

# TECHNOLOGICAL DIFFERENCES BETWEEN CRM AND eCRM

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## ABSTRACT

*The Internet has changed the traditional business model of organizations. It has spawned many new industries and has forced organizations to embrace organizational as well as operational changes. In today's competitive global environment, organizations must do everything to seek new customers and, more importantly, retain profitable, loyal customers. The 1990s saw the emergence of a new class of software called Customer Relationship Management (CRM). The objectives of CRM were to help organizations in their marketing, sales management, service and support functions. Now, customers are demanding the same information via Internet, wireless, mobile and PDA technologies (eCRM). This paper outlines the important differences in the two technologies which organizations must consider when adopting these technologies.*

**Keywords:** CRM, e-CRM, Information systems, E-commerce, Customer relations

## INTRODUCTION

Mass production and mass marketing of the mid-twentieth century changed the methods business used to relate with their customers. Customers came to feel that mass marketing reduced them to a number. The unique relationship customers established over time with the company somehow got lost in this transition. Many companies are now starting to reestablish this connection and are reengaging their customers by implementing relationship marketing based on customer relationship management (CRM) software (1).

During the last fifteen years, we have witnessed evolutionary changes in business software deployment, with a rapid move from central computing to client/server architectures, and more recently to web architectures. The superior capabilities of next-generation information technology have been a driving force in redesigning business processes. Increasingly, businesses depend on IT, and IT has been characterized as the enabler of change (5). Piccoli outlines a framework of customer-service life cycle to gain competitive advantage and uncover opportunities by using IT (9). With technical advancement, companies face the challenges of technology adoption and acceptance. These decisions are complex, and often the perceptions of various parties, including customers, non-IT staff, and IT staff must be addressed and reconciled. Within this context, we examine the evolving nature of CRM systems, focusing on the difference between CRM and eCRM. Their technological differences are identified as a starting point in understanding if these differences exist in practice, and if so, how organizations respond to them.

## **THE BUSINESS CONCEPTS BEHIND CRM**

Technology can greatly assist firms in developing great customer relationships by linking the front-office process (e.g. sales, marketing management, order management, sales management, sales planning, pricing, after sales service and support) with back-end processes (e.g. procurement, finance, payroll, shipping, production planning, profitability analysis, receivables and payables, inventory management, and human resources).

Since the introduction of CRM, the term has been defined in different ways, with no clear consensus. Some authors emphasize establishing a call center, while for others it meant mining a customer data warehouse. Others used the term to describe a web presence targeting customers. Without consensus, managers have a difficult time understanding how functional areas of the organization interact within CRM (10). Handen defines CRM as "...the process of acquiring, retaining and growing profitable customers" (6). He further states that in order to be successful in the future, organizations need to better understand customers' needs. It is important for organizations to understand these needs and be in position to act quickly. Massey asserts that CRM is about attracting, developing and maintaining profitable customer relationships over time (7). This focus is critical in today's global economy, where a customer may opt to change providers with a click of a mouse.

Simply put, CRM is a strategy to identify and satisfy customers' needs and behaviors; and doing so will result in a stronger relationship with them. Greenberg defines CRM as "the commitment of the company to place the customer experience at the center of its priorities and to ensure that incentive systems, processes, and information resource leverage the relationship by enhancing experience" (3). According to this definition, the experience of the customer is a cumulative effect of a series of interactions. The objective of CRM essentially is to enhance this cumulative effect and thus the loyalty of the customer.

Loyal, repeat customers are intangible assets and provide a true competitive advantage to any organization. It is estimated that the cost of acquiring a new customer is about five times that of maintaining a current customer (3, p. 67). It stands to reason that it makes economic sense to pay closer attention to the needs of current customers. Savvy managers know this and understand the importance and the value of this strategy.

## **CRM AND eCRM**

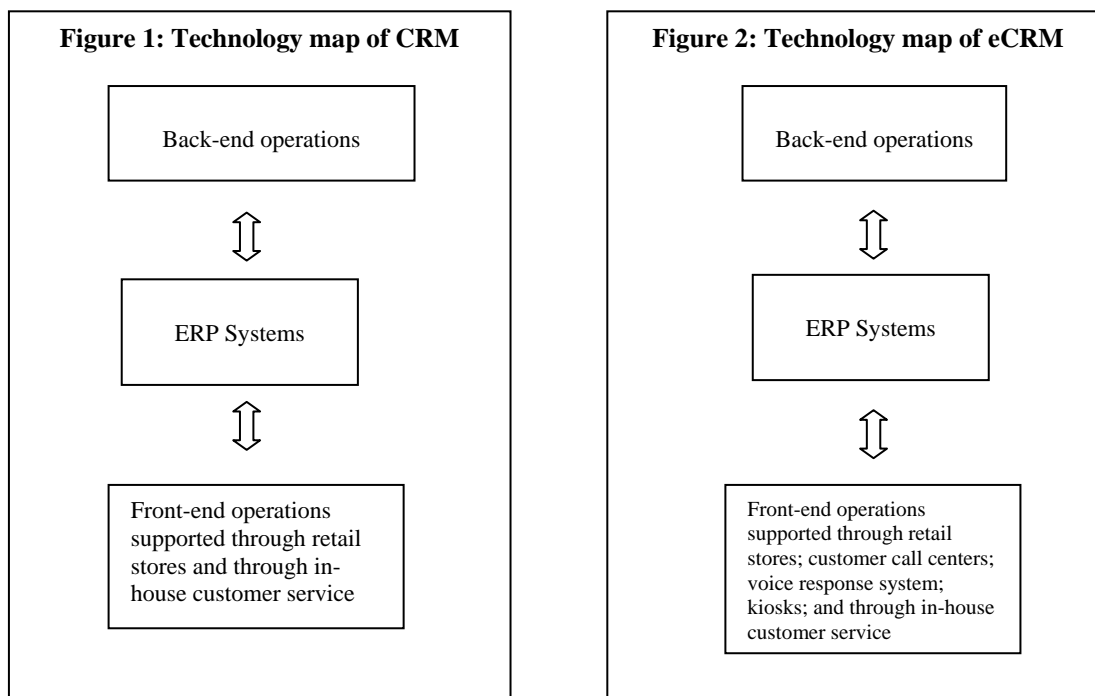
The 1990's was a period of remarkable growth of a class of software called ERP (Enterprise Resource Planning). ERP systems tie-in numerous legacy systems used for the 'back-end' operations so that systems across a firm are linked, thereby making information across the firm available more easily. Until then, organizations deployed a host of specialized application servers throughout the organization, each dedicated to perform a specific function. With ERP systems, an organization is able to capture data in one place and integrate it seamlessly throughout various departments and processes. Although ERP systems are helpful in managing "back-end" operations, they are not designed to capture data and support the complexities of marketing (e.g. marketing campaigns, customers' changing preferences, and finer nuances of

customers' behavior). On the other hand, CRM systems were specifically developed for the "front-end" applications and were quickly adopted.

Ideally, CRM allows an organization to tailor its products and services to each customer's preferences. CRM "may be used to create a personalized, one-to-one experience that will give the individual customer a sense of being cared for, thus opening up new marketing opportunities based on the preferences and history of the customer" (8). Croteau and Li point out "CRM is a customer-focused business strategy that aims to increase customer satisfaction and customer loyalty by offering a more responsive and customized service to each customer" (2).

With the movement of business applications to the Internet, CRM has enhanced an organization's capabilities by providing access to its customers and suppliers via the Web. *This 'web experience' and communication through the wireless web is called eCRM.* The Internet is advancing eCRM; it provides features that are attractive to customers and business organizations.

Differences between CRM and eCRM are subtle, but important. They concern the underlying technology and its interfaces with users and other systems. For example, many eCRM systems provide the customer with a self-service browser-based window to place orders; check order status; review purchase history; request additional information about products; send e-mails and engage in a host of other activities. These capabilities provide customers freedom in terms of place and time. The customer no longer is limited to contacting an organization during regular business hours, and the organization does not have to provide a live contact at the other end for customer's inquiries and requests. Figures 1 and Figure 2 depict a common, high-level technology map of traditional CRM and eCRM systems respectively.



Traditionally, CRM systems use client/server technologies where all programs and applications are run on one or more centralized servers. The front-end operations of the system interface with the backend operations through traditional ERP systems. The system does not use data warehouses or data marts. ERP systems act as data repositories and capture data from both the front-end and back-end operations. The usual customer 'touch points' are retail stores and the organization's customer service and support centers; e.g., personal contact through retail outlets, telephone, and fax.

With eCRM, the interface between the front-end and back-end operations is not only through ERP, but it also utilizes data warehouses and data marts. Data warehouses is a logical collection of information, gathered from several operational databases, used to create business intelligence in support of business activities and decision-making. Data warehouses are multidimensional databases. The layers in a data warehouse represent information according to different dimensions. A data mart is a subset of a data warehouse in which only a focused portion of the data warehouse information is kept (4). Customer 'touch points' in eCRM are expanded to include the Internet and wireless devices, supporting mobile and PDA technologies.

The users in CRM are the employees of the organization or the retail stores personnel. The system provides access via a set of predefined menus and choices, which cannot be customized by the user. Any customization requires making significant changes at the system level. In eCRM, on the other hand, an individual can easily customize these applications and menus through their web-based user interfaces.

The application programs in CRM are written with back-end operations in mind; the emphasis is on data collection and the optimality of interface with the user's PC (client). Merely web-enabling these applications is not efficient as it places a greater burden and overhead on the 'client' computer. Web-enabling CRM application involves downloading applets to the client – a time consuming process. Furthermore, web-enabling CRM applications require that each application and program be rewritten for different platforms. Any modifications or changes must be incorporated in all versions. In addition, the information provided to the customer cannot be altered in a short time frame.

On the other hand, in eCRM all applications are designed and implemented for optimal web interaction and experience. Typically, the client does not need to download applets to access applications. The browser is the medium and it allows access to appropriate information without any regard to the platform of the client. From the customer's perspective, it is just like accessing different web pages.

CRM applications are designed around products and job functions. The applications are designed for the corporate department or the individual employee to access his customer-related intelligence, and to provide customer service more effectively. In eCRM, the applications are designed with the customer in mind and give the customer the 'total experience' on the web. Each different user has a different view of the array of information, goods, and services available to him/her.

Web-enabled CRM usually is designed around one department or business unit and not the entire enterprise. In eCRM, on the other hand, all applications are designed for the entire enterprise including all customers, suppliers and partners.

Traditional CRM systems do not allow the organization to dynamically alter its marketing campaigns whereas eCRM systems provide this capability. As business conditions change, an organization with eCRM capabilities can direct specific campaigns to targeted customer segments.

Table 1 below summarizes the difference between the two technologies.

Table 1: Technological differences between CRM and eCRM

<b><u>Criterion</u></b>	<b><u>CRM</u></b>	<b><u>eCRM</u></b>
Customer Contacts	Customer contact usually initiated through traditional means of retail store, telephone, or fax.	In addition to telephone, contact also initiated through the Internet, e-mail, wireless, mobile and PDA technologies.
System Interface	Works with the back-end applications through ERP systems.	Designed for front-end applications, which in turn interface with backend applications through ERP systems, data warehouses, and data marts.
System Overhead (client computers)	Web-enabled applications require a PC client to download various applets and applications. These applications and applets would have to be rewritten for different platforms.	No such requirement; the browser is the customer's portal to eCRM.
Customization and Personalization of Information	Different audiences require different views and types of information. Personalized views for different audiences are not possible. Individual customization requires programming changes.	Highly individualized "dynamic" and personalized views based on purchases and preferences are possible. Each audience individually customizes the views.
System Focus	System is designed around products and job functions (for internal use). Web-enabled applications are designed around one department or business unit.	System is designed around the customer's needs (for external use). Enterprise wide portals are designed and are not limited to a department or business unit.
System Maintenance and Modification	Implementation is longer and management is costly because the system is situated at various locations and on several servers.	Reduced time and cost. System implementation and expansion can be managed in one location and on one server.

## **FURTHER WORK**

Distinct differences in the technologies of CRM and eCRM have been identified. With the emergence of web-based applications, it is easy to assert that using the Internet for CRM is now a necessary strategy, not a luxury. Organizations that do not accept this argument and adopt

eCRM are doomed. As Paul Greenburg aptly puts it, “eCRM is CRM and CRM must become eCRM” (3, p. 59). However, this argument does not consider the lessons learned in migrating business applications from centralized computing to client/server architectures, and then to the Internet.

The technological differences described above are the basis for the question posed earlier – how are these factors considered in an organization’s technology adoption decision? How does the organization address them in responding to the perspectives of customers, non-IT staff, and IT staff? Are the differences between web-based applications, as represented by eCRM, and client/server applications, as represented by CRM, understood sufficiently to influence technology adoption decisions? For marketing and IT managers, CRM adoption decisions are crucial, yet a set of comprehensive guidelines for framing this decision is difficult to identify. Field-level studies are needed to understand strategic and operational technology adoption concerns. The transition from CRM to eCRM provides an opportunity to understand these issues.

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