

Citizen Relationship Management Implementation in Local Government – Towards a Theoretical Research Framework

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Abstract — Many governments today have made significant investment on Citizen Relationship Management (CiRM) implementation. The employment of CiRM systems has increased the operational day-to-day and strategic long-term effectiveness of governments, particularly in relation to the intimacy of their relationship with the public. However, many of the initiatives have failed to deliver the benefits expected at the local government setting. As a consequence, it is now important to look from the literature in order to understand the process of implementation and if there are common determinants that may influence the success of CiRM implementation. Based on the reviewed of literature, this paper investigates the development of CiRM implementation studies that had significant effects upon the CiRM system implementation. A conceptual framework is proposed which contributes to the theoretical understanding of CiRM implementation process, and may inform practitioner success with new CiRM system implementation. The paper concludes with four crucial issues that need to be clarified before the proposed theoretical framework of the study can be further explored and developed: 1) the meaning of CiRM implementation process; 2) the determinants that may influence the process of CiRM implementation; 3) the appropriate approach to investigate CiRM implementation process; and 4) the perspective of CiRM implementation projects.

Keywords – Citizen Relationship Management (CiRM); implementation; implementation process; local government

1. INTRODUCTION

Many governments have implemented e-Government initiatives. For instance, the Australian government has coordinated all online services into a single electronic platform and delivery that have underpinned all other delivery means by 2010, while the Danish government offered easier access to public authorities by using main channels such as telephone, in person and Internet, to support one another and to encourage the public to use the least expensive channel [20]. These initiatives are not only implemented at the national level, but also at the state and local government levels [64, 13]. The initialization of these initiatives, which focused specifically on how governments interact and manage their relationship with their citizens, can be referred to as Citizen Relationship Management [64, 13, 12]. The potential of Citizen Relationship Management (CiRM) system is to create a more citizen-centric government.

The implementation of a CiRM system can bring technology, people and business processes together [59] with many types of applications that can be referred to as CiRM systems [13]. For instance, for the London Borough of Haringey in the UK, their call centre, using CiRM, has created a multi-channel system that allows the council's staff to maintain a seamless, uninterrupted dialogue with the public [32]. When a member of the public has an enquiry about a particular service, they can either visit the local service centre in person or communicate with the call centre by telephone, e-mail, fax or post. Besides Internet based systems, non-Internet based CiRM systems, such as mobile government, interactive voice response and public information kiosks have also been implemented by local governments in delivering public services [57, 13]. The employment of CiRM systems by local governments has increased the operational day-to-day and strategic long-term effectiveness of governments, particularly in relation to the intimacy of their relationship with the public [55]. Some initial studies in the field [44, 12] have indicated that CiRM implementation has delivered some impressive benefits.

Meanwhile, the UK government has set a target that, by 2005, all local governments must be able to deliver all government services online. However, by that year, King and Cotterill [57] reported that only about 60 percent of local governments have implemented CiRM, 35 percent are in the process of implementing the system while the rest have yet to start. King [58] argued that British local governments are unlikely to achieve the radical target envisaged by central government. As a result, successful of CiRM implementation has become a great challenge to the British local governments. The similar situation also occurred by the Malaysian local governments where their services has been subjected to various criticisms based upon the increasing number of complaints from the public regarding the poor services provided to the public [28, 47]. The criticisms can be seen through a number of negative newspaper articles on public delivery by local governments. In fact, Siddique [41] has argued that the implementation of e-government initiatives in Malaysia has not been able to deliver many of the benefits other countries offer elsewhere. The initiative can be time consuming and expensive for

local governments, can take many years to complete and can cost millions of pounds [42]. Hence, CiRM implementation in local government is still falling short of its true potential.

This paper is conceptual in nature and documents the first phase of a research project designed to theory building of CiRM implementation process in local government. The aim of this paper is to propose a framework of CiRM implementation process to guide local governments as they embark upon the implementation of CiRM systems. The paper is structured as follows: the following section presents the knowledge body of CiRM implementation research; the third section describes the proposed framework of CiRM implementation process. The final section concludes the study and provides some possible future research directions.

2. RESEARCH METHOD

The goal of this study requires a complete review of past CiRM implementation research relevant to practice. To identify papers which adequately represent the topic, the full-text of articles within ABI/INFORM, EBSCOHost, Elsevier and Emerald databases with CiRM implementation-related keywords for articles published between 2000 and 2010 were searched. The preliminary search resulted in 350 papers. Perusal of abstracts resulted in the elimination of 205 articles which did not directly pertain to CiRM implementation process. This resulted in a list of 145 papers related to CiRM system implementation. Following this, the study carefully examined each paper and categorized it into several themes as discussed in the following sections.

3. LITERATURE REVIEW

A. *The Present State of CiRM Implementation Research*

CiRM implementation research has only been studied within the past 10 years. The CiRM implementation phenomenon, which is capable of creating and establishing well-managed relationships with the public more effectively, began to grow in the early 2000s. As it is still within the early stage, the literature review on the area has focused on three issues – the adoption, the system's applications, and the benefits of the implementation. The adoption category issue has the highest amount of literature on CiRM implementation studies [12, 13, 33].

Most of these studies have been conducted by using exemplary practices in developed countries. Some gradually establish the public-centric approach by modeling the interactions or relationships between the government and the citizens. For instance, Michel [23] proposed four types of model of CiRM relationships in the French Government – e-Administration (government for the public), e-Government (government of the public), e-Governance (government by the public) and “the learning city” (government according to the public). Drawing on the success of a government agency in Singapore, Teo et al. [59] suggested an integrated strategy to CiRM relationships that binds the business, technology and public perspectives, called the holistic approach. Although the natures of the CiRM models discussed are slightly different, the researchers are agreed as to the significance of Information Systems (IS) utilization to enable a close relationship between their governments and the public for the delivery of high service quality. Therefore, CiRM can be treated as an IS enabled strategy with a focus on citizens; the CiRM system is an application that enables the strategy to be implemented.

The literature on the adoption of CiRM also briefly addresses the needs of integrating the CiRM system with back-office systems through channel led interaction. For instance, Larsen and Milakovich [8] recommended that all possible services that are needed by citizens should be provided in integrated solutions, such as websites, call-centers, or one-stop shops. In fact, governments cannot rely on only one channel; instead they must provide information to the public through multiple service channels [1, 12]. In another study, Reyes et al. [33] suggested focusing on the integration at the back-office first before moving to its front applications. Nevertheless, the integration is supposed to represent a successful combination of technologies that provide the basis for governments to engage intimately with their public [32].

Another development in CiRM implementation studies has focused on the system's application. For instance, Teo et al. [59] divided CiRM systems into three types– operational, collaborative and analytical. While the operational CiRM includes all applications that are aimed to accomplish work tasks in serving public delivery services (such as customer service system and static website), the collaborative CiRM system comprises applications that support the public through a single service path directly to the government agency (such as a call centre and integrated CiRM portal). The analytical CiRM contains an application that is capable of establishing information on public data, its behavior and value by using modeling and predicting methods (such as data warehouse and data mining tools). Nonetheless, it was found that the most common forms of CiRM reported in the literature can be seen through web-based government portals (which may encompass a combination of the three types of CiRM system). This includes CiRM systems with or without an integrated call centre [59, 2]. There are also non-Internet based CiRM solutions that were reported in the literature, such as public information kiosks [57, 13].

There are also many cited implementation studies on the issue of benefits from the CiRM deployment. CiRM supports governments to achieve numerous benefits in terms of:

- 1) Improving citizen orientation [44, 43, 13], e.g., public experience when contacting government can be increased through holistic approach
- 2) Providing information sharing [11, 12], e.g., increases the government and public's knowledge by providing access to reliable and detailed information
- 3) Reducing cost of service delivery [39, 59], e.g., a single view of CiRM system will reduce overhead costs as public are more interested in using self-service facilities
- 4) Improving customer service [11, 59, 43, 12], e.g., CiRM system will allow government agencies to better understand public needs, preferences and expectations
- 5) Improving operational efficiency [59, 43], e.g., the integrated multi-channels operation contribute greatly towards reducing the overall workload of customer service staff

In short, the CiRM implementation initiative is becoming increasingly important due to the public demand for improvement in the services offered by governments [58]. Reddick [12] argued that large local governments are more likely to implement CiRM systems because they are under greater pressure to find alternative ways of providing public service delivery at reduced cost. The CiRM implementation initiative is becoming increasingly important due to the public demand for improvement in the services offered by governments [1, 58].

B. Paradigms of IS Implementation Studies for CiRM Implementation Research

As CiRM has the capacity to collect data, store, process raw data into information, and disseminate that information to some interested parties [12], the technology itself can be considered IS in its own right [60]. As a result, the literature on IS implementation process has inevitably been referred to. There are two broad approaches that are commonly used in the literature for studying the phenomenon of system implementation – the factor approach and the process approach [25, 61]. Nonetheless, both approaches are dissimilar in three ways.

First, the factor approach tries to identify the factors or determinants that are potentially relevant to successful implementation while the process approach looks for a collective of events and activities that unfolds over time. In the factor approach, the research focuses upon a variety of users, organizational, and technology forces that are important to IS implementation success [50]. The researchers usually concentrate on a single determinant or a combination of determinants that are associated with the successfulness of the system outcomes. In contrast, process research focuses on the actual process over time of implementing a system [25]. The researchers are generally looking for a combination of sequential events and activities that are necessary for success [61].

Second, both approaches have a different view of the research design in their studies. Researchers who favor factor studies site the rigor of research designs and the fact that they generally collect data from a large number of users [25]. The data are then analyzed in order to access the relative importance of different factors contributing to successful implementation [20]. Statistical techniques like regression analysis and correlation make it possible to generalize the findings to other settings. In contrast, process research disputes that implementation occurs over time and that the researcher has to examine the process to understand all of its fine distinctions. Much of this empirical research has allowed a deeper understanding of the multiplicity of factors affecting implementation success [20].

Third, both approaches have also employed a different model of framework for setting the boundaries of the study. Factor researchers usually propose descriptive models of implementation, including variables other researchers have found to be related to implementation success [25]. In contrast, process researchers often employed a model of the consultation process from the organization change literature as a framework for their studies [25]. In many cases, the theory of change utilized by this approach is grounded on the early Lewin's model of change [45].

Although the factor approach is indeed useful, an in-depth understanding of the complexities associated with implementation demands is needed. This is because the factor approach was found to be less suitable for studying how the system is developed, such as in implementing a complex CiRM system. As a result, a decision was made to employ the "process approach" to describe the process of CiRM implementation in local governments. In doing this, all system developers' activities that have evolved during the system implementation have to be identified (in accordance with their stages). As the process approach shows how a multiplicity of determinants interacts with one another, the identified activities may be significant in demonstrating how the characteristics of the determinants influence the implementation success or failure. Once the activities have been discovered, they need to be arranged to follow the system development life cycle. Through the arrangement, the entire CiRM implementation process (i.e., from beginning and end of the process) can be developed by sequencing the activities to the narrative story of system developers in implementing a CiRM system.

To frame the structure of the implementation process, the study has chosen an appropriate IS implementation model. The following section will describe in detail some of the models and the rationale for the selection.

C. IS Implementation Models for CiRM Implementation Research

As implementing a new IS involves an organizational change process [46], a number of models have been reviewed to frame the CiRM implementation process. This includes the models of Lewin's [19], Kolb-Frohman's [35], Cooper and Zmud's [51], Kotter's [30], and Garvin and Roberto's [17]. These models recommend a series of stages for organizations to achieve the success of the change in the implementation process.

Using the change model proposed by Kolb and Frohman [18], Ginzberg [35] undertook a survey of the attitude of consultants in different organizations and projects. The model contains seven steps for the system implementation – *scouting, entry, diagnosis, planning, action, evaluation* and *termination*. The result from Ginzberg's work highlights that success or failure implementation is related to the quality of handling the process. This means that the *termination* stage is the critical stage for the success of the implementation and it also reflects what occurred in the earlier stages. Meanwhile, Cooper and Zmud [51] proposed a stage model of change that consists of six steps – *initiation, adoption, adaptation, acceptance, routinisation, and infusion*. The model helps the consultant to develop a better understanding for both technical and organizational aspects during the implementation process.

Kotter's [30] model, however, offers a specific sequence of steps that change agents (e.g., managers) should follow in an orderly manner for the successful implementation. He asserted that "skipping steps never produces a satisfying result". He further cautioned that mistakes are cumulative because a mistake in a previous stage can have a devastating impact and slow momentum on the success of the subsequent stages. The description of the Kotter's model lies under eight stages – *urgency, coalition, vision, communicate, empower, short-term wins, consolidation* and *institutionalize*. On the other hand, Garvin and Roberto [17] have offered another method for achieving implementation success in an organization that is through persuasion. They argued that many organizational attempts have failed because their employees are reluctant to change. In line with this, Garvin and Roberto's model asserts that for the success of implementation, a change leader must perform a series of deliberate but subtle steps to recast employees' existing views and create a new context for action. This must be actively managed during the few months of turnaround (when uncertainty is high). To do this, the change leader should follow a four-part communication strategy – *setting the stage, creating the frame, managing the mood, and reinforcing good habits*.

The theory of change utilized by these four models has its roots in the early work of Lewin's model of change [19]. Lewin's work is long established and considered to be highly effective [6, 7]. In fact, the findings of a recent study also reported that many recent models of change have followed the Lewin's model [45]. The model has to be a generic recipe for studying the organizational change process while its characterization has been reformulated and recast in many forms [45]. Generally, Lewin's model of change revolves around a basic sequence of three stages – *unfreezing, moving and refreezing*. *Unfreezing* can only take place when there is motivation to change, and such motivation could either be self-induced or influenced by peers [16]. In *moving*, the organization learns new behavior patterns and assimilates the ramifications of change. *Refreezing* refers to the process of making these patterns of behavior a permanent part of the system. It is believed that the *refreezing* stage can only begin when the new behaviors are adopted in the organization. These three steps remain in dynamic social balance changing from one stage to another. Zand and Sorensen [19] asserted that the high levels of activity conducive to these three stages are associated with greater implementation success, while high levels of activities antithetical to the requirements of the three stages are positively related to project failure.

As the first four implementation models (i.e., Kolb-Frohman, Cooper and Zmud, Kotter, and Garvin-Roberto's) are similar in concept to, and parallel with the Lewin's three-stage model [19], all their stages from the models can be mapped according to the broad stages of Lewin's. Table 1 shows the mapping stages as recommended by some previous studies [4, 14].

TABLE 1: Various frameworks of models of change

Stage	IS models of implementation process				
	Lewin [19]	Kolb-Frohman [35]	Cooper and Zmud [51]	Kotter [30]	Gavin and Roberto [17]
Stage 1	Unfreezing	Scouting Entry Diagnosis	Initiation	Urgency Coalition Vision Communication	Set stage Create frame
Stage 2	Moving	Planning Action Evaluation	Adoption Adaptation	Empower Wins Consolidation	Manage mood
Stage 3	Refreezing	Termination	Acceptance Routinisation Infusion	Institutionalisation	Good habits

The similarity between these five models is that an implementation process is used to plan an organizational change to achieve the desired outcome (i.e., success). In general, the two basic lessons underscored by these models are:

- 1) The change process typically occurs in multiple stages that take a considerable amount of time to unfold
- 2) Mistakes in any step can slow implementation, as well as negate hard-won progress

These two lessons are valuable for all those involved in implementing the technological change in an organization [4]. In reviewing the frameworks of the models of change dissimilarities were also found. Lewin's model offers a simpler framework to encapsulate the implementation process into three broad stages – *unfreezing*, *moving* and *refreezing*. It is this simplicity that has appealed to a large number of researchers in the recent investigation of IS phenomenon [22, 29]. For instance, [29] discussed the applicability of Lewin's model in a nursing system. In another study, [16] and [22] employed the same model to investigate the implementation of e-Government projects in some local governments.

In another comparison, although the Kolb-Frohman's, Cooper and Zmud's, Kotter's, and Gavin and Roberto's models of change offer a prescription for managing the change process, they are more relevant for change agents such as consultants who provide recommendations on a change process in an organization. These models, however, do not support key players, such as system developers, who are actively involved in implementing the system applications and managing issues that arise during the actual change process. As Lewin's model recognizes the change involving actors' attitudes and values [22], it can be used as a lens to encapsulate the process of system developers' going through the implementation of a CiRM system. The adoption of Lewin's model of change would assist the study to better understand the phenomenon in implementing a CiRM system. Based from these arguments, it is the three stages of Lewin's model that were chosen as a tentative framework of the study. The following section describes how this model will be used for guiding this study.

4. THE PROPOSED THEORETICAL CiRM IMPLEMENTATION FRAMEWORK IN LOCAL GOVERNMENT

In the attempt to identify the main implementation determinants together with their stages, the study has viewed Lewin's Change Model as follows. In the *unfreezing* stage, the study will identify how the system developer creates responsiveness to the need to implement CiRM and creates an accessible ambience to the system implementation. In the *moving* stage, the implementation of the CiRM system will be thoroughly investigated. In this stage, the study will identify how system developers develop the CiRM and how they learn to accommodate the system. Whilst in the *refreezing* stage, the way in which system developers stabilize and maintain the CiRM system will be identified.

There are two types of forces that are characterized by the system development life cycle in local government organizations – internal and external. These two forces come together to form as forces and have an impact on the CiRM implementation process (see **Figure 1**). The internal force consists of aspects (i.e., organizational and technical) that may shape the implementation of the system whilst the external environment refers to the forces outside an organization (e.g., public demand towards better services, central government directions in pushing for online services). These strategies have been used to implement new system's applications or technologies in many governments' initiatives [9, 27].

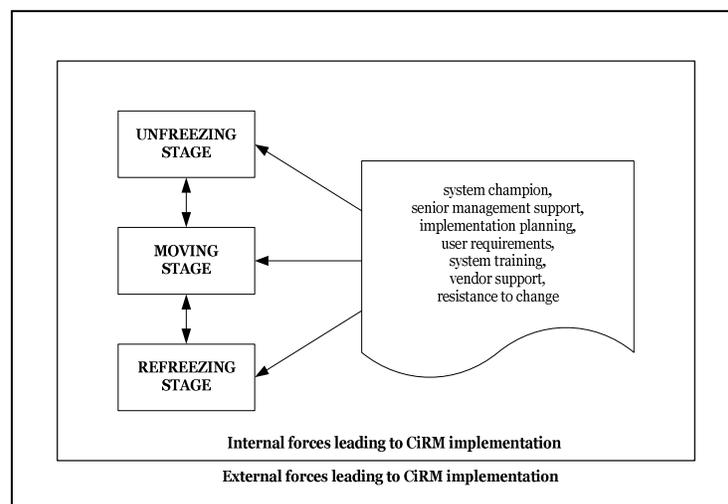


FIGURE 1: Proposed theoretical framework (adapted from [19]).

The model is applicable in probing the potential issues (e.g., convincing senior managers of the implementation, urging the end-users to use the system) that have an effect upon system developers implementing the CiRM system. These issues cannot be ignored because CiRM implementation involves the process of change [42, 27, 13, 12], thus, its implementation requires an understanding of how system developers managed the issue involved effectively. As a result, the common determinants leading to CiRM implementation, which were identified while reviewing CiRM implementation studies are proposed to encapsulate the gist of the phenomenon of implementation in question. This includes the determinants of:

A. Management support

The most recurring success determinant in the CiRM implementation studies is management support [21, 31, 47, 38, 13, 37]. Successful implementation of a CiRM system has been found to occur not only when senior management exhibits a commitment to change, but also to the implementation activities that they will endure. Senior management needs to publicly and explicitly identify CiRM projects as a top priority [42, 8]. Kim and Bretschneider [26] advocated that among the support from local administrative governments is the mobilizing of the project resources. Since the system implementation will not be realized in the short-term, they argued that senior management have to have a risk-taking propensity to support the project team to design and plan for the implementation without worrying about the consequences. Senior management must be committed to their involvement and be willing to allocate some funding to the CiRM implementation effort. The absence of committed senior management, particularly in funding approval, may lead to unsuccessful implementation efforts [27, 13]. The more senior management support and commitment CiRM initiatives receive, the higher the likelihood of implementation success.

B. System champion

Another recurring determinant in the CiRM literature is the significance of a system champion. Someone should be placed in charge and he or she should champion the project in the government organizations. The literature consistently points to the importance of the champion to be involved with the entire life cycle of system development [9, 5, 37]. These studies established that the system champion should be able to negotiate for the resources needed to move an idea to fruition and who understands the underlying technology as well as the business and organizational context. This person may be the project manager advocates and ensures the progress of CiRM projects. The role played by the mayor in championing the e-Government implementation projects in local government is also recognized as highly important [38]. They influenced the implementation success because of their skills in bringing about the organizational change in the organizations.

C. Implementation planning

Planning for implementing the CiRM system is another recurring theme in the literature [9, 47, 62]. Implementation planning is interesting because it is generally seen as the major barrier to the system's success (due to the lack of coordination between planning and process) [1]. A good of implementation planning should describe the specific citizen-centered strategies that will be incorporated in the design and operation of the e-Government initiatives. Leaving room for flexibility and adaptation in its timetable, target and method of execution, especially when in the midst of the uncertainties of risks stemming from organizational demands (such as diversity of stakeholders interests), is significant for the implementation activities to make progress [47]. Implementing a CiRM system in the local government may be successful when it is conducted through planned phases or on an incremental basis [9, 38]. The approach allows for creating awareness about the value of the system's implementation and making stakeholders participate actively in the projects. In fact, to make this plan work best, organizing a team of several members from cross-functional areas is the key to successful planning [5, 37]. Good communication between the functional areas to the team members involved in the project is also an important ingredient in forging a shared understanding between them for the success of the implementation [27]. Thus, a successful CiRM system needs to be planned and managed carefully throughout the process of implementation. Without such a plan is likely to result in poor quality services with limited capacity to meet public needs.

D. User requirements

One of the reasons why the CiRM implementation initiative fails is due to the lack of user requirements [34, 62]. According to Saiedian and Dale [24], user requirements have been defined as "all activities devoted to the identification of user requirements, analysis of the requirements to drive additional requirements, documentation of the requirements as a specification, and validation of the documented requirements against the actual user needs". This serves to alert system developers about the architecture of the system and how it will work throughout the process of implementation. To generate a useful list of user requirements, a clear and formalized approach is needed [34]. In this sense, spending time to learn about

the citizens' environment is the key to understanding their demands. This can be done by involving and identifying special groups of citizens who will have different needs in terms of which services would be most effective to each group [9]. The public should be involved in the planning, developing and testing of the CiRM system while their needs should be paramount throughout the system life cycle and every effort should be made to be proactive in meeting their future needs [62]. Velsen [34] proposed a requirement engineering approach to user requirements, called a citizen-centric approach (utilizes interviews, the formulation of requirements, low-fidelity prototyping and citizen walkthrough). Although the approaches used in these studies are different, the aims of the user requirements are still the same – to obtain the needs of the citizen. Therefore, it is imperative to investigate the public needs if government organizations desire a highly successful, useful, and usable CiRM system outcome.

E. Resistance to change

Resistance to change is seen in the CiRM studies as the biggest barrier to successful implementation [12, 13]. It may occur at any stage in the CiRM implementation life cycle. For instance, CiRM implementation is likely to become a problem when the needs of the end-users and organizations concerned are not taken into account at the early stage [63]. In another study, Beaumaster [53] asserted that for most people, new technologies (such as CiRM) represent a daunting learning curve including possible downsizing of their jobs. This perception introduces fear into the implementation and creates significant resistance to change. The end-users (both users within local government departments and the public) may refuse to use the system's application. The staff fear change as they believe that the system would replace them and so cause job losses or they do not understand the benefits of the system. Meanwhile, the public may be reluctant to use the technological change as they feel that the CiRM system is not secure for them to do an online transaction [36]. In this regard, several actions can be done to overcome these concerns for successful implementation. Involving staff during the implementation process, such as at the user requirements and system training activities, is recognized as a way to reduce the level of resistance [47, 62]. Furthermore, promotion of the CiRM system for the public to engage with the local government can be conducted to make them realize the system benefits, and, thus, reduce their resistance.

F. System training

Another critical determinant is system training [47, 54]. For instance, [54] argued that limited IS capabilities of staff (e.g., lack of skill in order to use more innovative IS) can be increased by providing them more educational programs such as training during the CiRM implementation. It enables staff to acquire the skills they need to continue to be productive after the deployment of the system [26]. Training is critical not only to help staff overcome the uncertainty generated by the CiRM implementation, but for the public to use the new innovations of the system. The public should also be trained to foster their IS knowledge and the capabilities of e-Government, thus, reinforcing the desired image of CiRM system implementation [47]. Fleming [9] argued that a proper training program, formal or informal, concerning the use an application of CiRM is needed for the end-users (the staff and public). The training may help staff to understand and be better prepared for dealing with members of the public from different cultural backgrounds. A failure to invest in the planning of education and training programs for those who will be affected by the system may affect the success of the CiRM implementation.

G. Vendor support

The implementation of a CiRM system is likely to require additional outside technical support [21, 54]. This refers to any type of assistance provided by the CiRM vendor (e.g., product consultation, maintenance of CiRM system). For instance, [26] found that five of the seven municipalities in their study tended to purchase CiRM applications from vendors rather than develop applications in-house using internal IT staff. The lack of qualified staff to develop and operate in-house applications, and train the end-users is found to be common to both their study as well as most of the other e-Government implementation studies [39, 48]. In these studies, CiRM implementation is likely to be a success, especially when vendors possess strong technical, communication, and project management skills. To identify a suitable vendor, CiRM projects should establish a set of criterion. When selecting e-Government vendors, the respective experience possessed by the vendors is among the important evaluation criteria. If they can provide training and coaching for the knowledge management capabilities (e.g., quick services, accurate customer interaction), this will help government organizations to make the planning of CiRM implementation run smoothly [54]. In this regard, competent CiRM vendors can increase the level of implementation success. .

5. CONCLUSION

There are four crucial issues that need to be clarified before the proposed theoretical framework of the study can be further explored and developed. The first issue is the meaning of the CiRM implementation process. Traditionally, system implementation is viewed as one of the steps in the development life cycle [31]. They argued that the implementation begins after the system's applications have been designed and ends once it produces outcomes (e.g., reports). Following this view, however, can lead the study to unconscious activities that are crucial throughout the process of implementation [52]. Hence, the study should choose the view that is capable of encapsulating most of the activities in the system development life cycle. A broad definition of CiRM implementation process seems to be more suitable in this study to determine as much as possible the determinants leading to implementation success.

The second issue is the significant array of determinants that need to be addressed while implementing the system. It can be argued that there are enormous amounts of determinants that lead to CiRM implementation success in the literature. These determinants are subject to where and how the CiRM system has been implemented. This includes the organizational determinants of senior management support, system champion, implementation planning, user requirements, user resistance to change, system training and vendor support. However, the generalization of the findings that have been reported is somewhat limited. The determinants identified were not thoroughly discussed in terms of how they fit together and occur within and perhaps across, stages for the whole implementation process. It fails to cope with the "unfolding" overtime within the process of implementation, and, thus, is unable to encapsulate the complexity of the situation. This missing piece provides one of the strongest motivations for this study. Nonetheless, the existing studies are helpful in determining the appropriate route to depict the representation of the implementation process in local governments albeit only in part.

The third issue is the appropriate approach to investigate the CiRM implementation in local governments. As a large number of studies were found on the dependent factors, an understanding of the process of CiRM implementation is still limited and largely remains as a 'black-box'. Several studies suggested a call for researchers to pay more attention to the process of e-Government implementation initiatives ([40]. They argued that the initiatives can be complicated due to the lack of fundamental structures, human and technical resources, and the vast size and bureaucratic nature of government. As such, CiRM initiatives remain challenging and deserve much more attention. Thus, taking a "process view" is a significant step towards understanding the process of CiRM implementation in local governments.

The fourth issue is the perspective of CiRM implementation projects. While implementing CiRM systems, the system developers in local governments do not have the same expertise as those in the private sector to deal with the new technologies [49]. By simply inheriting and following the best strategies carried out by their peers (system developers in the private sector), they assume that it could bring about faster development in their environment [56]. However, it can be argued that the strategy may be counterproductive as, fundamentally, the issues faced by the public sector's information systems are not similar [22, 11]. This is because both private and public sectors have different determinants concerning the successful implementation of the system. Therefore, the lack of study on the local government organizations from the perspective of system developers may affect the sector's success in implementing the CiRM system.

By considering these four issues, it will assist the next phase of the study which is to encapsulate the phenomenon of the CiRM implementation process in local governments. The proposed framework provides a part of departure for additional studies in CiRM implementation and it is hoped that other researchers will embark on similar paths of enquiry to further explore this new and interesting area of research.

REFERENCES

- [1] A. Schellong, "CRM in the public sector: Towards a conceptual research framework". *Proceedings of the 2005 National Conference on Digital Government Research*, 2005, Atlanta.
- [2] A. Schellong, and T. Langenberg, "Managing citizen relationships in disaster: Hurricane Wilma, 311 and Miami-Dade County," *Proceeding of the 40th Annual Hawaii International Conference on System Sciences*, 2007, Hawaii.
- [3] A. Y. Ni, and A. T. Ho, "Challenges in e-government development: lessons from two information kiosk projects," *Government Information Quarterly*, 2005, Vol 22, pp. 58-74.
- [4] A.A. Armenakis, and A.G. Bedeian, "Organizational change: a review of theory and research in the 1990s," *Journal of Management*, 1999, Vol 25(3), pp. 293-315.
- [5] A.J. Chen, S.L. Pan, J. Zhang, W.W. Huang, and S. Zhu, "Managing e-government implementation in China: a process perspective," *Information & Management*, 2009, Vol 46, pp. 203-212.
- [6] B. Burnes, "Kurt Lewin and complexity theories: back to the future?" *Journal of Change Management*, 2004, Vol 4(4), pp. 309-325.
- [7] B. Burnes, "Kurt Lewin and the planned approach to change: a re-appraisal," *Journal of Management Studies*, 2004, Vol 41(6), pp. 977-1002.

- [8] B. Larsen, and M. Milakovich, "Citizen relationship management and e-Government. In Wimmer et al., (Ed.) *Electronic Government*," Lecture Notes in Computer Science, 2005, 3591, pp. 57-68.
- [9] C. Fleming, "Connecting citizens with local government – recommendations from the ICMA National Study of 311 and customer service technology," *Public Management*, 2008, pp. 16-18
- [10] C. Ong, and S.Wang, "Managing citizen-initiated email contacts," *Government Information Quarterly*," 2009, Vol 26, pp. 498-504.
- [11] C. Pollard, J. Young, and P. Gregg, "Towards a simplified framework of CRM for use in public and private sectors," *Journal of Information Technology Case and Application Research*, 2006, Vol 8(2), pp. 24-38.
- [12] C.G. Reddick, "Customer relationship management (CRM) technology and organisational change: evidence for the bureaucratic and e-government paradigms". *Government Information Quarterly*, 2011, Vol 28, pp. 346-353.
- [13] C.G. Reddick, C.G., "Impact of citizen relationship management (CRM) on government: evidence from U.S. local governments". *Journal of E-Governance*, 2010, Vol 33, pp. 88-99.
- [14] D. Mukherjee, and D. D'Souza, "Think phased implementation for successful data warehouse," *Information Systems Management*, 2003, Spring, pp. 82-90.
- [15] D. Robert, "Leadership in customer service: delivering on the promise," Accenture, The Government Executive Series, 2007. Retrieved August 15, 2008 from <http://www.accenture.com>.
- [16] D. Wastell, P. Kawalek, and M. Newman, "Plus Ca Change: Defensive Translations and Resistance to IT-enabled Change in Local Government". *Proceedings to European Conference of Information Systems*, 2003, Naples, Italy.
- [17] D.A. Garvin, and M.A. Roberto, "Change through persuasion," *Harvard Business Review*, 2005, Vol 83(2), pp. 104-112.
- [18] D.A. Kolb, and A.L. Frohman, "An organization development approach to consulting," *Sloan Management Review*, 1970, Vol 12(1), pp. 51.
- [19] D.E. Zand, and R.E. Sorensen, "Theory of change and the effective use of management science. *Administrative Science Quarterly*, 1975, Vol 20, pp. 532-545.
- [20] E. Kasanen, H. Wallenius, and S. Zions, "A study of high-level managerial decision processes, with implications for MCDM research," *European Journal of Operational Research*, 2000, Vol 120, pp. 496-510.
- [21] G. Kannabiran, M.J. Xavier, and A. Anantharaj, "Enabling e-governance through citizen relationship management – concept, model and applications," *Journal of Services Research*, 2004, Vol 4(2), pp. 223-240.
- [22] G. Pan, S.L. Pan, M. Newman, and D. Flynn, "Escalation and de-escalation of commitment: a commitment transformation analysis of an e-government project," *Information Systems Journal*, 2006, Vol 16, pp. 3-21.
- [23] H. Michel, "E-administration, e-government, e-governance and the learning city: a typology of citizenship management using ICTs," *Electronic Journal of e-Government*, 2005, Vol 3(4), pp. 213-218.
- [24] H. Saiedian, and R. Dale, "Requirements engineering: making the connection between the software developer and customer," *Information and Software Technology*, 2000, Vol 42(6), pp. 419-428.
- [25] H.C. Lucas, and V. Spitzer, "Implementation in a world of workstations and networks," *Information & Management*, 2000, Vol 38, pp. 119-129.
- [26] H.J. Kim, and S. Bretchneider, "Local government information technology capacity: an exploratory theory," *Proceedings of the 37th Hawaii International Conference on System Sciences*, 2004, Hawaii.
- [27] H.J. Kim, G. Pan, and S.L. Pan, "Managing IT-enabled transformation in the public sector: a case study on e-government in South Korea," *Government Information Quarterly*, 2007, Vol 24, pp. 338-352.
- [28] H.S. Abdullah, and M. Kaliannan, "From customer satisfaction to citizen satisfaction: rethinking local government service delivery in Malaysia," *Asian Social Science*, 2008, Vol 4(11), pp. 87-92.
- [29] J. Šuc, H.U. Prokosch, and T. Ganslandt, "Applicability of Lewin's change management model in a hospital setting," *Methods Inf. Med.*, 2009, Vol 5, pp. 419-428.
- [30] J.P. Kotter, "Leading change: why transformation efforts fail," *Harvard Business Review*, 1995, Vol 73(2), pp. 59–67.
- [31] K. Kendall, and J. Kendall, *System analysis and design* (8th ed.), 2011, England.
- [32] L. Batista, and P. Kawalek, "Translating customer-focused strategic issues into operational processes through CRM – a public sector approach," In: Traummüller, Roland (Ed). *Electronic Government*. Lecture Notes in Computer Science, 3183/2004. Springer, pp. 128–133.
- [33] L. Reyes, J. Garcia, and J.C. Mansi, "Citizen-centric approaches to e-Government and the back-office transformation," *The Proceedings of the 12th Annual International Conference on Digital Government Research*, 2011, USA.
- [34] L. Velsen, T. Geest, M. Hedde, and W. Derks, "Requirements engineering for e-Government: a citizen-centric approach and case study," *Government Information Quarterly*, 2009, Vol 26, pp. 477-486.
- [35] M. J. Ginzberg, "Key recurrent issues in the MIS implementation process," *MIS Quarterly*, 1981, Vol 5(2), pp. 47-59.

- [36] M. Kaliannan, H.S. Abdullah, and M. Raman, M. "Local e-government in Malaysia: an empirical investigation. In Reddicks (Ed.)," *Handbook of research on strategies for local e-government adoption and implementation: comparative studies*, 2009, pp. 812-831. San Antonio: USA
- [37] M. Kamal, V. Weerakkody, and Z. Irani, "Analyzing the role of stakeholders in the adoption of technology integration solutions in UK local government: an exploratory study," *Government Information Quarterly*, 2011, pp. 200-210.
- [38] M. Santana, "A preliminary assessment of the development of e-Government in a local government in Peru," *Journal of Asia-Pacific Studies*, 2009, Vol 12, pp. 75- 89.
- [39] M. Themistocleous, and Z. Irani, "Developing e-government integrated infrastructures: a case study," *Proceedings of the 38th Hawaii International Conference on System Sciences*, 2005, Hawaii.
- [40] M. Yildiz, "E-government research: reviewing the literature, limitations and ways forward," *Government Information Quarterly*, 2007, Vol 24(3), pp. 646-665.
- [41] N.R. Siddique, "E-governance and innovations in service delivery: the Malaysian experience," *International Journal of Public Administration*, 2008, Vol 31(7), pp. 797-815.
- [42] P. Beynon-Davies, and S. Martin, "Electronic local government and the modernisation agenda: Progress and prospects for public service improvement," *Local Government Studies*, 2004, Vol 30(2), pp. 214-229.
- [43] P. Chu, S. Yeh, and M. Chuang, "Reengineering municipality citizen electronic complaint system through citizen relationship management," *Electronic Government, an International Journal*, 2008, Vol 5(3), pp. 288- 309.
- [44] P. Richter, and J. Cornford, "Customer relationship management and citizenship: Technologies and identities in public services," *Social Policy & Society*, 2007, Vol 7(2), pp. 211-220.
- [45] P.D. Elrod, and D.D. Tippet, "The "death valley" of change". *Journal of Organisational Change Management*, 2002, Vol 15(3), pp. 273-291.
- [46] P.E. Cule, and D. Robey, "A dual-motor, constructive process model of organizational transition," *Organization Studies*. 2004, Vol 25(2), pp. 229-260.
- [47] P.T. Tseng, D.C. Chen, Y. Hung, and N.C. Wang, "To explore managerial issues and their implications on e-government deployment in the public sector: lessons from Taiwan's Bureau of Foreign Trade," *Government Information Quarterly*, 2008, Vol 25, pp. 732-756.
- [48] R. Hashim, "Economic issues in information systems implementation in local government," *International Review of Business Research Papers*, 2010, Vol 6(1), pp. 562-573.
- [49] R. Hashim, R. Mohd-Roslin, and A. Jamaludin, "The transition of e-Government for local governments: a conceptual framework on issues in ICT implementation," *Proceedings of the 7th European Conference on e-Government*, 2007, Netherlands.
- [50] R. Sabherwal, A. Jeyaraj, and C. Chowa, "Information system success: Individual and organizational determinants," *Management Science*, 2000, Vol 52(12), pp. 1849-1864.
- [51] R.B. Cooper, and R.W. Zmud, "Information technology implementation research: a technological diffusion approach," *Management Science*, 1990, Vol 36(2), pp. 123-139
- [52] R.P. Marble, "Operationalising the implementation puzzle: an argument for eclecticism in research and in practice," *European Journal of Information Systems*, 2003, Vol 9, pp. 132-147.
- [53] S. Beaumaster, "Local government IT implementation issues: a challenge for public administration", *Proceedings of the 35th Annual Hawaii International Conference on System Sciences*. 2002, Hawaii.
- [54] S. Hung, W. Hung, C. Tsai, and S. Jiang, "Critical factors of hospital adoption on CRM system: organizational and information system perspectives," *Decision Support Systems*, 2010, Vol 48, pp. 592-603.
- [55] S. King, and S. Cotterill, "Transformational Government? The role of information technology in delivering citizen-centric local public services," *Local Government Studies*, 2007, Vol 33(3), pp. 333-354.
- [56] S. Krishna, and G. Walsham, "Implementing public information systems in developing countries: learning from a success story," *Information Technology for Development*, 2005, Vol 11(2), pp. 123-140.
- [57] S.C. Kavanagh, "Revolutionising constituent relationships: the promise of CRM systems for the public," 2007, Retrieved July 16, 2011 from <http://www.gfoa.org>.
- [58] S.F. King, "Citizens as customers: Exploring the future of CRM in UK local government," *Government Information Quarterly*, 2007, Vol 24, pp. 47-63.
- [59] T.S.H. Teo, P. Devados, and S.L. Pan, "Towards a holistic perspective of customer relationship (CRM) implementation: a case study of the Housing and Development Board, Singapore". *Decision Support Systems*, 2006, Vol 42, pp. 1613-1627.
- [60] V. S. Lai, and R. K. Mahapatra, "Exploring the research in information technology implementation," *Information & Management*, 1997, Vol 32(4), pp. 187-201.
- [61] V. Sambamurthy, and L.J. Kirsch, "An integrative framework of the information systems development process," *Decision Sciences*, 2000, Vol 31, pp. 391-412.

- [62] W. R. Rose, and G.G. Grant, "Critical issues pertaining to the planning and implementation of e-government initiatives," *Government Information Quarterly*, 2010, Vol 27, pp. 26-33.
- [63] W.E. Ebbers, and J.A. Van-Dijk, "Resistance and support to electronic government, building a model of innovation," *Government Information Quarterly*, 2007, Vol 24, pp. 554-575.
- [64] Y.C. Chen, "Citizen-centric e-Government services: understanding integrated citizen service information systems," *Social Science Computer Review*, 2010, pp. 1-16.