

Principles and Guidelines for Developing Implementation Methodology of Customer Relationship Management (CRM) Systems

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ABSTRACT

The implementation of CRM systems has become very necessary for organizations in order to effectively manage their relationships with the customers. Unfortunately, it has faced various failures in different industries. Besides, the existence of implementation methodologies or frameworks that guide the successful implementation of CRM systems are still lacking. In response to that, this paper aims to critically review the methodologies of the existing implementation of CRM system and to comprehensively suggest a set of principles and guidelines for the successful implementation plan of CRM systems. In accordance, this paper compares three most famous CRM implementation methodologies; CRM-iris methodology, CRM-six sigma methodology, and Jun- Wu methodology. As a result, a set of implementation principles and guidelines are suggested to be taken into consideration in the implementation of CRM systems. These principles and guidelines could be tested empirically in the future for the generalization purposes.

Keywords: CRM system, implementation, six sigma methodology, iris methodology, customer knowledge.

I INTRODUCTION

In today's business environment, customers have become one of the most important assets of an organization, similar with financial and knowledge. For any organization to be successful, it must take care and give a great attention to its customers. Organizations have to carry out their businesses on the basis of satisfying customers' needs and desires even if they are not clearly stated or requested by customers. In essence, the prediction of the unspoken needs of customers is very important for organizations. In regards to this, implementing Customer Relationship Management (CRM) is the paramount solution.

Unfortunately, there is a high failure rate in CRM initiatives (Rigby, Reichheld, & Scheffer, 2002; Ryals & Knox, 2001; Zablah, Bellenger, & Johnston, 2004). As an example, Raisinghani et al. (2005) found that the failure rate of CRM software installations in the industry is 60%. Later, in 2001 the failure rate of

CRM projects was estimated to be between 55% and 75% (Kotorov, 2003), while Gartner Group, (2003) found that 70% of CRM projects did not improve organizational performance (Zhang, Chen, & Fu, 2006). Further, Qingliang, Nongji, and Guangming, (2008) found out that 80% of CRM projects failed to generate a positive return. Similarly, according to Peppers & Rogers Group, 70% of CRM initiatives failed, while Cap Gemini Ernst & Young argues that more than 50% of all CRM projects do not produce results. In fact, these CRM programs not only failed to achieve economic benefits, but also have destroyed the relationship between an organization and its customers (Lindgreen, Palmer, Vanhamme, & Wouters, 2006; Frow, Payne, Wilkinson, & Young, 2011). Indeed, Finnegan and Currie (2010) assured for the fact of the low success rate of CRM implementation.

Despite the huge investment in CRM, organizations are still unable to reap the expected benefits from these investments (Corner & Rogers, 2005). Meanwhile, Karakostas, Kardaras, and Papanthassiou (2005) criticize the effectiveness of CRM and its contribution in achieving competitive advantage. On the other hand, the tremendous benefits associated with the successful CRM initiatives encourage and stimulate the continuation of the adoption of CRM and motivate the researchers to study closer into the reasons of the failures and further tackle the issues (Paulissen, Milis, Brengman, Fjermestad, & Romano, 2007). Regardless of the high failure rate of CRM, there are substantial opportunities of the successful CRM, in which it will help an organization identify and adapt to the needs of their customers, reduce transaction costs, and enable the development of closer relationships with loyal customers (Sharma & Iyer, 2007).

The adequate implementation and integration is necessary for the successful CRM implementation (Meyer, 2005). However, Paulissen et al. (2007) indicate the lack of attention given to the implementation phase of CRM in marketing and information system (IS) literatures. In addition, an integrated conceptual framework than can guide the organizations towards the successful implementation of CRM has not been developed yet (Garrido-Moreno & Padilla-Melendes, 2011). Therefore, this paper aims to come out with a set of principles or guidelines to be

included in any implementation methodology of CRM systems in order to increase the success while reducing the failures of CRM initiatives. The next section of the paper explains the different existing implementation methodologies of CRM systems and compares between these methodologies. The third section presents the principles and the guidelines suggested for the implementation plan of CRM systems and the last section concludes the paper.

II CRM IMPLEMENTATION METHODOLOGIES

Defining and understating CRM is very important for implementing it successfully. One of the most recent and holistic definitions has been outlined by Rababah, Haslina, and Huda, (2011) who say "*CRM is the building of a customer-oriented culture by which a strategy is created for acquiring, enhancing the profitability of, and retaining customers, that is enabled by an IT application; for achieving mutual benefits for both the organization and the customers*". Previously, Laudon and Laudon (2004) define the implementation as "*all organizational activities working toward the adoption, management, and routinization of an innovation*". In short, CRM systems are implemented to bring in benefits to an organization. Hence, Xu and Walton (2005) address that the reasons for CRM implementation include improving customer satisfaction level, retaining the existing customers, improving customer lifetime values, providing better strategic information to sales, marketing, finance, etc., attracting new customers, and saving cost. In addition, the implementation of CRM programs will lead to achieving a competitive advantage and profitability for an organization (Roberts, Liu, & Hazard, 2005). Among the most famous methodologies for implementing CRM systems are CRM-Iris Methodology, CRM-Six Sigma Methodology, and Jun-Wu Methodology. Selecting these methodologies refers to their comprehensive approaches for the implementation of the CRM system.

A. CRM-Iris Methodology

Chalmeta (2006) indicates that solving the integration problem in CRM implementation need for an overall integrated methodology. Therefore, CRM-Iris methodology was developed. It is a formal methodology that directs the process of developing and implementing a CRM system, taking into consideration various aspects of the CRM system including defining customer strategy, re-engineering customer-oriented business process, human resources management, the computer system, management of change, and continues improvement (Chalmeta, 2006).

Chalmeta(2006)also explains that CRM-Iris methodology consists of nine activities including project management and prerequisites, definition of the organization framework, definition of customer strategy, designing a customer relationship assessment system, process map, human resources organization and management, construction of the information system, implementation, and monitoring.

At the first activity (project management and prerequisites), the techniques and methodology used in engineering projects must be applied on the CRM project management to help at the following activities. Therefore, before beginning the project, there is a need to raise the management awareness, define the vision and the objectives of the project, create committee, appoint a coordinator officially, and develop and get the approval on the project plan and internal dissemination. On the other hand, during the execution of the project, it is necessary to monitor the execution of the project to control time slippage, prevent resistance to change, motivate staff, and measure the degree of participation and asses the results.

The second activity is defining the organizational framework through the analysis of the organization's vision, mission, strategies, objectives, and culture including policies and values. Next, the organization needs to create and define a customer strategy through, identifying organization's customers, then analyzing the profitability of customers and defining customers' objectives. After that, the construction of measurement system for assessing customer relations including the customer satisfaction and customer care. Afterwards, the developing of process map which involves redesigning the business processes to become customer-oriented by analyzing the current situation (AS-IS state) and designing the future status (TO-BE). Then, the human resources need to know about the CRM project, its importance, and trained on its using. In addition, accompany with changing the organization's culture, the organization's job manual and the organizational diagram need to be restructured. Another issue is choosing the right computer system that handles the acquisition of customer information and converting it into business knowledge. Additionally, the CRM computer system must cover four main areas; transactional (operational), analytical, strategic, and the e-CRM. Next, the implementation stage, that is how to move from the old (AS-IS) system to the new (TO-BE) system by making activities prioritization then implementing the short term projects and managing the change properly that will inevitably accompany the conversion. Finally, the monitoring stage by which, a control panel-type tool is initiated to monitor each activity by using different types of indicators of success. In addition, to assure that the desired change

is implemented effectively, a quality assurance method must be established.

In conclusion, the integration of the strategic and technological aspects of CRM properly is one of the most appealing factors for the using of CRM-Iris methodology. In the contrary, CRM-Iris methodology has many weaknesses like limited consideration of the critical success factors (CSFs), users not involved in the design of the CRM system, no indication nor measurement for the user acceptance, and limited validation for the methodology to small and medium-sized companies.

B. CRM-Six Sigma Methodology

Zhedan, Hyuncheol, Jongmoon, and Hojin(2007) investigated and offered the most important CSF for the CRM implementation including measurements, management involvement, training of CRM concepts, time and budget management, and minimizing customization. Next, they developed a strategy to integrate the Six Sigma Define, Measure, Analyze, Improve, and Control(DMAIC) methodology with the CRM implementation process taking into consideration the revealed CSF. They define Six Sigma as a business improvement methodology aiming for increasing customer satisfaction, and improving processes, analyzing rigidity, and executing timely. The DMAIC indicates the main phases of the Six Sigma.

Define phase

Define phase consists of five steps. Zhedan et al. (2007) illustrate how these steps are adopted for the CRM implementation. The first one is to align the CRM goals with organization's business goals. The second step, using a process map for the processes the CRM project will improve and the current process (AS-IS) will be documented. In the third step, based on the CRM project's goals the process metrics will be defined. The fourth step builds an effective CRM implementation team that needs to be established based on knowledge, skills, abilities, and personal attributes (KSAP). Finally, the project charter is developed by the project team, which is written document containing information about the CRM project goals, budget, the start and end time, and the team members. In addition, the development of the CRM project schedule which includes the tasks, resources, times and milestones for each step of the CRM implementation.

Measure phase

The measure phase includes the steps from six to nine. Zhedan et al. (2007) articulate how these steps are adopted for CRM implementation. The sixth step is determining the data to be measured based on the CRM project goals, current processes, and process metrics. The seventh step collects and records data

through various techniques including surveys, and documents review. The eighth step is data consolidation to ensure its consistency, completeness, and validity. In the ninth step, the baseline of the current process based on the collected information is determined.

Analyze phase

Zhedan et al. (2007) express how the three steps of analyze phase are adopted for CRM implementation. The phase starts with step ten which is finding out and analyzing the main problems of the current process. Step eleven identifies the future process then refining the CRM project goals with it. Step twelve selects the CRM product taking into consideration its functionality to assure its capability to achieve the future process and the project goals.

Improve phase

Zhedan et al. (2007) point out how the steps in the improve phase are adopted for the CRM implementation. In step thirteen, the CRM products are customized, but over customization must be avoided which may cause budget overruns or missed deadlines in the CRM implementations. Step fourteen installs the CRM system and trains the end users on the CRM concepts and how to use the CRM system. Finally step fifteen manages the change that will inevitably accompany the implementation of the CRM system.

Control phase

Control phase consists of three steps. Zhedan et al. (2007) explain how these steps are adopted for the CRM implementation. Step sixteen measures and maintains the TO-BE process to find out if the project goals are archived or not. Step seventeen disseminates lessons learned from the implementation, which are necessary for the continuous process improvement. Finally, step eighteen identifies any new goals that may arise over time whether to solve any future dissatisfaction or to exploit any future opportunities.

In conclusion, Six-Sigma methodology has strong points that encourage the CRM implementation. Among the points, the explanation of the CSF for CRM implementation and mapping out each one to each main phase of CRM implementation are significant. On the other hand, it has many weaknesses such as the limited consideration of the CSF, the limited validation for the methodology, the users are not involved in the design of the CRM system, and there is no indication or measurement for the user acceptance of the methodology.

C. Jun-Wu Methodology

Jun-Wu (2008) developed a framework for CRM implementation and indicated to the need for taking a holistic approach for finding the major factors affecting CRM implementation. Meanwhile, Becker,

Greve, and Albers (2009) emphasized for the need for such a holistic approach for the evaluation of CRM implementation. According to this methodology, CRM implementation is divided into six iterative processes including exploring and analyzing, visioning, building business case, planning and designing solution, implementing and integrating, and realizing value (Table 1). In addition, people, process, and technology are proposed as the key perspectives of CRM.

Table 1. Description of CRM Implementation Process

Implementation phase	Implementation details
Explore and Analyze	Organization takes a CRM audit including Strategic visioning, understand market best practices, Developing a process from a customer-centric perspective, identify areas lacking, moving toward major process change, and thus CRM implementation.
Vision	Through CRM strategy assessment, organization should: (1) Segment and develop 'touch-point' strategies to support CRM. (2) Implement and execute the processes, performance measures, IT infrastructure and marketing programs to support CRM capabilities. (3) Manage the delivery of a significant transformation project, including interdependent changes in people, process, systems and technology.
Build business case	Organization sets the enterprise wide CRM roadmap, system construction in 3 phases based on mass planning, phasing-out implementation principle. Phase 1, Implementing standard CRM solutions. Phase 2, System deploying and optimizing. Phase 3, System integration with other applications.
Plan and design solution	Organization chooses the CRM system from CRM solution vendors and develops a detail plan to implement the system, aiming at covering the marketing, sales and service functional area.
Implement and Integrate	Organization implements the system based on CRM solution vendor's implementation methodology. Organization's IT professionals fulfill most of the analysis, development, testing, and integration between sales force, customer care, customer service, telemarketing, web, field service, and transaction system processes and technology.
Realize value	Investigating the CRM effect on the productivity functionality of the organization.

One important aspect of Jun-Wu methodology is the identifying of the CSF associated with the proposed key perspectives; people, processes, and technology. Jun-Wu (2008) indicates that the CSF includes technical, business process, and people factors. In detail, technical factors include implementing relevant technology that supports the organization's processes and able to grow in the future, and the

intelligent use of technology. The business process factors include reviewing the AS-IS processes, re-designing the core business processes, the commitment to processes, the change management, the management support, and the organizational structure. Meanwhile, people factors include the existence of a vision, employee understanding of the project and its implications, the assessment of the organization's readiness, and the development of a detailed plan for training the end users.

In conclusion, the strong points of Jun Wu-methodology is laid on the using of a holistic approach for finding the major factors affecting CRM implementation. On the other hand, among the weak points include the limited consideration of CSF, the limited validation for the methodology to a leading high-tech company in China, the users not involved in the design of the CRM system, the lack of clear understanding of CRM, the lack of measurement systems, no effective team building for CRM implementation, and no indication nor measurement for the user acceptance.

D. Comparisons among the Three Methodologies

Table 2 summarizes the comparisons among the three methodologies regarding CSF, strengths, weaknesses, and the industry of applying the methodology. In addition, the comparison among the three methodologies of CRM implementations has brought the following:

The convergence points

1. At the three methodologies process metrics or measures are developed based on the CRM project goals.
2. For both Iris-methodology and Six-Sigma methodology, an analysis of the current situation (AS-IS) and, designing and measuring the future status (TO-BE) are included.
3. The three methodologies consider the management of the change that will inevitably accompany the CRM adoption.
4. Iris-methodology and Jun-Wu methodology concentrate on building customer-oriented business processes.
5. The three methodologies indicate for the need of choosing the appropriate CRM system.
6. The three methodologies emphasize on the need for user training to increase the likelihood of the successful implementation.
7. The three methodologies include monitoring and measuring activities for the effectiveness of the CRM implementation.

The divergence points

1. Iris-methodology begins with the analysis of the organization's vision, mission, objectives, strategies, and culture. In contrast, Six-Sigma starts with defining the objectives of the CRM project and aligning it with the organization's objectives. Meanwhile, Jun-Wu opens with making a CRM audit.
2. Six-Sigma differs from Jun-Wu and Iris-methodology by building-up the CRM implementation team and the development of project charter which includes the CRM project goals, budget, timeframe, team members, and CRM project schedule.
3. Iris-methodology indicates to the need of an organization to create and define a customer strategy, in which organization's customers are identified, the profitability of customers is analyzed, and customers' objectives are defined. In contrast, Six-Sigma and Jun-Wu do not.
4. Iris-methodology constructs the measurement system for assessing customer relations including customer relations and customer care, in which the other two do not.
5. Jun-Wu indicates to the need for mass planning and phasing-out implementation principle, while Iris-methodology and Six-Sigma do not.
6. Six-Sigma emphasizes on the CRM system customization while Iris-methodology and Jun-Wu do not.
7. Iris-methodology contains a quality assurance method while Six-Sigma and Jun-Wu do not.
8. Six-Sigma methodology disseminates lesson learned from the CRM implementation for the continuous process improvement while Iris-methodology and Jun-Wu do not.
9. Jun-Wu takes into consideration the integration capabilities of the CRM system while Iris-methodology and Six-Sigma do not.

Based on the strength and weakness points in the existing methodologies, the next section includes the suggested principles and guidelines for developing successful implementation methodology of CRM systems.

Table2. Summary of the CRM System Implementation Methodologies

Methodology	Iris-Methodology	Six Sigma-Methodology	Jun-Wu Methodology
Criterion			
CSF	<ol style="list-style-type: none"> 1. Defining customer strategy. 2. Re-engineering customer-oriented business process. 3. Human resources management. 4. Selecting the computer system. 5. Management of change. 6. Continues improvement. 	<ol style="list-style-type: none"> 1. Measurements. 2. Management involvement. 3. Training of CRM concepts. 4. Time and budget management. 5. Minimizing customization. 	<ol style="list-style-type: none"> 1. Implementing relevant technology. 2. Re-designing the core business processes. 3. The change management. 4. The management support. 5. The existence of a vision. 6. Employee understanding of the project and its implications. 7. Organization's readiness assessment. 8. Training the end users.
Strengths	The integration of the strategic and technological aspects of CRM properly.	The explanation of the critical success factors and mapping each one to each main phase of CRM implementation.	Using a holistic approach for finding the major factors affecting CRM implementation
Weaknesses/ Limitations	<ol style="list-style-type: none"> 1. Limited consideration of CSFs. 2. Users not involved in the design of the CRM system. 	<ol style="list-style-type: none"> 1. Limited consideration of CSFs. 2. limited validation for the methodology. 3. Users not involved in the design of the CRM system. 	<ol style="list-style-type: none"> 1. Limited consideration of CSFs. 2. Limited validation for the methodology. 3. Users not involved in the design of the CRM system. 4. Lack of clear understanding of CRM. 5. Lack of measurement systems. 6. No effective team building.
Industry	Small and Medium-sized companies from various sectors.	Large human resource service company in China.	A leading high-tech company (computer manufacturer) in China.

III SUGGESTED PRINCIPLES AND GUIDELINES

Organizations need to implement the CRM systems innovations to become more competitive locally and

globally. The CRM systems enable organizations to manage the customer knowledge effectively. Managing customer knowledge enables the

organizations to serve customers better, to satisfy customers' needs, and to anticipate their future needs.

Based on the previous critical review of the existing implementation methodologies of CRM systems, this paper provides a set of principles and guidelines to be embedded in any implementation plan and methodology of CRM systems. Firstly, before implementing the CRM systems, the management of the organization has to give a great attention towards creating mutual understanding within the organizations regarding the main benefits of the CRM systems.

Secondly, the organization must have a clear plan for the end users' training on the CRM system: The importance of the training and education for the end users on the use of the CRM systems have been emphasized by many researchers (e.g. Zhedan et al., 2007; Caldeira, Pedron, Dhillon, & Jungwoo, 2008; Maleki & Anand, 2008) because the CRM systems are more sophisticated than other IS. The training programs could be initiated with the cooperation of the government or the vendors of the CRM systems in the form of seminars, workshops, presentations, or conferences. These programs will produce qualified personnel for the effective and successful implementation of CRM systems.

Besides, the CRM strategy must be embedded within the organization vision: The importance of this point has been emphasized by Jun-Wu (2008) and Langerak and Verhoef (2003). They argue that it is important because embedding the CRM principles and value within the philosophies and dreams of the organizations will facilitate the acceptance and usage of the CRM systems.

Also, the implementation of CRM system must be based on the technological readiness assessment of the organization: Many previous studies (e.g. Croteau & Li, 2003; Payne & Frow, 2006; King & Burgess, 2008) suggest for the need of the CRM readiness assessment before implementing the CRM systems. The assessment of the organizational technological readiness will provide indications for the organizational abilities and capabilities for the usage of new technologies. In addition, it will enable the organization to anticipate the volume of change and business process reengineering required in the organization.

Nevertheless, the end users must be involved in the design and development of the CRM system: Allowing the end users to participate in the development, design, and defining the requirements of the CRM system in terms of the matching with their needs and expectations will increase their acceptance of the system. In contrast, it will decrease their resistance to the systems as they will have the

feeling of doing what they want and choose to do. In fact, it has been emphasized by many researchers such as Maleki and Anand (2008), Payne and Frow (2006), and Wilson, Daniel, and McDonald, (2002).

On top of that, the implementation of the CRM system must be based on a phased rollout schedule: Dividing the implementation of the CRM systems into phases with specified outcomes within a schedule with clear mile stones will contribute in increasing the success rate of the CRM systems implementation.

On the other hand, the CRM system must be integrated well with the other organization IS: The integration of the CRM systems with the other information systems will help the organizations to create a single view or a single profile for each customer. It will enable the employees to get any piece of information about any customer wherever it resides. Hence, this will increase the accuracy and speed of their response to customers and enhance the decision making process in the organization.

Additionally, there must be a champion available all the time to support the CRM system implementation. The existence of a person who is able to lead people, to encourage people, to influence people and to support people during the implementation of the CRM systems is highly necessary to ensure the achievement of the objectives toward the successful implementation of the system.

Lastly, there must be measurement systems and metrics for measuring the CRM system effectiveness. The existence of criteria for the evaluation of the systems effectiveness is highly necessary to ensure the achievement of the predefined objectives and to carry out the continuous improvement and enhancement of the system to meet any future needs.

IV CONCLUSION

CRM systems provide many promises for organizations such as improving customer satisfaction and increasing organizations productivities and revenues. The successful implementation of CRM systems was very limited in different industries. This paper reviews three main implementation methodologies of CRM systems namely; iris, six-sigma, and Jun-Wu methodologies. It includes a comprehensive comparison among the three methodologies regarding the CSFs, strengths, weaknesses, and the industry of validation. In short, a set of principles and guidelines are suggested for the successful implementation of CRM systems. They are very fundamental for the development of any implementation methodology of the CRM systems. They should be included in the implementation plan or the implementation framework of the CRM system. In the future, they could be tested and validated empirically.

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