

The Implementation Process of a Closed Loop
Marketing System in the Healthcare Industry: A Case
Study Approach

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ABSTRACT

Title: The Implementation Process of a Closed Loop Marketing System in the Healthcare Industry: A Case Study Approach

Lea Khlat, M.Sc.

Closed Loop Marketing (CLM) is a relatively new marketing information system that has received substantial attention in recent years. However, the pharmaceutical and medical device industry has been slow to adopt CLM, primarily because of the industry's resistance to cultural and business process changes. Research is limited in the context of CLM and some issues have arisen with respect to leadership and mandatory versus volitional use of this system. Literature on other Management Information Systems (MIS) such as ERP and CRM (which face similar difficulties) reveals the need for a deeper understanding of the *management of the implementation process* of such systems. As CLM differs from ERP and CRM in certain respects, this research is grounded in the broader array of the implementation of strategic decisions in order to uncover the Critical Success Factors (CSFs) specific to CLM. Case study methodology is used to compare two CLM system implementations in the same medical device organization. The results delineate a chronological three-step process model that highlights the varying effects of CSFs throughout the implementation process. In addition, the research findings revealed Backing as a novel and important CSF in the context of MIS implementation. Backing consists of having efficient aggregate leadership activities and commitment driving the initiative forward across all levels of the organization. Finally, a mandatory versus volitional use environment did not seem to have a significant impact on implementation success. These findings align with previous research on both MIS implementation and strategic decisions' implementation.

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Abbreviations

- BPC: Business Process Change
- CLM: Closed Loop Marketing
- CRM: Customer Relationship Management
- CSF: Critical Success Factors
- ERP: Enterprise Resource Planning
- HCP: Healthcare Professional
- IDT: Innovation Diffusion Theory
- IS: Information System
- KPI: Key Performance Indicator
- MIS: Management Information System
- PSR: Professional Sales Representative
- ROI: Return On Investment
- SFA: Sales Force Automation
- TAM: Technology Acceptance Model

1 Introduction

This research paper is a case study that investigates the implementation process of Closed Loop Marketing (CLM), a new Management Information System (MIS) with a customer-centric focus in a medical device organization.

*“Closed loop marketing (CLM) is the process by which a pharmaceutical company develops marketing strategies and deploys them through one or more channels to reach their customers (the prescribers) and gain a sound understanding of what happens in the marketplace. It’s being able to understand what’s working and what’s not working. It’s being able to understand objective data and refine the processes in a closed loop format so over time you continue to improve effectiveness both in marketing and sales.”—Proscape Life Sciences President and Co-Founder
Derek Pollock (Mack, 2008)*

The pharmaceutical and medical device industry has been slow to adopt CLM (Faden, 2009); firstly, because it is hard to persuade the sales representatives to comply with a new system that requires a change in established business processes and culture (Mack, 2008); secondly, because it is difficult to analyze the large amounts of data collected and turn it into actionable data that the sales representatives and the marketing team can use (Hagemeyer, 2013); and thirdly, because the healthcare industry is cautious when using online and social media platforms (used in other industries for CLM) to target physicians due to heavy regulations (Katsanis, 2015). CLM is an extension of Customer Relationship Management (CRM) systems; it provides the organization with detailed information on the specific nature of Healthcare Professionals’ (HCP) responses to marketing initiatives, which CRM systems cannot provide. This is important to remain competitive in the marketplace since sales representatives are now awarded less and less time to meet with HCPs (Mack, 2008). Thus, having a sales force that is able to present more efficient and targeted messages during detailing visits to HCPs may have a significant return on investment and may create a competitive advantage for the organization as a whole.

This case study presents two divisions, within the same organization, that implemented the same CLM system two months apart but with different implementation processes. The findings suggest conflicting results in the success of implementing the system. This unique setting allows the focus on differences in the implementation *process* rather than the contextual variables pertaining to overall company culture and climate (Leidner & Kayworth, 2006).

The originality of this research paper lies in the fact that it aims to study the *implementation process* of a new Management Information System (MIS), an under-researched area (Motwani et al., 2005): This is in the context a new marketing system in the medical devices industry called Closed-Loop Marketing. The findings suggest a three-phase process of implementation, which aligns with the Critical Success Factors (CSFs) found in both previous MIS and strategic decisions' implementation research. The theory of a three-phase process of implementation has not yet been fully established in the literature, and this study aims to further test and validate its occurrence by providing an initial rationale regarding how the Critical Success Factors interact with each other throughout the phases of implementation leading to a successful completion. This research aims to create a comprehensive, chronological and utilizable model. This action model is designed to help practitioners in future endeavors to implement CLM systems more efficiently. If done correctly this may allow for a better flow of information between the sales and marketing teams, thus improving their working relationship; and, it may lead to a significant ROI by building a better-equipped and more-data driven sales force that is able to personalize sales efforts to its customers.

2 Context Variables

The Medical Device industry is one the fastest growing in the world, with an estimated revenue of 42.4\$billion in the US in 2016 (iExpert, 2016). A recent analysis of the industry's economic growth potential states that there are significant opportunities for growth specifically in emerging markets (which is where this case study takes place) due to a rising GDP and an expansion of the middle class (Maresova et al., 2015). These markets are growing at a much faster pace than the already developed and plateauing US and European markets (Maresova et al., 2015) and this makes for an interesting and contemporaneous research setting.

Recent research also shows that the region is facing growing health awareness due to an escalation of various medical conditions (Howard, 2014) relating to bad nutrition habits, consanguinity, and other hazardous conditions. This leads to an increase of investments in building new medical and research centers, as well as supplying advanced high-cost medical technologies (Howard, 2014).

The sales representatives in this industry can most directly be compared to pharmaceutical sales representatives, because they are very highly trained, knowledgeable; cannot easily be replaced; call on physicians, and, in some contexts they are also called Medical Science Liaisons (Spinner, 2004). This means they cannot be compared to other sales representatives outside the medical field in certain respects. The sales representatives are in constant contact with healthcare professionals (HCPs) and other procurement entities, and are the face of the organization in the market.

In this industry, sales representatives traditionally relied on older forms of marketing such as pamphlets and printed documents for sales support. However, the use of tablet PCs is now routine and they employ more digital marketing tools. This allows for a more constant flow of information between the organization, the sales representatives and the customer (Chase, 2015). The switch to electronic devices created a shift towards e-detailing, which allows for better-equipped, more interesting and targeted sales efforts, but consists solely of a unidirectional flow of information: from the company to the sales representative (Mack, 2008). However, information systems should be used in a bi-directional manner: With the technological development of information systems and the advancement in data mining and analysis tools, organizations now see the value in also collecting data from the sales representatives, analyzing and utilizing it in developing future strategies and marketing efforts (Moore & Qanadilo, 2012). This is the essence of CLM, when properly implemented: Information that flows both ways between marketing and the sales force.

3 Literature Review

Closed Loop Marketing (CLM) is a relatively new marketing concept, thus, the implementation of CLM systems have not yet been researched. Previous literature on Information Systems (IS) covers a wide array of different research streams; some authors study technology acceptance to find ways to decrease resistance in organizations (Ahearne et al., 2004), while others investigate the design of information systems to create more alignment upfront between the goals of organizations and the capabilities of new information systems (Maguire, 2000). However, the research stream most relevant to this case study is that of Management Information Systems, since a CLM system qualifies as such. These systems gather and analyze data for the purpose of making informed strategic decisions (Rainer, Prince & Watson, 2014).

The two types of MIS most frequently researched are Enterprise Resource Planning (ERP) systems and Customer Relationship Management (CRM) systems. This research is grounded in the theory of Business Process Change because they are both organization-wide mandated initiatives and require a complete overhaul of organizational processes. ERP and CRM implementation research attempts to uncover Critical Success Factors (CSFs) affecting the success of ERP and CRM implementations (Maleki & Anand, 2008); however, only a few studies examine the implementation as a stepwise process (Motwani et al., 2005; Almotairi, 2009). Thus, there is a gap in the literature concerning the *management of the implementation process* of an MIS. CLM systems differ from ERP and CRM systems because they touch different functional departments; are not organization-wide endeavors; and, are present in both volitional use and mandated use environments. Thus, there is a need to uncover the variables specific to CLM systems outside the realm of ERP and CRM research.

The literature review further examines the concepts of mandatory and volitional use environments and their effects on IS adoption. Both ERP and CRM systems are exclusively implemented in a mandatory use environment, mainly because they are organization-wide endeavors that require the participation of all employees; but also, because they are very costly initiatives. Previous IS research has found that having a volitional use or mandatory use environment will play only a moderating role on technology acceptance and does not seem to

have a direct effect on user adoption. However, this research stream, grounded in the Technology Acceptance Model (TAM), has not revealed a significant direct relationship between use environment and IS implementation success. A CLM system can be implemented in both volitional and mandatory use environments; and thus, it may reveal interesting findings regarding the effect of this variable on implementation success.

Finally, the literature review examines leadership research, since it is a prominent factor that is present in both ERP and CRM research that appears to potentially affect the implementation success of a CLM system. On the other hand, research on the implementation of strategic decisions does not consistently consider leadership to be a significant factor that impacts implementation success. Research shows that a single manager's leadership style may have an impact on user adoption of technologies. However, in settings where multiple levels of leadership exist, leadership research recommends a multilevel analysis of leadership to properly evaluate the effect of multiple leaders' activities on implementation success. Findings reveal that effective leadership across multiple levels of an organization aggregates and positively influences implementation success. Finally, previous research also highlights difficulties in the relationship between sales and marketing managers and discusses the moderating impact of top management commitment on that relationship. A deeper analysis is required when examining the effect of leadership activities in a multilevel and multifunctional setting such as the one of a CLM system implementation.

3.1 Closed-Loop Marketing (CLM) Systems

Closed-Loop Marketing has become increasingly popular in the pharmaceutical and medical device industry as a marketing strategy in recent years (Katsanis, 2015). Companies that use online platforms to track their clients' interests through their web-based activities first developed the concept. This information is then used to analyze each individual's interests in order to make their future experience more personally tailored to their preferences in terms of marketing efforts (Vaughan, 2012). In general, a CLM strategy relies on a CRM tool in the organization, but could very well function with less advanced data collection and analysis tools, as is the case in this study. A model for CLM is presented in Figure 1 below.

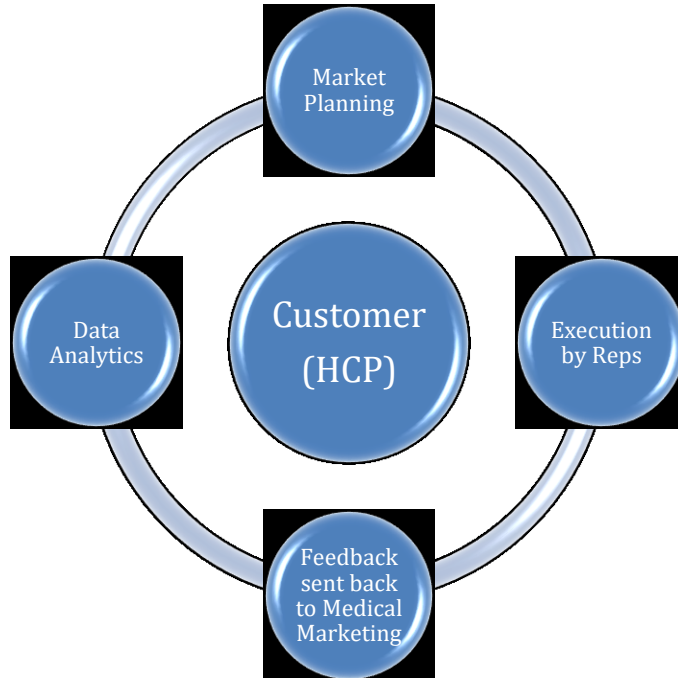


Figure 1: Closed Loop Marketing Cycle—Adapted from Wentworth (2015)

The Closed Loop Marketing Cycle:

1. The organization equips the sales representatives with tablet PCs with access to the CLM software, which contains promotional materials and other sales aids.
2. After every detailing visit, the sales representatives provide a report of the promotional tools used during that visit and the feedback provided by the HCP.
3. This data is centrally collected and analyzed by the marketing team in the head office (in more advanced CLM systems, the data is linked to a preexisting CRM system to derive a more in-depth analysis).
4. The marketing team may then use this data to derive inferences on the content and mode of delivery preferred by the HCP (this analysis may also be extended to countries and/or regions).
5. This market intelligence may then be used to modify and adjust future marketing strategies on either a country or regional level.
6. This information is also circulated back to the sales team, so that they may adapt future sales tactics to specific customers.

Pharmaceutical and medical device organizations have only recently started realizing the importance of collecting this same type of customer data to stay competitive in the marketplace. However, the shift towards digital tools has been slow due to the industry's resistance to change (Moore & Qanadilo, 2012). Their sales representatives, also called Professional Sales Representatives (PSR) (Katsanis, 2015), due to their high levels of knowledge, are now equipped with tablets to aid them in their detailing visits to physicians and other procurement entities in hospitals. These tablets can also be used to gather critical data regarding the detailing visits to customers, which greatly improves the organization's access to real-time customer-centric data. In older marketing models, organizations either created customer portfolios to collect this type of information, and in the most basic sales systems, customer information was only known by the salesperson working with that customer directly and depends completely on their personal bond (Rahimi & Berman, 2009). Thus, the introduction of tablets to the market has completely changed the marketing efforts of medical devices organizations, as they now have a better view of how their marketing efforts are performing in the marketplace. This data can be used to personalize marketing strategies to individual customers, or it can be extended to geographical regions and markets (Moore & Qanadilo, 2012). According to the CapGemini Consulting Report (Moore & Qanadilo, 2012), this industry is still in the initial steps of tablet detailing, and CLM is seen to be at the very first steps of its development in regards to personalizing messages to customers, data analytics and responsiveness to the latter by constantly furthering CLM efforts.

Faden (2009) highlights the fact that, while many major pharmaceutical companies have tried to adopt a CLM system in recent years, many have failed because they were not able to efficiently use the data that they were collecting. Thus, they are using the CLM software as a message delivery platform and are failing to achieve the key component of a CLM system, which is "closing the loop". This is the purpose of having a CLM system: transforming the data gathered from the field into actionable data by linking it to performance measures, and using that data in both marketing and sales capacities to make future sales tactics more targeted and efficient.

When investigating implementation in the scope of CLM, we can see that one commonality to all these systems (ERP, CRM and CLM) is that their implementation process

cannot be approached as a simply technical matter from an IS perspective: The fact that they affect so many individuals in the organization and change business processes means that implementation should be executed strategically as well. Faden (2009) states that implementing a CLM system goes beyond the introduction of tablet PCs and requires the implementation of new practices in the organization that pertain to how the data from the system should be integrated in decision-making.

3.2 Information Systems (IS)

Information systems are meant to collect, store and organize data in order to re-use it for the strategic planning and the accomplishment of strategic goals of a company. By doing so, information systems are expected to streamline activities and improve the overall performance of an organization (Baskerville & Myers, 2009). However, information systems have not lived up to their full capabilities or to business expectations, and previous research has taken different approaches to understand the reasons for this.

From a purely technical standpoint, significant research exists concerning how information systems should be preemptively designed and chosen in order to fit the needs of the organization (Maguire, 2000). For example, a key difference is whether software is developed in-house, which might be costlier but may better address unique organizational requirements; or alternatively, bought through Application Software Packages, which would save time and money but require more customization and might lead to underperformance on certain metrics (Rainer, Prince & Watson, 2014). Maguire (2000) calls for a “business-led approach to information systems development”. This requires the organization to focus less on the technical development side of IS and instead, to fully evaluate their needs and expectations from this IS in order to design it accordingly; thus, approaching IS development as more than just a technical endeavor. It is recommended that the systems be designed to consider both long-term and short-term goals as well as data needs, in order to collect only pertinent information (Rainer, Prince & Watson, 2014).

From a non-technical standpoint, most previous research in IS focuses only on user resistance to IS after they have been implemented and finding methods both to reduce this resistance and increase acceptance and usage of the information system at hand (Ahearne et al., 2004). One research stream looks at this problem from an organizational perspective by studying variables such as task interdependence, training, technical complexity and management support (Sharma & Yetton, 2003; Sharma & Yetton, 2007). Another stream investigated this problem from a more social perspective by looking at the problem at an individual level rather than an organizational level. This approach was rooted in the “Technology Acceptance Model” (TAM) originally developed by Davis (1989), which uses the antecedents “perceived ease of use” and “perceived usefulness” to predict “intention to use” of a certain technology. This model was then reworked and developed in IS research by finding different antecedents and moderators of the relationships first uncovered by Davis (1989) and some of the new models that emerged are the Theory of Reasoned Action (Davis et al., 1989), Theory of Planned Behavior (Taylor & Todd, 1995), the extended TAM (TAM2) (Venkatesh & Davis, 2000) and many more. However, the most crucial model to note is the Innovation Diffusion Theory model (IDT) (Lehmann, 2014), which is also an acceptance model, but is the only one to include *voluntariness* as a new construct in IS literature. This variable will be discussed in a further section, as it will play an important role in this research paper.

Overall, an investigation of the previous literature on IS reveals that there are two main streams to consider: The first is based on the *design and technological aspects* of information systems, and the other is focused on *user acceptance* of information systems. However, not enough has been done in regards to investigating the *implementation process* in and of itself and its effect on IS success. For that reason, the following section will give a comprehensive review of previous research on implementation.

3.3 Implementation Research

Implementation is a well-researched area of research and spans multiple domains and subject matters (Govindarajan, 1988). For the purposes of focus, the research is directed to the implementation of strategic decisions in organizations in general. Most of this literature attempts

to uncover and establish causal relationships with implementation success using variables such as goal setting and implementation intentions (Gollwitzer & Sheeran, 2006), or, various administrative mechanisms key to successful implementations such as management support (Miller, 1990; Miller, 1997). Hickson et al. (2003), take a different approach to the above by uncovering the critical success factors affecting the implementation of strategic decisions in various organizations. They devised two routes of *managing an implementation*:

- The Experience based approach: relies on familiarity with the implementation, assessability of goals set, specificity of the expectations for the strategic decision, resourcing (financial, human capital) and finally acceptability of the strategic decision; and,
- The Readiness based approach: relies on the receptivity of the internal and external environments, structural facilitation of the implementation taking place and prioritization of the project at hand.

These two approaches are not mutually exclusive; as the researchers uncovered that a combination of the two approaches is what contributes to the highest success of the implementation of any strategic decision. Either approach alone could also lead to successful implementations if managed appropriately.

This research is grounded in the broader array of strategic decisions implementation, given that the goal of this paper is to focus on the implementation of a new information system, since the latter is itself a strategic decision. The rationale is that all the same critical success factors and variables are expected to arise, specifically when looking at *management of the implementation process*. This will refine the understanding of IS implementations overall.

"Implementation consists of the organizational activities working toward the adoption, management & routinization of a new information system" (Sharma & Yetton, 2007)

Management of the implementation process is well understood to be a factor that influences the success/failure of an IS (Rainer, Prince & Watson, 2014). Therefore, implementation literature

will be used to investigate this concept in an IS environment. Nilsen (2015) distinguishes between three types of implementation research:

- Process Models: bridging theory and practice, and aimed at describing the process of implementation;
- Implementation Theories: aimed at uncovering the variables that influence implementation outcomes, these include determinant frameworks, which focus on the contextual variables surrounding an implementation without necessarily giving any causal relationships; and
- Evaluation Frameworks: aimed at evaluating the implementation using various criteria.

That said, this study may be categorized as a combination of a process model and a determinant framework, given that the objective is to create a stepwise chronological process (which includes a determinant framework of each phase).

3.4 Management Information Systems

Information systems used in organizations can span a broad range of activities, but given the scope of this case study, the focus will be on Management Information Systems (MIS). They are a category of IS designed to use data gathered in the organization for decision-making (Rainer, Prince & Watson, 2014). There are three levels to MIS, and some sales & marketing functions for each are described below (Rainer, Prince & Watson, 2014):

- The operational level: Locating & contacting prospective customers, tracking sales, processing orders, providing service support;
- The management level: Market research, advertising and promotional campaigns, pricing decisions, sales performance and sales staff performance; and,
- The strategic level: Monitor trends, opportunities, competitors, and plan support for new products.

Considering the many functions that Management Information Systems can take, there are multiple types of MIS. Therefore, the rest of this discussion focuses on introducing two of the most researched MIS in order to draw on their implementation literature and findings: Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM). This will be

compared to the MIS used in this case study, which is part of the relatively new concept of Closed-Loop Marketing (CLM).

3.4.1 Enterprise Resource Planning (ERP) Systems

ERP systems are designed to collect data from all departments in an organization, and range from manufacturing and sales to accounting and HR departments. The purpose is to create one unified timely information database that management can use to make strategic decision concerning the business (Motwani et al., 2005). When an organization decides to implement such an integrative system, the system affects every individual in the organization and will change all their regular business processes. ERP research has thus spanned multiple areas of ERP implementation, including the motivation to and expectations of adopting ERP systems; or, the investigation of the success factors and costs associated with ERP implementation (Kumar et al., 2003; Sarker & Lee, 2003). There is extensive research in this domain, since ERP projects have a high failure rate and are very costly projects; therefore, significant attention was given to investigating this problem.

One seminal model in the literature was developed by Motwani et al. (2005), which draws on the theory of Business Process Change management (BPC). Motwani et al. (2002) first documented the 24 factors put forth in the BPC management model (Kettinger & Grover, 1995) in Figure 2, and showed how those factors correlated with the success factors found in ERP implementation literature. This is how BPC became the recommended model to use when talking about ERP implementations.

“BPC is defined as an organizational initiative to design business processes to achieve significant improvement in performance through changes in the relationships between management, information technology, organizational structure, and people” (Motwani et al., 2005)

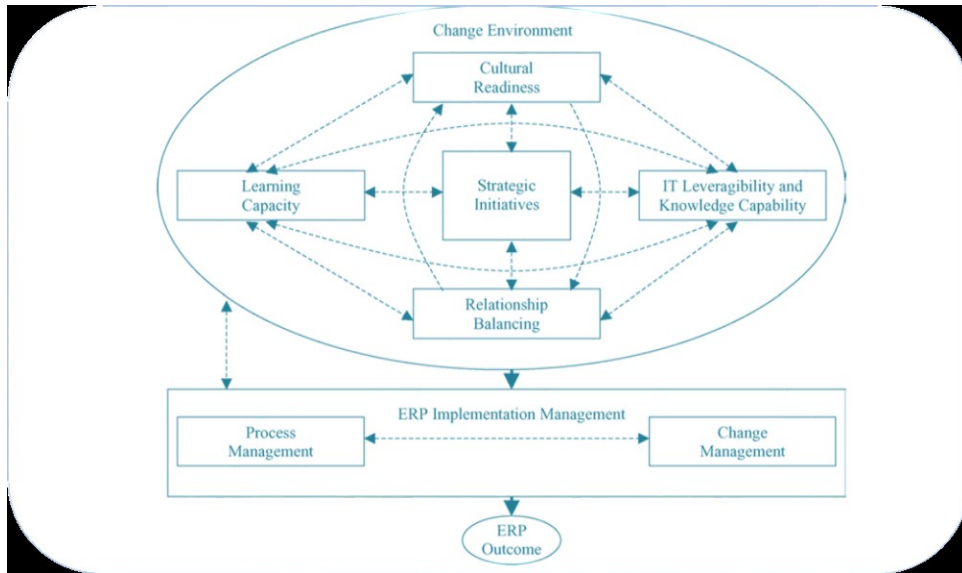


Figure 2: Theoretical framework for ERP Implementation Management (adapted from Kettinger and Grover’s model of BPC Management, 1995) Adapted from Motwani et al. (2002)

Motwani et al. (2005) further extended this body of research by proposing that the implementation of ERP systems has multiple phases and cannot be looked at as one entire phase, but rather should be divided into three phases: Pre-implementation (setting up), Implementation and Post-implementation. This process model shows a chronological process of how this implementation takes place rather than looking at it as one big project. This research is grounded in BPC management theory, and the critical success factors uncovered were then laid out into their respective phase where they were found to be of importance (Figure 3).

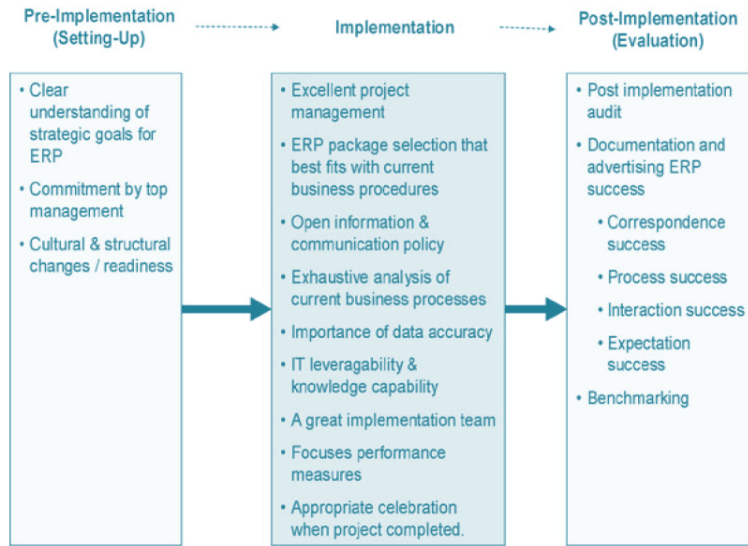


Figure 3: ERP Implementation Framework Adapted from Motwani et al. (2005)

It is important to note that factors related to ERP implementation success are not all equally prominent throughout the entire implementation process. Rather, their importance as success factors only exists at key strategic points during the implementation. The process of implementation is a three-phase implementation framework, each with its respective success factors. It is the same type of process that this study aims to apply in the context of an information system; however, with different managerial consequences.

3.4.2 Customer Relationship Management (CRM) Systems

CRM systems usually gather data from tools such as Salesforce Automation (SFA) tools in order to streamline sales, marketing and service activities in the goal of developing the relationships the organization has with its clients as well as using this information as business intelligence (Zablah et al., 2004). Previous literature on CRM also explores many factors such as user resistance (Zablah et al. 2004; Rahimi & Berman, 2009), or whether the implementation should take a bottom-up or top-down approach (Bohling et al., 2006).

CRM affects many departments simultaneously and requires significant coordination and change acceptance, and in that way, it is very similar to ERP systems; but it focuses on the relationships external to the organization rather than internal processes (Da Silva & Rahimi, 2007). However, the two types of systems have often been compared in terms of their implementation, because they share so many commonalities in terms of Critical Success Factors (CSFs), and in addition, because they go beyond the simple introduction of software into changing how things are done in an organization (Maleki & Anand, 2008; Da Silva & Rahimi, 2007). Thus, the CSFs are similar because they embody the strategy that accompanies an IS implementation of this caliber, and many of those undoubtedly overlap between ERP and CRM implementations. Maleki & Anand (2008) provide a comprehensive review of the literature concerning CRM and ERP implementations as well as CSFs that would be common to both, and in their conclusions, they emphasized the need to have a “Phased Implementation Plan”, which means the company should have a chronological plan for implementation that goes beyond just setting up the right organizational climate and mustering the right resources and support.

Almotairi (2009), also provides a comprehensive review of the literature concerning CRM implementation and combines three main aspects from previous findings. He addressed the fact that CRM has three main components, first found by Zablah et al. (2004): People, Processes and Technology. By using a case study methodology and collecting information on how implementation processes took place, he created a three-step framework, also following a chronological implementation plan, and categorized the CSFs and the components they belong to into the phase in which they are most prominent. The framework is shown below in Figure 4.

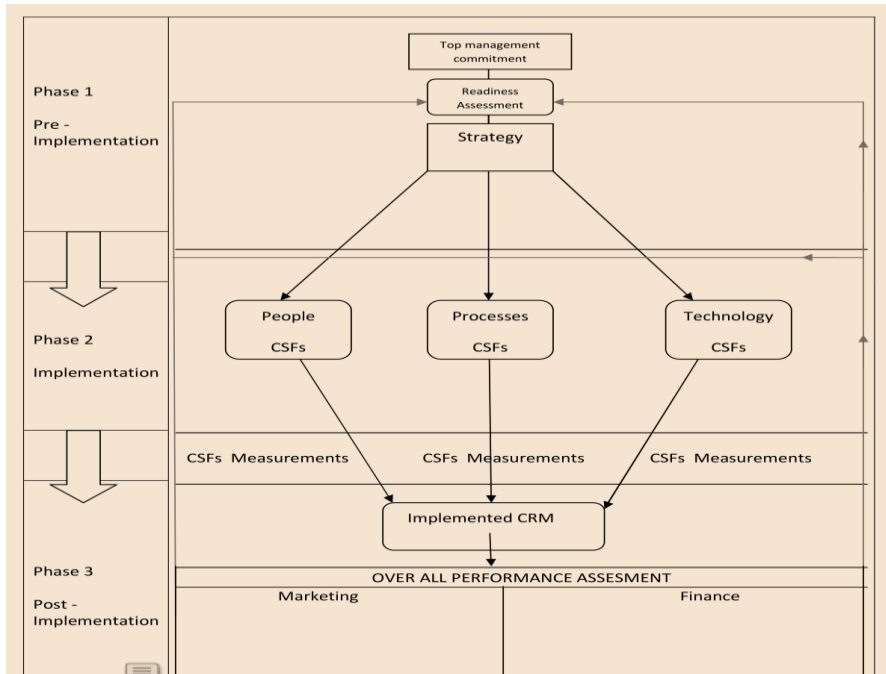


Figure 4: Proposed CRM Implementation Framework Adapted from Almotairi (2009)

The above implementation phases are extremely similar to the ones delineated by Motwani et al. (2005) for ERP Implementation. It was necessary to evaluate both CRM and ERP research in order to show their commonalities and differences. One major aspect of CRM is that it is a customer-centric information system, and this differs from ERP. This is the case for the IS used in this case study and relates directly to the concept of Closed-Loop Marketing (to be introduced in the next section).

3.5 Mandatory Vs. Voluntary System Use

The voluntariness of system use was first raised in the earlier discussion on information systems. When Management Information Systems are as big as those of an ERP or a CRM, the organization has usually invested very large sums of money in order to streamline activities within the organization or relationships outside the organization. Either way, this represents a shift in how individuals do their jobs, making system usage a mandatory part of their daily activities. A *mandatory use environment* is defined as one “in which users are required to use a specific technology or system in order to keep and perform their jobs” (Brown et al., 2002). In

contrast, a *voluntary use environment* is defined as “one in which users perceive the technology adoption or use decision to be a willful choice” (Brown et al., 2002). In this case study, the two information system implementations that were examined used different approaches in regards to having a mandatory use or volitional use environment; thus, this variable should be considered in the analysis.

Prior research on IS discusses voluntariness only when looking at variations of the Technology Acceptance Model (TAM) (King & He, 2006) (used to predict intention to use a certain technology) since voluntariness was not examined in the original model. Innovation Diffusion Theory (IDT) (Lehmann, 2004) shows that *voluntariness* had a direct effect on *intention to use*. In voluntary settings, intention to use decreased and in mandatory settings intention to use increased. However, this was not a fully causal relationship, as demonstrated by other models such as the Theory of Reasoned Action and the TAM2. Voluntariness was found to only play a moderating role on the relationship between *social influence* and *behavioral intention*. When use of the technology was mandated, social influence had a larger and positive effect on behavioral intentions (Venkatesh et al., 2003). One interesting conclusion, however, is that the positive effect of social influence on behavioral intention in a mandated environment is only short-lived, whilst social influence in a voluntary context may lead to longer-lasting acceptance—even though the initial effect on behavioral intention is relatively low.

In any case, all the research examined this far attempts to evaluate behavioral intentions and user acceptance of the technology, and that is not the end-result sought in this research. The key question to be answered here is whether or not voluntariness will have an effect on implementation success. Petter et al. (2008) undertook a qualitative literature review in the hopes of uncovering the different ways of measuring information systems success. They found no significant difference between mandatory and voluntary settings when it came to measuring IS success, and explained that this variable probably does not have a significant enough effect on overall success. However, voluntariness did have a direct relationship with system usage, which is itself an antecedent of IS success. Their recommendation is to use objective methods of measuring system use, based on what type of use environment we are dealing with (Petter et al., 2008).

3.6 Leadership Factors Affecting IS Adoption

According to previous literature on ERP and CRM implementations, leadership activities across all levels of the organizations have a significant effect on implementation success, both in terms of commitment to and support for the new initiative. However, this variable does not consistently appear in the general context of the implementation of strategic decisions in organizations. Since this case study bridges the two streams of research, it will draw on MIS implementation research and investigate the effect of leadership on the implementation process of a CLM system.

According to Goleman (2000), there are six distinctive leadership styles, which emerge from different aspects of emotional intelligence. It is recommended that all leaders should master multiple styles of leadership in order to adapt to various situations in the workplace, and use a combination of styles when necessary. These six leadership styles are described below:

- Coercive: Demands that subordinates immediately obey the leader's request, this has some negative impacts on organizational climate and should only be used in extreme situations;
- Authoritative: Motivates subordinates by getting them working towards a bigger vision; it has a positive impact on organizational climate and can be used in most situations but should be done carefully to avoid a backlash;
- Affiliative: Focuses on subordinates' happiness and building strong relationships as the backbone of achieving results; it also has a positive impact on climate but should only be used in situations that require strong interpersonal relationships, and should be merged with another style in order to be effective on the long-run;
- Democratic: Encourages participation on behalf of subordinates to reach agreements on future direction in a democratic manner. It also has a positive impact on organizational climate, although it is not as high as other leadership styles given that consensus is often hard to reach;
- Pacesetter by the leader: Demands immediate compliance. It is similar to the coercive style; however, leading is done by leading by example. The leader will set very high standards, follow them, and expect the same from his subordinates. This has a negative

impact on organizational climate and should be used sparingly in situations that require quick results from highly motivated and skilled individuals. Otherwise, it might have a negative impact on morale and eventually performance; and,

- Coaching: Urges subordinates to increase their performance by giving constructive feedback and developing future goals with the help and support of their leader. This focuses on personal development and long-term results and is not always aligned with organizational goals, but has an overall positive impact on organizational climate.

When undergoing a change in the organization, such as the adoption of a new technology and a “new way of doing things”, leadership style is likely to affect the employees’ performance in regards to the information system. Thus, leadership style should be looked at as a context variable of implementation. According to Wu et al. (2010), leaders should increase their communication and team-building efforts, focusing on a shared vision, in order to increase the team’s effectiveness. Therefore, when faced with cultural differences, adoption of an affiliative and authoritative leadership style is recommended.

Moreover, in an extensive qualitative review of leadership literature in the *Leadership Quarterly Journal*, Dionne et al. (2014) highlight the importance of incorporating the levels of analysis in both empirical and conceptual leadership research. Thus, when researching an organizational level phenomenon, it is important to clearly state the multiple levels of leadership and therefore, multiple units of analysis in order to design the data collection methodology accordingly. Multi-level data analytic techniques should thus be used to accurately reflect multi-level leadership dynamics (Dionne et al., 2014).

The marketing team usually drives the implementation of a CLM-specific information system in order to get insight as to how market deployment strategies are performing on the ground; however, the sales representatives usually follow the leadership of their sales managers. This creates a rift, and as shown in previous research, conflict between sales and marketing managers will arise. According to Homburg et al. (2007), this conflict between sales and marketing managers arises from different aspects of the job, some of which are beneficial to business unit performance and others which can be detrimental to performance as well as

interpersonal relationships between the managers. Overall, their recommendation is that sales and marketing should have the same competences but different orientations, or as they put it “similar people with different missions” (Homburg et al., 2007) in order for the conflict between them to be a driver and not a hindrance of business unit performance.

Finally, previous literature shows that top management support can alleviate the pressures facing the relationship between sales and marketing by encouraging coordination, goal alignment, good communication and joint planning (Le Meunier-FitzHugh et al., 2011). Therefore, leadership at all levels of the organization must be involved in supporting and driving big changes in an organization involving multiple departments and functions, which is represented by the notion of aggregate leadership (O’Reilly, Caldwell et al., 2010). The latter is defined and measured by taking into consideration the effectiveness of leadership at different levels of the organization and the study shows that the more consistent aggregate leadership effectiveness is, the more it positively influences the implementation of strategic decisions. This concept will be revisited in the context of this case study since leadership here cannot be looked at as any single leader leading in isolation.

3.7 Synthesis of the Literature Review

Previous IS literature is grounded primarily in the Technology Acceptance Model (TAM). It aims to evaluate an IS implementation’s success by looking at adoption rate, the different factors affecting it, and how to mediate resistance if it occurs. Other research streams stress the importance of designing the system with clear goals in order to better align system capabilities to organizational targets. However, when looking at MIS, and more specifically ERP and CRM systems, previous literature is mostly grounded in the theory of Business Process Change. This is because these types of systems affect an organization as a whole, and their implementation requires a careful and organized business restructuring to reduce resistance, instill new practices and reap the benefits of the system. Most research in this stream aim to uncover the Critical Success Factors (CSFs) affecting implementations’ success, but regard the implementation process as one large endeavor. Only two models in MIS literature have looked at ERP and CRM implementation as a chronological process that results in a 3-step implementation framework

(Motwani et al., 2005; Almotairi, 2009). Thus, MIS literature has not studied the factors which affect the *management of the implementation process*. This is a gap to be filled by future research.

The Closed Loop Marketing system is relatively new, and its implementation has not yet been thoroughly researched. These systems are important because the purpose of CLM is to make the data collected from the sales representatives in their detailing visits actionable, and to incorporate the proper use of this data to tailor future market deployment strategies. This is not achieved in most companies that attempt a CLM system implementation nowadays (Moore & Qanadilo, 2012). The lack of research on these types of systems may be filled by the proposed research. In the pharmaceutical and medical device industry, CLM system implementations are not always successful because organizations are not properly integrating the use of the data collected into their organizational practices. Moreover, business process change is overlooked in most CLM system implementations because they are not organization-wide systems, as opposed to ERP and CRM systems, and are adopted only from a technical standpoint (Faden, 2009).

Thus, this study draws on previous research on the general implementation of strategic decisions in organizations (Hickson et al., 2003), since the implementation of a new information system qualifies as a strategic initiative. In this research stream, multiple variables have been linked to a successful implementation of strategic decisions such as goal setting or top management support. Hickson et al. (2003) extract two approaches to implementing strategic decisions: the experience-based approach, which relies heavily on familiarity, planning and delineating clear goals; and the readiness-based approach, which relies on the receptivity and structure of the environment in which the implementation takes place. The researchers explain that while each approach might be successful independently, a balanced combination of the two is most highly correlated with successful implementation outcomes.

On the other hand, previous research grounded in the TAM suggests that having a mandatory use or volitional use environment has a mediating effect on the relationship between social influence and intention to use a new technology, but was not found to be a significant determinant of technology acceptance and adoption. MIS research on ERP and CRM systems is

exclusively limited to mandatory use environments, whereas CLM systems can be implemented in both mandatory use and volitional use environments. Understanding the use of CLM systems is a gap in this literature that may be satisfied by this case study.

Finally, leadership has been extensively studied and the two streams of research that relate to this case study are: 1) Individual leadership styles; and 2) Aggregate leadership activities. In this case study, one manager is heading the implementation process, however, multiple managers across all levels of the organization are involved. In ERP and CRM systems research, leadership is found to have a significant impact on implementation success, mostly linked to top management support and good project management. However, since CLM is not always a mandatory organization-wide endeavor, different aspects of leadership might affect the success of the implementation process. This area of study is under researched with respect to CLM, and this case study may provide insight into key leadership variables.

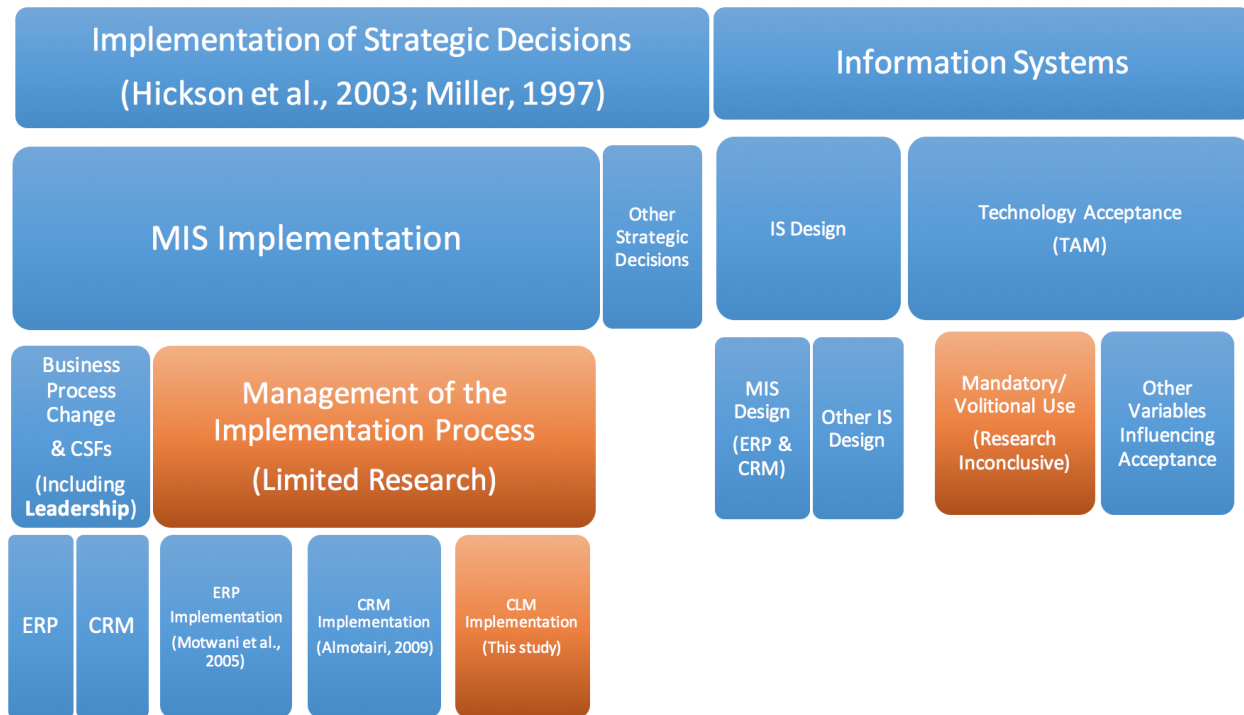


Figure 5: Research Gaps in the Literature (Orange Highlight)

4 Methodology

4.1 Research Objectives

The aim of this study is to uncover the process of *how* the implementation of a CLM system took place in its original environment, hence the case study design: Key variables are not controlled; rather, the purpose is to explore why this phenomenon succeeded or failed. To do so, one cannot take the phenomenon out of its context. According to Yin (2013), the boundaries between the phenomenon and its context are not always clear, which is the case in this particular setting. Further, Mariotto et al. (2014, p. 359) defines a case study as a “detailed description of a management situation” in the management context. The researchers also outline the importance of a single-case study in management situations since it is the closest link between academic research and practitioners research, and is the most truthful representation of what actually happens in an organization.

In this study, a very specific type of sales representative, known as a professional sales representative (PSR), is investigated; and thus, this CLM system implementation is examined distinctively from others due to the peculiarity of its function and of its users. Therefore, this research model may be categorized as a critical single case research design (Yin, 2013): It highlights a very specific context in which the research is conducted. The findings and results can thus be generalized, but only to similar concepts and situations. That is why the introduction and methodology aim to provide a “thick description” of the case, in order to accurately position it in the literature (Yin, 2013) for future research.

The research propositions to be uncovered should align with previous research on CRM and ERP implementation processes. A three-phase process of implementation is to be outlined to categorize the critical success factors taken from implementation research (Hickson et al., 2003). The CSFs’ distribution in the process phases outlined is expected to align with the ones found in the three-phase process design of ERP implementation presented by Motwani et al. (2005).

In order to uncover the underlying mechanisms that drive each phase of implementation, a semi-structured interview guide was developed based on the variables outlined by Hickson et al.

(2003) (Appendix A). Yin (2013) suggests that such semi-structured interviews should be regarded as “guided conversations” (Yin, 2013, p. 150), in which the interview guide is used by the researcher to make sure that the original line of inquiry is followed, as well as to maintain an unbiased manner of asking the questions. Therefore, the questions were used as a guide during the interviews, rather than a structured and rigid questionnaire. This allowed the refining and improvement of the questions between interviews if need be in order to further develop and better conduct every subsequent interview. The questions were also arranged in a chronological order that follows the process from the first steps taken to set the stage for the CLM implementation from the launch of the system to post-launch activities.

4.2 Research Questions

The research questions this paper is aiming to answer can be broken down into the following four questions:

1. What is the process of implementation of a CLM system?
2. What are the Critical Success Factors (CSFs) of implementation that play a decisive role at each phase of the process?
3. What is the effect of voluntariness of system use on the implementation process’ success?
4. How does leadership affect the implementation process’ success?

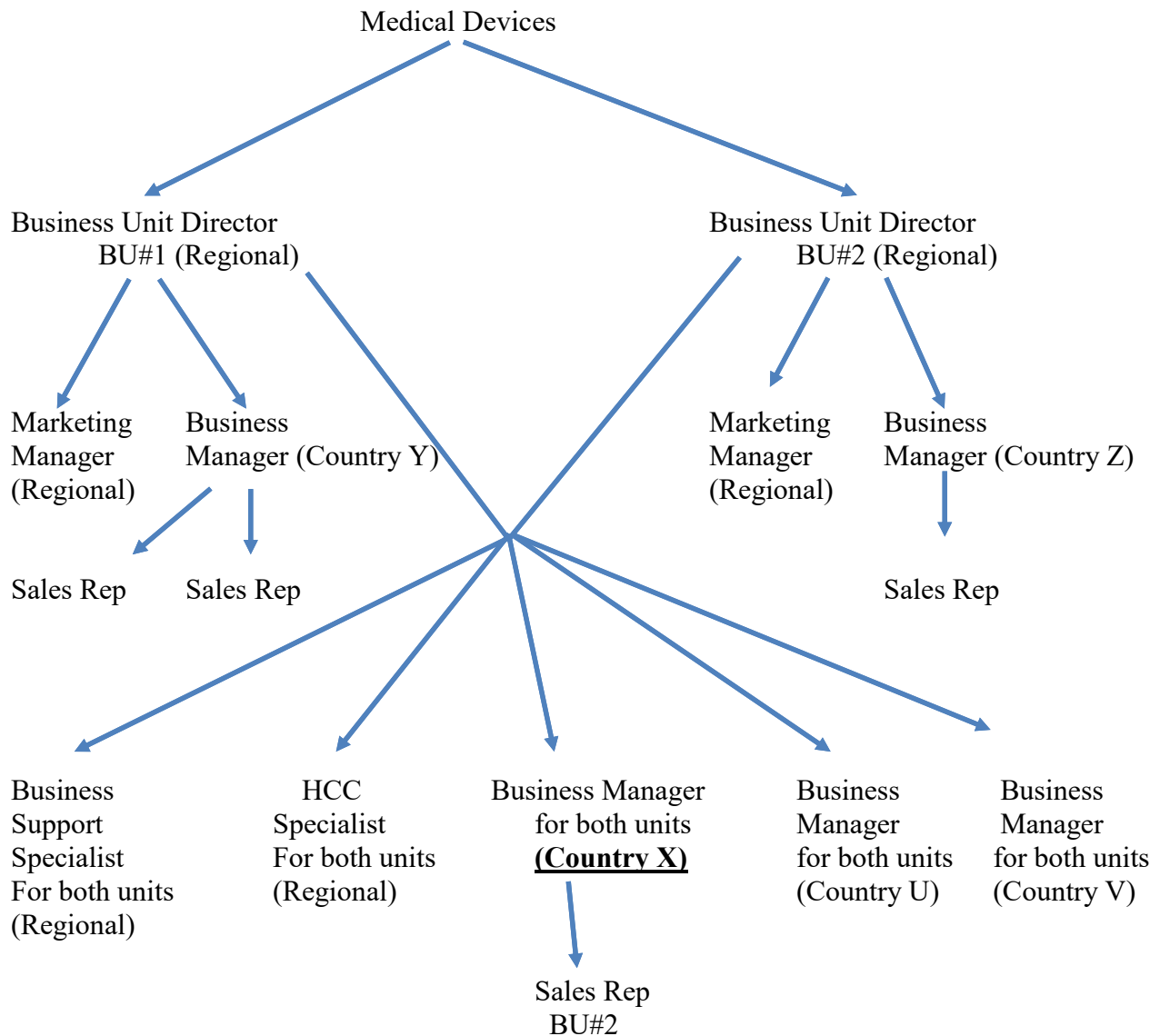
The case study examines two business units belonging to the same larger department within a medical devices organization in the Middle East region. Both units undertook the implementation of a new digitized CLM system, at almost similar times but with different leaders driving the implementation, and resulted in different levels of success.

4.3 Data Collection

The research setting is in the medical device division of a global Big Pharma company. The company identity is masked for confidentiality at their request. Given that this case study investigates two business units belonging to the same department, informants at different levels

of the organization were interviewed to gain multiple perspectives of the implementation process. Some informants were involved in the implementation process of one unit only (5 informants/unit), and others in the department can overlap as informants for both units (5 informants), which totals up to 15 informants for both units. For each unit, the business unit director, the marketing manager, the business/sales managers, and the sales representatives were interviewed, along with the business support specialist and the management support and healthcare compliance specialist who worked with both units. An organizational chart representing the distribution of informants is presented in Figure 6 below.

Figure 6: Organizational Chart with Distribution of Informants



Two interview guides were developed for both types of informants, and are presented in Appendix B and Appendix C; one for individuals working in one unit and the other for individuals overlapping both units, respectively. The unit of analysis is the organization level process; however, using key individuals as the data source further justifies the use of interviews for data collection (Yin, 2013). Informants can provide the information necessary to uncover how a process took place in an organization when they recall how the events took place.

Informants are used at different levels and some will overlap for both units and this allows for the triangulation of the data for each of the units separately using multiple data points (rather than using multiple data sources). The goal is to develop “converging lines of inquiry” (Yin, 2013, p. 161), which uses different sources of information to reach similar conclusions. Triangulation also allows for more cognizant data analysis efforts and highlights discrepancies, if any (Yin, 2013) which increases internal validity. This is a multiple-case study in which two cases are analyzed at the same single unit of analysis. The cases were selected based on the fact that they predict contrasting results for anticipatable reasons (Yin, 2013), which may reveal very interesting findings.

Finally, a pre-test was conducted to test the interview guide questions in a single case study, which investigated the implementation of a new student information system in a university setting. The type of information system and type of organization are different, however, the purpose is to uncover the same chronological implementation process. In this pre-test, the interview guide proved to be sufficiently comprehensive to collect the relevant data required to establish a framework model, with a clear three-phase process of implementation, which encompassed all the variables derived from Hickson et al. (2003).

5 Data Analysis

5.1 Data Coding

After the data was collected, the interviews were each transcribed and coded in accordance with the variables used from Hickson et al. (2003) to design the interview questions, so they are relevant to the implementation of strategic decisions. This process involved the following:

1. Initial coding of all the interviews according to the specific pre-defined codes. In this step two new variables emerged that were specific to this context and different from the pre-defined

codes: Leadership and Communication. Both these variables align with factors deemed necessary in ERP and CRM implementation research.

2. The researcher combed through the interviews in a second round, to extract the most significant codes for classification in spreadsheets. This delineates the three-phase chronological process of implementation and sorts the previously found codes correspondingly to each phase. All of the respondents' spreadsheet classifications are provided in Appendix D, where the codes are itemized by their corresponding page and line numbers in the transcription document. For informants responding on behalf of both units, a distinction was made in the color of the codes (Green vs. Red) in order to highlight the differences between the units, and the codes that were common to both units were kept in a neutral color (Black). The codes were also differentiated on the basis of whether they had a positive or negative occurrence during the implementation process. For example, if an informant mentions that communication efforts were low before the launch of the new system, that would be classified as a negative code for the communication variable in the pre-launch phase of implementation and so on.
3. This initial presentation of results allowed the researcher to catalog which variables played a role, by virtue of their presence or absence, in each of the phases of implementation for each respective unit. By triangulating the results of all the respondents by units, the findings from all the informants were condensed into two comprehensive models of the variables present in the implementation process (one for each unit in Figure 7 below).
4. During the course of this exercise, the triangulation efforts revealed that sometimes the marketing manager and sales managers did not agree on the presence or absence of some variables. For example, a marketing manager could believe that the expectations for this project were made clear to the team before the launch of the IS whereas the sales manager would state that he was not aware of any expectations until after the launch of the IS. This gap between the sales and marketing managers' perceptions of how the implementation process took place was thus crucial to highlight, and is emphasized in the models presented below (Figure 7).

The following will assist in the reading of Figure 7:

- a. Each phase column lists the variables which had a relevant effect on the implementation process by their presence (Blue), absence (Red) or neutrality (Black) during that phase. This is the result of the *triangulation of all the informants' responses* for each unit.
- b. The small side columns to the right labeled “M” (Marketing) and “S” (Sales) show *only the impression of the marketing manager and the sales managers respectively* of the presence (+) absence (-) or neutrality (N) for every variable in each phase and for each unit.

Please note that key variables will be italicized in the data analysis that follows.

Business Unit #1

Pre-Launch	M	S
Acceptability (If those affected by the change were in accord)	-	-
Assessibility (Expectation are clear, measurable)	+	+
Specificity (Clear Project Plan)	+	+
Familiarity (In-house & Brought-in)	N	N
Resourcing (Capital: Financial, personnel...)	+	N
Communication (Frequency and Efficiency)	+	+
Receptivity (Internal and External climates)	+	N
Structural Facilitation (Clear structure and authority)	+	+
Priority (In comparison to other projects)	+	-
Leadership (Leader activities driving implementation)	+	N

Launch	M	S
Acceptability (If those affected by the change were in accord)	+	N
Assessibility (Criteria for success is clear, measurable)	+	N
Specificity (Clear plan for launch)	+	+
Familiarity (In-house & Brought-in)	+	+
Communication (Frequency and Efficiency)	+	+
Receptivity (Internal and External climates)	+	+
Structural Facilitation (Clear structure and authority)	-	+
Priority (In comparison to other projects)	+	+
Leadership (Leader activities driving implementation)	+	+

Post-Launch	M	S
Acceptability (If those affected by the change were in accord)	+	+
Specificity (Clear plan regarding data distribution, enforcement & follow up)	-	N
Resourcing (Capital: Financial, personnel...)	-	-
Communication (Frequency and Efficiency)	+	+
Structural Facilitation (Clear structure and authority)	N	-
Priority (In comparison to other projects)	+	+
Backing (Aggregate of Leader activities driving implementation at all levels)	+	+
Assessibility → Achievement (How the implementation performed overall & in comparison to previously set metrics)	+	N

Business Unit #2

Pre-Launch	M	S
Acceptability (If those affected by the change were in accord)	+	N
Assessibility (Expectation are clear, measurable)	+	-
Specificity (Clear Project Plan)	+	-
Familiarity (In-house & Brought-in)	N	N
Resourcing (Capital: Financial, personnel...)	+	+
Communication (Frequency and Efficiency)	+	-
Receptivity (Internal and External climates)	+	+
Structural Facilitation (Clear structure and authority)	+	N
Priority (In comparison to other projects)	+	-
Leadership (Leader activities driving implementation)	+	-

Launch	M	S
Acceptability (If those affected by the change were in accord)	+	-
Assessibility (Criteria for success is clear, measurable)	+	-
Specificity (Clear plan for launch)	-	-
Familiarity (In-house & Brought-in)	+	+
Communication (Frequency and Efficiency)	+	-
Receptivity (Internal and External climates)	-	-
Structural Facilitation (Clear structure and authority)	+	-
Priority (In comparison to other projects)	+	-
Leadership (Leader activities driving implementation)	+	N

Post-Launch	M	S
Acceptability (If those affected by the change were in accord)	-	-
Specificity (Clear plan regarding data distribution, enforcement & follow up)	-	-
Resourcing (Capital: Financial, personnel...)	-	-
Communication (Frequency and Efficiency)	N	-
Structural Facilitation (Clear structure and authority)	-	-
Priority (In comparison to other projects)	-	-
Backing (Aggregate of Leader activities driving implementation at all levels)	+	-
Assessibility → Achievement (How the implementation performed overall & in comparison to previously set metrics)	+	-

Exception of CountryX team, the only ones active due to a CM that spans both units, so the importance and acceptability of the system trickled down that stream of the organization and shows slight achievement in MIS

Figure 7: Implementation Process' CSFs Framework for Each Business Unit with Descriptions of Each Variable

5.2 Summary

A brief description of how this implementation process took place for each of the two Business Units will be discussed below in order to make sense of the models shown above and to better understand those key points and variables that significantly impacted implementation success/failure.

CLM System Description:

For both business units, the CLM system was developed in-house and consisted of a very basic data management tool. The marketing team planned to deploy different types of sales calls for certain products, using specific promotional materials available on the tablet PCs. After every sales call, the sales representatives were expected to fill out a form on their tablet PCs, specifying the type of sales call conducted, the products mentioned and the different promotional materials used along with the HCP's feedback. The business support specialist gathered all the data from the central database on a regular basis and incorporated it into descriptive dashboards, which were then circulated to the marketing teams and the sales teams across the region for analysis. The marketing team will then analyze this data to adjust future deployment strategies accordingly. The sales team may also use this data along with the marketing team's feedback to adjust their future sales calls strategies to specific customers. This analysis may also be generalized to countries or regions, and may be used to adjust future market planning initiatives accordingly.

This system provided the same basic functions of a developed CLM tool (Figure 1) but differed because it was not fully automated and still required manual efforts for the data to be collected, analyzed and distributed, which might reduce the speed of circulating the relevant information collected back to the team. The most efficient system would be automated to provide real-time information at all times without the delay of human intervention at any stage. Also, it would not rely on the sales representative's personal report of the activity that took place during the sales call, but rather have an integrated feature that would record certain metrics such as the type of sales call and the time spent on presentations.

CLM Approval Process:

To begin with, it is important to note that the two units initiated the project in their respective units only two months apart, and thus the marketing managers from both units heading the implementation process worked hand in hand to introduce the concept to upper management. This consisted of 1) getting financial approval, and 2) collecting feedback regarding what metrics were important for upper management and marketing to gather in order for this IS to be valuable as a CLM tool. Both units wanted to complete this implementation using a small budget, and thus leveraged internal capabilities to create the project team that was in charge of designing the tool and setting the stage for the upcoming system introduction. Both teams faced the same issues of low *Receptivity* due to the geographical distance between the headquarters and the regional teams, which sometimes hindered *Communication* and deployment efforts. This is a constant factor that affects both teams in all of their daily practices and is overcome by using technology enabled communication channels.

Figure 8: Summary of Implementation for Business Unit #1

Context:

- 35 sales reps
- Highly competitive spirit
- Highly driven and dedicated project driver

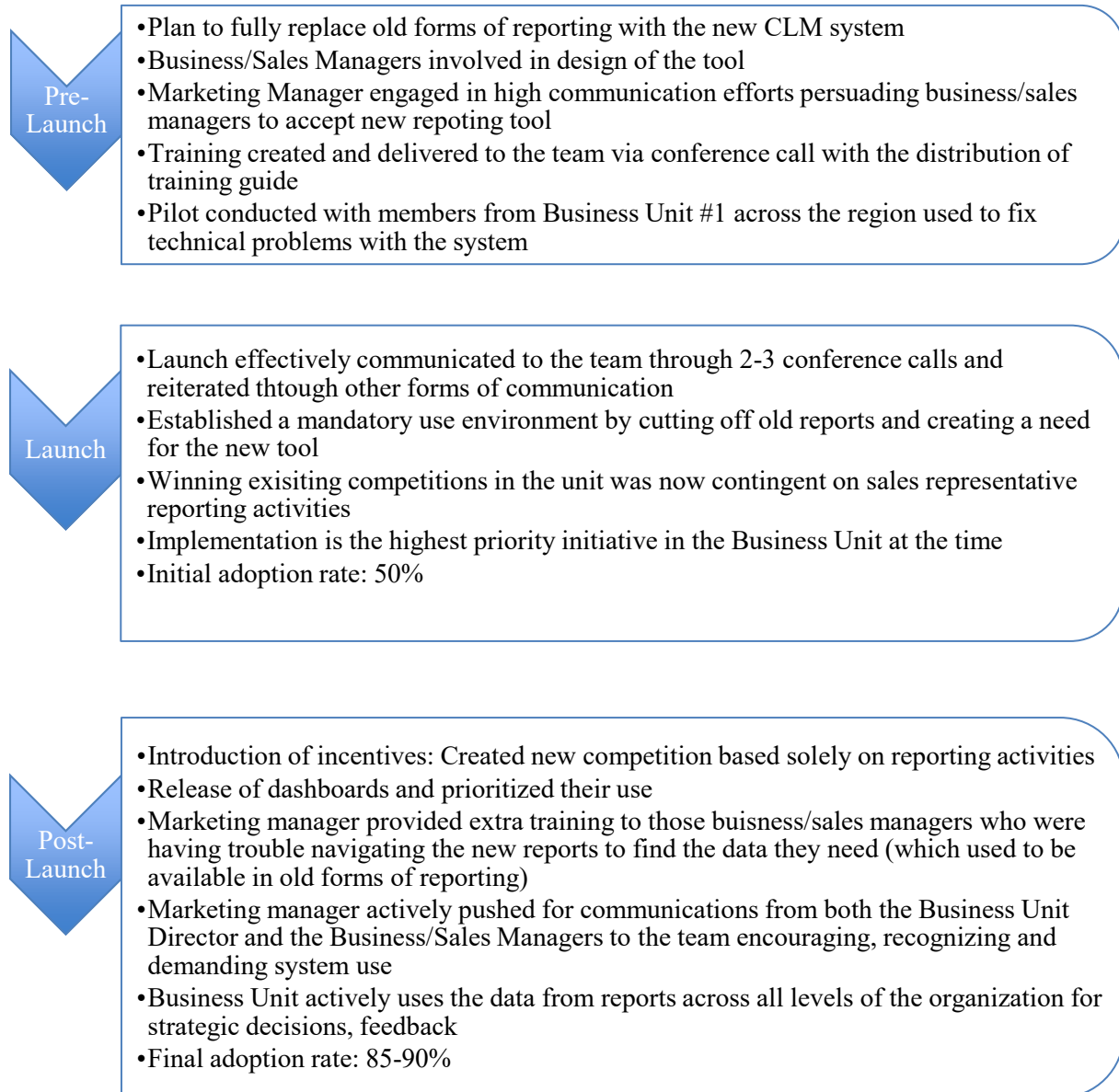


Figure 9: Summary of Implementation for Business Unit #2

Context:

- 65 sales reps
- Implementation begun 2 months after Business Unit #1
- Country X in the region has proven to be an exception in terms of implementation success: In this country only, the Business Unit #2 team has an 85% adoption rate because the Business Manager, who oversees sales activities for both Business Units (Figure 6), enforced system use.

Pre-Launch

- Plan to supplement old forms of reporting with the new CLM system
- Used template of reporting tool created by Business Unit #1, and modified metrics to fit products, specialties etc. of Business Unit #2
- Marketing Manager introduced the new reporting tool and provided training in one conference call, supplemented by the training guide

Launch

- Launch took place through one conference call and email
- Conference call took place right around the beginning of summer: Many sales representatives were not available to take the call
- Launch communications were not efficient in delivering the message of an official start date for reporting
- Created a volitional use environment, where reporting activities was not enforced but rather highly encouraged
- Launch was not prioritized over other initiatives taking place in Business Unit #2 at the time
- Business/Sales Managers expressed their concerns about the new reporting tool: Still prioritized old forms of reporting
- Initial adoption rate: 10%

Post-Launch

- Business/Sales Managers' concerns and Sales Representatives' input were collected through a research project conducted to evaluate the performance of the system
- Could not modify the system based on the findings from research project, but incorporated feedback in the creation of the comprehensive dashboards
- Marketing Manager and Business Unit Director continued encouraging and requesting system use from the team through email and newsletter communications
- Communications were not relayed by the Business/Sales Managers who still prioritized the old forms of reporting and did not use the new system in any feedback session with the sales team
- Priority dwindled over time and adoption rates decreased to 5% across the region

6 Findings

6.1 Summary of the Findings

The findings of this study suggest that different variables affected the implementation's overall success in each of the three phases throughout the implementation process. Figure 10 below highlights the most critical differences between the two business units at each phase. These findings will be discussed in more detail in the following sections, which aim to provide a comprehensive analysis of the implementation process by comparing the two units' activities at each phase of the process.

The findings and data analysis are then used to answer the research questions presented in this paper, and to derive a comprehensive working model of the best practices to be used in future CLM implementations.

Figure 10: Summary of Findings

	Pre-Launch	Launch	Post-Launch
Business Unit #1	<ul style="list-style-type: none"> • High involvement of the sales managers mediated by high Communication levels • Clear goals and project plan set • Tool positioned as disruptive • Led to low Acceptability 	<ul style="list-style-type: none"> • Receptive timing for launch • Launch had highest Priority • High levels of efficient Communication • High levels of leadership activities driving the implementation forward • Clear guidelines for adoption: Completely cut-off and replaced old report • Mandatory use environment • Initial Acceptability increased 	<ul style="list-style-type: none"> • Strong follow-up and feedback activities through high levels Communication • Maintained high Priority within unit • Backing: Leadership activities cascaded down through all levels of the unit • Successful integration of new practices provided by this tool into day-to-day activities across the region • Addition of incentives to supplement Mandatory approach and increased Acceptability even further • High Achievement level
Business Unit #2	<ul style="list-style-type: none"> • Low involvement of the sales managers and thus, low Communication • Goals and project plan were unclear to those individuals involved • Tool positioned as a simple addition • Led to high Acceptability 	<ul style="list-style-type: none"> • Non-Receptive timing for launch (summer season) • Low Priority compared to other initiatives in the unit at the time • Low levels of Communication (deemed inefficient) • Low levels of Leadership activities drove the implementation forward • No clear guidelines for adoption: Supplemented old reports containing some of the same information as the new reports (Overlap) • Volitional Use Environment • Initial Acceptability decreased slightly 	<ul style="list-style-type: none"> • Low levels of follow-up and feedback activities and thus, low Communication • Priority dwindled with time • No Backing: Leadership activities <i>not</i> cascaded down through all the levels of the unit: <ul style="list-style-type: none"> - Low commitment from top management and marketing manager - Resistance at the business/sales managers' level hindering adoption • Data collection level low and insufficient to showcase usable results and integrate new practices • Failed to incentivize adoption • Acceptability decreased further • Low Achievement level

6.2 The Pre-Launch Phase

6.2.1 Readiness

The variable *Assessability* is defined as “the extent to which the criteria for success was clear”, and *Specificity* is defined as “the extent to which what had to be done was determined beforehand” (Hickson et al., 2003). Both *Assessability* and *Specificity* were high in the pre-launch phase of Business Unit #1. The repercussions of the new reporting tool were clear to the marketing manager, the sales managers as well as the sales team. The marketing manager had specifically asked the sales managers pre-launch to supply him with the information they would need to see. He also explained to the sales representatives that this would be a replacement of the manual reports and not an addition to their administrative work.

“As a leadership team I sit on the board with them. So the goal for them and where I spent a lot of time prior to developing it, was really understanding again what they needed to see on a monthly basis. To allow them to stop their sales team having to do these monthly [manual] reports and also winning them over.

[...]

I think that was also met with a little bit of hesitation and animosity but my trade off was that they needed me for a lot of other things, and I've done a lot of stuff for them. So I've helped you it's your turn to help me, it was sort of a tradeoff.”—

Marketing Manager, Business Unit #1

These comments also explain why *Acceptability* was low and yet did not negatively affect the implementation's success. In fact, the marketing manager was aware of the fact that his sales team did not like the idea of the upcoming change after introducing the system to them, and their sales managers were not pleased at having their manual reports replaced; but this was to be expected because the new IS was positioned as a disruptive tool. It was also made clear that this would be mandatory to all those involved. However, based on previous research (Rivard & Lapointe, 2012) this type of conflict is bound to occur when a new IS is introduced and is essential to being able to take the necessary measures to mediate it. In this case, conflict

mediation was enabled by high levels of *Communication* during the pre-launch phase for two reasons: 1) to gather feedback, efficiently communicate goals and expectations, and 2) to moderate initial resistance. A good example of how these interactions were relayed is presented below, and highlights the *Communication* pre-launch between the marketing manager and the team in Business Unit #1:

“There was basically a research project done with all the sales managers and about 15 sales reps to either find out what they wanted, or to rectify the data that I had set in there, if it was something that they needed to see. We launched a pilot as well with a rep from each different country, to make sure that if we’re missing anything we could fix it before doing a full launch, and we did make a few changes in that pilot timeline and we had multiple conference calls and there was lots and lots of emails regarding the project.”—Marketing Manager, Business Unit #1

6.2.2 Experience

Since the same tool had already been deployed and tested by Business Unit #1, the same template was used with minor modifications to fit this Business Unit #2’s needs.

“Because the [Business Unit #1] team was already starting it, and with [Business Unit #2] we just needed to change the product name, the different types of products and the codes of the products, and the specialty...”—Business Support Specialist, Business Units 1 & 2

Utilizing in-house *Familiarity* (which is relevant experience) was advocated, however, in this case, a discussion with the sales managers in Business Unit #2 about their differing information needs was overlooked. This was crucial to making the necessary adjustments to the template that was previously agreed upon by the sales managers in Business Unit #1. Thus, *Communication* in Business Unit #2 was neither clear nor efficient in extracting and catering to the concerns of the different parties involved.

“So they [sales managers of Business Unit #1] were asking us, telling us not all the information is in [The reporting tool], and at the beginning it was supposed to be only the information that their Business Unit director and that the marketing team

require, so they didn't look at what information the Sales Managers were looking for to collect from their team.”—Business Support Specialist, Business Units 1 & 2

6.2.3 Tool Introduction and Positioning

In Business Unit #2 the CLM system was positioned from the very beginning as a supplement to the current reporting tools rather than a full replacement, yet there were no clear guidelines on how adoption of this reporting tool would take place concurrently with the existing requests for manual reports by the sales managers. In the model for Business Unit #2 (Figure 7), a comparison of the marketing manager and the sales manager impressions about *Assessability* and *Specificity* pre-launch shows a discrepancy in their responses. The sales managers were not sufficiently aware of the project plan or what would be expected of them when the system was launched; in contrast, the marketing manager believed those expectations were adequately relayed. The reason for this discrepancy could be due to the fact that reporting was not going to be mandatory in Business Unit #2, and was not going to replace the older reports (meaning it wouldn't completely disrupt current processes), which led the sales managers and the sales representatives to be less resistant to the idea of the new tool pre-launch and more curious about the upcoming change. Below is an example of these opposing views:

“The number one commitment I got from the managers was to make the data active and live, which means they have a commitment to read the data and act upon it, which means call the team, discuss the input, discuss the report and schedule one on ones with the team and schedule one meeting with the whole team.”—Business Unit Director, Business Unit #2

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“I'm telling you that the [new IS] was interesting it was nice, and easy and it doesn't consume much time. However, we don't need to spend time discussing the data on the tool, because we have a primary weekly report which is more comprehensive, and contains deeper details about the business, and urgent and pressing ongoing conversations...”—Business Manager, Business Unit #2

Finally, *Communication* in Business Unit #2 was at a neutral level pre-launch because the marketing manager announced the upcoming change to the team. However, this *Communication* was not strong or recurrent enough to appropriately relay the message needed to such a big team scattered across multiple regions.

“I can’t remember that there was a communication specifically for that [Introducing the system to the team], but there was an announcement in the recertification that there will be a reporting tool, but I can’t remember if there was any other communication.”—Business Support Specialist, Business Units 1 & 2

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“But the trainings were via [Web conferencing online platform], with the team. With [Business Unit #1] they did 2 or 3 conference calls, [Business Unit #2] it was 1 conference call.”—Business Support Specialist, Business Units 1 & 2

6.3 The Launch Phase

6.3.1 Mandatory vs. Voluntary Use Environments

This phase of the implementation process started at the time of launch of the reporting tool for each unit and extended into the first couple of months when launch-specific activities and communications took place. For both units at launch, the goal was to collect initial data from the sales representatives in order to: 1) create dashboards illustrative of sales and marketing activities and 2) sort out any preliminary technical issues, which might impede adoption. Figure 10 shows that there are discrepancies between the implementations of the two units at launch. One of the key differences to note that may have a significant impact on implementation success was whether system use was mandatory.

“And I think the businesses have approached it differently. [Business Unit #1] has been more autocratic, that it’s a mandatory process, whereas [Business Unit #2] was left to be more organic, and the adoption has definitely been higher in the dictative version. So where it’s mandatory in [Business Unit #1] we’ve seen very high

adoption rates specifically of reporting in the field, and obviously makes the data that much more valuable.”—Marketing Manager, Business Unit #2

An in-depth look at how Business Unit #1 enforced system use reveals that the precursors of a mandatory environment are high levels of *Specificity* and *Assessability* at launch. A specific course of action regarding adoption expectations, developed by the marketing manager, was defined clearly and efficiently to both the sales representatives and their sales managers. This is highlighted below:

“The first thing was saying that the reps would have to stop doing their monthly reports to their sales managers and I hoped and imagined that the sales managers would then be on top of them to make sure they would do it. That didn’t happen across the board, and then I went through a few different stages of being quite forceful over conference calls, and telling them they had to do it.”—Marketing Manager, Business Unit #1

Firstly, it was planned and communicated that the new reporting tool was to *replace* the older forms of reporting, and now this was the only way for the sales managers to get any information from their team. This obliged them to be more supportive of this initiative by encouraging their teams to use the tool in order to keep collecting the data that they needed to see on a weekly basis. Some sales managers still requested that their teams supplement the new reporting tool with manual reports to provide other information they thought was still lacking (mostly linked to planning features that are not provided in the new tool). However, due to the mandatory nature of the latter, they were forced to prioritize the new reports over any supplementary reports. Secondly, the sales representatives were also difficult to influence because they report to the sales managers and not the marketing manager. Thus, the marketing manager made success at winning pre-existing competitions contingent on reporting into the new platform. This provided a mechanism he could control and use to exert some pressure on the sales team without the intermediary of the sales managers.

“I know for example that the [competition tables] in [Business Unit #1] started before the [new] reporting tool, they were started by [Marketing Manager of Business Unit #1] alone, and then when [the new reporting tool] came on board,

[Marketing Manager of Business Unit #1] used it as a tool to capture data. So it was then connected to the data.”—Business Unit Director, Business Unit #1

6.3.2 Implementation Climate

Another significant variable that affects the implementation’s success at launch is *Receptivity*, which is defined as the extent to which internal and external climates eased implementation (Hickson et al., 2003). This relates to the internal climate of the organization, as well as of the business unit. In this case, the team was already quite competitive, and thus the addition of a new tool that would encourage that competitive spirit was more accepted by the sales representatives. High *Receptivity* also directly relates back to choosing the most appropriate and receptive time for launch. Given the fact that this organization is large, there were always multiple business initiatives taking place simultaneously, and managers needed to prioritize new initiatives such as this one while they overcame the issue of having a geographically dispersed team. Increased *Communication* and follow-up were vital to push the team to comply in the first months of launch. These efforts culminated in about a 50% adoption rate, which is the target the marketing manager had set.

“We did weekly conference calls like the first 6 weeks for this, getting people’s feedback, following up with people, I did communications in emails and I feel like myself is a driving force, this was a passion for me, I was able to stick close enough to them to not encounter those issues.”—Marketing Manager, Business Unit #1

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“Honestly, in my mind I figured if I could get 50% of the sales team using this then that would be a win in my mind. So that was kind of the goal that I had outlined.”—Marketing Manager, Business Unit #1

This mandatory approach was still insufficient to motivate some sales managers and thus their sales representatives:

“No it was mandatory but people didn’t feel that it’s mandatory, and I feel that at the managerial level, they didn’t push their employees to do it.”—Sales representative, Business Unit #1

From the examples shown above, one important factor that appears to push this implementation forward is the *Leadership* activities of the project driver (in this instance, the marketing manager). These activities were crucial to setting expectations, leading the change, and monitoring the state of the implementation throughout in order to constantly manage the course of action of all the players involved. Finally, Business Unit #1 also positioned their launch at a time when they were able to prioritize the introduction of this reporting tool over other business initiatives taking place around the same time. This is important because it ensured that the sales representatives as well as their sales managers were not overwhelmed by this new addition. It reduced resistance and increases the likelihood of amassing Acceptability across the multiple levels of the organization.

At launch, Business Unit #2 had low *Receptivity*, mostly due to the timing of the launch: 6 out of 10 respondents for Business Unit #2 stressed the fact that the launch took place at the wrong time. It was initiated right before the summer season had begun, so employees in the unit were slowly starting to take their yearly vacations. This affected the launch because it made it more difficult to efficiently communicate with the sales representatives and their sales managers at a time when they were either unreachable or preoccupied by the disruption of regular activities. *Communication* was thus deemed inefficient at this stage of the implementation process in delivering the crucial messages for two reasons: 1) the official start date for reporting activities; and 2) the reporting expectations for participation. This resulted in both low *Specificity* and *Assessability*.

“I remember that once we launched it for [Business Unit #2] it was vacation season, most people were on vacation so even when we did the call for the team to make a review about [the new reporting tool] launch, most team members didn’t attend because they were on vacation. And then after coming back from vacation, it was September and we have a lot of events the team was busy to achieve their targets, so they had other priorities, other than working on [the new reporting tool], so this is one of the reason that makes it also slow, or that the adoption rate is smaller in [Business Unit #2].”—Business Support Specialist, Business Units 1 & 2

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“So one of the things that also made the adoption rate low in [Business Unit #2] is because as we said, it started during vacation season, and there was no official start date for the team, that from now you have to start filling the [new reporting tool]. So they didn’t feel that it was something mandatory that they had to do, they just thought that if they fill it or not, no one is following up on that.”—Business Unit Director, Business Unit #2

The CLM system was positioned as volitional rather than mandatory in Business Unit #2; it did not replace any older forms of reporting used but rather supplemented them. This required that the sales representatives needed to duplicate their reporting efforts. However, this had little influence on the initial adoption at launch, probably because the sales representatives were curious as to how this new reporting tool worked and how it could be beneficial. The marketing manager took the time to explain how this tool would improve their performance as well as the marketing department’s overall intelligence.

“I think the initial embrace was positive from the sales reps. I’m sure some were concerned about doing double administrative work, but in general the reps like mobile technology, they like that we brought it to them on their iPads [...] But initially it was pretty easy and not a lot of resistance.”—Marketing Manager, Business Unit #2

6.3.3 Priority

Business Unit #2 took measures to try to increase the initial adoption rate at this stage by collecting feedback from the sales managers and the sales representatives regarding the reporting tool. This input was used to design the dashboards that were released in the post-launch phase of implementation in order to determine what incentive schemes might be successful in increasing sales representatives’ acceptability (and thus adoption rates). By then, however, they could no longer make changes to the format of the reporting tool based on the modifications that the sales managers suggested were necessary to replace their manual reports. Some of the sales managers’ requests went beyond the scope of what was initially meant for this reporting tool, which had to be articulated to them.

“There was quite a bit of uptake at the beginning. I think where it failed was in the follow-up and in the feedback, because as the teams were reporting they still had to fill in the Excel sheets for the managers, and they still had to go to the manual reports, and they did not feel that the report from the [new reporting tool] was sufficient and I don’t think there was a lot of follow-through on that. And there were no consequences for doing or not doing, so that’s where it failed.”-Business Unit Director, Business Unit #2

Finally, prioritizing the launch of this reporting tool might have alleviated some of these issues. At launch, the tool was definitely given importance within Business Unit #2 but, it was not prioritized over other initiatives happening at the time. This relates back to the necessity of timing the launch of the system at the most receptive time possible to allow implementation activities to take *Priority* over others.

“The original launching phase did not get all the time and attention it deserved, not because there was anything wrong with it but probably again timing, I think it came probably around the end of year and people had so many things to take care of that some people lagged behind and it wasn’t the most top priority for managers. They had other things to take care of.”—Business Unit Director, Business Unit #2

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“Other than a new product launch, or a KPI for the job, I feel like this got a lot of attention and visibility, and we followed it up with a lot of direct interviews and engagement with the managers, so I think from an internal standpoint, it got a fair amount of energy and attention.”—Marketing Manager, Business Unit #2

6.4 Post-Launch

6.4.1 Plan for Data Analysis and Distribution

The post-launch phase of the implementation process begun at the release of the first dashboards and extended for a couple of months. In this phase, both units were no longer engaging in launch-specific activities; they were now responsible for finding ways to utilize the data collected while maintaining/increasing adoption in order to liven up the tool and reap the benefits of having a CLM specific tool.

Both units exhibited low *Specificity* post-launch because they did not have a set plan ahead of time regarding the data that was collected. It was only after the launch of the system that the data was analyzed and organized into dashboards that they could use based on the feedback from the sales team and the sales managers. Low *Specificity* exhibited here was not an unsurmountable factor, and rather the analysis below will highlight that a lack of planning may be mediated by other factors that were more critical at this phase of implementation.

Another factor to consider at this phase is that post-launch *Resourcing* was also low for both units. From the very beginning, one of the goals for this system was to have it completed on a modest budget, which was feasible in the first two phases of implementation. However, in the post-launch phase, the implementation of system changes based on the feedback collected from the sales managers and their teams required more capital investments.

“I think if we had more budget to create more flexibility and maybe some ad hoc or some customized reporting, like maybe every sales manager has their own dashboard or report where the dashboarding was done real-time instead of in Excel by someone on the team, we would see greater adoption of the tool.”—Marketing Manager, Business Unit #2

On its own, this situation did not seem to negatively affect the implementations’ success and might also have been mitigated by other more important success factors, which are discussed below.

6.4.2 Leadership Activities Driving Implementation

6.4.2.1 Business Unit #1

Business Unit #1 displayed one key factor that differentiated it from Business Unit #2, and which appears to be the most critical factor in the post-launch phase of implementation: *Leadership* activities at *all levels* of the organization supported the new CLM tool and drove the initiative forward in Business Unit #1. The marketing manager who drove this implementation throughout the process maintained high levels of follow-up *Communication* with both the sales managers and the sales representatives. He provided constant reminders to report and reiterated the benefits of the tool. Top management was also involved in giving feedback and communicating support for this initiative, to showcase how the data was being used to improve market intelligence. This was essential to the process because it created even more value in the tool for the sales representatives. It will not only help them to improve their sales performance overall, but if they excel in their performance, it will be visible to top management, will be recognized and ultimately give the sales representatives more exposure within the organization to advance their careers.

“And we kept reiterating in all our communications, he made sure in all my communications with the team I would reiterate these messages. He made sure in all the sales manager conversations too. So there was a lot of communication cascading, from all the stakeholders to reinforce the message.”—Business Unit Director, Business Unit #1

Support from the sales managers was imperative since they are the ones who strongly influenced their teams. The sales managers who were involved in the implementation process from the pre-launch phase, now had greater *Acceptability* (vs. low *Acceptability* pre-launch) towards the new reporting tool. The marketing manager taught them how to navigate through the new tool in order for them to get all the information they needed, and they were able to partially, if not fully, replace their older forms of manual reporting. They were also able to relay to their teams the high *Priority* that was set by the marketing team and top management regarding the efficient adoption and utilization of this tool. This ensured that every sales representative now adhered to his/her reporting obligations by prioritizing the new reports over the old ones.

“There were a few people that felt it was a bit difficult for them to get some of the information that they were used to looking at on a monthly basis, which I agreed with, and I basically spent extra hours giving them training on the tool to make sure

that they were able to utilize their time a little bit better and become more interactive with it so they could easily find what they needed.”—Marketing Manager, Business Unit #1

In the earlier stages of implementation, the results show that it is essential to gather support from leaders at all levels of the organization to increase *Acceptability* of the system. However, post-launch, a deeper analysis reveals that *Leadership* consists of both support for the initiative and leadership activities driving the initiative forward. The results suggest that *Leadership* aggregates through all levels of the organization, which reveals a new variable - *Backing*. This transforms the *Leadership* variable (previously thought to have an effect through individual leader activities) into an aggregate of all leadership activities and commitment at the various levels of the organization. *Backing* is an interesting finding because it reveals that efficient *Leadership* across the various levels of the organization is necessary for a CLM system implementation. This is because it aligns the goals of the different managers involved and this allows managers to relay the messages from the project team or from top management to their teams in a more uniform way.

“If you want to see the gap, the gap is between the team and management. I have my sales manager, who every day reminds me please don't forget to put your data in the [new tool], so I come to my team like please, don't forget to put your data into the [new tool]. Like that I started this, 3 or 4 months ago, and now there's no need to remind anyone because by default they came to the office after their visits to the field, and the first thing they did is putting their data into [the system], submitting it and then seeing their emails.” – Senior Sales Representative, Business Unit #1

This will be discussed in further detail in the Discussion section of the paper.

Moreover, at launch, Business Unit #1 was only able to increase adoption rates to about 50%, but could not impose the system's use on the entire team using only the coercive approach, as mentioned in the launch phase. Even some of the initial adopters of the system started to lose interest in the tool because of the time it took to collect enough data to create and send the first dashboards. Both feedback and follow-up in the form of increased two-way *Communication* were crucial to maintaining compliance from the sales representatives post-launch because it showed them that their efforts were not wasted and would result in a report that would be useful to them, their managers and the business unit as a whole. Collective support from the various levels of management allowed the team in Business Unit #1 to: 1) start using the dashboards efficiently in

their weekly communications; 2) recognize the high achievers and call out the non-compliers; 3) provide guidance on how individual or country future activities could be improved in performance evaluations and feedback sessions at all levels of the organization; and 4) adjust their strategy setting efforts for future marketing initiatives and deployment strategies according to the data collected.

“In [Business Unit #1] there was a lot at stake, because it fed into the [competitions], it fed into the managers. So [Business Manager from Business Unit #1] for example adopted this 100% and it was his only tool of feedback and coaching with his team.”—Business Unit Director, Business Unit #1

The marketing manager also began incentivizing reporting efforts around the time that they introduced the dashboards to the team post-launch in order to further maintain *Acceptability* and increase adoption and user participation even further. Business Unit #1 launched a competition that was solely based on the activity data collected in the new reporting tool in the post-launch phase. At that point, the data was expected to be fully descriptive of the sales representatives’ activities. It was established that if one did not accurately report all of his/her activities, it would result in a negative perception of their performance by management. The use of actively reporting as an incentivized KPI aided in enforcing system use.

“I realized that I probably needed to go with the carrot as well as the stick message so that’s when we started incentivizing it. [...] So we saw lots of people using it to begin with, and whilst they didn’t have anything to see what they were doing, like what did it mean that they were entering this data in, we then started to see a drop off then we entered the dashboards again, and then we saw a pick up and that’s when we started doing these competitions.”—Marketing Manager, Business Unit #1

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“So it was embedded in the goals and objective of every sales rep, you would now find ‘filling the reporting tool’. So when it was time for a performance review, the managers could actually remove those points for the reps and they could risk losing some of their performance rating due to their lack of reporting.”—Business Unit Director, Business Unit #1

6.4.2.2 Business Unit #2

Post launch, Business Unit #2 did not have all the necessary *Leadership* activities supporting the implementation of the new CLM system across the different levels of the organization, and this proved to be the biggest downfall in its implementation at this stage. *Leadership* activities at the various levels of the organization were not consistent or aligned and thus, did not aggregate to create *Backing* as was seen in Business Unit #1.

Post-launch, the marketing manager who drove the implementation maintained his *Communication* efforts and tried to encourage the sales managers and their sales team to report. Moreover, top management participated in sending reminders encouraging participation on an intermittent basis. This was not a very strong or forceful approach on their behalf; firstly, because *Priority* for this initiative dwindled over time; and secondly, because the driving force behind this implementation was not sufficiently firm or persistent to overcome the difficulties of having a volitional environment for system use.

“Yeah I think the priority has dwindled through time, we still send the dashboard on a weekly or almost weekly basis, and still try to use it in our conversations, but I think there’s not enough data entry in it to make it worthwhile on the [Business Unit #2] side from a leadership standpoint.”—Marketing Manager, Business Unit #2

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“I think this is something they would’ve adopted and really followed had maybe me [Business Unit Director] myself given it more attention, priority and pushed it through as much as [Marketing Manager of Business Unit #1] was pushing it through in [Business Unit #1]. [...] I think if it was to get more attention it would really pick up for [Business Unit #2] as well.”—Business Unit Director, Business Unit #2

Once the dashboards were released, it was expected that the sales managers would utilize the data collected in their feedback sessions and weekly reviews with the team. It was also assumed that they would exert more pressure on their teams to report if they were not compliant, since the sales managers are the ones who have direct influence on the sales representatives. However, this did not happen across the board. Most sales managers and the regional business

managers in Business Unit #2 did not feel that the dashboards were sufficiently illustrative of the information they needed to fully replace old manual reports. As a result, they did not encourage reporting on the new tool but rather prioritized their own manual reports, which reduced the sales representatives' *Acceptability* of the new tool: This meant that not only are the sales representatives duplicating their efforts by reporting on two different platforms, but they are also unable to reap the benefits of the new CLM tool because it is not being incorporated into their regimen. They did not see the results of their reporting activities, and this led them to be both indifferent and rather opposed to the new system. *Acceptability* became very low post-launch.

"They have the tool and they use it a secondary reporting tool. They do understand that the weekly [manual] report is the primary reporting tool because we can't have enough space to discuss every aspect of the business"—Business Manager, Business Unit #2

When the data were triangulated from the 10 informants in Business Unit #2, *Communication* appeared to be neutral at this stage. While there was some *Communication* from the marketing team and top management to both the sales representatives and their sales managers regarding the new tool and encouraging participation, it was inadequate to ensure compliance. Moreover, because reporting was not mandatory, *Communication* was perceived as not being sufficiently forceful. Finally, these messages were not cascaded down the organization by the business managers and sales managers in Business Unit #2 due to both their resistance and low *Acceptability* of the new reports.

"We've highlighted to the [Business Unit #2] leadership team, they get a copy of the report on a weekly basis, we've highlighted the lack of compliance to reporting, but again there's not really a mechanism to enforce it. Especially if he's [Business Manager of Business Unit #2] asking his team to fill out a different report and this isn't meeting his needs, and he hasn't been held accountable then at this point I'm not really sure how we can enforce it."—Marketing Manager, Business Unit #2

An exception worth mentioning in Business Unit #2 that highlights the importance of leader activities at the business manager and sales manager level is Country X in the region, where the team in Business Unit #2 exhibited an 85% adoption rate. This example shows how the pitfalls of the implementation process in this unit might have been overcome. The business

manager's activities in isolation, without strong *Backing* from the business unit, was able to generate a high adoption rate within his team. In Country X, the sales representatives are almost fully committed to reporting on the new system (85% adoption) and the team as a whole is utilizing the new reports in the way that was initially expected of them. The business manager in Country X oversaw multiple areas of the business, for both units among others. He was a strong proponent of gathering data and intelligence from the field, and played a very big role in enforcing user participation in this country for both units. He took the initiative to prioritize the new reporting tool, and to turn reporting activities into a KPI, which meant that if any member of the team did not comply, he/she could be penalized. This trickled down the organization and to the rest of his team (including the sales managers). CountryX reached an 85% adoption rate, which constitutes the largest component of the small amount of data collected for Business Unit #2 regionally: At launch, the teams in Business Unit #2 from other countries across the region adopted the new system, but that was short-lived because of the lack of follow-up and feedback post-launch, which led to a 5–10% adoption region-wide post-launch.

“From a sales team perspective, I think it's just traditional, of course you face the same problem as any type of reporting tool. But this is where it's crucial to set it, and explain that this is not an optional tool that we're testing this is actually THE reporting system of the company which they need to follow.

And second of all it's very important to show them #1 how we're interpreting this data into something that will better help them in their business, and #2 recognizing them as we said earlier, for those who show commitment and sort of manage themselves.”—Business Manager, Business Unit 1 & 2

Even though the business manager in Country X made reporting mandatory (contrary to the Business Unit's overall approach) this example demonstrates how much influence the business and sales managers had over the implementation's success and their sales representatives' *Adoption and Acceptability*.

Finally, since the reporting tool was positioned as volitional in Business Unit #2, there were some thoughts about incentivizing participation by management, however, this was difficult to do at this stage when so little data was collected. It was hoped that the release of the

dashboards would spark the competitive spirit in Business Unit #2, but that was unsuccessful, again, due to the inconsequential amount of data collected.

“In [Business Unit #2] it was highly encouraged and I thought peer pressure by publishing and seeing your team either on the results or off would influence behavior, but it didn’t necessarily influence behavior, now that there’s so few people reporting from the [Business Unit #2] team, I don’t think there’s any pressure on the team or the managers to report.”—Marketing Manager, Business Unit #2

6.4.3 Implementation Achievement

Overall, Business Unit #1 had a high level of *Achievement*, which is defined by how well the implementation performed overall and in comparison to previously set metrics (Hickson et al., 2003). All of the informants (10/10) for Business Unit #1 agreed that the tool was successfully implemented in terms of design and execution. The team was at an 85–90% adoption rate; the sales managers are efficiently using this tool to coach and provide feedback to their teams, and the marketing team was able to analyze this data to devise future marketing deployment strategies. Top management was supportive of this initiative because they are seeing results and numbers descriptive of sales representatives’ activities on the ground.

On the other hand, the *Achievement* level for Business Unit #2 was low, not only because adoption rates were so low, but because they also faced an overall problem with execution of the implementation and deployment of the tool. In total, eight out of ten respondents for Business Unit #2 agreed that the design of the reporting tool (which was done in conjunction with Business Unit #1) was successful, but its implementation failed.

An initial assessment that compares the two business units might lead to the view that taking a volitional approach was the downfall of Business Unit #2. However, a deeper analysis revealed that the fact that system use was not mandatory might have been mediated by other factors with a different approach to the implementation process. For example, Business Unit #2 lacked support from the sales managers in the region, who were crucial to pushing this initiative

forward. This could be due to the fact that they were minimally involved at the pre-launch phase of implementation. This created a gap between the marketing team and the sales team from the start, which worsened with the progression of this implementation. During the triangulation process, it became apparent that it was more difficult to triangulate the information received from Business Unit #2, because the informants had opposing views on the occurrence of some variables (absence/presence/neutrality). A closer look at the roles of the respondents with the most opposing viewpoints revealed that their differences existed between the marketing manager and sales managers. This is consistent with previous research on the relationship between marketing and sales managers (Homburg & Jensen, 2007). Figure 7 shows the misalignment of the marketing manager and the sales manager responses regarding their impressions of presence or absence of the variables studied at all the stages of implementation, even post-launch:

“I believe that maybe marketing is being able to get much more out of this [new reporting tool] than the sales managers. I think the dashboards themselves give me [Business Manager for both units] an amazing helicopter view of what is happening, but the program is not designed to give a sales manager, because the way we look at things is different, it does not give me coverage dashboards, benchmarking dashboards, within the same country among the reps based on specialty. And I think this is normal because originally it was built with a stronger marketing foundation, but I think that the future or upgraded system needs to also take into consideration, what type of dashboards the sales manager might be looking at.”—Business Manager, Business Units 1 & 2

The success factors derived at post-launch combined with the previously derived success factors from the pre-launch and launch phases will be discussed below and used to create a working process model that may be used for future endeavors when implementing a CLM reporting tool.

7 Discussion

In this section the findings in the data analysis are discussed in order to provide answers to each of the research questions.

7.1 What is the process of implementation of a CLM system?

This case study reveals that the process of implementation of a CLM system should be viewed as a longitudinal endeavor that consists of multiple phases and not as a single-block in time. In fact, the data collected suggests that this process may be divided into three distinct phases of implementation, and this aligns with previous research on the implementation of CRM and ERP systems (Motwani et al., 2005; Almotairi, 2009). This study proposes a process model for an IS implementation, which has only been done in two previous studies on ERP and CRM implementations. Thus, the theory of studying an IS implementation as a three-phase process has not yet been fully established in the literature. The results from both business units in this study and from the pre-test further validate the occurrence of three distinct phases of implementation and align on the factors found in each of the phases. This validates the necessity of developing a process model even further

Figure 7 delineates the process of implementation in each unit and highlights which factors came into play at each individual phase. It is important to note that the list of relevant factors in each of the phases did not vary from one business unit to the other; in addition, the factors in this study aligned with those derived in the pre-test that was conducted in a university setting. This is a new and interesting finding because it exposes the fact that the different factors involved in the implementation of strategic decisions in general in organizations (Hickson et al., 2003) have varying effects throughout the process of implementation when examined longitudinally. Thus, when examining these factors in the context of an implementation of an IS, one needs to look at the varying roles of each factor throughout the implementation process, and keep in mind that these factors do not have the same level of effect on the implementation's success in each of its phases.

7.2 What are the Critical Success Factors (CSFs) of implementation that play a decisive role at each phase of the process?

7.2.1 Pre-Launch

To begin with, the addition of CLM to the organization requires a major shift in the daily business processes that take place. As suggested by the data, this implementation touches various functional departments in the organization, the most important of which are the sales and marketing departments. Given that they are the most affected; it is important to gain support from the managers of each department in order to efficiently understand their needs and requirements of the system (Maleki & Anand, 2008). In this case study, the marketing managers headed the implementation. Given the fact they were implementing a CLM tool, the latter was focused on marketing efforts and market deployment strategies and thus, support for this initiative from the marketing managers was a given.

On the other hand, when comparing Business Units #1 and #2, the sales managers' support was difficult to obtain in both units, but was more of a problem in Business Unit #2. Business Unit #1 obtained support by involving the sales managers in the design of the tool starting at the pre-launch phase of implementation. This finding aligns with previous research: user involvement at the design stage of an IS will lead to lower resistance over time (Hartwick & Barki, 1994). After all the initial metrics to collect had been agreed upon by top management and the marketing teams from both units, the marketing manager from Business Unit #1 requested feedback from the sales managers regarding those metrics. This was because this tool was set to fully replace the older forms of reporting, and thus, collecting feedback was crucial to achieving that objective. By doing so, the marketing manager was also able to use this feedback session to clearly communicate the benefits of having a CLM tool to the sales managers, as well as to set expectations regarding adoption and system use activities with their sales teams. This was a key differential of Business Unit #1's approach to the implementation, which set the stage for alignment of the different leaders involved, by resolving conflict in the initial stages of implementation. Business Unit #1 showed high levels of *Specificity* (having a clear project plan) and *Assessability* (criteria for success was clear to all those involved) that were necessary to taking the right steps in gaining the sales managers and their sales teams' commitment to the tool down the line of the implementation process.

Acceptability at pre-launch was low in Business Unit #1 because the individuals involved—the sales managers and the sales representatives—were not fully in accord with the

upcoming change because it was going to affect their day-to-day work. However, this initial resistance did not hinder the success of the system's implementation in the later stages. In fact, previous research shows in the context of a CRM implementation that user resistance and apprehension is to be expected in the first stages of the IS project. It should be welcomed in order to take the necessary steps to deal with it as early as possible in order to avoid future consequences of this resistance such as partial participation or partial data entry (Rahimi & Berman, 2009). Business Unit #2 did not create alignment between the various leaders involved at the initial phase of implementation due to a lack of *Communication* and thus, conflict arose in the later stages of implementation.

Business Unit #2 did not position the tool as disruptive: it was not intended to completely change current business processes, but rather, to supplement them. In this case, *Acceptability* was high because the goals and expectations for this tool were not clearly set or communicated to the team, and thus did not spark much apprehension. The data analysis reveals that this is due to low levels of *Specificity*. Business Unit #2 did not clearly outline a plan regarding how this tool would be incorporated into regular business processes or how it should be utilized by the sales managers or the sales team. They focused their communications on the benefits of a CLM tool, and not on how it would be used. This resulted in having too much flexibility across the region regarding how the tool should be adopted and utilized.

In organizations, when a rift exists between the marketing and sales functions, any implementation of a new information system requires top management support. Previous research in ERP and CRM contexts emphasizes this point (Maleki & Anand, 2008), because top management support is essential to endorsing the new system and explaining how it supports organizational goals. However, ERP and CRM tools are organization-wide tools and thus differ slightly from this CLM tool. Specifically, in the context of this CLM tool, previous research on the relationship between marketing and sales managers in general states that top management commitment and support is needed to moderate this relationship. This is realized by showing support for strategic initiatives, encouraging collaboration and ensuring goal alignment and good communication (Le Meunier-FitzHugh et al., 2011). Top management support is important at all stages of the implementation process, and should be secured starting at the pre-launch phase.

7.2.2 At Launch

The most crucial factor to consider at launch (and which is a precursor to effective *Communication* and implementation success) is *Receptivity*. A receptive climate consists of factors both internal and external to the organization, and can ease implementation by having the system launched in a facilitative climate (Hickson et al., 2003). Business Unit #2 is a good example of the consequences of low *Receptivity* at launch. The timing of their system launch took place during the summer season, when most employees take their yearly vacations. Moreover, since this organization is in the Middle East, the Islamic holy month of Ramadan occurred around the same time, which modified work hours and affected the engagement of some employees. Finally, multiple other projects were taking place in Business Unit #2 that took the focus away from the launch of the system, and did not allow them to *Prioritize* this initiative over others. This affected the marketing manager's ability to efficiently communicate with both the sales teams and other management levels. This is because the team was unreachable and the managers had other concerns they were focused on, and the message regarding the launch of the reporting tool was lost. There was still some *Communication* to the team to notify them that adoption rates were low; however, this communication did not reach the team efficiently.

In contrast, Business Unit #1, exhibited high *Receptivity* at launch: the launch happened at a time when they were able to prioritize this initiative in comparison to others occurring in the Business Unit at the time. The sales managers and top management were available and able to convey the *Priority* to their teams, and this positively facilitated these *Communication* efforts. *Priority* was expressed in the form of persistent and persuasive *Communication* efforts from the project team or project driver, in this case, the marketing manager, as well as other leaders involved: top managers and middle managers. It is imperative that the launch of the system is made a top *Priority* and does not go unnoticed in the department, and this was the case in Business Unit #2. Business Unit #1 had a strong launch because the project driver (the marketing manager) ensured that *Communication* regarding the launch of the system and adoption expectations uniformly came from all levels of leadership and reached the sales representatives. He pushed top management to showcase their support for this initiative in their communications

to the team, and made sure that the sales managers were following up on their respective teams to prioritize adoption of the new reporting tool at launch. This is an example of having a “change champion” (Miller, 1997), to push a strategic initiative forward in the organization. However, having high *Receptivity* in Business Unit #1 was crucial in establishing this high *Priority* and engaging in effective *Communication* at launch.

One must also consider the effect of having a suitable project plan and a high level of *Specificity* at launch. Regardless of whether system use was mandatory or volitional, the units needed to devise an appropriate project plan regarding how the launch would take place. Firstly, the most important problem to tackle was how the system would be introduced to the team. It was important to have an official start date for reporting, but in addition, clear guidelines were necessary on how the marketing manager and the sales managers were going to encourage or enforce system use. Previous literature suggests that clarity of vision is crucial to setting *Specificity* (Miller, 1997). In Business Unit #1, the marketing manager had a clear vision of where the new reporting tool would fit into the business processes and activities of the unit. The sales representatives in that unit were aware that the new reporting tool was meant to replace the older forms of reporting, and if additional information was required by the sales managers in the form of supplemental reports, it would take second priority to the new tool. Moreover, the sales managers were informed to encourage system use and were responsible for following up on any sales representatives who were not complying to this initiative. Those involved knew what had to be done in order to achieve progress and how to push this implementation through. This implementation was enabled by high levels of *Communication*.

Business Unit #2 did not have a clear vision of how the new reporting tool would be adopted as a supplement to current reporting activities. Since the two reports overlapped on some pieces of information and differed on others, increased *Specificity* at launch could have alleviated this problem by clearly differentiating what goes into the new reporting tool and what could remain in the supplementary manual reports in order to minimize the duplication of effort for sales representatives. The sales managers, on the other hand, still prioritized the manual reports to ensure they got the information they needed, and were under no pressure to prioritize or enforce the new reporting tool with their respective sales teams. They relied mostly on the

communications from the marketing manager and top management to relay the messages regarding the CLM system's adoption and use. Moreover, the launch happened at a non-receptive time, and resulted in less effective *Communication* all around. The sales team for the most part was unaware that an official start date had been set for the new reporting activities.

Finally, a major difference between the two units was whether or not system use was mandatory. In Business Unit #1, where system use was mandatory, adoption rates at launch reached 50%, which was in line with what was intended for a successful launch. However, the marketing manager ideally wanted to increase this rate across the region post-launch. This suggests that a mandatory environment alone is not the only determinant of adoption, but rather other incentives need to be provided to increase adoption rates and system *Acceptability*. This will be discussed further in our upcoming discussion of the third research question.

7.2.3 Post-Launch

Post-launch, the most crucial part of maintaining *Acceptability* and adoption rates lay in the *Communication* of results from the addition of CLM. When adoption increases after the initial launch, it is important to engage in two-way communication in any information system implementation: 1) to showcase results; and 2) to collect feedback and maintain follow-up. Previous research on ERP implementation suggests that the *Communication* of ERP success post-implementation is crucial to maintaining *Acceptability* by constantly monitoring previously set targets and milestones and showcasing achievement (Motwani et al., 2005). The CRM literature also highlights the *Communication* of success and states the importance of having the system perceived as easy to use and beneficial by the users of the system (Maleki & Anand, 2008). This stresses the importance of collecting feedback from the sales team and the sales managers post-launch to ensure that the system is being used efficiently and is perceived positively by the sales team. For example, in Business Unit #1, the marketing manager realized that having a mandatory use environment was insufficient to get his team to fully adopt the system. After considering their feedback, he incorporated an incentive scheme that increased adoption rates from 50% to about 85% across the region. *Communication* also allows the project team or project driver to follow up on adoption patterns: If a sales representative were to suddenly stop reporting, or reduce his/her

efforts, the project driver can then initiate a direct response to follow up with his/her sales manager and/or them directly to re-engage them.

In this case study, both units had low *Specificity* regarding what to do with the data once it was collected and figured it out as they went; according to the literature one might assume this would reduce *Acceptability* and adoption rates (Maleki & Anand, 2008). It took the units a couple of months before they could deliver the dashboards that were representative of the sales teams' reporting efforts. The sales representatives did grow tired of reporting without seeing the resulting actionable data, but in Business Unit #1, that problem was alleviated with increased *Communication* and follow up from the marketing managers and continuous encouragement from the sales managers and top management. This brings us to the second most crucial success factor post-launch, which is *Backing*.

Backing according to previous literature is defined as “the degree to which influence patterns favor implementation” (Miller, 1997) and requires commitment and support from those authorizing the change, which in this case is top management; it also requires commitment and support from those needed to implement the change, in this case, the marketing and sales managers. This is similar to the concept of aggregate *Leadership*, which is the importance of having efficient and effective *Leadership* across all levels of the organization or unit's hierarchy working together (O'Reilly et al., 2010). The authors suggest that an aggregate of conducive *Leadership* activities results in higher alignment between the leaders and a more successful strategy implementation overall. In Business Unit #1, the lack of *Specificity* before the release of the dashboards was overcome by: 1) having a project driver to follow up on the CLM system's performance; 2) the sales managers following up on their teams and mandating reporting efforts; and finally 3) the top managers showcasing support for this initiative and encouraging participation (i.e. high levels of *Backing*). Once the dashboards were released, this cascade of *Communication* continued: Both top management and the marketing manager used these dashboards to recognize high achievers, call out non-compliers, and provide feedback and coaching regarding how to improve performance based on the data collected. Moreover, the same information was also relayed by the sales managers to their teams directly; firstly, by encouraging participation and recognizing high performers and secondly, by using the dashboards and the

reports from the new reporting tool to provide feedback to individual sales representatives. Finally, given the pertinence and substantial amount of the data collected, the marketing team was able to showcase how they are now using the new reporting tool to devise future marketing strategies and deployment efforts.

In contrast, Business Unit #2 did not have a strong *Communication* effort post-launch. The sales team was using the system and not getting any form of feedback before the release of the dashboards; thus, they slowly reduced their efforts. Even though the marketing manager of Business Unit #2 was following up on the team through his *Communication*, he lacked *Backing* from the other leaders involved. Top management commitment diminished and the sales managers were not relaying any of the messages from the marketing manager to their team. No one exerted direct pressure on the team to report, and once the dashboards were released, *Priority* on the reporting tool and *Communications* regarding its implementation had dwindled. The sales managers did not see value in these reports, even more so post-launch due to the little amount of data; thus, they did not share the dashboards with their sales team and did not use them in any feedback sessions or to offer guidance. Clearly, there was no *Backing* in Business Unit #2 from the different leaders involved.

The data suggest that some factors are more critical than others to the eventual success of the CLM implementation, while others only play a secondary role and their absence can be mediated. Therefore, the best practices derived from our case study and previous literature discussed above and the resulting Critical Success Factors (CSFs) for each phase are presented in Figure 11. An action model is developed and proposed that can be used to guide future similar CLM system implementation initiatives.

The Critical Success Factors highlighted in this research fully align with previous research on the implementation of strategic decisions (Miller, 1997), with the new addition of the *Communication* variable specific to the implementation of information systems, because it requires showcasing results and utilizing the CLM tool. *Communication* is considered a CSF in the ERP and CRM implementation literature (Maleki & Anand, 2008) however, and is now a novel CSF in CLM systems implementation research. Moreover, this aligns with other research

on successful strategy implementations by Crittenden & Crittenden (2008), in which the researchers highlight the six silent killers of strategy implementation, which proved to be the downfall of Business Unit #2, and relate back to the CSFs here outlined:

- “Top down or laissez faire senior management style
- Unclear strategy and conflicting priorities
- An ineffective senior management team
- Poor vertical communication
- Poor coordination across functions, businesses and borders
- Inadequate down-the-line leadership skills and development”— (Crittenden & Crittenden, 2008)

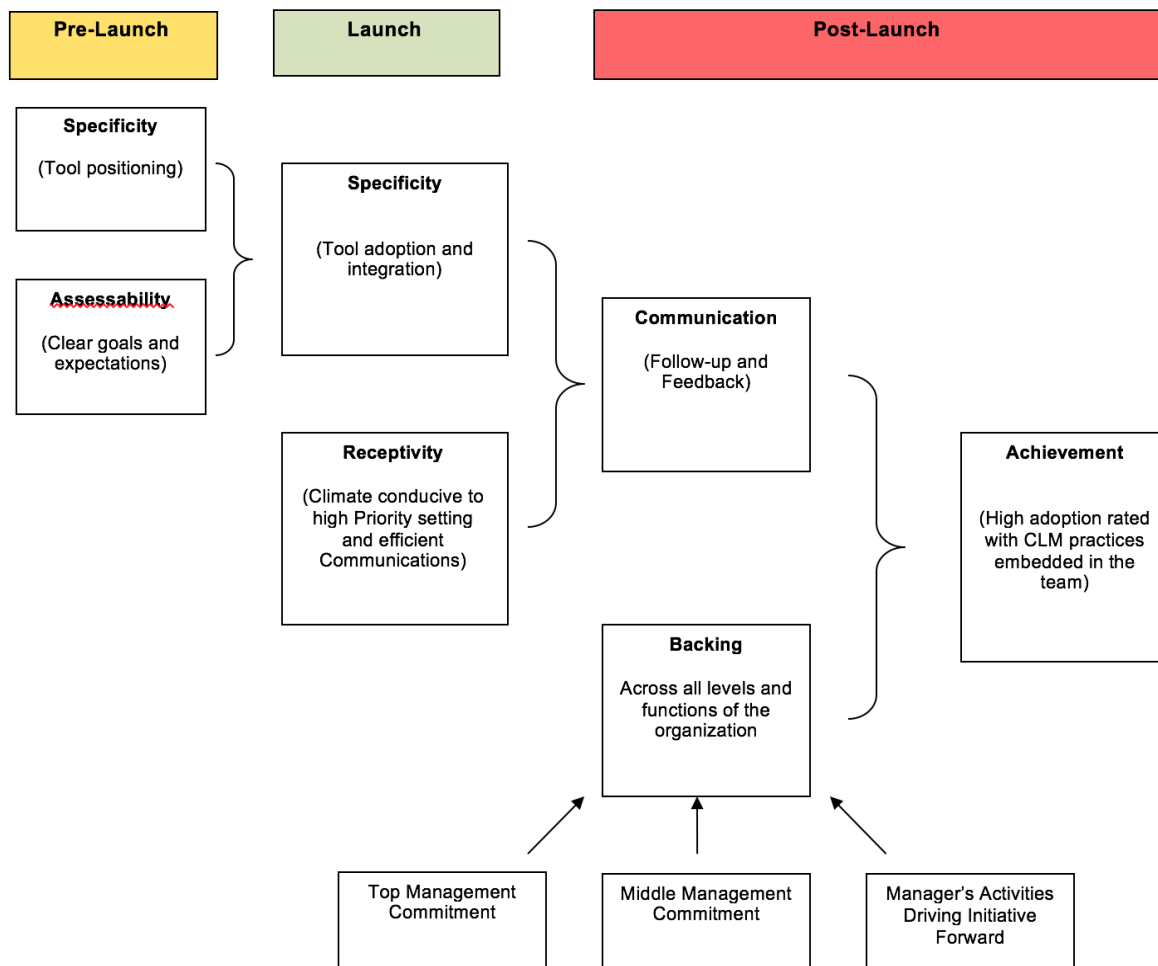
The proposed action model derived from our data analysis and extraction of best practices also aligns with previous research on the implementation of ERP research, grounded in Business Process Change Theory (Motwani et al., 2005) in Figure 3 above, and which inspired this case study’s research design. The added value lies in creating this three-phase framework in the context of the implementation of a CLM system, which has not been researched in previous literature due to its newness in MIS research.

Figure 11: Action Model for the process of CLM system implementation

	Pre-Launch	Launch	Post-Launch
Proposed Action Model	<ul style="list-style-type: none"> • Project Team/Driver • Top Management Commitment • Middle Management (sales & marketing) Involvement leading to higher Middle Management Commitment • Specificity and Assessability as to what this project necessitates to gain Acceptability of those involved at ALL levels of the organization 	<ul style="list-style-type: none"> • Project Team/Driver (centralize processes) • Highly Receptive time for launch • TOP Priority conveyed through: <ul style="list-style-type: none"> - Middle Management Commitment - Top Management Commitment • Specificity & Assessability should be very high regarding: <ul style="list-style-type: none"> - Official start date - How sales managers should enforce & prioritize reporting - Recognition/Incentives scheme in place • Efficient and clear Communication enforcing system use at both middle management and sales representative levels → Communication Cascading 	<ul style="list-style-type: none"> • Project team/Driver • Maintain Priority through: <ul style="list-style-type: none"> - Top Management Commitment (showcase value of visibility to sales reps and increase Acceptability of sales managers) - Middle Management Commitment leading to successful Communication Cascading: <ul style="list-style-type: none"> - Follow-up - Feedback (two-way) - Recognizing achievers or calling out non-compliers • Introduce new incentives to maintain momentum • Link participation to incentives or performance reviews to make system use necessary
CSFs	<ul style="list-style-type: none"> • Specificity • Assessability 	<ul style="list-style-type: none"> • Receptivity • Specificity 	<ul style="list-style-type: none"> • Backing • Communication

The action model in Figure 11 highlights the CSFs that are crucial to each phase of the implementation process, but does not explain how these factors interact with each other in a causal manner eventually leading to implementation success. Thus, Figure 12 below aims to clarify how the causal relationships between these factors can create a climate conducive to a successful implementation longitudinally. Thus it proposes an initial theory for a successful CLM implementation.

Figure 12: Causal Model Proposition



7.3 What is the effect of voluntariness of system use on the implementation process' success?

At first glance, it appears that the only variable differentiating the two Business Units' implementation processes is the fact that Business Unit #1 took a mandatory approach in their CLM system's implementation while Business Unit #2 took a volitional approach in their system's implementation. However, the previous discussion of the findings helps answer the third research question: Overall, having a volitional or a mandatory approach is *not* a determinant of the implementation's success, as was assumed when this case study was initiated.

Previous research grounded in the Technology Acceptance Model (TAM) shows that social influence has varying roles in each of the two environments. The UTAUT model presented by Venkatesh et al. (2003) highlights that voluntariness of use plays only a moderating role between social influence and behavioral intentions. In a volitional environment, social influence usually leads to higher and longer lasting acceptance and use of the technology. This is because it acts on influencing user perceptions of the technology (Venkatesh et al., 2003) and thus, on the intention to use the system. This concept may suggest a way to alleviate the difficulties of having a volitional environment for system use in Business Unit #2: Increasing *Communication* and highlighting and showcasing the benefits of the new technology to increase *Acceptability*.

However, in a mandated environment social influence was shown to be necessary only at the very beginning and became less significant once the technology had been utilized for a certain amount of time (Venkatesh et al., 2003). This was the case in Business Unit #1, where social influence was necessary for the initial uptake of the system. After a while, the informants all agreed that system use is now embedded in the team's daily practices without having to use social influence or reminders. The problem in a mandated setting is that technology acceptance can be confused with compliance, where the users of the system adhere to the rules set upon them but actually have a negative attitude towards the system (Hwang et al., 2016). This could lead to incorrect data entries and a lower performance if the users do not believe in the system's advantages but continue to use it. The researchers suggest that getting buy-in from the users at the first stages of implementation by fostering positive attitude towards the system will positively affect adoption and *Acceptability*. If a volitional approach is chosen, those driving the

implementation will have to exert high levels of social influence consistently until adoption is at the ideal rate.

7.4 How does leadership affect the implementation process' success?

Based on the findings in this study, the implementation of the CLM system in both units involved different levels of *Leadership* in the organization. O'Reilly, Caldwell et al. (2010) study the effects of leadership in such situation as an "aggregate of the hierarchical leadership in an organization". They suggest that efficient and effective *Leadership* aggregates across the hierarchical levels of an organization, and it is the alignment of those leaders involved that will have a positive impact on the implementation of strategic initiatives.

Top management support has been studied extensively as a major factor influencing the implementation of strategic decisions (Hwang et al., 2016), and has also been highlighted as a CSF in all research regarding the implementation of ERP and CRM systems (Motwani et al., 2005; Bohling et al., 2006). Top management support is found not only to influence the performance of IS but is also found to be one of the major determinants of individual user adoption (Hwang et al., 2016). In this case study it is revealed that top management support is necessary, not only to increase *Acceptability* and *Adoption*, but it is important in the early stages of implementation. This is because it needs to moderate the relationship between the sales and marketing functions involved in the implementation of a CLM information system, since the latter affects managers from different functional departments. This aligns with findings from previous research in the context of ERP and CRM implementations (Maleki & Anand, 2008). Balogun (2003) also stresses the fact that middle managers should be regarded as "change intermediaries" rather than the recipients or implementers of change. This is done by harnessing their potential to internalize the change initiative as their own to fully understand its benefits, so that they can then pass on the right messages in the right form to their subordinates, and become more equipped to handle any setback that may arise. It is an empowerment method that can only be achieved before the start of any implementation process, and should be approached both vertically and horizontally in the organization through the different leaders involved.

Moreover, *Backing* is a new variable derived from previous literature on the implementation of strategic decisions (Miller, 1997); however, it has not been used in the context of IS implementation thus far. The concept behind it has been mentioned in such research by highlighting the need for *Leadership* support across all managerial levels involved in the IS implementation driving a common strategic goal (Sharma & Yetton, 2003). However, *Backing* consists not only of the support of those managers involved in the implementation across multiple levels, but also of their *Leadership* activities driving this implementation forward (Miller, 1997). Therefore, it is an essential component of a successful IS implementation, and more specifically, CLM system implementation. In this case study, the distribution of authority is not always delineated, thus, leaders from all levels need to agree on a clear and shared aim, both to positively impact the implementation process and increase *Acceptability* at all levels.

Also, as was mentioned in the data analysis, Business Unit #1 provides an example of having a “change champion” (Miller, 1997) who made it his priority to drive the implementation to its completion. Previous research suggests that having a change champion can sometimes make up for the lack of *Backing* in the implementation of a strategic decision. In Business Unit #1, this was apparent, since the marketing manager was really the driving force behind all of the other leaders’ activities.

Finally, leadership style in this study did not seem to have an effect on the implementation of the CLM tool: firstly, because the leaders who initiated and drove the CLM system implementation in each unit, in this case the marketing managers, had similar leadership styles as suggested by the data and thus, did not individually affect the course of the implementation; and secondly, because *Leadership* in this context really consists of an aggregate of leadership activities rather than a single leader’s activities affecting the sales team as suggested by the data. Therefore, leadership style in the implementation of CLM systems, and IS more broadly does not seem to be a determinant of implementation success.

8 Conclusion

8.1 Practical Implications

The findings of this study highlight an action model that can be used by practitioners in the implementation of CLM systems by uncovering the Critical Success Factors specific to CLM that are important to consider at each phase of the implementation process.

At pre-launch, it is important to have a clear and articulated plan regarding the adoption expectations from all those affected by the change. By doing so, *Communication* between the marketing and sales managers will be more efficient in resolving their conflicts stemming from the differences in the nature of their work. This will also allow for a more useful and inclusive design of the system, before its official launch. Top management support is also recommended at this stage to alleviate the pressures of the relationship between marketing and sales managers, and to encourage participation on behalf of the entire team.

It is also crucial to choose the most receptive timing for the official launch of the system. In this case study, one of the most detrimental factors to the implementation process of Business Unit #2 was the fact that it took place during the summer season, when many employees were unavailable and at a time when the unit was facing more pressing business initiatives. This rendered *Communication* and *Priority* setting inefficient in relaying the necessary messages to the team. Moreover, it is necessary to have a clear project plan outlined regarding adoption expectations and how the system should be used and its data integrated into daily practices and decision-making. This allows for a more uniform and streamlined adoption across the team. This is necessary to avoid the duplication of efforts that was exhibited in Business Unit #2, which reduced the team's *Acceptability* of the system. Strong and efficient *Communication* is necessary to properly convey these expectations and showcase the implementation's *Priority* over other initiatives taking place at the time of launch.

Finally, at post-launch, it is crucial to aggregate commitment and leadership activities pushing for the adoption of the CLM system from the different managers at all levels of the organization involved in the implementation. This is called *Backing* and consists of creating

alignment of the different managers involved regarding the expectations from the CLM system. Moreover, in order to maintain *Acceptability* from the sales team, it is important to showcase the results of the implementation once sufficient data is collected. Ideally, there should be a plan regarding data collection, processing and distribution activities. However, the lack of such a plan can be alleviated with increased *Communication* from both middle and top management, encouraging, recognizing and requesting system use, as was seen in Business Unit #1, under the direction of a change champion (the marketing manager). This type of follow up is indispensable to instilling a new habit in the team's practices in the early stages of system use.

The action plan proposed in Figure 11 specifies in more detail the ideal situation for a CLM system implementation, and should be used by practitioners in the future for similar endeavors. As mentioned in the earlier discussion, most CLM systems in pharmaceutical and medical device organizations are not being used efficiently because the data collected is not being integrated into the decision-making process of the different players involved. This action plan helps to alleviate some of those problems: It stresses the importance of actively involving managers at all levels of the organization in the design of the tool, as well as engaging and empowering them to use the tool as recommended to fully reap its CLM-specific benefits. The project team or driver needs to devise new practices specific to the CLM tool and work to fully integrate them into the daily practices of all the employees in the business unit or organization. This requires clear planning, setting expectations for and monitoring data use.

8.2 Research Implications

MIS research focuses on the factors affecting user participation and acceptance (grounded in the Technology Acceptance Model) from both a technical and an individual factors standpoint. Moreover, research on the implementation of the two most prominent MIS, ERP and CRM systems, is grounded in the theory of Business Process Change because those systems affect the entire organization, and their implementation requires more complicated managerial initiatives. This case study investigates the implementation a CLM system (a MIS) that does not affect the entire organization, but rather only certain sub-units in the marketing/sales area. The research design investigates the implementation of a CLM system by drawing on the broader literature of

the implementation of strategic decisions in organizations (Hickson et al., 2003; Miller, 1997) in order to draw on factors not specific only to ERP and CRM systems. The findings highlight the fact that *Receptivity* of the internal and external climates can help alleviate poor planning, as was seen in Business Unit #1 during its post-launch period. This aligns with previous research (Hickson et al., 2003; Miller, 1997), which states that readiness-based approach can succeed when the experience-based factors are missing and vice versa. This is an interesting finding for MIS research since it shows that an experience-based approach and a readiness approach can help balance each other out in situations where one is more difficult to achieve.

The purpose of this research was to highlight the *process* of implementation longitudinally, which has been negligibly researched in the context of ERP and CRM. The findings of the study uncovered the Critical Success Factors specific to each phase of the implementation process. The findings were aligned with the models presented for both ERP and CRM implementations (Motwani et al., 2005; Almotairi, 2009). This is an interesting finding because it allows academicians to bridge the literature on MIS implementation and the implementation of strategic decisions. *Backing* is a new variable in the context of a MIS, which was derived from literature on the implementation of strategic decisions, and may now be used in MIS research to combine and replace the multiple *Leadership* CSFs that exist (top management commitment, middle management commitment, *Leadership* activities driving implementation at top and middle management). Moreover, it is a useful addition to the field of MIS implementation research by stressing the importance of dividing the implementation process into phases of implementation, rather than studying it as non-temporal endeavor. Limitations of this study and directions for future research will be developed further in the following section.

Finally, since this study looks at the implementation process of a CLM system, a relatively new MIS, it can constitute a starting point for future research on CLM systems. Academic research may become more current in examining new marketing tools and concepts that are still novel in practice, to minimize the gap between academic research and current practices.

8.3 Limitations and Future Research

One of the limitations of this study is that it is very specific to the context of a CLM system implementation in the medical device industry. However, the findings from the study have aligned with both research on the implementation of strategic decisions and research on the implementation of MISs. This suggests that the research method and findings can be generalized to other similar MISs that differ from ERP and CRM, which should be investigated in more detail in future research.

Moreover, this study highlights the presence or absence of variables in each phase of the implementation process, but does not measure the relative effect of each CSF on the implementation's success. Therefore, future research should create a scale to measure each of these factors quantitatively to establish a causal model linking them to implementation success.

This case study followed the implementation process of a CLM system in two units within the same organization (a medical device organization) in the Middle East. This is interesting because the two units overlap on so many cultural and organizational factors, and thus, it allows the assumption of those factors having a minimal effect on the implementation's success in this research. However, future research should investigate CLM systems' implementations taking place in various organizational settings, such as different industries or different regions, to further develop our understanding of how those factors can affect the implementation's process and its success.

Another limitation of this study is the fact that the data was collected after the implementation process took place; and thus, was based on informants' retrospective reports. This was alleviated by triangulating data to minimize memory biases and create the most accurate description of how each implementation took place. It would be interesting for future academics to examine the implementation during its occurrence in the organization, to get objective observational insights into how this process takes place.

This research also looks at the implementation of a CLM system as the implementation of a strategic decision, and uncovered results which are in line with previous research on MIS implementation. This suggests that future research on MISs, which are not as complex as ERP and CRM systems, may use the approach and methodologies used in this study in investigating the implementation of new types of systems that have not yet been researched.

More research should also be conducted to investigate whether or not a mandatory use environment is necessary for a CLM system implementation. Thus far, previous literature and the findings of this case study suggest that the difficulties of a volitional use environment can be alleviated using social influence; however, mandatory use environments are more efficient in gaining user adoption of the technology but could result in compliance rather than acceptance (Brown et al., 2002). Thus, academicians should further investigate both volitional and mandatory use environments and the implementation process activities which accompany each approach, to have a better understanding of user adoption and *Acceptability* in each type of setting.

Finally, one of the most important findings in this study is the *Backing* variable. *Backing* consists of both commitment and leadership activities on behalf of all the managers involved at the different levels of the organization. This notion is previously mentioned in ERP and CRM implementation research, but is broken down into top management and middle management commitment and leadership activities. This research now contributes to the literature of ERP and CRM implementation by introducing the concept of *Backing* into this research stream. The *Backing* variable originated in the literature on the implementation of strategic decisions, but has been overlooked since its creation by Miller (1997). Future research on the implementation of strategic decisions should also consider reintroducing *Backing* into the literature stream, since it is an important concept that seems to have a significant effect on implementation success. Future research can investigate the different ways to gain *Backing* from the various individuals involved, and whether or not one managerial level can have more influence than the other in *Backing* activities on the eventual success of the implementation process. A scale should be developed to measure both managerial commitment and leadership activities, in order to properly understand

the effect that they have on the success of an implementation, as well as how they interact with each other.

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Appendix A: Variables that Affect the Implementation of Strategic Decisions Adapted from Hickson et al. (2003)

- **Familiarity**: The extent to which relevant experience was available (either in-house, outsourced or brought in)
- **Assessability**: The extent to which the criteria for success was clear
- **Specificity**: The extent to which what had to be done was determined beforehand
- **Resourcing**: The extent to which what was needed was available (including people, money and time)
- **Acceptability**: The extent to which those affected were in accord with what was done
- **Receptivity**: The extent to which the organization and/or external climate eased implementation
- **Structural Facilitation**: The extent to which organizational structure eased implementation (by appropriately allocated authority, for example by setting up a project team)
- **Priority**: The extent to which implementation was put ahead of other commitments
- **Achievement**: The extent to which the performance over time of what was done was as intended or better

Since this study examines a CLM system (a MIS), the research also draws on MIS implementation literature to include the following two variables (crucial to MIS implementations):

- **Communication**: The extent to which what needed to be done was clearly and efficiently articulated to those affected
- **Leadership**: The extent to which managers' activities drove the implementation forward (multilevel variable)

The inclusion of these variables was validated in the pre-test that was conducted in a university setting information system implementation.

Appendix B: Interview Guide for Individuals in One Business Unit

(With Rationale Behind Each Question in Blue)

Pre-launch

1. Could you tell me a little about yourself? [Probe]: Age, Origin, Educational/Professional background
2. Could you explain to me briefly what your position in the company entails?
3. How were you involved in the implementation of the system?
→ To distinguish the leaders from the subordinates and differentiate the interview
4. Why did the department initially decide to implement this type of information system?
5. How was this decision made internally?
6. What other sales information system was in place prior to this one?
7. How would you compare the two? (Old vs. new)
→ Q4-6: Looking to see the necessity of this implementation, this relates back to the variable of “PRIORITY”. Was the switch needed to evolve business practices and performance?
8. What goals did you have set for the sales team concerning the adoption & use of the system?
9. What goals did you have set for management concerning the implementation & use of the system?
10. What goals did you have set before the implementation of the system for the data that was collected?
→ Q7-9: “Specificity” what had to be done was determined beforehand. Relates to having a project plan as well, having specific and oriented goals
11. Was your team aware of these goals?
→ Q7-10: “Assessability”, was the criteria for success clear? Did you have goals to measure success against and were those goals made clear to the individuals involved?
12. How did you communicate to your team these expectations?
13. How was participation in system use encouraged by leadership? (country managers vs. headquarters managers)
→ “Communication” This question is going to distinguish the leadership style and how they approached the management of change within the organization
14. Can you tell me more about the implementation plan that was set out by your team?
→ “Specificity” and “Structural facilitation” we want to see whether or not there was a clear plan for what had to be done stepwise when taking on such an implementation, as well as the extent to which the organization helped this implementation by allocating the necessary efforts
15. Can you tell me more about the structural changes that were required in order to achieve this plan? Probe: Process changes, Hiring personnel, Consulting service
16. Who led the structural changes, and what approach was used to handle these changes?
17. What financial resources were necessary to a successful implementation of the system?
[Probe]: How did you go about acquiring these resources?
18. What human capital (employees, consultants...) was necessary to a successful implementation of the system? [Probe]: How did you go about acquiring these resources?

19. What structural changes occurred within the departments in order to support this technological change? (Did we bring in new hires or did older employees have to increase their job load?)
 → Q13-16: All relate back to resourcing in different areas such as human capital, financial resourcing and structural resourcing in terms of having a project team in charge of this implementation and a specific timeline
20. Tell me more about the different departments that were involved in the development/implementation of this information system? How was communication mediated between the departments?
21. When was the announcement made of the upcoming information system addition? (Early on enough?)
 → Communication and Receptivity, how did other departments facilitate this change for example and was communication clear enough with employees?
22. Could you tell me more about the initial reactions of the different parties who were going to be affected? (Pre-implementation)
23. Do you remember seeing a difference between the reactions of different people involved? (Upper management/Management/Sales Force)
 → Acceptability of the new information system. How did people react and how were these expectations managed if any? Acceptability is usually low before a change happens but we should see an increase in acceptability later in the interview when looking at acceptability after the change was implemented
24. Did you require any trials before you implemented the new reporting tool?
 → Familiarity with the situation, did you have a trial run to test out how it went, in order to make sure that the actual implementation worked without any setbacks for example. This is aligned with building experience and learning from mistakes. In ERP research this is very important because the system is so integrative. In this case it might not be as important but if it is available, could help immensely. Also, one unit's implementation followed the other, which could count as familiarity and experience as well.

At launch

25. Who was in charge of heading this implementation throughout?
26. How was leadership assigned throughout the department concerning the switch in systems?
 → Structural facilitation. Was there a clear project team, a line of command in case they were faced with any issues. This is very important at the implementation stage specifically and after implementation when easing through newly found problems and user resistance. This variable comes back in the last phase of the interview.
27. Can you tell me about any initial major obstacle/s that you had to overcome once the implementation begun?
28. Could you tell me more about any training that was offered for the new system?
29. Did the sales representatives seem to be proficient enough in the information system to begin using it?
30. What factors external to the organization could affect the implementation of the system?
31. How does the geographical distance between the sales teams affect the way technical issues are handled? (Post-implementation)

- Q23—27: Receptivity in the organization, internal and external factors easing implementation during and after. Training is one of them allowing for a highly receptive internal climate in the organization when the users are proficient with the information system at hand. This is very important at the implementation phase, to feel that they are capable of using this technology. Relates to perceived ease of use and behavioral intentions mentioned in the research on technology acceptance.
32. When the implementation of this reporting tool was taking place, how prioritized was it in comparison to other projects in each of the two units? [Probe]: In the Medical Devices department as a whole?
 → Priority within the unit and then within the department as a whole. This is a question that will serve as a great triangulation tool when comparing the multiple sources of data. Priority should be set very high before and during the implementation and should remain high even after in order to show the results of the implementation and keep people motivated
33. Tell me more about the official switch to the new information system and how that was done.
 → Question which also relates to communication, leadership style and whether usage was made voluntary or mandatory
34. Could you tell me more about the day of implementation?

Post-launch

35. [Probe]: Did attention/priority dwindle down? Did resistance increase/decrease?
 → Priority again
36. How were these problems handled? (Time, effort)
37. Probe: How were the problems handled by the unit? The department as a whole?
 → Acceptability. If there was resistance, how was it handled? Increasing communication for example, or offering training.
38. What feedback loops were used to measure this implementation's performance overall?
39. How was the data collected used and shared across the team post-implementation?
40. How would you rate the performance of this project overall now that the new reporting system is in place and in use?
41. Can you think of what you would do differently retroactively now that the first phase of implementation has set in?
 → Assessability and Achievement. So how did this project live up to the previously set expectations? Were the criteria for success clear? Were they compared to overall performance later? And on the COMMUNICATION side, was all this relayed back to the team in order to showcase the performance of the new information system? As we know from previous research this is an essential part of increasing Receptivity and acceptance, thus usage.

Appendix C: Interview Guide for Individual Overlapping Both Units

1. Could you tell me a little about yourself? [Probe]: Age, Origin, Educational/Professional background
2. Could you explain to me briefly what your position in the company entails?
3. How were you involved in the implementation of the new system for each unit?
Compare degree of involvement. This also triangulates for receptivity in the workplace.
4. Why did the departments initially decide to implement this type of information system?
5. How was the decision made?
6. [Probe]: Do you know how the decision was made?
7. What other sales information system was in place previously to this one?
8. How would you compare the two systems? (If there is anything previously)
9. What goals did you have set for the sales team concerning the adoption & use of the system?
10. What goals did you have set for management concerning the implementation & use of the system?
11. What goals did you have set before the implementation of the system for the data that was collected?
Here I assume that the goals for both units were similar from the perspective of upper management. Should not be a very differentiating factor between the units.
12. Were the teams made aware of these goals? What was the difference between the two units and their communication of goals?
13. How was participation encouraged by the department as a whole? And by the units individually?
14. Can you tell me more about the implementation **plans** that was set out by both units? How were they similar/different?
15. Can you tell me more about the structural changes that were required in order to achieve this plan? Probe: Process changes, Hiring personnel, Consulting service
16. Who led these changes in each department? How would you describe their leadership style in regards to their unit?
17. What financial resources were necessary to a successful implementation of the system? [Probe]: *Did the financial needs differ between the two units?* (considering that they should need about the same budgets, unless one team is bigger than the other)
18. What human capital (employees, consultants...) was necessary to a successful implementation of the system? [Probe]: *How did these differ between the two units and why?*
19. What structural changes occurred within the department in order to support this technological change? (Did we bring in new hires or did older employees have to increase their job load?)
20. Tell me more about the different departments that were involved in the development/implementation of this information system (IT, HR... *should be the same for both units*)
21. How long before the implementation were the announcements made of the upcoming change in system for each of the units? (Early on enough?)
22. Could you tell me more about the initial reactions of the different parties who were going to be affected? (Pre-implementation)

23. Do you remember seeing a difference between the reactions of different people involved? (Upper management/Management/Sales Force) (Also was there a major difference that you noticed between the two units?)
24. Did the first implementation in any way affect the subsequent one? (in terms of building relevant experience, one unit learning from the other? Or were they treated as completely separate experiences?)
25. Who was in charge of heading this implementation throughout for each unit?
26. How would you describe each leader? Project team?
27. Can you tell me about any initial major obstacle/s that you had to overcome once each implementation begun?
28. Could you tell me more about training that was offered for the new system?
29. Did the sales representatives seem to be proficient enough in the information system to begin using it?
30. What factors external to the organization could affect the implementation of the system?
31. How does the geographical distance between the sales teams and the headquarters affect the way technical issues are handled?
32. When the implementation of this reporting tool was taking place, how prioritized was it in comparison to other projects in each of the units? In the larger department? [Probe]: In the Medical Devices department as a whole?
33. Tell me more about the difference in transitioning the new information system between the two units
34. Could you tell me more about the day of implementation for BU2? If there was any specific day.
35. Could you tell me more about the day of implementation for BU1? If there was any specific day.
36. [Probe]: Did attention/priority dwindle down? Did resistance increase/decrease? How would you compare priority and resistance in both units?
37. How were these problems handled on behalf of each team leader/project team? (Time, effort)
38. What feedback loops were used to measure this implementation's performance overall for each unit? How did the feedback approaches differ? And what was their effect on the implementation and acceptance overall?
39. How was the data collected used and shared across the team post-implementation differently?
40. How would you rate the performance of each unit's implementation overall now that the new reporting systems are in place and in use?
41. How would you compare both implementations, and what would be the lessons learned from each of them?

Appendix D: Coding Spreadsheets for all Informants

Informants for Business Unit #1

Business Unit Director

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitatio	Priority	Achievement	Communication	Leadership	Others
		P1/L18-20 P2/L4-8 P2/L9-10 P3/L16 P7/3-5 P8/L5-6 P9/L17-20 P10/L3-4 P10/L17-18 P13/L9-10	P4/L15-19 P4/L21-23 P4/L24-25 P5/12-16 P8/6-10 P9/L1-2 P10/L8-11	P5/L17-18 P6/L1-2 P8/L6-9 P9/L2 P9/L9-14	P10/L16-17	P1/L11-12 P2/L1-3 P8/L2-4 P10/L1-2	P3/L2-9 P5/L16	P3/L14-15 P14/L12-19		P6/L3-11 P10/L10-11 P13/L9-15	P8/L19-22 P8/L16-18	
Pre-Launch Positive	P13/L11-18 P1/L8-10 P1/L13-16 P3/L17-18			P9/L19-20								
Pre-Launch Negative												
At Launch Positive			P16/L12-16		P15/L19-20	P15/L10-13		P14/L19-21 P16/L14-16		P6/L3-11 P15/L17-19	P8/L19-22 P11/L22-23	
At Launch Negative	P13/L22-24		P18/L4-7	P14/L4-8	P6/L16 P16/L19-20		P12/L14-15 P13/L3-4					
									P2/L19-20 P4/L5-10 P4/L26-29 P6/L3-11 P6/L16-18 P9/L3-5 P16/L7-9 P20/L3-4 P20/L7-8	P4/L26-29 P6/L3-11 P6/L10 P7/L6-12 P16/L3-4 P17/L12-17 P18/L16-22	P6/L3 P6/20-21 P7/L14-16 P7/L16-17 P11/L1-5	
Post-Launch Positive	P13/L25-26		P16/L1-2 P16/L12-16		P11/L3-4 P16/L2-4 P16/L23-24		P12/L22-23 P12/L14-15					
Post-Launch Negative						P12/L15-16	P12/L14-15					

Marketing Manager

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitatio	Priority	Achievement	Communication	Leadership	Others
		P2/L1-3 P2/L8-11 P3/L6-13 P4/4-6 P5/L11-14 P5/L19-22 P6/L2-5 P8/L3-4 P8/L17-18 P14/L11-16 P14/L12-15	P2/L11-14 P2/L25-29 P5/L3-5 P6/L14-17 P6/L17-19 P8/L18-21 P9/L10-12 P12/L13-15 P14/L7-10 P16/L12-13	P2/L2-5 P3/L3 P9/L1-2 P9/L16-18	P3/L4-6 P11/L1-9 P11/L24-25	P1/L15-18 P2/L18-22 P4/L11 P15/L15-18 P13/L8-10 P14/L2-4	P2/L5 P9/L8-9 & 12 P4/L6-8			P5/L6-11 P6/L19-21 P8/L18 P10/L1-2	P1/L15-18 P15/L19	
Pre-Launch Positive	P9/L9-10 P14/L11-16			P19/L7-10								
Pre-Launch Negative	P8/L13-15 P9/L12-15		P18/L23-28 P19/L24-26		P11/L1-9 P11/L24-25	P13/L8-10 P14/L2-4	P4/L6-8	P15/L7-12 P15/L20-24			P2/L5-8 P7/L1-2 P14/L24-25	
At Launch Positive	P6/L17-19 P12/L10-12			P15/L8-9	P12/L2-4	P12/L19-21	P14/L26-27			P14/L22-23 P16/L15-17		
At Launch Negative			P10/L11-14		P11/L10	P7/L9-11	P11/L23-24 P16/L14-15				P16/L23-25	
									P7/L2 P12/L21-22 P16/L15 P16/L24-25			
									P3/L17-19 P3/L23-26 P5/L14 P6/L2-3 P7/L8-9 P7/L12 P9/L2-4 P11/L12-14 P12/L22-24 P13/L1-3 P17/L14-17	P5/L24-27 P6/L22 P7/L6-8 P7/L20-21 P8/L3-6 P10/L17-18 P12/L24-26 P16/L26 P18/L4-10 P18/L15-16	P4/L11-13 P7/L3-8 P12/L4-5 P16/L17-19 P16/L26 P17/L7-10 P18/L9-10	
Post-Launch Positive	P12/L5-7				P7/L25-27 P11/L10-12 P11/L25-27 P13/L2-3	P7/L23-25	P18/L15-22					
Post-Launch Negative				P13/L21-24			P13/L14-24			P3/L21-23 P10/L7-10		

Business Manager

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitatio	Priority	Achievement	Communication	Leadership	Others
			P1/L10-11 P1/L15-17 P5/L20-21		P5/L18-21		P5/L11-13 P7/L6			P4/L11-13		
Pre-Launch Positive		P3/L6										
Pre-Launch Negative	P1/L20 P5/L7-8 (BM)		P2/L10-12		P3/L13-15					P5/L7-8*		
At Launch Positive			P3/L1-3 P9/L20-23			P8/L7-8	P7/L6 P8/L7-8	P8/L12	P5/L1-2	P8/L14-15 P9/L1-2		
At Launch Negative											P2/L12-13	
Post-Launch Positive			P11/L17-18				P7/L6 P11/L1-5			P2/L19-22 P3/L10-11 P6/L16-17 P5/L1-2 P6/L25 P8/L3-4		
Post-Launch Negative				P4/L4-8	P6/L3-6 P9/L22-23	P7/L1-3 P9/L14-15	P2/L21-22 P3/L20-21 P12/L7-13	P2/L18-19 P3/L11-13 P9/L8-11		P9/L2-5 P10/L10-14		

Sales Representative 1

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitation	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive	P1/L13-16	P2/L9-16 P5/L4-7 P12/L7-9	P2/L19-22 P7/L1-6 P7/L19-20 P8/L19-22 P9/L9	P9/L3-4 P11/L19-21	P8/L1-5	P8/L2-5 P12/L1	P9/L17-18 P10/L17-18			P5/L17-18 P6/L1-4 P7/L14-15 P9/L8 P11/L3-6	P8/L28 P9/L7-9 P11/L5-6	
Pre-Launch Negative	P3/L1-2					P12/L18-20						
At Launch Positive	P7/L7-8 P12/L9-11	P12/L4					P10/L18	P12/L15	P7/L12-13	P13/L1 & 3 P13/L19		
At Launch Negative			P8/L6-9 P13/L8 P15/L1-5		P8/L9-12 P13/L6		P8/L8-9			P15/L1-3		
Post-Launch Positive		P5/L20-22				P13/L6-10 P14/L12-16	P1/L16-18 P10/L1-7 P10/L19-21 P14/L4-6	P13/L22	P3/L10-11 P4/L4-6 P15/L8-9	P1/L16-21 P5/L18-20 P6/L7-10 P6/L16-24 P13/L9-10 P14/L9-12	P18-22?	P14/L20-23
Post-Launch Negative			P4/L17-21 P4/L25-27	P3/L21-22 P8/L16-17					P3/L15-19	P4/L24-26		

Sales Representative 2

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitation	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive	P7/L19-20 P9/L2	P3/L5-8 P3/L13	P3/L14-19 P4/L4-8 P7/L7-8	P6/L12-13 P7/L1-2		P13/L1-4	P7/L2-4	P2/L15-17		P1/L8-10 P7/L7-9 P7/L15 P9/L1-2	P9/L13-15	
Pre-Launch Negative	P2/L1-3		P12/L2-5		P4/L11-13 P8/L2-3	P8/L11-13						
At Launch Positive	P9/L6-7 P10/L5-6	P10/L10-11	P5/L24-25				P10/L1-2	P11/L17-19		P9/L5-7 P10/L1-2 P11/L23	P9/L13-15	
At Launch Negative		P8/L21-22	P9-L18-22		P4/L18-20 P8/L18-22	P10/L16 & 18	P5/L23-24 P11/L6-7			P5/L19-21 P8/L19-20 P11/L4-6 P12/L1-2 P14/L11-12	P5/L20-21 P14/L12-14	
Post-Launch Positive		P11/L17-19			P4/L16-17 P4/L20-22 P8/L9-10 P12/L8	P5/L10-11 P10/L17		P12/L10-11	P1/L12-13 P1/L17-18 P2/L7-8 P13/L14-16	P12/L2-4 P12/L14-15 P13/L7-8 P13/L19-20	P9/L13-15	
Post-Launch Negative				P13/L11-16	P3/L19-23	P11/L12-13			P13/L11-14	P12/L18-19		

Informants for Business Unit #2

Business Unit Director

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitation	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive	P1/L18-20 P2/L4-8 P2/L9-10 P3/L16 P7/3-5 P8/L5-6 P9/L17-20 P10/L3-4 P10/L17-18 P13/L9-10	P4/L15-19 P4/L21-23 P4/L24-25 P5/L12-16 P8/6-10 P9/L1-2	P5/L17-18 P6/L1-2 P8/L6-9 P9/L2	P9/L9-14	P10/L16-17	P1/L11-12 P2/L1-3 P8/L2-4	P3/L2-9 P5/L16	P3/L14-15 P14/L12-19		P6/L3-11 P10/L10-11 P13/L9-15	P8/L19-22 P8/L16-18	
Pre-Launch Negative	P1/L8-10 P1/L13-16 P3/L17-18			P9/L19-20								
At Launch Positive					P15/L19-20		P14/L19-21 P16/L14-16			P6/L3-11 P15/L17-19		
At Launch Negative	P13/L22-24		P18/L4-7	P14/L4-8	P6/L16 P16/L19-20	P15/L4-7	P12/L14-15 P13/L3-4	P11/L23-24 P15/L4-7			P11/L19-22 P15/L2-4	
Post-Launch Positive	P13/L25-26						P12/L22-23		P2/L19-20 P4/L5-10 P4/L26-29 P6/L16-18 P9/L3-5 P16/L7-9 P20/L3-4 P20/L7-8	P4/L26-29 P6/L3-11 P6/L10 P7/L6-12 P16/L3-4 P17/L12-17 P18/L16-22	P6/L3 P6/20-21 P7/L14-16 P7/L16-17 P11/L1-5	
Post-Launch Negative			P15/L23-25		P11/L5-9 P15/L21-25 P16/L19-20 P17/L3-4	P12/L15-16	P12/L14-15	P6/L22	P4/L5-10 P6/L18-19 P9/L5-6 P11/L12-14 P12/L1-3 P20/L5-7	P6/L19-20 P6/L22-23 P15/L20-24 P17/L21-22	P6/L20 P7/L16-17 P7/L20-21 P11/L14 P16/L18-19 P17/L21	

Marketing Manager

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitation	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive	P2/L2-3 P7/L16-17	P2/L9-10 P5/L4-7 P5/L20-21 P6/L3-10	P4/L3-7 P4/L5-7 P4/L8-10 P5/L25-26 P7/L1-3 P12/L7-10	P3/L2-5 P4/L2 P4/L7-10 P11/L1-2 P11/L21-22 P12/L5-8 & 11-12	P4/L1-2 P4/L15-16 P13/L1-4	P4/L14-16 P12/L16-18	P2/L3-5 P4/L4	P16/L21-22		P6/L3-4 P8/L1-3	P6/L9-10	
Pre-Launch Negative	P5/L1-4 P12/L17-18			P11/L7-11		P11/L12-17						
At Launch Positive	P4/L8-10 P14/L1-4	P7/L17-18 P15/L21-22	P15/L17-20		P13/L7 & 9-10 P14/L4-5		P14/L4 & 8-9	P16/L21-23		P15/L17-20 P17/L16-18	P14/L12-14 P17/L21-24	
At Launch Negative		P14/L19-21 P17/L13-18	P14/L19-21 P16/L11-14			P16/L1-4 P15/L9-11	P14/L17-19 P15/L7-9	P16/L23-24		P17/L13-14 P17/L14-16	P9/L13-14	
Post-Launch Positive		P10/L7-8	P6/L11-12	P11/L26-27	P9/L8-9	P12/L18-21	P11/L21-22 P11/L26-30		P5/L12-15 P6/L13-15 P19/L2	P8/L4-6 P8/L7-9 P9/L2-3 P10/L1-4 P16/L24-26 P17/L5-6 P18/L6-8	P8/L7-9 P12/L22-25	
Post-Launch Negative			P13/L18-19 P15/L5-8	P15/L2-3 P16/L15-17 P18/L3	P7/L18-22 P9/L4-5 P13/L7-9 P13/L18-20 P17/L6-7		P9/L4-7 P10/L4-6 P18/L8-11 P20/L6-8	P17/L4	P6/L11-13 P7/L4-6 P9/L1-2 P10/L9-11 P17/L8 P18/L3	P9/L14-15 P16/L26 (fair) P17/L6-7	P10/L3-4 P17/L25-26 P18/L9-10	

Business Manager

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitation	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive		P3/L5 P9/L4		P11/L15-16		P5/L16-17 P9/L11						
Pre-Launch Negative	P2/L16-17		P2/L1-2 P2/L3-5 P10/L11-13							P6/L5-6 P5/L15 & 19 P6/L12-13 P7/L12-14	P8/L12-13	
At Launch Positive	P6/L15	P8/L14-16					P9/L1					
At Launch Negative		P2/L14			P8/L4-5							
Post-Launch Positive					P7/L17-18				P1/L7-8	P3/L20-21 P5/L12-13		
Post-Launch Negative		P9/L15-18 P9/L21-23	P1/L8-10 P5/L1-5 P10/L18	P2/L1 P2/L19-20	P2/L2-3 P5/L23-24		P4/L7 P8/L19	P2/L1-3 P4/L12 P9/L18-20 P10/L10-11 P10/L21-22	P11/L3-5 P10/L11-13 P11/L19-21	P10/L10-11 P10/L18	P5/L24	

Sales Representative 1

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitation	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive		P2/L3-9	P1/L14-18 P6/L2-4	P5/L19-21	P1/L18 P3/L1-3 P6/L8-10		P4/L4-7 P5/L19-20			P1/L12-14 P4/L11-13 P6/L1-3		
Pre-Launch Negative	P2/L12-14					P8/L15-20						
At Launch Positive	P4/L4-5 P4/L11-13		P3/L17-18				P7/L15-16		P3/L18 P4/L6-8 P9/L1-5	P3/L15-18 P7/L4-5 P7/L12-13 P9/L11-13	P4/L6-8 P7/L15-16 P9/L4	
At Launch Negative			P3/L22-28									
Post-Launch Positive		P5/L15-16			P1/L23-24 P5/L5-12 P6/L11-13 P6/L20-24		P3/L27-28 P8/L10-11 P10/L18-20	P7/L5-6	P1/L20-24 P3/L1-2 P6/L16-17 P9/L17-23 P10/L9	P1/L20-22 P3/L27 P4/L19-24 P5/L7-12 P6/L19-20 P10/L1-4 P10/L9-16	P4/L21-22 P5/L5-7 & 11 P6/L17-18	
Post-Launch Negative			P1/L20		P8/L1-7 P8/L21-25 P10/L22-23					P3/L3-5		

Sales Representative 2

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitation	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive		P2/L19-20 P4/L8-10 P4/L15-17				P8/L3 P8/L6-9				P6/L7 P6/L17-18	P6/L16	
Pre-Launch Negative					P3/L16-18 P3/L14-15					P4/L17-20		
At Launch Positive	P4/L17	P6/L7-13	P4/L23-24		P1/L15-17			P8/L13-14		P7/L11-13 P17/L10-12		
At Launch Negative			P1/L20-21							P3/L5 P3/L10-11 P4/L1-3 P4/L24 P5/L8-15		
Post-Launch Positive					P2/L8-10				P9/L1-2			
Post-Launch Negative				P2/L10-12	P3/L9 P4/L5-7 P5/L1-4			P1/L20-21 P8/L14-15	P5/L20-26	P3/L1-2 P3/L8-11 P5/L16-18 P7/L6-8	P7/L13	

Informants for Business Units 1 & 2

Business Support Specialist

Implementation Phase	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitation	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive	P3/L16-18 P15/L13-17	P4/L1-3 P4/L21-25	P4/L4-7	P4/L20 P5/L5-11 P10/L15-16 P13/L14-21			P4/L1 P10/L9-10 P10/L10-12 P10/L12-14 P10/L15-16			P4/L4-7 P9/L22-24 P11/L14-17 P14/L17		
Pre-Launch Negative	P3/L19-24 P14/L1-7	P8/L5	P6/L19-22 P8/L16-23 P12/L7-8	P12/L10-14	P12/L1-3	P13/L1-8	P13/L1-2			P10/L1-3 P12/L16-20 P14/L18		
At Launch Positive	P14/L9-10				P5/L12-13	P15/L1-6		P16/L11-12		P9/L24-27 P16/L8		
At Launch Negative	P14/L8-10		P5/L19-22 P8/L13-15		P5/L15-19 P16/L5-6	P11/L3-6		P5/L16 P10/L25-26 P11/L6-10		P9/L1-2 P16/L1-4 P17/L15-17		
Post-Launch Positive					P5/L29-32			P6/L10-13 P7/L1-2 P16/L11	P5/L11-12 P6/L26-27 P18/L17-20	P17/L17-19 P18/L1-3 P18/L6-8 P18/L18-22	P7/L3-4 P9/L20-21 P10/L23-25 P16/L9-10	
Post-Launch Negative			P7/L23-29 P15/L9-12					P6/L10-13 P7/L12-14	P6/L26-27 P18/L23-25	P17/L10-14 P10/L13-6 P12/L20-23 P15/L6-7 P16/L13-17 P18/L4-5 P18/L23		P10/L25-26

Healthcare Compliance Specialist

Implementation Phase	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitation	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive	P5/L13 P9/L10-11	P1/L15-17 P3/L14-17 P4/L3-5	P4/L2-3	P6/L14-16			P6/L16-18			P5/L12-13 P7/L10-13		
Pre-Launch Negative		P3/L7-10		P11/L7-10 (time)	P5/L13-15 P7/L15-18							
At Launch Positive		P9/L11-12			P5/L16-17 P11/L13-14	P10/L1-5		P10/L10		P14/L18-20	P8/L11-12 P8/L12-14	
At Launch Negative												
Post-Launch Positive	P5/L6-8		P9/L3-7 (data)		P2/L18 P4/L22-23 P5/L18-19 P7/L18-20 P7/L24-25 P11/L14-15 P12/L9-12	P10/L11-12	P1/L7-9	P10/L16 P11/L18-19	P1/L18-23 P2/L6 P2/L8-11 P2/L19 P2/L17-20 P4/L22-23 P13/L13-14	P3/L20 P4/L16-19 P12/L9-10 P14/L10-12 P14/L23-25	P2/L4-5 P8/L19-24 P11/L2	
Post-Launch Negative			P13/L1-2		P5/L5-6 P7/L23-24 P11/L15			P10/L15	P3/L7 P3/L10-11 P4/L15-16 P11/L23 P13/L14-16		P11/L1	

Business Manager 1

Implementation Phase / Ty	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitation	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive	P15/L6-9	P3/L6-8 P3/L13-16 P3/L24-27 P4/L1-13 P5/L16-19 P6/L15-17 P7/L7-8 P8/L6-9 P12/L20-21	P11/L10-13 P15/L6-9	P2/L2-3	P3/L8-9 P12/L4-8	P12/L4-8	P14-L12-15 P15/L8-9			P3/L23-25 P4/L14-15 P11/L7-8 P11/L17-21 P15/L4-6		
Pre-Launch Negative	P14/L6-9	P12/L20-21	P21/L5		P12/L18-19					P11/L22-24		
At Launch Positive	P11/L1-2		P16/L17-18			P9/L3-5 P13/L4-6 P13/L13-14	P7/L16-18 P10/L7-10 P10/L11-14 P10/L19-23 P11/L12-13			P4/L15-16 P8/L17-18 P10/L19-23 P13/L10-12	P8/L15-21 P13/L7-9	
At Launch Negative			P19/L1-2 P21/L6-12	P15/L17-19	P16/L20-22			P13/L15-18 P15/L19-21	P13/L20-21	P16/L18-19 P21/L3-5		
Post-Launch Positive			P16/L23-25		P2/L6-7 P9/L2-5 P9/L6-8 P16/L23-25	P5/L1-2 P7/L19			P5/L12-15 P6/L23-28 P9/L7-8 P9/L13-14 P9/L16-19 P13/L24-25 P14/L20-21 P16/L9-10 P19/L9-12	P9/L19-24 P12/L22-25 P13/L21-23 P16/L11-14 P19/L9-12	P7/L9	
Post-Launch Negative			P19/L1-2				P17/L7-10 P17/L10-16 P17/L16-22 P18/L5-14		P7/L5-7 P19/L12 P20/L14-17 (SM)	P19/L12		

Business Manager 2

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitatio	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive			P1/L10-13 P1/L15-16 P3/L9-12									
Pre-Launch Negative	P1/L10-11		P8/L12-13	P1/L16-17	P4/L3-6	P4/L20-23	P2/L4-6					
At Launch Positive	P8/L12-14	P6/L7-8					P6/L23-25 P8/L4-5			P5/L6-7 P5/L8-10 P6/L6-8 P7/L18 P10/L20	P7/L14-15	
At Launch Negative		P4/L18						P7/L9-11		P5/L7-8 P7/L18-20		
Post-Launch Positive			P6/L5		P3/L15-16 P3/L17-20 P4/L6-8 P4/L13-14 P9/L10-12 P9/L20-22				P3/L1-3 P5/L5-6	P6/L14-15 P6/L20 P9/L8-10	P3/L16-17 P6/L4-6 P9/L8-9	
Post-Launch Negative			P6/L13-15 P10/L8-10		P9/L1		P6/L14-15	P9/L4-5	P2/L9-10	P9/L5-17 P10/L13-15 P11/L3		

Business Manager 3

Implementation Ph	Familiarity	Assessability	Specificity	Resourcing	Acceptability	Receptivity	Structural Facilitatio	Priority	Achievement	Communication	Leadership	Others
Pre-Launch Positive			P2/L6-8			P5/L14-15	P4/L7-9			P2/L5-7 P2/L16-17 P2/L23-24 P4/L2-7	P2/L23-24	
Pre-Launch Negative			P1/L12-14			P4/L19-21	P1/L4-5					
At Launch Positive		P5/L22-23			P4/L18-19	P5/L23-25	P1/L8-12			P2/L16-17		
At Launch Negative					P4/L25							
Post-Launch Positive					P7/L3-5				P3/L8-11	P2/L24-27		
Post-Launch Negative			P1/L19-20 P7-18-20							P6/L10-11		