A Framework for Understanding Customer Relationship Management Systems Benefits

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Abstract:

This paper presents a structured framework for understanding the benefits of CRM systems. The framework is comprised of a set of benefits grouped into categories with empirical indicators and example metrics. The framework provides researchers with a systematic approach for exploring CRM system benefits and provides a sound base for further empirical research. It also provides practitioners with a means of defining objectives for CRM projects during specification of the business case and for conducting post-implementation reviews.

Keywords: customer relationship management, CRM system benefits

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I. INTRODUCTION

Customer relationship management (CRM) is concerned with the business processes and enabling technologies that focus on managing and improving relationships with customers in the areas of sales, marketing, and customer support and service. CRM systems consist of operational and analytical technological components as well as relationship marketing strategies and supporting, customer-centric business processes [Buttle 2004]. Although CRM systems were initially designed to help solve operational and tactical problems, they have since evolved to support strategic initiatives [Dyche 2002] and are used by a variety of employees, from front office staff to senior managers. As companies move into the new consumer-driven economy, customers are their most important asset and their success in the globalized economy depends on effective customer relationships [Reynolds 2001; SAS 2000; Berkowitz 2001;, Ryals and Payne 2001].

CRM systems are perceived as important strategic imperatives [Coltman 2007], with investment forecasts predicting that global spending on these systems is expected to increase over the coming years [Gartner Group 2009]. The worldwide CRM application software market is set for 10 percent growth from 2007-2012 despite the recession, with total revenue expected to reach $10 billion in 2009 [Gartner Group 2009]. In a U.S. based survey, Goodhue et al. [2002] found that 91 percent of organizations either already had a CRM system in place or were planning to acquire one. The implementation of a CRM system is, however, fraught with risk and high failure rates have been reported [Rigby et al. 2002]. Boardman [2005] suggested that 70 percent of CRM projects are failures, and found that more than half of all companies investing in CRM consider it a disappointment.

The absence of a clear and consistent definition of what constitutes a successful CRM system implementation makes it difficult to evaluate industry experiences. One approach to overcome this problem is to determine the success or failure of CRM system implementations in terms of benefits realisation. Understanding the business benefits is considered to be a critical success factor for successful CRM system implementation [Wilson et al. 2002], while low awareness of benefits is perceived to be a barrier to successful implementation of CRM systems [Ryals and Payne 2001]. CRM system benefits are typically presented as unstructured lists or focus on the enabling drivers [Reinartz et al. 2004; Thompson 2004; Goodhue et al. 2002; Wixom et al. 2002], while Freeman and Seddon [2005] have adapted an Enterprise Systems benefits framework to CRM systems.

The framework presented in this paper is designed specifically for CRM systems, identifies and categorizes CRM benefits, provides indicators for each benefit, and describes example metrics that can be used for each indicator. The benefits framework provides researchers with a systematic approach for exploring CRM system benefits and a tool that can be used in further empirical research. It will assist practitioners in determining the feasibility of CRM projects, ascertaining which benefits have been achieved in CRM projects during post-implementation review, and establishing benchmarks for effective CRM system implementation.

This paper is structured as follows: The next section discusses information systems evaluation in general and argues that a CRM specific benefits framework is necessary and important. The following section describes the design science research approach used to develop, validate, and refine the framework. The CRM benefits framework is then presented, including definitions for each benefit and its indicators. The fourth section discusses issues that emerged during development of the framework and use of the framework in research and practice. The final section concludes the paper and proposes directions for future research.

II. CRM SYSTEMS BENEFITS AND EVALUATION

There is a large body of research in information systems concerning benefits realization and evaluation. Expenditure on information systems and information technology represents a substantial investment for many organizations that managers find increasingly difficult to justify [Lin and Pervan 2003]. Evaluation of information systems involves establishing quantitative and qualitative means to assess the worth of information systems to organizations [Willcocks 1996]. In practice, little attention has been paid to formal evaluation of information technology investments [Fabrey et al. 1999] and many firms do not conduct rigorous evaluations of their information systems investments [Seddon et al. 2002]. The value of information systems investments is often justified by faith alone, or by understanding costs and using mainly notional figures for benefits assessment [Willcocks 1996]. A significant reason for this is that there are few reliable measures for assessing the impact of information systems [Irani 2002, Kumar 1990; Remenyi 2000; Willcocks 1996].

Information systems evaluation is a complex process, which includes aspects of efficiency, effectiveness, and competitive advantage within a complex social and political context [Kling and Iacono 1984; Silk 1990; Smithson and Hirschheim 1998; Willcocks and Lester 1999]. There is a lack of consensus on how success and failure are constituted, and different social groups will have different views of success and failure at different points in time [Wilson and Howcroft 2002]. The results of information systems implementation are also emergent rather than planned, and are often realized several years after implementation by the interaction of technology, people, and institutional context [Boddy 2000]. Furthermore, the superficiality and simplicity of much information systems evaluation leads to little difficulties in learning from failures [Dalchar and Genus 2003; Lyytenin and Robey 1999]. Despite these difficulties, "… much greater care should be taken in ensuring that planned benefits are actually achieved" [Smithson and Hirshheim 1998, p. 167]. Lyytenin [1987] notes that information systems evaluation should recognize a wide range of consequences and focus mainly on effectiveness rather than simple technological and cost measures. In this paper, we do not address the evaluation of information systems or attempt to define success. We focus on developing a framework of benefits relating to efficiency, effectiveness, and competitive advantage that may be used within an evaluation process.

The identification and measurement of benefits is a key aspect of information systems evaluation [Lin and Pervan 2003; Remenyi 2000; Seddon et al. 2002; Willcocks 1996]. Benefit frameworks should include both tangible and intangible benefits [Remenyi 2000; Willcocks 1996] and can be used in the development of business cases and for performance monitoring [Poon and Wagner 2000; Silk 1990]. However, when assessing information systems investments, many organizations include partial and inaccurate treatment of benefits, and focus on tangible benefits due to the difficulty in dealing with intangible benefits [Fabrey et al. 1999; Lin and Pervan 2003].

It is difficult to build a comprehensive list of benefits for an information system implementation [Remenyi 2000]. Benefits should, however, be identified as early as possible in an information systems implementation project and they should be closely related to the formulation of user requirements [Silk 1990]. Furthermore, potential benefits evolve as a project progresses; new benefits can be identified, and benefits that were originally identified may no longer be valid [Remenyi 2000]. The development of a framework for understanding CRM system benefits would be of great help in defining benefits that can apply within specific projects.

There are many lists of general benefits for information systems broadly, and for enterprise-wide packaged software systems in particular [e.g., Davenport 2000; Ross and Vitale 2000; Shang and Seddon 2002]. While there will be some high level benefits that are common to these systems, for a benefits framework to be useful, detailed indicators for the benefits need to be included. For a CRM benefits framework many of the benefits, and almost all of the indicators, will need to be specifically focused on CRM systems [Freeman and Seddon 2005]. Therefore, in this paper we develop a framework specifically focused on CRM system benefits, including both tangible and intangible benefits and detailed indicators for each benefit.

III. RESEARCH APPROACH

The research follows a design science approach and comprises building and evaluation of an artifact [Hevner et al. 2004]. In this section we describe the research approach we used and show how it follows the seven guidelines for design science research proposed by Hevner et al. [2004]. The first, or building, phase of the research involved development of an initial CRM Benefits framework [Hevner et al. Guideline 1 – design as an artifact]. Anthony's [1965] classification of employee cohorts as operational, tactical, and strategic was used to structure the framework. This classification distinguishes between the levels on the basis of timeframe for decision making, level of judgment, and impact of a single action. It was selected as it has previously been used successfully to categorize information systems benefits [Silk 1990] and highlights the relevance of specific benefits to different levels of management. It also enables different types of users to understand the potential impact of the system on their area of work.

CRM system benefits were then identified using an analysis of relevant literature [Jayaganesh et al. 2004]. The literature included was selected as follows: First, highly ranked information systems journals (*MIS Quarterly*, *Information Systems Research*, *European Journal of Information Systems*, *Decision Support Systems*, *Information & Management*, *Information Systems Journal*, and *Management Information Systems*) and conferences (International Conference on Information Systems and European Conference on Information Systems) were searched for papers on CRM systems, benefits, and evaluation [Fisher, Shanks and Lamp 2007]. Second, other information systems and marketing journals and conferences were searched. These were identified from reference citations from the journal and conference papers found in the first step. Third, recent books on CRM systems were included in the literature analysis. These were also identified from reference citations from the journal and conference papers found in the first two steps. As benefits were identified in the literature they were assigned to levels in the initial framework as follows: operational benefits have short time scales and focus on current tasks; tactical benefits concern mid-term planning and involve choosing and following a new direction; strategic benefits

are long term and focus on where the organisation is going [Silk 1990]. The initial CRM benefits framework comprised benefits that were defined and illustrated with examples from the literature.

The second, or evaluation, phase of the research involved two cycles of evaluation and refinement of the framework [Hevner et al. Guideline 3 – design evaluation]. The first cycle was an empirical study involving semi-structured interviews with CRM experts, and the second cycle was a focus group including six CRM experts. A detailed discussion of the design for each of these empirical studies is provided below [Hevner et al. Guideline 5 – research rigor]. In section IV we present the final CRM benefits framework resulting from the two cycles of refinement.

Semi-structured interviews with seven CRM system experts were used to validate and refine the framework. Interviewees were selected on the basis of their CRM system experience. A protocol was developed for the interviews based on the initial CRM system benefits framework. The interviews comprised two main parts. In part A, interviewees were asked about their CRM experiences and personal profiles; in Part B, interviewees were asked about each benefit and associated indicators in the framework, including definitions for each benefit and whether they were correctly categorized, definitions of indictors for each benefit, and asked to nominate any additional benefits and indicators that should be included in the framework. Interviews lasted approximately one hour, were audio recorded, and then transcribed for subsequent detailed analysis using pattern matching with concepts identified in the initial framework. Table 1 shows details of interviewees, who had an average of five and one half years of CRM experience in industry.

No.	Current Position	Industry Sector	Country	No. of years
Table 1. Interviewees and their CRM Experience				
1	Chief CRM Manager	Banking	Australia	7
2	Senior Consultant	Banking, Telecommunications	Australia, Asia	8
3	Senior Consultant	Banking, Telecommunications	Australia, Asia, Europe	8
4	Marketing Manager	Automobile	Australia	3
5	Marketing Officer	Telecommunications	Australia	2
6	Marketing Information Manager	Financial Services	Australia	7
7	Senior Systems/Business Analyst	Consumer Products	Australia, SE Asia, Eastern Europe	4

Each interviewee had been an important participant in the deployment of at least one CRM system and had at least three years experience as a CRM practitioner. Interviewees had various roles including managers, consultants, and a business analyst, in a variety of industry sectors including banking, telecommunications, automotive, insurance and managed funds, and consumer products. They had also worked with several types of CRM systems, varying from call centre systems to more comprehensive ones with both operational and analytical CRM capabilities. While all interviewees had experience with CRM systems in Australia, three of them had also been involved with CRM projects in Asia and Europe. This strength and diversity of experience was crucial in gaining a comprehensive perspective on CRM system benefits. Seven experts were considered sufficient for the interviews, as they represent a variety of industry sectors. Saturation was reached, in that, the seventh interview provided strong support for the framework and very few changes recommended.

Three main outcomes resulted from the interviews. First, the interviewees strongly endorsed the three level structure of the framework and felt that the operational, tactical, and strategic levels were intuitive and useful for practitioners [Hevner et al. Guideline 2 – problem relevance]. They were also supportive of the initial set of benefits in the framework and their categorisation. Second, the interviewees enhanced the discussion about each benefit in the initial framework and provide insight into several benefits from their industry experience. Third, the interviewees suggested that indicators for each benefit should be separated from the benefit discussion and made explicit within the framework. The indicators were important as they operationalized the benefits and would enable easier use of the framework in practice.

Following the interviews, a set of empirical indicators was established for each benefit and listed separately to the benefit. Each benefit included a brief definition and many included comments from interviewees indicating how they might be used.

The focus group involved six CRM system experts to validate and refine the framework. Focus groups, compared to interviews, enable interaction between participants and collect a rich, concentrated set of data in a short period of time. They allow the facilitator to explore similarities and differences of opinions and enable conclusions to be made about consensus on issues [Gibson and Arnott 2007]. Six participants is considered sufficient for focus group research [Krueger and Casey, 2000]. Focus groups are widely used in the social sciences for evaluation and are being increasingly used in IS research for evaluation [Gibson and Arnott 2007]. Focus group participants were selected on the basis of their CRM system experience, and two of the interviewees in the second phase also participated in the focus group. The focus group was facilitated by an experienced focus group facilitator and based on a detailed running sheet. The running sheet included an introduction, a transition stage to discuss CRM systems in general, an in-depth investigation stage to evaluate the CRM benefits framework, and a closure stage to capture any further issues from participants [Krueger and Casey 2000]. The focus group lasted approximately two hours, was audio recorded, and then transcribed for subsequent detailed analysis using pattern matching with concepts identified in the initial framework. Table 2 shows details of focus group participants.

Table 2. Focus Group Participants and their CRM Experience			
No.	Current Position	Industry Sector	Country	No. of years
1	Principal Director (CRM consulting company)	Banking, Telecommunications	Australia, Asia, USA	15
2	Marketing Specialist	Financial, Telecommunications	Australia, USA	20
3	Senior Systems Analyst	Banking, Telecommunications, Consumer Products	Australia, Asia, Europe	7
4	Marketing Manager	Automobile, Banking Telecommunications	Australia, Asia	5
5	Manager, Application Services	Banking Telecommunications	Australia, Asia, UK	7
6	Senior Analyst Programmer	Pharmaceuticals	Australia	5

Six main outcomes resulted from the focus group, each supported by a majority of participants. First, participants confirmed the three level structure of the framework. Second, participants recommended that two benefits, "enables real-time responsiveness to trends" and "improved productivity," should be moved from the tactical level to the operational level in the framework. Third, they suggested the addition of the benefit "improved innovative use of CRM systems" to the strategic level of the framework. Fourth, they stressed the importance of having a comprehensive benefits framework that could be used within different contexts by selecting from the complete set of benefits those that were relevant to the systems at hand. Fifth, they suggested that the framework would be useful in developing a business case for a CRM system and within evaluation of CRM systems projects. Sixth, they suggested the inclusion of case studies and vignettes to illustrate the use of benefits and their indicators in practice.

Following the focus group, approximately 50 case studies and vignettes from Web sites were added to the framework. The case studies were identified by searching the web sites of leading CRM vendors including IBM, Microsoft, Siebel Systems, SAS, Salesforce, Claritas, and Oracle and technology research and advisory companies including Tower Group and Gartner. Case studies of CRM systems implementations across a range of industries including banking and finance, health insurance, pharmaceutical, aviation, food, telecommunications, IT hardware, electrical appliances, textile, automobile, Internet services, education, and the non-profit sector were included to strengthen the general range of the framework. The case studies were used to provide examples of each of the benefits and their indicators in practice, and are cited in Appendix 1 and listed in Appendix 2.

The CRM benefits framework was developed iteratively through cycles of literature synthesis, expert interviews, and a focus group [Hevner et al. Guideline 6 – design as a search process]. It is an important contribution to the area of information system benefits and evaluation, and focuses specifically on the area of CRM system benefits [Hevner et al. Guideline 4 - research contributions]. In this paper we describe the final CRM benefits framework including levels, benefits, indicators, and measures [Hevner et al. Guideline 7 – communication of research].

IV. THE CRM BENEFITS FRAMEWORK

The CRM benefits framework describes and categorizes CRM benefits for operational, tactical, and strategic levels of management (see Table 3). Subsequent subsections provide a discussion of each benefit in the framework and

its associated indicators. Further details for each indicator, including example measures and illustrative case studies, are provided in Appendix 1.

Table 3. CRM System Benefits Framework
Benefits for Operational Level of Management
1. Improved customer data management 2. Improved process management 3. Improved customer service 4. Empowerment of staff 5. Improved productivity 6. Enables real-time responsiveness to trends
Benefits for Tactical Level of Management
1. Facilitates market segmentation 2. Facilitates key account management 3. Improved channel management 4. Improved analysis, reporting and forecasting
Benefits for Strategic Level of Management
1. Improved customer satisfaction 2. Improved business performance 3. Improved value-added partnerships 4. Improved innovative use of CRM systems

Benefits for the Operational Level of Management

These benefits pertain to day-to-day operations of the business. Several of these benefits may trigger related benefits at the same or higher levels of management as discussed below.

1. Improved Customer Data Management

To be effective, CRM systems require integrated and high quality customer data [Dyche 2000]. Customer data is often recorded within different functional areas within companies and on different media [Turnbull 2004]. In order to manage customer relationships, organizations need a "whole of customer view" to manage individual customer relationships [Ryals et al. 2001]. CRM systems seek to integrate customer data and provide the means to improve customer data quality. One expert pointed out that, "improved customer data can be regarded as an enabler of CRM system benefits rather than a benefit itself since virtually every other benefit identified in the framework is in some way dependent on high quality, integrated data". Indicators for improved customer data management are:

- Improved accuracy of customer information: Data accuracy is a key aspect of data quality and is defined as the correctness in the mapping of stored customer data to the appropriate state of the actual customers [Nelson et al. 2005; Price and Shanks 2005]. Ideally, each data value should have a perfect match with the real-world customer. All experts agreed that, while minor errors are acceptable, "the quality of data can make or break the system". One senior consultant commented "the quality of data in the system has a direct impact on user adoption".

- Improved completeness of customer information: Data completeness is defined as the degree to which all relevant customer data is represented in the customer database [Nelson et al. 2005; Price and Shanks 2005]. This can be all data about individual customers or particular data attributes that are required for each customer [Price and Shanks 2005]. Complete and integrated customer data is the basis for a seamless customer experience across the different functional areas of the organization and, in turn, provides a holistic view of the organization to the customer.

- Decrease in the number of duplicate records: Duplicate or redundant customer data occurs when the same customer data is collected in different parts of an organization for different reasons [Price and Shanks 2005]. One expert commented that duplicates not only "skew analysis" but also "dilute the customer's perception of what the organization is doing if they are contacted for direct marketing more than once". Although the implementation of a CRM system can reduce duplicates, an expert with extensive experience in banking advised that in actual practice "the presence of some duplicates at the household level is acceptable".

- **Reduction in time taken to access complete customer information:** The time taken to access complete customer information is reduced when customer data is integrated, and the need to access data from multiple systems is consequently eliminated. An expert with experience in the telecommunications industry said, "reduction in time taken to access complete customer information is a particularly significant indicator for high throughput users such as tellers and call centre staff". Another expert reported that when call centre operations are outsourced, payment for the service is based on the duration of the call and therefore, "if more time is taken to access the information, we end up paying for it". However, yet another expert was quick to warn us to distinguish between time savings brought about "by advanced technology rather than the CRM system itself".

- **Increase in timeliness of information:** Timeliness is defined as the degree to which customer data is sufficiently up to date for the task at hand [Price and Shanks 2005]. Some customer data, such as customer identifiers and contact details, needs to be current at all times while other less frequently used data may be more out of date. Currency measures require a date/time stamp to be kept for each data value.

- **Improved customer data history.** CRM systems exploit opportunities to collect pertinent data at each customer contact [Zikmund et al 2003] and provide employees with a better insight into account history by preserving past interactions between the customer and the company. Experts unanimously agreed that this was of particular significance for high volume transaction environments, such as banks. One expert also emphasized that "this ensured internal knowledge management" - the retention of knowledge about customers even after salespersons and customer service staff have left the organization.

2. Improved Process Management

For successful implementation of CRM systems, the alignment of information technology and business processes is essential [Buttle 2004; Gurau et al. 2003]. Customer related business processes need to be designed and managed to ensure that this alignment occurs. One expert felt strongly that process management is as important as customer data management, and the failure to recognize this is "one of the key reasons why CRM systems might fail". Indicators for improved process management are:

- **Reduction in the number of redundant processes:** Consolidated customer data enables the seamless integration of cross-functional processes and identification of blockages to customer satisfaction. This includes the identification and elimination of redundant processes and consequent reduction in duplication of effort. Knowsley Metropolitan Borough Council report a 20 percent cost saving by eliminating duplication of effort.

- **Increase in efficiency at different stages of managing the customer:** Typically, the relationship between organizations and customers progresses through customer acquisition, customer retention, and strategic customer care [Brown 2000]. The level of service provided needs to be tailored to suit each stage as the relationship progresses. Process improvements, together with the availability of complete customer data at every point of customer contact, ensure efficiency at each stage of managing the relationship with the customer. One expert noted, "smartening up at both front and back ends of operations results in increased efficiency at different stages of managing the customer".

- **Increase in efficiency in assignment of tasks:** CRM systems enable automatic assignment of tasks within customer relationship processes. For example, Sales Force Automation (SFA) products often include a sequence of sales activities that can systematically guide the sales representative through each discrete step in the sales processes and thereby provide a standardized sales process throughout the organization. An expert who has extensive experience with SFA systems reported, "collaboration of employees is encouraged with automatic assignment of tasks in the context of the customer relationship". He added, "workflow automation also results in time and cost efficiencies".

3. Improved Customer Service

By aligning people, technology, and processes together, CRM systems assist organizations in providing consistent and personalized customer service [Buttle 2004; Gurau et al. 2003]. The level of service has a direct impact on customer satisfaction and the generation of repeat business. Indicators for improved customer service are:

- **Increased number of resolutions at first point of contact**: The integration of processes and data enables more proactive effort in managing customer relationships, particularly in resolving complaints. One expert commented that it is more efficient to "place ownership of the complaint with the first point of contact and from there on, it is the responsibility of the complaint owner to ensure that the issue is directed to the most

appropriate channel and the best solution is determined". The emphasis is on the quality of the service delivered rather than on the speed or number of contacts.

- **Reduced handling time for enquiries.** CRM systems can enable the reduction of customer hold time during enquiries. An expert with 3 years' experience with call centre management systems reported that elimination of the need to access multiple systems for information and use of specific technologies such as load balancing, call routing, and precision call distribution leads to considerable reduction in the time taken to service customers. The introduction of a CRM system at the Avis car rental company in the UK resulted in significant improvement in customer service, including reduction in the time that customers are placed on hold over the phone (Avis case study). AAA Mortgage reported faster loan processing time as a direct result of their new CRM system (AAA Mortgage case study). One expert explained that "customers tend to equate time savings with excellent customer service" and, therefore, reduced customer hold time is a particularly important indicator.

- **Increased access to high quality information at the point of customer contact.** The availability of high quality customer data at each point of customer contact enables organizations to provide consistent personalized customer service. Improved customer data management provides a unified view of the customer across all the business units and channels used, and presents the customer with a single view of the company. This level of consistency in service increases the customer's confidence in the organization.

4. Empowerment of Staff

By giving employees access to more customer data, CRM systems provide them more autonomy in their tasks to shape procedures to the requirements of specific customers [Vavra 1995]. Sales force automation systems and related products empower employees with relevant information that assists in contact and lead management, configuration support and knowledge management [Dyche 2002]. As one expert pointed out, the inclusion of empowerment of staff in the CRM benefits framework is in keeping with the recommendations of IBM's [2004] CRM Done Right study which suggests a crucial link between alignment of CRM systems with employee goals and the outcome of the system implementation. Other experts agreed that empowerment of staff is an essential benefit of CRM systems and one of them reported that, in his experience, "60-70 percent of the effort in CRM is directed towards the three indicators suggested for this benefit". Indicators for improved empowerment of staff are:

- **Increased conversion rate of prospects:** Improved access to customer data can help negotiate and close deals on the spot. This leads to a higher conversion rate of prospects into sales which might have otherwise been missed due to the delay in waiting for complete data to be made available.

- **Increased staff satisfaction level:** Providing salespersons with customer data about a prospect allows them to negotiate on-the-spot proposals, close deals, and manage appointments without returning to the office. An expert explained that this level of empowerment makes the salespersons "feel more professional and confident". The buyer's perception of the salesperson's efficiency also improves considerably in the process.

- **Reduction in administration of sales staff:** "Aligning the goals of the CRM system with those of employees" plus "increased empowerment of employees" is believed to have a positive effect on the level of user adoption. As users gain more confidence in the system, they are likely to increase usage of it for their requirements. The enthusiastic adoption of the system by users, coupled with the automated assignment of tasks (such as call routing, etc.), leads to a reduction in the need to administer their activities.

5. Improved Productivity

While prospective users of CRM indicate that growth in revenue is the biggest expected benefit, existing users report that the biggest benefits have been observed in the area of productivity improvements [Aberdeen Group 2003]. This is particularly significant during economic downturn when productivity gains translate into increased profit margins through cost savings. Indicators for improved productivity are:

- **Reduction in lost opportunity costs:** CRM systems improve visibility of marketing opportunities. By utilizing these opportunities for more effective target marketing campaigns, up-sales (selling higher value -- and margin -- products and services), and cross-sales (selling additional products and services), the cost of lost marketing opportunities is considerably minimized [Buttle 2004].

- **Reduction in costs for lead generation, marketing, customer service and sales:** By identifying customers on the basis of lifetime profitability, organizations can avoid over spending on customers who are a liability rather than an asset. It is generally accepted that it costs five times more to sell to a new customer than it

costs to service an existing one. By supporting customer retention, CRM systems can result in reduced cost per sale. Information about channel preferences and existing purchase patterns means resources can be better allocated [Takis et al. 2000]. The roles and responsibilities of personnel can be redesigned to be more effective. Target marketing implies more effective use of resources for promotional purposes [Kotler et al. 1998]. Several experts commented that reduction in acquisition and operational costs are enabled through process improvements, channel optimization, customer segmentation, key account management, and improved resource management.

- **Increase in the number of customers handled per sales representative.** Elimination of the need to access multiple systems to obtain customer data leads to considerable reduction in the time taken to service each customer. Other supporting technologies, such as call routing and load balancing systems, assist in further reduction of time taken for customer service. As a consequence, each sales representative can handle more customers in the given length of time. One expert explained that, while this was a desirable benefit and could lead to considerable cost savings, "it is necessary to combine this with an emphasis on maintaining the quality of customer service".

6. Enabling of Real-Time Responsiveness to Trends.

CRM systems enhance relationships with customers by facilitating immediate response to their needs and foster continuous learning and improvement [McKenna 1991]. However, while the experts agreed that CRM systems enable increased responsiveness, they were unanimous in their opinion that the concept of "real-time responsiveness" is only "required only under select circumstances such as fraud detection". They suggested that most business circumstances do not require data processing in real time and that the emphasis should be on "right-time responsiveness", which is determined by "the volume and frequency of transactions and contact". This could range from one day to six months and it is important to determine the right intervals. One of the experts added that win-back campaigns are "the most time sensitive of all marketing activity and determination of the right time to attempt a win-back from a customer who has defected is very important" and this is one of the determinants of the right interval for responsiveness. Indicators for enabling of real-time responsiveness to trends are:

- **Increase in number of cross sales:** The early detection of trends coupled with better understanding about customer needs and behaviour results in the deployment of more effective marketing campaigns at not only market segment level, but also at the level of the individual customer. Cross selling is one such instance, and refers to the offering of a related product at the time of enquiry or purchase of a product [Buttle 2004].

- **Increase in number of up-sales:** Up-sales is similar to the cross sales, and refers to an offering of an upgrade or a higher value option of the same product which the customer is enquiring about. The emphasis is on offering an alternative product, which offers increased value to the customer [Buttle 2004]. This requires an understanding of the customer's preferences and what might be considered to be a higher value product offering.

- **Earlier detection of trends:** The capture and analysis of customer data in real-time enables early detection of trends in the market and facilitates swifter development of responsive marketing strategies [Peppers et al. 2000]. An interesting analogy compares this to a dance between two partners – the organization and the customer [Gordon and Roth 2000]. As the customer swings in one direction, the organization keeps up pace. The organization soon begins to anticipate the moves of the customer and refines its response with such efficiency that it would be difficult to discern who is leading.

- **Increased number of effective campaigns:** Campaigns are effective when they are profitable, particularly in terms of sales and incremental margin [Buttle 2004]. Although increased speed in delivery of marketing strategies and identification of the right product to offer at the right time are important, experts commented that a focus on the effectiveness of campaigns is important, emphasizing profitability over volume.

Benefits for the Tactical Level of Management

These benefits relate to the middle level of management which is concerned with medium term planning and the development of tactical strategies such as specific marketing campaigns.

1. Improved Facilitation of Market Segmentation

Traditional unsegmented marketing involves mass production, distribution, and promotion of the same product to all customers and focuses on what is common in the needs of the consumers rather than on what is different [Kotler et al. 1998]. On the other hand, relationship marketing is based on the principle that not all customers want the same product and that individuals may purchase the same product for different reasons. CRM analytics enables profiling

of customers from a heterogeneous market to appropriate levels of aggregation to obtain smaller, more homogenous groups. Markets can be segmented on the basis of physical attributes or behavioural patterns. The former includes geographic variables, demographic variables, and socioeconomic characteristics while the latter includes lifestyles/psychographics, product usage, and benefits sought. Marketing strategies can then be adjusted accordingly. Indicators for improved facilitation of market segmentation are:

- **Increase in campaign response rates:** Due to increased efficiency in the determination of market segments and the choice of campaigns to be delivered to each segment, the response rate is likely to increase. CRM also makes it easier to track the effectiveness of a given campaign as opposed to traditional mass media marketing [Handen 2000]. The effectiveness of a campaign can be measured by comparing the response rate achieved using target marketing in segments to the typical response rate achieved before segmentation. If historical data for previous campaigns does not exist, a test campaign needs to be send out to a randomly selected control (test) group of customers, and then the results can be compared [Todman 2001]. Lift charts can be developed to compare performance of different segmentation models [Kumar and Reinartz 2006]. [Case Studies 35, 37]

- **Increase in identification and utilization of business opportunities:** Target marketing is more helpful in spotting market opportunities and developing more effective products and marketing mixes [Kotler et al. 1998]. One expert commented that the use of the system to "tease out higher value opportunities could be tied up with employee incentives to promote effective user adoption of the system".

- **Increase in target marketing driven revenue:** This refers to the ultimate goal of target marketing initiatives – increase in revenue. However, as with the previous indicator, the experts emphasized increase in revenue through increase in profitability is preferable to increase in volume of sales.

- **Increase in profitability of market segments:** While increase in the number of target marketing initiatives and campaign response rates is important, several experts cautioned against the use of these indicators without proper emphasis on profitability. As one expert explained, "the increase in the number of campaigns is less important than increase in efficiency of such marketing initiatives". This could result in a "trade off between response rate and the profitability of campaigns". The metrics for segment profitability depend on the definition of profitability used by a company. They typically include revenues minus costs at the transaction level for each specific customer account, aggregated by customer segment, and may also include lifetime value and customer valuation metrics and company's other costs [Kaplan and Narayanan 2001; Williams 2006].

- **Increase in number of target marketing initiatives.** CRM systems enable efficient profiling of the customer base into manageable homogenous targets for marketing campaigns. One expert reported that a major benefit of CRM systems is that they "enable the running of multiple concurrent campaigns to different market segments". As a consequence, the implementation of a CRM system is typically accompanied by an increase in the number of target marketing initiatives.

2. Facilitation of Key Account Management

CRM systems enable better management of key account customers. Not all customers are equally profitable; for organizations in most industries and markets a small portion of the customer base provides a significantly higher portion of revenue [Gordon et al. 2000]. These are the key customers. Indicators for facilitation of key account management are:

- **Increase in average customer lifetime value**: CRM systems enable identification of highly profitable customers who exhibit a propensity to leave and customers who are a liability to the organization. Multitiered service levels including priority queuing and special call handling for select customers can be developed for each level of profitability. In determining key accounts, it is important to distinguish between short and long term customer value and the calculation of customer lifetime value. By reducing expenditure on low profitability customers and motivating high value customers to remain loyal, the net benefit is an increase in average customer lifetime value.

- **Increase in number of customers with high lifetime value:** Identification of the highly profitable customers and motivating them to stay that way derives maximum value from existing customers [Dyche 2002]. CRM systems facilitate isolation of high-potential customers, development of a deeper understanding of what they want, determination of how much should be spent to satisfy them, and calculating what the returns might be [Band 1991].

- **Reduction in number of customers with credit risk.** As mentioned above, CRM systems assist in the identification of customers who are a liability to an organization in terms of higher cost for lower returns. For example, in the banking sector, CRM analytics alerts users to any imbalances between the client's needs and the bank's objectives of maximizing revenue with reduced risk.

3. Improved Channel Management

CRM systems assist in optimizing channel management. One aspect of this is ascertaining customer channel preferences [Falque 2000]. The other aspect is that it allows organizations to increase profitability by ensuring that the most effective channel is used for specific products and customers. Conflicts of interest between customers and the organization, in terms of channel preferences, are made visible and the organization is in a better position to resolve these issues satisfactorily. Indicators for improved channel management are:

- **Increase in number of transactions through cost-effective channels:** By combining knowledge about customer propensity to use a sales channel with organizational channel preferences, effective strategies can be deployed to direct customers towards the more cost effective channels. This involves working out the channel cost per sale and customer propensity to use each channel. The organization would then have to motivate the customers to use the most appropriate channel for a given transaction by providing appropriate incentives.

- **Increase in the number of customer self-service activities:** Research shows that the cost of contact through a call centre is one twentieth that of a face-to-face contact [Brown 2000]. Furthermore, the cost of a self-service Internet contact is, again,, one twentieth of a call centre contact. The widespread adoption of the Internet to perform banking transactions such as payment of bills, transfer of funds between accounts and ascertaining account balances is one example of successful propelling of customers to a self-service channel.

- **Reduction in the usage of cost-ineffective channels**: A reduction in the usage of cost-ineffective channels improves channel management. For example, in banking as routine transactions are made by customers on the Internet without assistance, the demand on tellers at branches should reduce. One expert explained that "in practice, higher-cost channels cannot be eliminated altogether and it is important for an organization to develop a multichannel strategy". Examples include the provision of a call centre to complement Internet-based services or the retention of some bank branches with tellers as well as self-service ATMs.

- **Reduction in channel cost per sale:** Although reduction in channel cost per sale is important, this should be coupled with an understanding of customer preferences for using channels. In directing customers toward lower cost channels and inadvertently providing poor quality service, a negative impact on customer sales could occur. Therefore, it is necessary to also consider the quality of customer service and the level of customer satisfaction in determining the organization's channel strategy.

4. Improved Analysis, Reporting and Forecasting

Organizations can improve analysis and produce more accurate forecasts using high quality, integrated customer data from CRM systems. CRM systems are usually equipped with the ability to generate predefined and ad hoc reports which can be effectively used to support functions such as forecasting and resource management. They therefore enable faster and improved decision making [Jayaganesh et al. 2004]. Indicators for improved analysis, reporting, and forecasting are:

- **Improvement in monitoring of KPIs:** Key Performance Indicators (KPIs) alert organizations to potential pitfalls before an impact is felt on net sales and profit figures. The experts commented that CRM systems assist in the identification and ongoing monitoring of KPIs. High quality and integrated customer data enables access to many indicators of key performance concerning customers, sales, and relationships that were previously too difficult to obtain or else unreliable.

- **Improvement in reporting at customer rather than account level:** The integrated customer and other data in CRM systems enables reporting at the customer level, taking into consideration the many different types of interactions that he/she might have with the organization. This is particularly relevant in the banking sector, where data has historically been structured by account. One expert with extensive experience in the banking industry noted that CRM systems allowed for profiling of customers based on their total relationship with the bank.

- **Increase in the number of relevant reports available:** Data from CRM systems enables an increased number of reports and reporting features. However, as with real-time responsiveness capabilities, many experts commented that emphasis should be on increased relevance, accuracy, and timeliness of reports rather than increase in volume. One expert noted that the accuracy of forecasts was "determined more by the quality of data in the system rather than the use of the CRM system itself".

Benefits for the Strategic Level of Management

These benefits relate to the top levels of management and are concerned with the long term vision and goals of the organization.

1. Improved Customer Satisfaction

Customer satisfaction increases when increased value is provided to the customer [Buttle 2004]. Almost all operational and tactical benefits discussed previously have a positive impact on value creation for the customer. Other indicators relevant to the strategic level of management are discussed below. Indicators for improved customer satisfaction are:

- **Improved value perception.** By providing a better quality service through individual customer profiling and passing on some of the cost gains to high lifetime value customers, CRM systems enable improved customer perception of value in the offered product or service. One expert commented that a CRM system implementation "is bound to fail if the objective is defined as an increase in profit; rather, it should be defined as an increase in profit while simultaneously delivering higher value to the customer".

- **Increase in period of customer loyalty:** Customer loyalty and, consequently, lifetime value will increase with improved customer satisfaction [Kotler et al. 1998]. Increased customer loyalty also has a direct impact on overall business performance [Case study 6]. Approaches to measuring customer loyalty are based on either behaviour or loyalty [Buttle 2004].

- **Increase in the number of repeat customers:** When customers receive a satisfactory level of service, their perception of value in a relationship increases and more opportunities will arise to sell related products/services to these customers. It is more expensive to acquire a new customer than to increase repeat business with existing customers.

- **Reduced number of complaints:** Customers complain either when their expectations are not met or they feel they have been treated unfairly. Satisfied customers register fewer complaints [Buttle 2004].

- **Increase in word of mouth recommendations:** Word of mouth recommendations are an important indicator of customer satisfaction and can be very influential [Buttle 1998]. However, one expert commented that word of mouth recommendations are relevant mainly "in the context of products and services that were relatively new as opposed to those which had established markets". It is also important to note that research shows that 91 percent of dissatisfied customers communicate their dissatisfaction to at least nine other persons [Vavra 1995].

2. Improved Business Performance

CRM systems can lead to improved business performance in terms of reduced customer attrition and increased customer retention, revenue, and profitability [Buttel 2004; Dyche 2002; Handen 2000]. They can also assist organizations to maintain/gain a competitive edge in their industry by promoting a favorable image among their customers, thus strengthening their leadership in the market. Generally, increased profitability is seen as more important than increased volume. Indicators for improved business performance are:

- **Increase in profit:** Increase in profit is a strong indicator of improved business performance. One expert commented, however, that "yes, we all want increased profit but you have to make a distinction between short-term and long-term gains. In the short-term, you could compromise on profits slightly in the short-term in order to get to high profitability customers and to keep them loyal".

- **Increase in share of wallet:** Share of wallet is a consumption related measure of customer loyalty [Baumann et al. 2005]. It measures the relationship between the actual purchases of the organizations products/services by the customer and the total purchasing potential of that customer. One expert commented when comparing share of wallet to share of market that, "increase in the share of market does not necessarily imply increase in earnings unlike increase in share of wallet of high lifetime value customers".

- **Increase in customer retention:** By providing value to customers, CRM systems can lead to an increase in the retention rate of customers and consequently improved business performance. Several factors contribute to the perception of value and one expert commented, "while cost is an important consideration in some markets, in others it is the level of customer service that makes the difference". Customer retention is defined as "the number of customers doing business with a firm at the end of a financial year expressed as a percentage of those who were active customers at the beginning of the year" [Buttle 2004, p 298].

- **Increase in revenue per customer:** This indicator summarizes the net benefit resulting from productivity gains coupled with improved customer loyalty. The revenue per customer is the amount earned in a relationship with a customer over a time period [Buttle 2004].

- **Increase in sales:** Increased retention of customers and acquisition of new customers translates into improved sales figures. Several experts mentioned a trade off between increase in sales volume and increase in profitability and cautioned that this indicator would be more appropriate to CRM systems if it is linked to profitability.

- **Increase in the number of customers.** Productivity improvements and customized service levels together with improved target marketing not only ensures retention of existing customers, but also leads to an increase in the overall number of customers. In keeping with their remarks throughout the interviews, the experts cautioned that the objective should be an "increase in the number of profitable customers", thus emphasizing profitability over increase in volume.

3. Improved Value Added Partnerships

CRM systems enable process integration beyond the traditional CRM areas of marketing, sales, and customer service. Sharing of integrated customer related data encourages the formulation of cross functional processes with areas such as manufacturing, logistics, finance, and product development. Furthermore, partnerships with external organizations are enabled through sharing of customer related data and the development of interorganizational processes that facilitate business-to-business trading and supply chain management. An indicator for improved value added partnerships is:

- **Increase in internal/external value-added linkages:** The number of value-added linkages with areas outside traditional CRM indicates creative and innovative use of CRM systems. Several experts reported instances of the creation of effective internal and external value-added linkages. The majority of these were in the area of inventory management, logistics, and other areas related to supply chain management. One expert felt that as the CRM market matures, there would be increased instances of similar innovative usage of these systems.

4. Improved Innovative Use of CRM Systems

Most CRM systems have typically focused on marketing, sales, and customer service. Recently though, there has been growing interest in investigating how the functionality of CRM systems can be leveraged for customer-centric product development [Lloyd and Walters 2005; Tseng and Piller 2003]. CRM systems contain data about customer behaviour and preferences that can be used by the research and development functional areas of organizations for product innovation [Brown 2000; Jagielska et al. 2005; Jayaganesh et al. 2004]. An indicator for improved value added partnerships is:

- **Increase in CRM system driven innovation:** CRM systems can lead to innovation in product development and other innovative applications. For example, the Telco expert commented about the "use of customer preference and call pattern information captured in the CRM system being used to determine positioning of new mobile signal towers". The expert from the automotive industry held meetings with stakeholders from their engineering department to identify how the existing CRM functionality could be extended and utilised to support engineering decisions in product development. The number and extent of CRM system driven innovations is a subjective measure and may be determined by relevant senior management.

In general, however, the experts felt that most of the CRM system implementations in their experience are not mature enough to be used in innovative ways. They were unanimous in their opinion, though, that such potential certainly exists and could grow in importance.

V. DISCUSSION

The CRM benefits framework presented in this paper provides researchers and practitioners with a structured and systematic approach to understanding CRM system benefits. Benefits were identified from both a thorough analysis

of existing literature, and an empirical study involving interviews and a focus group involving experience practitioners. The benefits have been categorised into three groupings to provide a simple overall structure. As the benefits are relatively broad, indicators have been provided for each benefit to facilitate application of the framework in theory and practice.

A number of themes emerged during the analysis of case studies, expert interviews and the focus group, including differences between consultant and expert perspectives on benefit measures, the impact of type of market on the importance of benefits, the use of metrics and the identification of additional benefits outside the traditional areas of marketing, sales, and customer service.

Differences Between Consultant and Other Expert Perspectives on Benefit Measures

Generally consultants tended to emphasise quantitative measure;, for example, number of reports available, increase in the number of target marking initiatives, and increase in the number of customers. In contrast, other experts tended to emphasise improvement in quality rather than quantity. Their interpretation of the same benefits were increase in the relevancy of reports, increased profitability of target marketing initiatives, and increased profitability of customers.

Similarly, consultants tended to emphasise the real-time capabilities of their CRM systems, particularly with respect to real-time responsiveness to customer trends and feedback. On the other hand, the other experts were of the opinion that real-time responsiveness was largely over rated. There are certain situations, such as fraud detection and certain banking functions, which may require systems to have real-time responsiveness capabilities. However, for most CRM purposes, "right-time responsiveness" was deemed to be far more important than "real-time responsiveness". The definition of "right-time responsiveness", however, varied depending on the industry sector and particular business processes.

Differences were also found in increased access to up to date information at the point of contact. Consultants tended to emphasise increase in the amount of information available whereas the experts were more focused on the delivery of the right information at the right time.

Impact of Market Type

The type of market in which the system operates was also found to have a bearing upon the importance of certain benefits. Increase in word of mouth recommendations received a higher score in the context of products and services that were relatively new as opposed to those which had established markets. In the case of some benefits, the experts often suggested an alternative ranking in the case of a different market. For example, increase in the number of proactive services received a higher score in a mature market as opposed to an emerging one. The innovative use of CRM systems outside the traditional areas of marketing, sales, and customer service was also perceived as a feature of mature systems and markets, although experts perceived that few CRM systems in Australia were mature enough to tap into these additional benefits.

Use of Metrics

Benefit metrics need to be applied judiciously as many benefits have interactions with other benefits. For example, the metrics reduced number of complaints, reduction in time for handling customer enquiries, and increased customer self-service activities may be misleading and could actually represent missed opportunities to liaise with customers and thereby increase sales. Furthermore, emphasis on increased number of issue resolutions at the first point of contact could inadvertently lead to hurried handling of customer complaints with adverse consequences for the level of customer satisfaction. The experts recommended coupling these metrics with accountability and quality assurance processes in order to ensure that the relationship with the customer is not at risk.

Additional Benefits Outside the Traditional Areas of Marketing, Sales and Customer Service

Organisations may capitalise on the opportunities presented by their CRM systems in areas other than marketing, sales, and customer service, using CRM systems in creative and innovative ways. Integrated customer data facilitates additional benefits within organisations; for example, innovation in product development. Furthermore, integrated customer data facilitates the creation of relationships between organisations; for example, in supply chain management. Experts in interviews and focus groups identified these additional benefits as having growing importance as CRM systems matured.

VI. CONCLUSION

Implications for Practice

The framework provides a comprehensive basis for planning for CRM systems implementation and conducting feasibility studies, for conducting post-implementation review of CRM systems and for establishing benchmarks for effective CRM system implementation. When planning for CRM systems implementation projects, it is important to be aware of the many possible benefits that can accrue. The framework contains a comprehensive list of benefits that can be adapted or customised for a particular project depending on its scope, purpose, and the organisational context within which it occurs. Establishing a customised set of expected benefits provides the basis for a comprehensive cost-benefit analysis to determine the feasibility of the project [53].

When undertaking post implementation reviews it is crucial to identify all benefits that accrue from the CRM system, including some that are emergent and may have been unplanned. The framework provides a sound basis for such a review. Use of the framework for planning projects and conducting post implementation reviews enables a comparison of expected and realised benefits, providing strong evidence in the analysis of benefits to determine the success or otherwise of the project.

The framework also enables a standardised means of conducting post implementation reviews and keeping a database of net benefit realisation for various CRM system implementations. The database could be used as a means of benchmarking CRM system projects that are of a similar nature.

Implications for Research

The framework provides researchers with a systematic approach for exploring CRM system benefits, which can be used in further empirical research. The separation of benefits and their indicators enables ready use of the framework in empirical studies. A number of empirical studies should be undertaken. First, further refinement of the framework is possible using the Delphi Study approach to capture the perceptions of a larger number of CRM experts. Second, the framework would provide a sound basis for a multiple case study that explores the gap between expected and realised benefits in CRM systems is planned. Fearon and Philip [18] provide a model for benefit gap analysis, in which they define the gap as being of three types – deficient, neutral, or efficient. This model could be adapted for use in the evaluation of CRM systems. The case study could also identify factors that enable and inhibit CRM system benefits to be achieved. Third, the framework could be used to develop an instrument to measure net benefits realised in CRM systems implementation, and perhaps establish baselines for particular industry sectors. The definitions for benefits and their indicators will provide a sound starting point for development of the instrument.

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APPENDIX 1: INDICATORS, METRICS AND CASE STUDIES

Indicators for each benefit in the framework are expanded with metrics and illustrative case studies.

Operational Benefit 1 - Improved Customer Data Management

Improved accuracy of customer information	
Data accuracy may be measured for each data attribute by determining the number of incorrect attribute values by surveying a sample of customers. An accuracy metric is the ratio of the number of data values in error to the total number of data values [Pipino et al. 2002].	Case study 48
Improved completeness of customer information	
Data completeness may be measured at either the individual customer level or the particular data attribute level. A completeness metric is the ratio of the number of incomplete items to the total number of items [Pipino et al. 2002].	Case study 24
Increase in timeliness of information	
Currency measures require a date/time stamp to be kept for each data value. A metric for timeliness should include both the currency (the age of the data) and volatility (the length of time the data remains valid for the task at hand). A suitable metric is the ratio of currency to volatility [Ballou et al. 1998].	Case study 18
Decrease in the number of duplicate records	
Duplicate data is normally defined at the customer instance or data record level. A metric for duplicate data is the ratio of the number of duplicate data records to the total number of records [Pipino et al. 2002].	Case study 48
Reduction in time taken to access complete customer information	
A metric for time taken to access customer information should include both the time taken to deliver the requested data and the time during which the data is useful to the user. A suitable metric is the ratio of the time interval from request by user to delivery to the time interval from request by user to the point at which data is no longer useful [Pipino et al. 2002].	Case study 3
Improved customer data history	
A metric for customer data history should compare the amount of historical customer data available that represents customer interactions at two points in time. A suitable metric is the number of customer data and interaction records available currently with that at a previous point in time, appropriate for the task at hand [Pipino et al. 2002].	Case studies 18, 20, 26

Operational Benefit 2 - Improved Process Management

Reduction in the number of redundant processes	
A metric for reduction in redundant processes should compare the number of CRM related redundant processes at two points in time.	Case studies 3, 12
Improved completeness of customer information	
A metric for increased efficiency of managing the customer should compare the time taken in interacting with each customer for each unit of profit at two points in time.	Case study 31
Increase in timeliness of information	
A metric for increased efficiency in assignment of tasks should compare the amount of time taken in the task and the number of people involved in the task at two points in time.	Case study 15

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Operational Benefit 3 - Improved Customer Service

Increased number of resolutions at first point of contact	
A metric for quality of service in resolving complaints is SERVQUAL, an instrument that measures the difference between customer expectations and perceptions of service [Buttle 2004; Pitt et al. 1995; Parasuraman et al. 1988].	Case study 3
Reduced handling time for enquiries	
A metric for reduced handling time should include both the time taken to receive the customer enquiry (hold time) and the time taken to process the customer enquiry.	Case studies 1, 10
Increased access to high quality information at the point of customer contact	
A metric for this indicator is an index comprising measures for data quality (accuracy, completeness, timeliness) and accessibility (both time and amount of data) (see section 1.1.1) at each point of customer contact [Ballou et al. 1998; Buttle 2004; Pipino et al. 2002; Price and Shanks 2005].	Case studies 40, 44

Operational Benefit 4 - Empowerment of Staff

Increased conversion rate of prospects	
A metric for increased conversion rate of prospects should compare the ratio of sales to the number of prospects at two points in time.	Case studies 8, 21
Increased staff satisfaction level	
A number of questionnaires are available to measure employee satisfaction [van Saane et al. 2003]. A metric for increased staff confidence level should compare the level of staff satisfaction at two points in time.	Case study 27
Reduction in administration of sales staff	
A metric for reduction in administration of sales staff should compare the amount of time taken in administration tasks related to sales staff at two points in time.	Case study 21

Operational Benefit 5 - Improved Productivity

Reduction in lost opportunity costs	
A metric for lost opportunity costs should compare the amount of sales per customer at two points in time.	Case studies 37, 44
Reduction in costs for lead generation, marketing, customer service and sales	
A metric for reduction in costs for lead generation, marketing, customer service, and sales should compare the total marketing, service, and sales costs per customer at two points in time.	Case study 10
Reduction in administration of sales staff	
A suitable metric is to compare the ratio of the number of customers to the number of sales people at two points in time.	Case study 18

Operational Benefit 6 - Enabling of Real-Time Responsiveness to Trends

Increase in number of cross-sales	
A metric for increase in number of cross-sales should compare the number of cross-sales for two time intervals.	Case studies 7, 13, 30
Increase in number of up-sales	
A metric for increase in number of up-sales should compare the number of up-sales for two time intervals.	Case studies 7, 13, 25
Earlier detection of trends	
A metric for earlier detection of trends should compare the average time taken to develop responsive marketing strategies for two time intervals.	Case study 6
Increased number of effective campaigns	
A metric for increased number of effective campaigns should compare the number of campaigns determined to be profitable for two time intervals.	Case study 33

Tactical Benefit 1 - Improved Facilitation of Market Segmentation

Increase in campaign response rates	
The effectiveness of a campaign can be measured by comparing the response rate achieved using target marketing in segments to the typical response rate achieved before segmentation. If historical data for previous campaigns does not exist, a test campaign needs to be sent out to a randomly selected control (test) group of customers and then the results can be compared [Todman 2001]. Lift charts can be developed to compare performance of different segmentation models [Kumar and Reinartz 2006].	Case studies 35, 37
Increase in identification and utilization of business opportunities	
The increase in identification and utilization of business opportunities can be measured using the number of new business opportunities and implementation of corresponding new initiatives introduced after implementing segmentation. For example, after segmenting customers into 10 segments, one of the major supermarket chains in UK reformatted old and established new stores, introduced new products and brands, changed promotions and pricing, implemented relationship marketing, and added new channels of communication with customers [Fovargue 2005].	Case study 22
Increase in target marketing driven revenue	
Increase in revenue can be measured by comparing total revenue dollars before and after implementing segment driven target-marketing initiatives.	Case studies 34, 38
Increase in profitability of market segments	
The metrics for segment profitability depend on the definition of profitability used by a company. They typically include revenues minus costs at the transaction level for each specific customer account, aggregated by customer segment, and may also include lifetime value and customer valuation metrics and company's other costs [Kaplan and Narayanan 2001; Williams 2006]. The increase in profitability can be measured by the increase in total revenue (as the response/sales volume and value go up) and cost savings achieved by eliminating customers who are poor prospects.	Case studies 7, 37, 38
Increase in number of target marketing initiatives	
The implementation of a CRM system is typically accompanied by an increase in the number of target marketing initiatives. The increase can be measured by the number of new target marketing initiatives developed after customer profiling.	Case studies 7, 35

Tactical Benefit 2 - Facilitation of Key Account Management

Increase in average customer lifetime value	
Customer lifetime value is a measure of the customer's profit generation for the company. A customer's lifetime value is defined as the sum of the historical (compounded up to today's value), present day, and future (estimated and discounted back to today's value) net earnings in a relationship with a customer [Buttle 2004]. A metric for increase in average customer lifetime value should calculate and compare the average customer lifetime value at two points in time.	Case study 32
Increase in number of customers with high lifetime value	
A metric for increase in number of customers with high lifetime value should count and compare the number of customers with high lifetime value at two points in time.	Case study 32
Reduction in number of customers with credit risk	
Credit risk may be determined for each customer using a credit scorecard based on customer data [Wynn and McNab 2003]. A metric for reduction in customer credit risk should determine and compare the number of customers that are a credit risk at two points in time.	Case study 32

Tactical Benefit 3 - Improved Channel Management

Increase in number of transactions through cost-effective channels	
A metric for increase in number of transactions through cost effective channels should compare the number of transactions made through selected channels over two time intervals.	Case studies 2, 4, 5
Increase in the number of customer self-service activities	
A metric for increase in number of up-sales should compare the number of up-sales for two time intervals.	Case studies 4, 5
Reduction in the usage of cost-ineffective channels	
A metric for reduction in the usage of cost-ineffective channels should determine which channels are cost-ineffective for particular transactions and compare the number of transactions made through these channels over two time intervals.	Case study 4
Reduction in channel cost per sale	
A metric for reduction in channel cost per sale should determine and compare the channel cost per sale for selected multichannel transactions over selected time intervals.	Case study 4

Tactical Benefit 4 - Improved Analysis, Reporting and Forecasting

Improvement in monitoring of KPIs	
A metric for improvement in monitoring of KPIs should determine and compare the number of KPIs used by decision makers and the perceptions of the decision makers about the usefulness and usage of the KPIs at two points in time.	Case studies 19, 20
Improvement in reporting at customer rather than account level	
A metric for improvement in reporting at customer rather than account level should compare a count of the number of reports structured by customer and those structured by account at two points in time. The perceptions of relevant decision makers about the reports available and their structure could also be determined using a survey.	Case study 11
Increase in the number of relevant reports available	
The relevance, accuracy and timeliness of reports is best determined by surveying the perceptions of users of reports. A metric for increase in the number of relevant reports available should compare the perceptions of users of reports at two points in time.	Case studies 11, 17, 28

Strategic Benefit 1 - Improved Customer Satisfaction

Improved value perception	
There are a number of metrics available for customer perceptions of value and satisfaction. Almost all compare the customer's perception of their experience with their expectations [Buttle 2004]. Detailed approaches to measure customer satisfaction may be found in Vavra [1997] and Oliver [1997].	Case studies 39, 43
Increase in period of customer loyalty	
Approaches to measuring customer loyalty are based on either behaviour or loyalty [Buttle 2004]. A metric based on behavioural loyalty uses recency of purchases, frequency of purchases, and monetary value of purchases as indicators of loyalty. An alternative attitudinal metric uses measures of belief, feelings, and purchasing intentions [Buttle 2004]. A combined measure based on both behaviour and loyalty may be found in Dick and Basu [1994].	Case study 6
Increase in the number of repeat customers	
The number of repeat customers may be determined from those customers who interact with an organization on more than one occasion. The metric will depend on the definition and extent of an interaction, which can be as different as an enquiry or a purchase [Buttle 2004].	Case study 16
Reduced number of complaints	
A simple metric is to maintain a count of the number of complaints received. However, one expert warned that, "while reduction in number of complaints could be a useful indicator, part of an effective CRM strategy is to ensure that channels of communication are kept open and that it is not difficult for customers to complain if the need arises".	Case study 43
Increase in word of mouth recommendations	
A metric for word of mouth recommendations is to survey customers who make purchases and seek information about he source of their decision to make the purchase.	Case study 6

Strategic Benefit 2 - Improved Business Performance

Increase in profit	
A metric for increase in profit should compare profit at two points in time, although ideally for several points in time to enable short and long term profit comparisons.	Case studies 41, 42
Increase in share of wallet	
A metric for increase in share of wallet should determine and compare the average share of wallet for all customers at two points in time.	Case studies 13, 25, 30
Increase in customer retention	
A metric for increase in customer retention should compare the customer retention over two periods of time.	Case study 9
Increase in revenue per customer	
A metric for increase in revenue per customer should compare the revenue per customer over two periods of time.	Case studies 36, 40, 42
Increase in sales	
A metric for increase in sales should compare the number of sales over two periods of time.	Case studies 7, 27
Increase in the number of customers	
A metric for increase in the number of customers should compare the number of customers at two points in time.	Case study 17

Strategic Benefit 3 - Improved Value Added Partnerships

Increase in internal/external value-added linkages	
The number and extent of value-added linkages is a subjective measure and may be determined by relevant senior management.	Case studies 46, 48

Strategic Benefit 4 - Improved Innovative Use of CRM Systems

Increase in CRM system driven innovation	
The number and extent of CRM system driven innovations is a subjective measure and may be determined by relevant senior management.	Case studies 45, 46, 47

APPENDIX 2: CASE STUDIES

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