

USING E-CRM FOR A UNIFIED VIEW OF THE CUSTOMER

The emergence of e-commerce has changed many aspects of existing businesses and generated new companies with new business models, business opportunities, and processes. Existing companies are being challenged to rethink the most basic business relationship—the one between an organization and its customers. Despite media hype about the Internet changing the rules of engagement with customers, it hasn't changed the underlying fact that addressing customers' needs leads to sustainable profit. Specifically, e-commerce practice has not replaced the need for human contact at key points in sales, marketing, and customer support.

APPLYING
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What has changed is the new competitive advantage needed for managing customer relationships online via the Internet. Companies need the ability to track and manage Internet-based e-commerce events that may demand immediate, personalized response irrespective of conventional operating schedules. In particular, most companies are confronted with an increasingly sophisticated customer base that demands a higher level of immediate service across multiple access channels. To satisfy customer needs, companies have to maintain consistency across all interaction channels (such as the Internet, email, telephone, Web, fax, and so on) and across all areas of a company a customer interacts with (including sales, service, marketing, and other fields).

To overcome this challenge, many organizations are considering adopting the concept of electronic Customer Relationship Management (e-CRM). This concept and practice provides the ability to capture, integrate, and distribute data gained at the organization's Web site throughout the enterprise. In spite of the growing popularity, very little is known about this concept as a strategy as well as an enterprisewide application. Our goal is to enhance the existing knowledge of the e-CRM trend by providing useful guidelines for the efficient integration of e-CRM. We depart from the point of view that the key to successfully managing customer relationships lies in the ability to integrate existing CRM processes with e-CRM applications.

By Shan L. Pan and Jae-Nam Lee

The Emergence of e-CRM

In order to fully understand how a unified view of the customer can be achieved through the strategic use of e-CRM, we must make a distinction between the terms CRM and e-CRM. We consider CRM an approach or business strategy providing seamless integration of every area of business that touches the

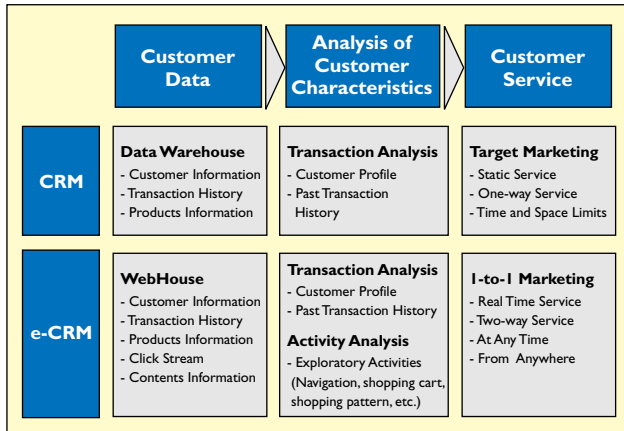


Figure 1. The differences between CRM and e-CRM.

customer—namely marketing, sales, customer service and field support—through integration of people, process, and technology. On the other hand, taking advantage of the revolutionary impact of the Internet, e-CRM expands the traditional CRM techniques by integrating technologies of new electronic channels, such as Web, wireless, and voice technologies, and combines them with e-business applications into the overall enterprise CRM strategy. In other words, what the traditional CRM delivers can be considered only a fraction of an e-CRM solution, as shown in Figure 1.

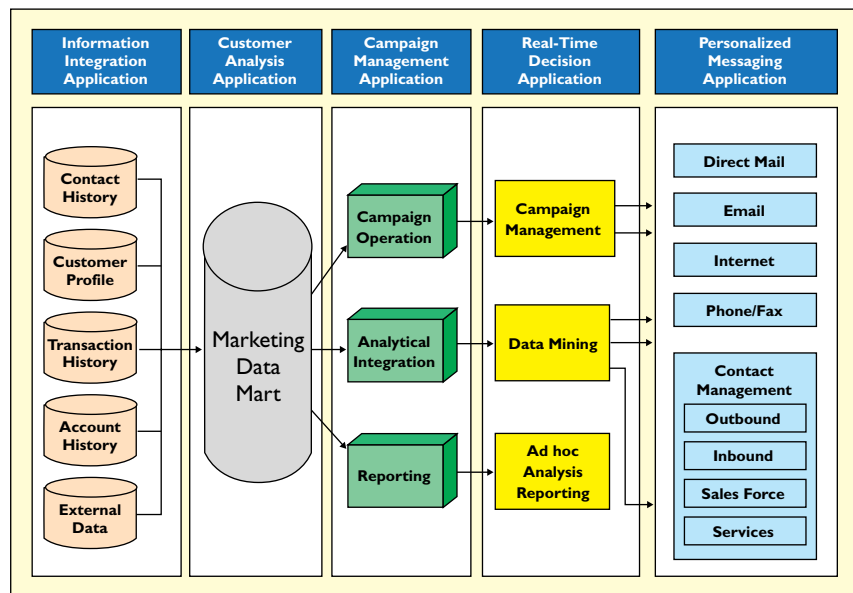
The traditional CRM has limitations in supporting outside multichannel customer interactions that combine telephone, the Internet, email, fax, chat, and so on. Unlike the traditional CRM, the current e-CRM solution (front-office suites) supports marketing, sales and service. Integration between CRM systems and Enterprise Resource Planning (ERP) systems is becoming more common [4]. The integration of all channels across all areas in the company is critical.

With the advancement of Web-based technology, market dynamics are driving companies to adopt

e-CRM. A fundamental motivator is the speed and unparalleled cost-effectiveness of the Internet are making the implementation of e-business possible and relatively cost-effective. Customer retention has replaced cost-effectiveness and cost-competitiveness as the greatest concern of business executives today—it costs approximately five to ten times more to acquire new customers than to retain established customers. It's going to take more than Web interactions to keep the customer brand-loyal. Furthermore, over the last few years, the speed of change in the business arena, including deregulation, has also made rapid adoption of new technologies and flexible business strategies basic requirements for businesses.

Organizations have reengineered many aspects of their businesses, automated their back-office procedures, streamlined their organizations, revised their product or service offerings, and invested in marketing activities. At the same time, they also face an increasingly complex marketplace with a high degree of competition and new entrants challenging for market share. With new channels (the use of Internet) and online and offline markets becoming increasingly available, technological advances have also opened up a new world of e-business opportunities. As a result of these changes occurring, customers are better informed, more demanding, and likely to be less loyal as their expecta-

Figure 2. The conceptual relationship among key e-CRM applications.



tions are increasing faster than businesses (traditional as well Internet-based) can deliver.

Customers of e-businesses are making the most impact as they are given more product or service options while the cost of switching has been reduced

drastically with competitors only a mouse-click away [1]. It was estimated by Forrester Research that B2C e-commerce in the U.S. will grow from \$38.8 billion in 2000 to 184.5 billion in 2004 [5]. With the availability of the Internet, unprecedented opportunities are now available for building sales and increasing revenue streams by expanding geographic scope, reducing operating costs, improving procurement, productivity, and supply chain efficiency.

The final driver is the application of real-time and

customer interactions and enables the creation of personalized service offerings.

Moreover, e-CRM can enable companies of all sizes and across all industries to offer one-to-one relationships to customers. E-CRM applications have the power to create an enormous amount of value by allowing companies to collect, organize, and disseminate a wealth of customer information. The e-CRM concept is designed to understand who the customers are and the products that are of interest to them—only then is it possible to provide them with the products and services they want. A more sound approach is to install a comprehensive software platform of the following five applications that together enable the e-CRM business process (see Figure 2). Equipped with such infrastructure, companies can continually create significant customer value, automating the “who, what, when, where, and how” of sales and marketing.

The *information integration application* consolidates customer data and information from different sources—transactional systems, call centers, Web sites, and ERP systems—into integrated customer-centric information. This application allows companies to identify and respond in a timely manner and accurately to their customers whether customers purchase products through a physical store, a call center, or a Web site. For the most part, an incomplete view of customers reduces their loyalty and trust [3, 6]. Developing an information integration application requires multiple data models and database architectures for integration with other back-end information systems. Since the application is dynamic, producing entities that have to keep up with every customer’s interaction with the company, the speed and accuracy is crucial for enabling a true value exchange with customers.

The *customer analysis application* measures, predicts, and interprets customer behaviors, enabling companies to understand the effectiveness of e-CRM efforts across both inbound and outbound channels. The integrated customer information is used to build a business campaign strategy and assess results. It also builds predictive models to identify the customers most likely to perform a particular activity such as purchase an upgrade from the company. This segment selection process improves response rates and campaign effectiveness and lowers campaign costs by reducing the size of the original target segment. Generally, there are three major types of customer analysis applications: online analytical processing, data mining, and statistics.

The *campaign management application* uses the data warehouse to plan and execute multiple, highly targeted campaigns over time, using triggers that respond to timed events and customer behavior. For example, a

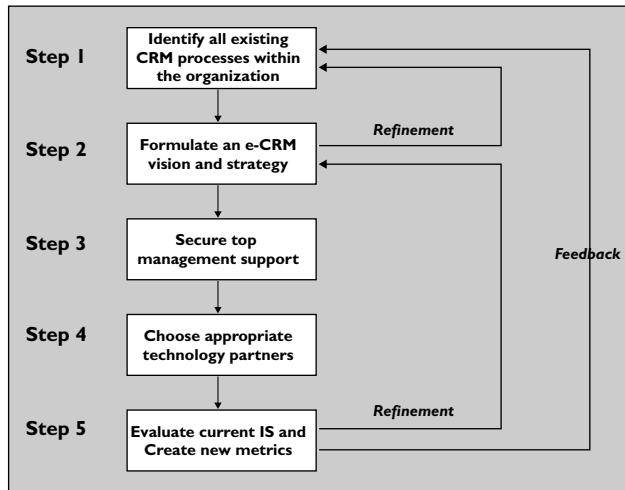


Figure 3. Management steps for e-CRM.

interactive customer interaction channels such as the Web, email, ATMs, call centers, and wireless devices to the customers’ nonelectronic activity in today’s fast-changing business environment. In particular, wireless technology has emerged as a new channel for accessing the Internet and will have a large effect on customer interaction.

Key Applications of e-CRM

Companies understand that e-CRM has significant potential, but they face the challenge of building the required technology infrastructure quickly and cost-effectively. An easily predictable reaction is to buy off-the-shelf applications, cobble together a database of Web traffic and online purchase information, and launch an e-CRM initiative [2].

One of the fundamental requirements of a successful e-CRM solution is the challenge of consolidating all customer-related information into a single view [7]. In order to achieve this, it is necessary to create a multichannel input stream that can take information from any of the recognized customer interfaces and use it to populate the single view. It could then facilitate the sharing of information between channels and meaningful cross-channel dialogue with customers. This forms the basis for intelligent handling of future

retail campaign may present a high-profit customer with a birthday gift or send an email message promoting various specials if the customer has been silent for several months. Furthermore, because customers are increasingly reachable through diverse communication channels, successful e-CRM requires an application that reaches customers wherever they are located: at home, at work, or while traveling. Hence, this application enables the integration of multichannel communications with individual customers, and in turn increases the likelihood of customer retention with higher customer switching costs.

The *real-time decision application* coordinates and synchronizes communications across disparate customer touch-point systems. It contains business intelligence to determine and communicate the most appropriate message, offer, and channel delivery in real time, and support two-way dialogue with the customer. Hence, an effective real-time decision application promotes information exchange between the company and every customer. Generally, to gain confidence in their product purchases, customers will interact with several vendors to get relevant information, conduct comparative analysis, and then decide which products to buy. In this case, a real-time decision application effectively provides appropriate value-added features and functionality. It is achieved by integrating with the four other applications.

The *personalized messaging application* delivers either text or HTML pages, scaled to support very high volumes, using an automated mechanism to answer responses and drive recipients to Web pages through traceable URLs embedded within messages. For example, a company might include three traceable URLs within a particular email message and be able to monitor success at driving an individual customer or prospect to one, two, or all three sites, and in which order. Since personalized attention and service were labor-intensive with high costs, most companies provide personalized attention to a small number of selected customers. But recent technology makes it possible to personalize products and services for a large number of customers in a cost-effective manner. To achieve one-to-one service, it builds customer profiles and enables customized product and service offerings based on the information integration application. The approach of this application can be classified into three major categories: rules-based, collaborative filtering, and inference model [4].

To reap maximum benefits of e-CRM system implementation, integration is needed between front-office applications such as office productivity applications (including word processors or spreadsheets) and back-office applications such as database manage-

ment, ERP systems, mail servers, fax servers, help desk systems, and so forth. Other needs include having e-CRM integrated with the company's portal site, intranet, and extranet. In addition to integration with Web-based technologies, part of the overall e-CRM solution can include a wide variety of telephony equipment to receive and manage inbound and outbound calls, automatic call distributors, interactive voice response systems, predictive dialers, fax machines, and paging systems.

Management Steps for e-CRM Integration

Managerially, if one is not careful, e-CRM projects can encounter one of the following problems:

- Strong vendor offerings exist within the broad CRM categories of sales, service, and marketing. CRM evolved with different vendors carving out their own niches in complete isolation from each other;
- Initial CRM efforts were hampered by the lack of a single view of the customer and have resulted in a separate and uncoordinated customer-interaction environment. Many CRM offerings will yield only tactical improvements; and
- Lack of a single customer-centric data warehouse has caused any addition of more customer touch points to worsen the problem.

To overcome the problems identified, we have some recommendations for organizations considering implementing e-CRM or are already managing e-CRM. The following five management steps are needed for effective e-CRM implementation (see Figure 3).

Identify the existing CRM processes within the organization, both online and offline. Knowledge of these detailed business processes is important, as it will provide answers to what specific business benefits are sought from the customer relationship management strategy. When conducting an audit to understand some of the existing CRM processes, it is crucial that the implementing organization takes a customer's view rather than a marketer's perspective.

Formulate an e-CRM vision and strategy. The second step is to formulate an overall e-CRM vision. To do this, it is important to establish an e-CRM strategy and its specific objectives. These objectives are best generated and built upon the existing CRM processes. A well-articulated strategy provides unequivocal direction to employees selecting and deploying e-CRM applications.

Secure top management support. After existing CRM processes are identified and an e-CRM vision

and strategy is formulated, the next step is to secure top management support for this project. Executive sponsorship helps the project to have higher visibility and buy-in across all departments and functionalities. While most recognized the importance of securing top management's support in major information technology projects including e-CRM, there is no single, effective approach. Every organization has its own IT culture and must custom tailor a strategy for sponsorship from top management according to its own circumstances. Top management can act as a project sponsor as well as a project champion in the implementation process of e-CRM.

Choose appropriate technology partners. With so many e-CRM vendors in the marketplace offering various capabilities in their products and services, choosing the best technology partner becomes an important challenge for organizations implementing e-CRM. This is difficult as some of the vendors provide excellent product capabilities including flexibility in their applications, customizability, and scalability. Thus, to select the right e-CRM vendor requires staying focused on the company's business objectives and carefully screening product offerings using those criteria that best match the business processes and overall e-CRM vision of the organization.

Evaluate current information systems and create new mechanisms and metrics to monitor and improve the process. Once the vendor has been determined, the organization needs to evaluate current information systems to decide whether a new system is required. Some of the questions to ask include: do they each fit in with your overall e-CRM strategy? Identify critical areas that require immediate attention and plan to replace any systems that don't fit. Furthermore, to more completely understand current systems the information flows between front- and back-office applications should be assessed. On the other hand, developing new performance measures is a necessary condition not only to speed adoption and increase overall return on investment, but also to check the performance of the customer relationship management and improve it.

Provision of the Next Step

We recognize that e-CRM is not the single answer to attracting and retaining customers, nor are e-customers the only valuable customers. The Internet is not the only point of contact with customers; some customers still prefer the telephone or face-to-face communications. Customers should not be segmented based on the assumption they will predominantly choose the one point of contact with your business. Customers will require multiple points of

contact such as Web sites, contact centers, salespeople, and so on. They will expect a consistent experience from one contact point to another. Therefore, the next step of the e-CRM application is actually integration with other points of contact, leading to a single view of the multichannel interactions including internal personnel as well as external customers.

To build e-CRM applications effectively, organizations should execute their implementation in phases, as this scenario provides several advantages. A fundamental advantage of breaking down the implementation into sizeable phases is that the entire endeavor is made much more manageable both in terms of complexity and costs. Another advantage is that this arrangement allows the effect of the e-CRM initiative to be demonstrated phase-by-phase so that appropriate analysis and subsequent fine-tuning can be performed for subsequent phases. Finally, there exists a myriad of e-CRM systems offered by different application vendors. A major consideration in deciding which e-CRM system to adopt depends largely on the compatibility of the system with the existing business processes, software, and hardware infrastructure in the enterprise.

Web-based CRM applications provide integrated marketing, sales, e-commerce, and customer support services to the enterprise through a single, customized Web interface. To be truly effective, an e-CRM infrastructure must provide internal personnel with a single view of the customer, regardless of how they are interacting with the company and which e-CRM applications they are using. ■

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