Customer Relationship Management (CRM): A Technology Revolution in Business Management

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Abstract

CRM is an approach to manage a company's interaction with current and potential customers. It uses data analysis about customers' history with a company to improve business relationships with customers, specifically focusing on customer retention and ultimately driving sales growth. CRM has evolved from advances in information technology and organizational changes in customer-centric processes. Companies that successfully implement CRM will reap the rewards in customer loyalty and long-run profitability. However, successful implementation is elusive to many companies, mostly because they do not understand that CRM requires company-wide, cross-functional, customer-focused business process re-engineering. Although a large portion of CRM is technology, viewing CRM as a technology-only solution is likely to fail. Managing a successful CRM implementation requires an integrated and balanced approach to technology, process, and people.

Keywords: Business management, Customer relationship, CRM, Technology

1.Introduction

From the second half of the 1990s, work on relationship marketing started to grow substantially. As the relationship marketing literature continues to develop, Sheth (1996) argued that the domain of relationship marketing should be limited to include only those collaborative marketing activities that are focused on serving the needs of the customer [1]. In contrast to this view, many other scholars argued that relationship marketing should encompass a much wider range of stakeholders [2-4]. Since then, this broader perspective of relationship marketing has progressively gained ground. Over the next 15 years, since the start of the millennium, there has been a considerable further advancement in the field of relationship marketing. This period marked a substantial rise in applying the use of technology in managing customer relationships. Technological advances in many areas, including increased computer power, more affordable data warehouses, availability of "big data" and advances in internet infrastructure have collectively influenced what managers can do to develop and enhance relationships. In particular, the increased ability to use information technology to generate customer insights and apply these insights in relationship marketing programs led to the rise of customer relationship management (CRM). Whilst the two terms – relationship marketing and CRM – are frequently used interchangeably, it is important to recognize how CRM fits with relationship marketing. In Figure 1, drawing on Frow and Payne (2009), we clarify the distinction between the concepts of relationship marketing, CRM and customer management [5].
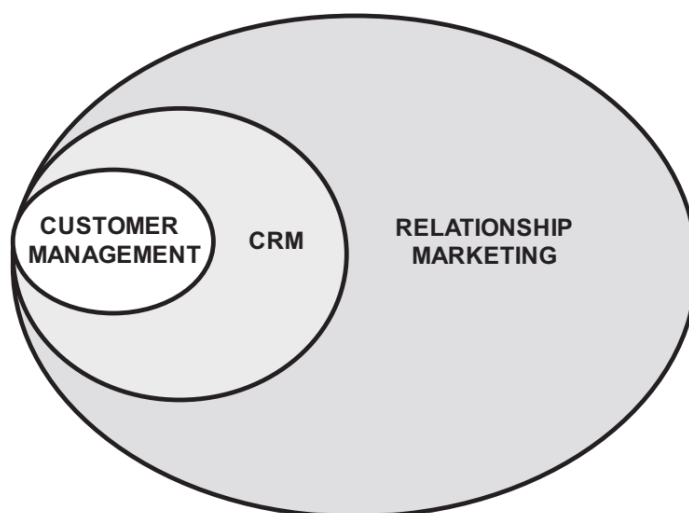
Figure 1: Relationship marketing (Strategic management of relationships with all relevant stakeholders), CRM (Strategic management of relationships with customers using appropriate technology) and customer management (Implementation and tactical management of customer interactions involving aspects such as Campaign management, call centre management, sales force automation).

1.2 Changes in management systems in the 1990s: ERP

The new framework for company activities that emerged in the 1990s, characterized by the globalization of markets, technological development, the larger number of competitors, and increased customer demands, obliged companies to renew their management systems in order to adapt themselves to the new competitive environment [5]. The dynamic of the change was based on both methodological and technological elements. Firstly, concepts and methodologies directed towards reducing costs and improving the quality of operational activities, such as reengineering business processes, supply chain management, and so forth, were consolidated. Secondly, innovative technologies became available, thus allowing companies to manage an ever-increasing volume of information in an efficient manner. One of

the most important of these technologies was the ERP (enterprise resource planning) computer programs [6]. Consequently, companies have achieved a high level of maturity in the use of computer applications to improve the efficiency of the firm's everyday activities. It is therefore very common, depending on their size or the sector, for their operational level activities in the areas of accounting, sales, purchasing, warehousing, logistics, production and human resources to be computerized.

1.3 Changes in management systems in 2000: CRM solutions

The implementation of ERP produces an improvement in the quality and efficiency of business processes. However, when the majority of companies in a sector have optimized their internal processes, this improvement becomes a condition that is necessary to remain in the market but ceases to be a competitive advantage [7]. As a result, in the future, differentiation from competitors is going to be based on the speed with which a company is capable of responding to the requirements and demands of the market with innovative products and services [8]. Therefore, although customer care has always been a basic rule of commercial activity, a new model of customer relationship management (known as CRM) is now necessary in order to adopt a customer-focused form of organization, which maximizes the value customers can expect from the company and sees in the information derived from the customer the opportunity to establish business strategies [9]. In addition, from the technological point of view, this new customer-focused organizational model makes it necessary to complement the ERP applications that have played a key role in the processes of optimizing internal procedures (Business Process Re-engineering) and external processes relating to supply chain management with CRM Information Technologies (IT) solutions that play a key role in customer management procedures [10].

1.4 CRM (customer relationship management)

CRM is an approach to manage a company's interaction with current and potential customers. It uses data analysis about customers' history with a company to improve business relationships with customers, specifically focusing on customer retention and ultimately driving sales growth [11]. One important aspect of the CRM approach is the systems of CRM that compile data from a range of different communication channels, including a company's website, telephone, email, live chat, marketing materials and more recently, social media [12]. Through the CRM approach and the systems used to facilitate it, businesses learn more about their target audiences and how to best cater to their needs.

CRM systems basically make three things possible [13].

(1) Having an integrated, single view of customers, by using analytical tools.

(2) Managing customer relationships in a single way, regardless of the communication channel: telephone, website, personal visit, and so forth.

(3) Improving the effectiveness and efficiency of the processes involved in customer relationships.

As a result, the implementation of a CRM System will involve changes in the organization and operation of each company, resulting in an improvement in its performance and competitiveness. The most notable improvements that can be predicted are the following [13].

• Greater customer satisfaction, by offering a better service.

• Greater business coherence, defining corporate objectives linked to customer satisfaction.

• Managing to increase the number of customers and secure greater loyalty thanks to the re-organization and computerization of business processes surrounding the customer relations life-cycle (sales, marketing, customer care services).

• Improving and extending customer relationships, generating new business opportunities.

• Knowing how to segment customers, differentiating profitable customers from those who are not, and establishing appropriate business plans for each case.

• Increasing the effectiveness of providing customer service by having complete, homogeneous information.
• Lower costs.
• Sales and marketing information about customer requirements, expectations and perceptions in real-time.

2. CRM: understand a company's customers

In the mid-twentieth century, mass production techniques and mass marketing changed the competitive landscape by increasing product availability for consumers. However, the purchasing process that allowed the shopkeeper and customer to spend quality time getting to know each other was also fundamentally changed. Customers lost their uniqueness, as they became an "account number" and shopkeepers lost track of their customers' individual needs as the market became full of product and service options. Many companies today are racing to re-establish their connections to new as well as existing customers to boost long-term customer loyalty. Some companies are competing effectively and winning this race through the implementation of relationship marketing principles using strategic and technology-based customer relationship management (CRM) applications. CRM technology applications link front office (e.g. sales, marketing and customer service) and back office (e.g. financial, operations, logistics and human resources) functions with the company's customer "touchpoints" [14]. A company's touchpoints can include the Internet, e-mail, sales, direct mail, telemarketing operations, call centres, advertising, fax, pagers, stores, and kiosks. Often, these touchpoints are controlled by separate information systems. CRM integrates touch points around a common view of the customer. In some organizations, CRM is simply a technology solution that extends separate databases and sales force automation tools to bridge sales and marketing functions in order to improve targeting efforts. Other organizations consider CRM as a tool specifically designed for one-to-one [15] customer communications, sole responsibility of sales/service, call centres, or marketing departments. We believe that CRM is not merely technology applications for marketing, sales and service, but rather when fully and successfully implemented, a cross-functional, customer-driven, technology-integrated business process management strategy that maximizes relationships and encompasses the entire organization [16]. A CRM business strategy leverages marketing, operations, sales, customer service, human resources, R&D and finance, as well as information technology and the Internet to maximize profitability of customer interactions. For customers, CRM offers customization, simplicity, and convenience for completing transactions, regardless of the channel used for interaction [17]. CRM initiatives have resulted in increased competitiveness for many companies as witnessed by higher revenues and lower operational costs. Managing customer relationships effectively and efficiently boost customer

satisfaction and retention rates [18-21]. CRM applications help organizations assess customer loyalty and profitability on measures such as repeat purchases, dollars spent, and longevity. CRM applications help answer questions such as "What products or services are important to our customers? How should we communicate with our customers? What are my customer's favourite colours or what is my customer's size?" In particular, customers benefit from the belief that they are saving time and money as well as receiving better information and special treatment [22]. Furthermore, regardless of the channel or method used to contact the company, whether it is the Internet, call centres, sales representatives, or resellers, customers receive the same consistent and efficient service [23]. Table I provides a brief overview of some of the benefits that CRM offers by sharing customer data throughout the organization and implementing innovative technology. With much success, software vendors such as Oracle, SAP, PeopleSoft, Clarify, SAS, and Siebel are racing to bring off-the-shelf CRM applications to organizations. Many of these are the vendors responsible for developing enterprise resource planning (ERP) systems. AMR Research estimates that the CRM market will top $16.8 billion by 2003 [24]. While there are many

compelling reasons to consider a CRM strategy, caution and careful analysis are prudent. Hackney (2000) warns that although CRM software vendors may entice organizations with promises of all-powerful applications, to date there is no 100 percent solution [25]. Possible risks such as project failure, inadequate return on investment, unplanned project budget revisions, unhappy customers, loss of employee confidence, and diversion of key management time and resources must be well thought out [26]. In one example, a large telecommunications company rolled out a major CRM application to more than 1,000 sales reps in late 1999, at a cost of $10,000 per user, only to find a year later that fewer than 100 were using the system [27]. Recent surveys further reveal that the average investment in CRM applications is $2.2 million dollars [28] and that CRM implementation failure rate is as high as 65 percent [29]. It is becoming increasingly clear that stalled or failed CRM projects are often the result of companies lacking a thorough understanding of what CRM initiatives entail. Thus, this paper first presents the evolution of CRM to facilitate the comprehension of the implementation issues. It then sets out to explore the underlying critical components that can enable (or hinder) the successful implementation of CRM initiatives. A CRM implementation model that integrates the three key dimensions of people, process, and technology within the context of an enterprise-wide customer-driven, technology-integrated, cross-functional organization is proposed in Figure 2. The essential roles of these three dimensions are further elaborated in the subsequent sections following the evolution of CRM.
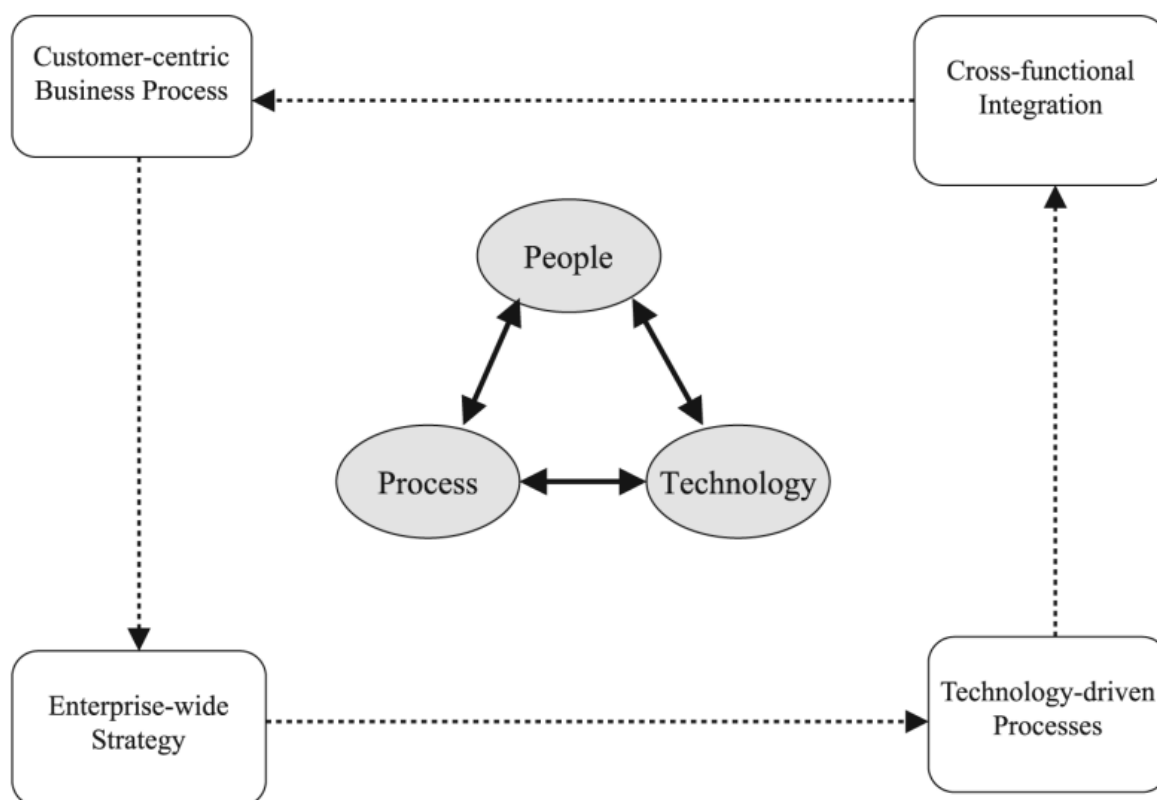
Figure 2. A CRM implementation model

Information technology (IT) has long been recognized as an enabler to radically redesign business processes in order to achieve dramatic improvements in organizational performance [30, 31]. IT assists with the re-design of a business process by facilitating changes to work practices and establishing innovative methods to link a company with customers, suppliers and internal stakeholders [32]. CRM applications take full advantage of technology innovations with their ability to collect and analyze data on customer patterns, interpret customer behaviour, develop predictive models, respond with timely and effective customized communications, and deliver product and service value to individual customers.

Using technology to "optimize interactions" with customers, companies can create a 360-degree view of customers to learn from past interactions to optimize future ones [33]. Innovations in network infrastructure, client/server computing, and business intelligence applications are leading factors in CRM development. CRM solutions deliver repositories of customer data at a fraction of the cost of older network technologies. CRM systems accumulate, store, maintain and distribute customer knowledge throughout the organization. The effective management of information has a crucial role to play in CRM. Information is critical for product tailoring, service innovation, consolidated views of customers, and calculating customer lifetime value [34]. Among others, data warehouses, enterprise resource planning (ERP) systems, and the internet are central infrastructures to CRM applications.

Customer relationship management is an enterprise-wide customer-centric business model that must be built around the customer. It is a continuous effort that requires redesigning core business processes starting from the customer perspective and involving customer feedback. The Seybold Group starts this process by asking customers what barriers they encounter from the company [35, 36]. In a product-focused approach, the goal is to find customers for the products using mass marketing efforts. In a customer-centric approach, the goal becomes developing products and services to fit customer needs. In Seybold's work, five steps in designing a customer-centric organization were suggested:

(1) make it easy for customers to do business;

(2) focus on the end customer;

(3) redesign front office and examine information flows between the front and back-office;

(4) foster customer loyalty by becoming proactive with customers; and

(5) build in measurable checks and balances to continuously improve

Optimizing customer relationships requires a complete understanding of all customers; profitable as well as non-profitable, and then to organize business processes to treat customers individually based on their needs and their values [37]. Within the paradigm of business process re-engineering, Al-Mashari and Zairi (1999) offer a holistic view of success and failure factors. Specifically, change management, management support, organizational structure, project management, and information technology were highlighted [38]. Companies considering CRM implementation can also benefit from addressing these five BPR issues. CRM projects require full-time attention to the implementation project team with representatives from sales, marketing, manufacturing, customer services, information technology, etc. Cap Gemini and IDC found that top management and marketing and sales management are generally the initiators of a corporate CRM project (1999). In addition, project teams require not only sponsorship by top management but also a project champion that can persuade top management for continuous change efforts [38]. In general, project teams assist companies to integrate their core business processes, combine related activities, and eliminate the ones that don't add value to customers. A functional organization often takes "ownership" of customer data. Many departments and individuals see customer handling as a sales or marketing function and regard the release of their data to another function as a loss of power. A customer-centric model requires sharing the data enterprise-wide; this usually requires a fundamental paradigm shift in the culture to sharing information and knowledge. Especially in organizations where tradition has established separate goals and objectives, top management must not take a passive role in change efforts. silo-based organizational myopia must be replaced with a customer-focus so departments will collaborate rather than compete with each other. Many of these changes' efforts can be aided by effective communication throughout the entire project and reaching all levels of employees.

CRM initiatives require vision and each and every employee must understand the purpose and changes that CRM will bring. Re-engineering a customer-centric business model requires cultural change and the participation of all employees within the organization. Some employees may opt to leave; others will have positions eliminated in the new business model. Successful implementation of CRM means that some jobs will be significantly changed. Management must show its commitment to an ongoing

company-wide education and training program. In addition to enhancing employee skills and knowledge, education boosts motivation and commitment of employee and reduces employee resistance. Additionally, management must ensure that job evaluation, compensation programs, and reward systems are modified on a basis that facilitates and reward customer orientation. After all, how people are measured will determine their behavior [39].

Conclusions

CRM applications attempt to focus on the customer first, specifically one customer at a time, to build a long-lasting mutually beneficial relationship. Customer relationship management is a comprehensive approach that promises to maximize relationships with all customers, including Internet or "e-customers", distribution channel members, and suppliers. Getting to "know" each customer through data mining techniques and a customer-centric business strategy helps the organization to proactively and consistently offer (and sell) more products and services for improved customer retention and loyalty over long periods of time.

References:

[1] Sheth, J.N. (1996), "Relationship marketing: paradigm shift or shaft", paper presented at the Academy of Marketing Science Conference, Miami, FL.

[2] Christopher, M., Payne, A. and Ballantyne, D. (1991), Relationship Marketing: Bringing Quality, Customer Service and Marketing Together, Butterworth Heinemann, Oxford.

[3] Morgan, R.M. and Hunt, S.D. (1994), "The commitment-trust theory of relationship marketing", Journal of Marketing, Vol. 50, pp. 20-38.

[4] Gummesson, E. (1999), Total Relationship Marketing, Butterworth-Heinemann, Oxford.

[5] Chalmeta, R., Campos, C., Grangel, R., 2001. References architectures for enterprise integration. Journal of Systems and Software 57 (3), 175– 191.

[6] Kennerley, M., Neely, A., 2001. Enterprise resource planning: analyzing the impact. Integrated Manufacturing Systems 12 (2), 103–113.

[7] Dyche, J., 2001. The CRM Handbook: A Business Guide to Customer Relationship Management, first ed. Addison-Wesley.

[8] Boon, O., Brian, C., Craig, P., 2002. Conceptualising the requirements of CRM from an organisational perspective: a review of the literature. In: Proceedings of 7th Australian Workshop on Requirements Engineering AWRE; 2–3 December; Melbourne; Australia

[9] Kenneth, C., 2002. The Relational Enterprise: Moving Beyond CRM to

[10] Maximize All Your Business Relationships. John Wiley & Sons.

[11] Xu, Y., Yen, D., Lin, B., Chou, D., 2002. Adopting customer relationship management technology. Industrial Management and Data Systems 102, 8.

[12] "Management Tools - Customer Relationship Management - Bain & Company". www.bain.com. Retrieved 23 November 2015.

[13] Shaw, Robert (1991). Computer Aided Marketing & Selling. Butterworth Heinemann. ISBN 978-0-7506-1707-9.

[14] Bergeron, B., 2001. Essentials of CRM: Customer Relationship Management for Executives. John Wiley & Sons.

[15] Fickel, L. (1999), "Know your customer", CIO Magazine, Vol. 12 No. 21, pp. 62-72.

[16] Peppers, D. and Rogers, M. (1999), The One to One Manager: Real-World Lessons in Customer Relationship Management, Doubleday, New York, NY.

[17] Goldenberg, B. (2000), "What is CRM? What is an e-customer? Why you need them now", in Proceedings of DCI Customer Relationship Management Conference, Boston, MA, 27-29 June

[18] Gulati, R. and Garino, J. (2000), "Get the right mix of bricks & clicks", Harvard Business Review, Vol. 78 No. 3, pp. 107-14.

[19] Reichheld, F.F. (1996a), The Loyalty Effect, Harvard Business School Press, Boston, MA.

[20] Reichheld, F.F. (1996b), "Learning from customer defections", Harvard Business Review, March-April, pp. 56-69.

[21] Jackson, D. Jr (1994), "Relationship selling: the personalization of relationship marketing", Asia-Australia Marketing Journal, August, pp. 45-54.

[22] Levine, J. (1993), "Relationship marketing", Forbes, 20 December, pp. 232-4.

[23] Kassanoff, B. (2000), "Build loyalty into your e-business", in Proceedings of DCI Customer Relationship Management Conference, Boston, MA, 27-29 June.

[24] Creighton, S. (2000), "Partnering for success to the e-business world", in Proceedings of DCI Customer Relationship Management Conference, Boston, MA, 27-29 June.

[25] Tiazkun, S. (1999), "CRM opportunities abound for changing business needs", Computer Reseller News, 8 November, p. 159.

[26] Hackney, D. (2000), "Business intelligence technology and tools for CRM", in Proceedings of DCI Customer Relationship Management Conference, Boston, MA, 27-29 June.

[27] Schweigert, D. (2000), "Balancing idealistic vs realistic processes", in Proceedings of DCI Customer Relationship Management Conference, Boston, MA, 27-29 June

[28] Patton, S. (2001), "The truth about CRM", CIO Magazine, Vol. 14 No. 9.

[29] CIO Research Reports (2002), "CRM: are companies buying it?", CIO Magazine, Vol. 15 No. 1.

[30] Apicella, M., Mitchell, K. and Dugan, S. (1999), "Customer relationship management: ramping up sales service", InfoWorld, Vol. 21 No. 33, pp. 68-80.

[31] Davenport, T.H. and Short, J.E. (1990), "The new industrial engineering: information technology and business process design", Sloan Management Review, Vol. 31 No. 4, pp. 11-27.

[32] Porter, M. (1987), "From competitive advantage to corporate strategy", Harvard Business Review, Vol. 65 No. 3, pp. 43-59.

[33] Hammer, M. and Champy, J. (1993), Reengineering the Corporation, Harper Business, New York, NY.

[34] Eckerson, W. and Watson, H. (2000), Harnessing Customer Information for Strategic Advantage: Technical Challenges and Business Solutions, special report, The Data Warehousing Institute, Chatsworth, CA.

[35] Peppard, J. (2000), "Customer relationship management (CRM) in financial services", European Management Journal, Vol. 18 No. 3, pp. 312-27.

[36] Seybold, P. (1998), Customers.com – How to Create a Profitable Business Strategy for the Internet and Beyond, Times Books, New York, NY.

[37] Seybold, P., Marshak, R. and Lewis, J. (2001), The Customer Revolution, Crown Business, New York, NY.

[38] Renner, D. (2000), "Customer relationship management: a new weapon in your competitive arsenal", Siebel Magazine, Vol. 1 No. 2.

[39] Al-Mashari, M. and Zairi, M. (1999), "BPR implementation process: an analysis of key success and failure factors", Business Process Management Journal, Vol. 5 No. 1, pp. 87-112.

[40] Chen, I. J., & Popovich, K. (2003). Understanding customer relationship management (CRM) People, process and technology. Business process management journal, 9(5), 672-688.