area, with a particular emphasis on the analysis of published case studies. Since this is an initial proposal based on published experiences and other papers, we plan to elaborate a deeper analysis of the stages presented here by defining and detailing them in a broader way, in order to contribute to a final and complete definition of the CRM system life-cycle.

Once the definition is completed, we hope that the life cycle can help to comprehend in a better way how to manage and control a CRM project, since it can also be considered as a guide for people with no prior knowledge about the area. Another possibility is to compare the life cycle proposal with a real-life CRM development project in order to gather more data to refine or correct the sub stages defined in previous sections.

In the same way, this life-cycle proposal may help to identify potential risk in the CRM deployment process and to better manage the CRM project, with the goal to reduce the implementation failure rate and to help make CRM systems a reference tool in the enterprise information technology world.

Finally, with the development of this tentative CRM life-cycle it may be possible to, in future research, identify more specific research topics to expand the knowledge of this type of enterprise information system.

Acknowledgements

We thank the reviewers for their useful comments and ideas. This work has been partially supported by the Spanish research project TIN2004-07461-C02-02; we also thank the CONACYT (México) for the Ph.D. scholarship awarded to Luis H. Bibiano.

References

- Beckett-Camaratta, E. J., Camarata, M. R., Barker, R. T. 2000. 'Integrating Internal and External Customer Relationships through Relationship Management'. *Journal of Business Research,* 41: 71-81.
- Bose, R. 2002. 'Customer Relationship Management: key components for IT success'. *Industrial Management & Data Systems*. 102(2): 89-97.
- Bull, C. 2003. 'Strategic issues in customer relationship management (CRM) implementation'. *Business Process Management Journal*, 9(5).
- Corner, I., Hinton, M. 2002. 'Customer relationship management systems: implementation risks and relationship dynamics'. *Qualitative Market Research: An International Journal*, 5(4): 239-251.
- Dyche, J. 'The CRM Handbook: A Business Guide to Customer Relationship Management'.
- Esteves, J. and Pastor, J. 1999. 'An ERP lifecycle-based research agenda'. *1° International Workshop on Enterprise Management Resource and Planning Systems EMRPS*, Venice, Italy: 359-371.
- Gefen, D., Ridings, C.M. 2002. 'Implementation team Responsiveness and user evaluation of Customer Relationship Management'. *Journal of Management Information Systems*, 19(1):47-69.
- Hart, S., Hogg, G., Banerjee, M. 2004. 'Does the level of experience have an effect on CRM programs?'. *Industrial Marketing Management*, 33:549 – 560.

- Kotorov, R. 2003. 'Customer relationship management: strategic lessons and future directions'. *Business Process Management Journal*, 9(5).
- Minocha, S., Dawson, L., Blandford, A., Millard, N. 2005. 'Providing value to customer in E-Commerce environments: the customer's perspective. *Contemporary Research in E-Marketing,* 2.
- Levine, S. 2000. 'The rise of CRM'. *America's Network*, 104(6):34.
- Light, B. 2003. 'CRM Packaged software: a study of organisational experiences'. *Business Process Management Journal*, 9(5).
- Lindgreen, A. 2004. 'The design, implementation and monitoring of a CRM programme: a case study'. *Marketing Intelligence and Planning*, 22(2): 160-186.
- Pan, S. L., Lee, J. 2003. 'Using E-CRM for a unified view of the customer.' *Communications of the ACM*, 46(4).
- Parvatiyar, A., Sheth, J.N. 2002. 'Customer Relationship Management: emerging practice, process and discipline'. *Journal of Economic and Social Research*, 3(2).
- Paulissen, K., Milis, K. 2005. 'Customer Relationship Management Research. Voids in the current literature'. *Proceedings of the 11th Americas Conference on Information Systems AMCIS.*
- Romano Jr, N.C., Fjermestad, J. 2003. 'Electronic Commerce Customer Relationship Management: A research agenda.' *Information Technology and Management,* 4, 233-258.
- Ryals, L. and Knox, S. 2001. 'Cross-Funcional Issues in the Implementation of Relationship Marketing through Customer Relationship Management.' *European Management Journal,* 19(5): 534-542.
- Zablah, A. R., Bellenger D. N., Johnston, W. J. 2004. 'An evaluation of divergent perspectives on customer relationship management: towards a common understanding of an emergent phenomenon'. *Industrial Marketing Management*, 33:475-489.