ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT (E-CRM)

Learning Objectives
Upon completion of this appendix, you will be able to:

1. Distinguish customer relationship management (CRM) from electronic CRM.
2. Understand the role of customer life-cycle management in CRM.
3. Describe the basic building blocks of CRM.
4. Discuss and exemplify the major categories of CRM applications.
5. Describe the various types of CRM analytics and the business arenas where they can be applied.
6. Understand the importance of customer self-service in CRM.
7. Describe the key steps in a CRM implementation.
8. Discuss the move to on-demand CRM.

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B-1 CUSTOMER RELATIONSHIP MANAGEMENT DEFINED

Customer relationship management (CRM) is an integrated business model and a set of operating practices coordinated and aligned to maximize profitable revenue from targeted customers. CRM is based on the assumption that customers are the core of a business and that a company’s success depends on effectively managing its relationships with them. The term relationship is a bit fuzzy. Does it require an emotional attachment or bond between the parties in the relationship? Do the parties have to be interdependent on one another? In this appendix, a relationship is said to exist if there are “a series of interactive episodes between two or more parties over time” (Buttle 2009). So, if a customer makes a single purchase from a company, this is a transaction not a relationship. However, if a potential customer inquires about a product, negotiates a sales price, purchases the product, and later works with the company’s help desk to address a problem with the product, then a relationship exists between the customer and the business.

According to the market analyst firm Gartner (2009), the business goals of CRM have changed little over the past 10 years. While many of the business goals of CRM have seen little change over the last 10 years, today most CRM programs, applications, and services depend more heavily on IT than in the past. These programs, software applications, and services constitute part of what is known as electronic CRM (e-CRM). Electronic CRM (e-CRM) is the electronically delivered or managed subset of CRM. It arises from the consolidation of traditional CRM with the e-business applications marketplace and covers the broad range of information technologies used to support a company’s CRM strategy. This appendix provides an overview of e-CRM and its associated applications and services.

LIFETIME VALUE AND LIFE-CYCLE MANAGEMENT

CRM helps businesses use technology and human resources to gain insight into the behavior of customers and value of those customers. With an effective CRM strategy, a business can increase revenues by (Patton and Wailgum 2006):

- Providing services and products that are exactly what your customers want
- Offering better customer service
- Cross-selling products more effectively
- Helping sales staff close deals faster
- Retaining existing customers and discovering new ones

In an effective CRM, a customer is viewed as a lifetime income stream not as a set of independent transactions. For CRM to be truly effective, an organization must first understand who its customers are and what their lifetime value (LTV) is. Forecasting and computing the LTV of a customer is a fairly complex process. In most cases, the LTV is estimated for a segment of customers and then applied to the individuals within the segment (e.g., bank credit card customers with high credit ratings). Hughes (2009) provides an overview of the computation of LTV.

One of the keys to maximizing the LTV of a customer is to treat a customer relationship as something that needs to be developed over time, something requiring
life-cycle management. Customer life-cycle management (CLM) encompasses a number of major management activities. Different authorities have different views of the specific activities falling under the CLM rubric. For many the cycle includes:

- **Acquire customers.** Involves the processes of identifying and obtaining new customers. Lead generation, sales promotions, marketing campaigns, and customer registration are some of the services associated with customer acquisition.

- **Retain customers.** Involves the processes of caring for customers and maintaining long-term relationships. Technical support, loyalty marketing, customer satisfaction assurance, and collections and billing are some of the services associated with customer retention.

- **Growth.** Involves the processes of enhancing the value of customers to the business. New product launches, account management, loyalty marketing, affinity programs, and up-sells and cross-sells are services associated with customer growth and development.

### TECHNOLOGICAL REQUIREMENTS OF CRM

In the late 1990s the Meta Group laid out the building blocks of a CRM or e-CRM system. They called the combined collection of these building blocks the *CRM Ecosystem*. The blocks included:

- **Operational component.** This component encompasses various back-office processes (e.g., order management and order processing), as well as the automation of a variety of front-office customer-facing and customer-supporting processes such as selling, marketing, and customer service.

- **Analytical component.** This building block is focused on the intelligence mining of customer-related data for strategic or tactical purposes. It is concerned with capturing, storing, extracting, processing, mining, and analyzing customer-related data to enhance both customer and company value. At the heart of this component are data warehouses, data marts, and various business intelligence and statistical technologies used to mine and analyze the data.

- **Collaborative component.** This building block applies technology across organizational boundaries with a view to optimizing company, partner, and customer value. It is used to describe the strategic and tactical alignment of normally separate enterprises in the supply chain for the more profitable identification, attraction, retention, and development of customers. Key to the collaborative component is a variety of customer interaction systems such as interactive voice response, Web conferencing, e-mail, Web storefronts, and B2B portals.

### Section B.1 REVIEW QUESTIONS

1. How do you define CRM? E-CRM?
2. What are some of the ways CRM increases a company’s revenues?
3. What is meant by the term customer lifetime value?
4. What are the basic activities of customer life-cycle management?
5. Describe the major components of CRM.
Appendix B: Electronic Customer Relationship Management (e-CRM)

B.2 CRM APPLICATIONS

The building blocks specified by the Meta Group are closely related to types of CRM applications outlined by the Patricia Seybold Group (psgroup.com). The Seybold Group focuses on CRM and e-CRM from the customer’s point of view (Seybold 2008). To understand the difference, consider CRM from a company’s point of view. Companies are focused on enhancing customer satisfaction, improving customer loyalty, and increasing profitability. Now, consider CRM from a customer’s point of view. A customer is interested in simplified, straightforward, honest, consistent interaction and relationships with a company. Toward this end, the Seybold Group focuses on applications used to make it easy for a customer to do business with a company. They distinguish among customer-facing, customer-touching, and customer-centric intelligence CRM applications. They also include online networking applications that enable customers to interact more closely with the company and other customers. Exhibit B.1 shows these three categories of applications, as well as how customers interact with these applications.

- **Customer-facing applications.** These include all the areas where customers interact with the company: call centers, including help desks; sales force automation; and field service automation. Such CRM applications basically automate information flow or support employees in sales or service.

- **Customer-touching applications.** In this category, customers interact directly with the applications. Notable are self-service activities, such as FAQs; campaign management; and general-purpose EC applications.

- **Customer-centric intelligence applications.** These are applications that analyze the results of operational processing and use the results of the analysis to improve CRM applications. Reporting, data warehousing, and data mining are the prime topics here.

- **Online networking applications.** Online networking refers to methods that provide the opportunity to build personal relationships with a wide range of people. These include chat rooms, blogs, wikis, and discussion lists.

These four categories of applications are used to organize our presentation of CRM applications in the remainder of this section.

CUSTOMER-FACING APPLICATIONS

*Customer-facing applications* are those where customers interact with a company. The primary application is **Web-based call centers**, otherwise known as customer interaction centers.

**Customer Interaction Centers**

A *customer interaction center (CIC)* is a comprehensive customer service entity in which selling companies take care of customer service issues communicated through various contact channels. It allows customers to communicate and interact with a company in whatever way they choose—voice, fax, e-mail, and Web interactivity (e.g., Web chat). Providing well-trained customer service representatives who have access to data such as customer history, purchases, and previous contacts is one way to improve customer service.

A multichannel CIC works like this: (1) A customer makes a contact via one or more channels. (2) The system collects information and integrates it with a database, then determines a service response. (3) The system routes the customer to a self-service
or to a human agent. (4) The service is provided to the customers (e.g., the customer’s problem is resolved or the question is answered).

An example of a well-managed integrated call center is iRobot’s customer support group. The center, which provides a myriad of cross-channel customer touch points, is detailed in Case B.1. As the case shows, the payoff from multichannel support is based on strong channel integration. For more examples of CICs and call centers, see callcenterops.com.

**Automated Response to E-Mail (Autoresponder)**

The most popular online customer service tool is e-mail. Inexpensive and fast, e-mail disseminates information and conducts correspondence on many topics, including responses to customer inquiries.
CASE B.1

EC Application

IROBOT’S MULTICHANNEL SERVICE SUPPORT

Consumers want a choice in how they contact a company. As a consequence, many firms have implemented alternative support channels like interactive voice response (IVR), chat, e-mail, and Web self-service. The problem is that few companies have really integrated the separate channels. The lack of integration can result in customer frustration and increased costs as the customer switches from one channel to the next.

This situation is illustrated by the following service scenario. A customer sends an e-mail to a company about a particular product issue. The company promptly responds to the e-mail, but the information is seen as incomplete by the customer. The customer immediately calls the company’s hotline. The call is answered by an IVR, but the IVR is clueless about the e-mail. After winding through the IVR menus, the customer is finally handed off to a service agent. The agent then asks the customer to explain the issue from scratch. With integration, the IVR might have immediately known how to provide an automated response to the product issue, might have known whether and which service agent to contact, and the service agent would not have asked the customer to start over from the beginning.

iRobot is one company that has embraced highly integrated multichannel service as part of its overall corporate strategy. iRobot was founded in 1990 by some students and a professor (Dr. Rodney Brooks) at MIT. Today, it is a $307 million public company that is headquartered in Bedford, Massachusetts, and has 400 employees. iRobot is probably best known for its Roomba home vacuuming robot, although it also makes a variety of other home robots, as well as robots used by industrial firms and government agencies.

While all customers require specialized support and service, it is its home market that requires special care. Few of its customers have ever owned a robot before. Also, a sizable percentage of its home robots are bought by or for elderly customers. These specialized market segments require quick, clear, and accurate answers to their technical questions. Without exceptional technical support, iRobot would run the risk of building a poor reputation in the marketplace. This is something it could ill-afford especially since it is still trying to pioneer a new market.

iRobot utilizes a CRM system from a company called RightNow. The system enables customers to contact iRobot’s service group in a number of ways including e-mail, live chat, Web self-service, and phone. All of these channels have been integrated so that each channel is immediately aware of any customer communication, regardless of the source. Because iRobot has spent substantial time building its Web self-service knowledge base in the RightNow system, over 95 percent of the half a million customer questions that iRobot receives every month are now handled by this channel. The knowledge base is also used by the outsourced call center to answer customer questions. The overall impact has been a 30 percent reduction in incoming call volume and an 18 percent reduction in call abandonment rates.

From the customer’s standpoint, the RightNow system enables customers to switch from one channel to the next without losing context. It saves customers time and reduces service errors.

Sources: Compiled from Gianforte (2009) and RightNow (2009).

Questions

1. What is meant by the term multichannel service support? Cross-channel service support?
2. Why was it necessary for iRobot to implement multichannel service support?
3. Describe the benefits iRobot received from its multichannel support system.

autoresponders
Automated e-mail reply systems (text files returned via e-mail) that provide answers to commonly asked questions.
information on a product and then taps into a knowledge base to generate a canned, matching response. For messages that require human attention, the query is assigned an ID number and passed along to a customer agent for a reply. Exhibit B.2 shows this process. Note that the answers and their relationships to problems (questions) are stored in a knowledge base and are updated each time a human agent provides a new solution. Such systems are known as e-mail response management (ERM) systems (see D’Agostino 2006).

Many companies do not provide actual answers in their automatic responses but only acknowledgment that a query has been received. Customer queries are classified in a decision-support repository until a human agent logs in and responds. This can be done in a call center using intelligent agents.

Sales Force Automation
Salespeople constitute one of the major contact points with customers (both individuals and businesses). The more computer support they have available, the better (quicker, more accurate) service they can provide to customers. Sales force automation (SFA) applications support the selling efforts of a company’s sales force, helping salespeople manage leads, prospects, and customers through the sales pipeline. An example of such an application is a wireless device that allows quick communication with the corporate intranet. These applications are also discussed in Chapter 8 (Section 8.5). For further discussion of SFA applications and issues, see saleforce.com.

Field Service Automation
Field service employees, such as sales representatives, are on the move, and they interact directly with the customers. Field service representatives include repair people (e.g., from the telephone or electric company) who go to customers’ sites. Providing service employees

sales force automation (SFA)
Software that automates the tasks performed by salespeople in the field, such as data collection and its transmission.
with mobile devices can increase customer service. Field service automation applications support the customer service efforts of field service reps and service managers. These applications manage customer service requests, service orders, service contracts, service schedules, and service calls. They provide planning, scheduling, dispatching, and reporting features to field service representatives. Examples are wireless devices, such as provided in SFA. Some of these are wearable devices (see Chapter 8, Section 8.5).

CUSTOMER-TOUCHING APPLICATIONS

Customer-touching applications are those where customers use interactive computer programs rather than interacting with people. The following are popular customer-touching applications.

Personalized Web Pages

Many companies provide customers with tools to create their own individual Web pages (e.g., MyYahoo!). Companies can efficiently deliver customized information, such as product information and warranty information, when the customer logs on to the personalized page. Not only can a customer pull information from the vendor’s site, but the vendor can also push information to the consumer. In addition, these Web pages can record customer purchases and preferences. Typical personalized Web pages include those for bank accounts, stock portfolio accounts, credit card accounts, and so on. On such sites, users can see their balances, records of all current and historical transactions, and more.

American Airlines is an example of one company that uses personalized Web sites to help increase the bottom line. American Airlines (aa.com) began offering personalized Web sites as far back as 1998. At the time, it was one of the most innovative sites, generating personalized Web pages for more than 1 million registered, travel-planning customers. In 2007, AA.com also unveiled a companion site, aa.com/women. This was the first site focused solely on women travelers (American 2007).

In any given year, American Airlines estimated that 48 percent of its customers are women. Like other women travelers at the time, 35 percent booked their travel online. American calculated that if the company were able to use aa.com/women to increase its number of women passengers by 2 percent, the result would increase revenues by at least $90 million annually.

In designing and building aa.com/women, American created a specialized advisory panel of expert women travelers including former women employees, women business owners, and women who travel regularly for business and pleasure. Today, the site features articles about business, family, and companion getaways. It provides unique offers, destination content, weather updates, flight information, and travel tips. The site also hosts online discussion forums for the women’s travel community. Recently, the site began offering new content including destination videos from “Conway Confidential,” authored by travel expert Paula Conway.

Web Self-Service

The Web environment provides an opportunity for customers to serve themselves. Known as Web self-service, this strategy provides tools for users to execute activities previously done by corporate customer service personnel. Probably the best known and most frequently used Web self-service systems are the package tracking systems provided by FedEx and UPS. In the past, if FedEx or UPS customers wanted to know the whereabouts of a package, they had to call a representative, give the information about their shipment, and wait for an answer. Today, customers go to fedex.com or ups.com, insert their tracking numbers, and view the status of their packages.
Many other examples exist, ranging from checking the arrival time of an airplane to finding the balance of a checking account. Initially, self-service was done in voice-based customer response systems (known as voice-activated response [VAR]; e.g., netbytel.com). Today, these systems are integrated and complementary to Web-based systems.

Self-service applications can be used with customers and with employees, suppliers, and any other business partners. This was illustrated in iRobot's service support (Case B.1). It is also exemplified by Case B.2, which describes the self-service provided by Canon's customer support arm.

CASE B.2
EC Application
SELF-SERVICE FOR CANON CUSTOMERS

Canon Information Technology Services (CITS) is the customer support arm for Canon in the United States. It was formed in 1998 and is located in Chesapeake, Virginia. There are more than 550 employees in the 60,000 square foot facility in Chesapeake. The CITS employees handle thousands of service calls, e-mails, and letters from U.S. consumers of Canon's digital cameras and camcorders, copiers, printers, fax machines, calculators, and binoculars. In all, they handle 200,000 calls, 50,000 e-mails, and 1,000 letters per month. This translates to over 3 million contacts per year.

In 2004, CITS did not have a centralized repository or knowledge base for its technical support information (e.g., technical documents needed to solve a customer problem or inquiry). The information was spread throughout a number of internal systems and a variety of hard-copy documents and manuals. There was a lot of duplicate information and much of it was contradictory. This made it difficult for both its service reps as well as its self-service customers to locate the information they needed. The problem was exacerbated because the sales of Canon's products were growing steadily, which resulted in a corresponding growth in the number of support calls.

CITS tackled the problem in a two-fold manner. First, it consolidated the information into a single, searchable knowledge base for its customer service reps. This was done by implementing a packaged knowledge management suite from Consona (consona.com) a well-known e-CRM provider.

Second, it rolled out selective portions of the new knowledge base to support customers interested in self-service. The rollout entailed a number of steps including:

- **Building content to cover all supported Canon products.** This required the support engineers at CITS to identify and enter into the knowledge base technical content for over 800 Canon products. The knowledge base went from approximately no content to over 100,000 content pieces supporting 99 percent of the products.

- **Implementing self support.** The CITS technology team and Canon IT department integrated the knowledge base into the support site. This provided Canon customers with self-service access to the technical knowledge base used by the service reps.

By the first half of 2008, CITS was already seeing major returns from the consolidation of its technical information into a single, searchable repository. The call deflection rate, customer questions resolved online rather than by phone call, increased from 51 to 71 percent. Similarly, the need for follow-up correspondence, e-mail escalation rate, decreased 47 percent during this time period. Customer resolution rates improved from 50 to 60 percent. Overall, the customer satisfaction scores went up from 6.5 to 7.1 on a scale of 1 to 10.

**Sources:** Compiled from Consona (2008) and Consona (2009).

**Questions**

1. What type of customer support is provided by Canon ITS?
2. What problem was CITS trying to solve by implementing a centralized support repository?
3. What steps did CITS use in rolling out customer self-service?
4. Describe the benefits that CITS received from its self-service repository.
The benefits of Web self-service for customers are quick response time, consistent and sometimes more accurate replies or data, the possibility of getting more details, and less frustration and more satisfaction. The benefits for organizations are lower expenses of providing service (up to 95 percent savings), the ability to scale service without adding more staff, strengthening business partnerships, and improved quality of service.

It is not easy to implement large-scale self-service systems. They require a complex blend of work processes and technology. Also, only well-defined and repeatable procedures are well-suited for such systems.

Of the various self-service tools available, three are of special interest: self-tracking, FAQs, and self-configuration.

**Self-Tracking.** Self-tracking refers to systems, like that of FedEx, where customers can find the status of an order or service in real (or close to real) time. Most large delivery services provide such services as do direct marketers such as Dell, Amazon.com, and Staples. Some auto manufacturers (e.g., Ford) allow customers to track the progress of the production of a customized car. Some employers, universities, and public agencies will let job applicants track the status of their job applications.

**Customer Self-Service Through FAQs.** Most Web sites provide a “frequently asked questions” (FAQ) page. An FAQ page lists questions that are frequently asked by customers along with the answers to those questions. By making an FAQ page available, customers can quickly and easily find answers to their questions, saving time and effort for both the Web site owner and the customer. An effective FAQ page:

- Is easy to find.
- Loads fast (which is why it’s usually text).
- Makes it simple to locate the questions (which are usually summarized at the top).
- Answers questions from the customer’s perspective.
- Does not repeat information provided elsewhere.
- Provides an opportunity to easily ask a question not in the FAQ.
- Is frequently updated with new questions.

**Self-Configuration and Customization.** One of the best ways to satisfy customers is to provide them with the ability to customize products and services. This is especially true for complex products with many options. This is why many build-to-order vendors, from Dell to Mattel, provide customers with tools to self-configure products or services. Usually, the configured order is linked directly to production so that production decisions are based on real customer demand. In addition, customers are often linked interactively to the company and, if necessary, to product designers at the company.

**CUSTOMER-CENTRIC APPLICATIONS**

*Customer-centric applications* are synonymous with CRM analytics. CRM analytics refer to the use of business analytic techniques and business intelligence such as data mining and online analytic processing (see Turban et al. 2008) to CRM applications. Exhibit B.3 illustrates the basic concept. On the left side, we see the many sources of customer data from customer contacts with service and support centers, purchases from online and offline stores, and activities and interactions with Web storefronts and Web 2.0 sites. The large amount of data is processed and stored in a data warehouse or data mart or just in a database. Several types of analytical tools can then be applied to the data in order to provide insights into customer behaviors and propensities.
Analytics Tools

The main tools used in CRM analytics include reporting, online analytical processing (OLAP), data mining, and Web analytics. The following discussion covers the first three tools:

- **Reporting.** Reports can range from simple lists or charts of data and information to more complex analyses of CRM performance metrics. Usually, reports come in one of two forms—standardized (predefined) or query-based (ad hoc). Standardized reports, also called canned reports, are generated from predefined templates and provide little in the way of customization outside of reformatting. In contrast, a query-based report provides the end user (in this case a manager or analyst) with a set of tools for constructing a query against which the report is run.

- **Online analytical processing (OLAP).** Medium and large corporations often organize and store data in a central repository called a data warehouse. A data warehouse has a specialized (star schema or hierarchical) structure that makes it easy to view and analyze measures from a variety of dimensional perspectives (e.g., comparing sales data for different products sold at different stores at different times). The technologies used to view and analyze the data in a data warehouse are called online analytical processing (OLAP). OLAP tools enable the end user to “slice and dice” the measures by various dimensions (e.g., products, locations, customers, and time) and to “drill down” to more detailed information and “drill up” into aggregated or summary information.

- **Data mining.** Data mining is another analytic activity that involves sifting through an immense amount of data to discover hidden patterns. The process of discovery can involve: classification—assigning cases into predetermined categories based on a predictable attribute (e.g., using a decision tree to determine which customers should receive a particular ad campaign); clustering—identifying natural groupings of cases based on a set of attributes (e.g., determining similarities among groups of
Appendix B: Electronic Customer Relationship Management (e-CRM)

buyers based on demographic characteristics); association—searching for relationships between variables (e.g., market basket analysis to determine which items are purchased together); regression—determining a statistical function that models the data (e.g., using linear regression to predict coupon redemption rates).

Microsoft is one of a number of companies that provide data mining capabilities (with their SQL Server database). It has identified a number of arenas where data mining and other sophisticated analytical procedures are applied to customer data (microsoft.com/sqlserver/2008/en/us/data-mining.aspx):

- **Market basket analysis.** Discover which items tend to be bought together to create recommendations on-the-fly and to determine how product placement can directly contribute to your bottom line.
- **Churn analysis.** Anticipate customers who may be considering canceling their service and identify benefits that will keep them from leaving.
- **Market analysis.** Define market segments by automatically grouping similar customers together. Use these segments to seek profitable customers.
- **Forecasting.** Predict sales and inventory amounts and learn how they are interrelated to foresee bottlenecks and improve performance.
- **Data exploration.** Analyze profitability across customers, or compare customers who prefer different brands of the same product to discover new opportunities.
- **Unsupervised learning.** Identify previously unknown relationships between various elements of your business to better inform your decisions.
- **Web site analysis.** Understand how people use your Web site and group similar usage patterns to offer a better experience.
- **Campaign analysis.** Spend marketing dollars more effectively by targeting the customers most likely to respond to a promotion.
- **Text analysis.** Analyze feedback to find common themes and trends that concern your customers or employees, informing decisions with unstructured input.

CRM analytics lead not only to better and more productive customer relations in terms of sales and service but also to improvement in advertisement planning and analysis, marketing strategies, and supply chain management (lower inventory and speedier delivery) and, thus, lower costs and more competitive pricing.

An example of analytic CRM is provided in the closing case at the end of the appendix. For more on data analysis and data mining, see autonlab.org/tutorials/.

**ONLINE NETWORKING AND OTHER APPLICATIONS**

Online networking and other applications support communication and collaboration among customers, business partners, and company employees. Representative online networking tools and methods include the following:

- **Forums.** Available from Internet portals, forums offer users the opportunity to participate in discussions as well as to lead forums on “niche” topics (see Badjatia 2009 for discussion of the role of forums in online CRMs).
- **Chat rooms.** Found on a variety of Web sites, they offer one-to-one or many-to-many real-time conversations.
- **Usenet groups.** These are collections of online discussions grouped into communities. Usenet groups existed well before the advent of the Web (see usenet2.org for details).
Blogs and wikis. Blogs and wikis are becoming a major online networking tool. Blogs enable companies to approach focused segments of customers. Many B2C and B2B sites sponsor blogs for their customers. By monitoring the discussion on a blog, for example, companies can gain insight into factors such as customer satisfaction. For instance, this is how U.S. Cellular learned that many teenagers were unhappy because of the limited time on their cell phones. As a result, the company started offering unlimited “call me” minutes to attract the teenagers.

According to Wikipedia, a wiki is “a collection of Web pages designed to enable anyone with access to contribute or modify content, using a simplified markup language” (en.wikipedia.org/wiki/Wiki). Fewer companies utilize wikis than blogs as a form of online communication with their customers. One company that does provide a wiki is the online visual search company Riya.com. They have used a wiki, for example, to let customers participate in the construction of the company’s FAQ page (riya.wikispaces.com).

E-mail newsletters. These newsletters usually offer the opportunity for readers to write in, particularly in “Let us hear from you” sections. Users can find newsletters of interest by browsing a topic in a search engine. Many newsletter services invite you to sign in. Others only allow access to registered users. Usually registration is an opt-in option (i.e., a person can remove his or her name from the list at any time). Because of the current bulk of e-mail advertising and marketing, customers may initially be distrustful of e-mail marketing. Therefore, newsletter articles, commentary, special offers, tips, quotes, and other pieces of information e-mailed to people must be presented in a professional and attractive manner. Sample resources for information on e-mail newsletters are list-universe.com and new-list.com.

Discussion lists. A discussion list is a redistribution tool through which an e-mail is sent to one address and then is automatically forwarded to all the people who subscribe to the list. The three main reasons a company may use such lists are (1) to learn more about customers in a particular industry (assuming customers will react to the e-mail), (2) to market the company’s products and services, and (3) to gather and share information with a community of individuals with similar interests. If a company hosts a discussion list, it can define the subject matter to be discussed, determine the frequency of the publication, and even make it a revenue-gathering tool. Sources for more information on discussion lists are tile.net and lists.topica.com.

Section B.2 REVIEW QUESTIONS
1. Discuss key customer-facing CRM applications.
2. Describe customer-touching CRM applications, including Web self-service.
3. Describe the basic types of CRM analytics, giving examples of each.
4. List the major types of online networking CRM applications.

B.3 CRM IMPLEMENTATION ISSUES
According to Petersen (2006), Buttle (2009), and Seybold (2008), culture, commitment of top management, and communication lead to CRM success—not technology. This is why most of the critical steps in implementing an enterprise CRM revolve around internal processes and are centered on the customer. These steps include a focus on the end customer; systems and business processes that are designed for ease of use and from the end customer’s point of view; and efforts to foster customer loyalty (a key to
profitability in EC). Some of the major steps, which are shown next, are valid for B2C and B2B CRMs.

1. **Customer-centric strategy.** A customer-centric strategy should be established first at the corporate level. The strategy must be based on and consistent with the overall corporate strategy and must be communicated across the whole organization.

2. **Commitments from people.** The more commitments from people across the corporation to the transformation of the business strategy, the more likely the CRM implementation will succeed. Employees should be willing to learn the necessary technological skills.

3. **Improved or redesigned processes.** It is inherently difficult to identify the processes that need to be involved and frequently redesigned when implementing CRM.

4. **Software technology.** CRM software can record business transactions, create operations-focused databases, facilitate data warehousing and data mining, and provide decision-making support and marketing campaign management tools. Companies should select the appropriate CRM packages to meet specific corporate CRM needs as well as to enable integration with legacy enterprise applications, such as the ERP system. The best known CRM vendors are Oracle, SAP, Salesforce.com, Microsoft, and Infor. There are also a number of major CRM consultants that are segmented into strategic consulting (e.g., McKinsey), business consulting (e.g., Accenture), application consulting (e.g., CGEY), technical consulting (e.g., IBM), and outsource providers (e.g., Acxiom).

5. **Infrastructure.** Effective CRM implementation requires a suitable corporate infrastructure. This infrastructure includes network setup, storage, data backup, computing platforms, and Web servers. However, only effective corporate infrastructure integration can provide solid support for CRM implementation.

Bohling et al. (2006) claim that many CRM projects are disappointing at the beginning and require remediation because companies do not manage them properly. They offer an extensive methodology on how to implement CRM. See Hagen (2006) for additional tips on CRM implementation.

**INTEGRATING CRM INTO THE ENTERPRISE**

Some CRM applications are independent of enterprise systems. However, many CRM applications must be integrated with other information systems. To understand why, let us examine Exhibit 3.4 (p. 94 in Chapter 3).

As the exhibit shows, CRM lies primarily between the customers and the enterprise. The communication between the two is done via the Internet, regular telephone, snail mail, and so on. However, to answer customer queries, it is necessary to access files and databases. In medium and large corporations, these are usually part of a legacy system and/or ERP system. Companies may check data relevant to a customer order with their manufacturing plants, transportation vendors, suppliers, or other business partners. Therefore, CRM needs to interface with the supply chain, and do so easily, inexpensively, and quickly. In addition, CRM must be integrated with the data warehouse because it is easier to build applications using data in the warehouse than using data residing in several internal and external databases. Finally, CRM itself collects customer and product data, including clickstream data. These need to be prepared for data mining and other types of analysis.
Appendix B: Electronic Customer Relationship Management (e-CRM)

The integration of ERP and CRM must include low-level data synchronization as well as business process integration so that the integrity of business roles can be maintained across systems, and workflow tasks can pass between the systems. Such integration also ensures that organizations can perform business intelligence across systems.

**ON-DEMAND CRM**

Because of the difficulties associated with implementing a large-scale CRM, many companies are turning to on-demand CRM. Like several other enterprise systems, CRM can be delivered in two models: on-premise and on-demand. The traditional way to deliver such systems was on-premise—meaning users purchased the system and installed it on the premises. This was very expensive with a large up-front payment. Many small and medium companies could not justify it, especially because most of the CRM benefits are intangible.

The solution to the situation, which appears in several similar variations and names, is to lease the software. Initially, this was done by application service providers (ASPs) for SMEs. Later, Salesforce.com pioneered the concept for its several CRM products (including supporting salespeople), under the name of On-Demand CRM, offering the software over the Internet. The concept of on-demand is known also as utility computing, and it is discussed in detail in Online Chapter 12. On-demand CRM is basically CRM hosted by an ASP or other vendor on the vendor’s premise, in contrast to the traditional practice of buying the software and using it on-premise. According to Overby (2006), the hype surrounding hosted, on-demand CRM must be weighed against the following implementation problems: Many ASPs went belly-up, leaving customers without service. It is difficult, or even impossible to modify hosted software. Upgrading could have become a problem, and relinquishing strategic data to a hosting vendor could become a risk. Finally, the integration issues described previously are exacerbated by trying to integrate an off-site CRM with on-site ERPs and other systems.

The benefits are: improved cash flow due to savings in up-front purchase, no need for corporate software experts, ease of use, fast time to market, and use of vendors’ expertise.

**JUSTIFYING CUSTOMER SERVICE AND CRM PROGRAMS**

Two major problems arise when companies try to justify expenditures for customer service and CRM programs. The first problem is the fact that most of the benefits of CRM are intangible, and the second is that substantial benefits can usually be reaped only from loyal customers over the long run. This is true for both offline and online organizations. A variety of studies have suggested that the high cost of acquiring customers renders many customer relationship programs unprofitable during their early years. Only in later years, when the cost of retaining loyal customers falls and the volume of their purchases rises, do CRMs generate big returns. Therefore, companies are very careful about determining how much customer service to provide (see Smith 2006). For approaches for CRM justification, see Band (2006).

**FUTURE DIRECTIONS OF CRM**

Greenberg (2006) points to the following CRM future directions:

- The concept that value resides with the customer will be a decisive factor in the future. Corporate strategies will base the foundation for CRM on customer experience and will develop metrics to measure that success. “CRM on Demand” will predominate. For advantages, see IBM (2006).
Appendix B: Electronic Customer Relationship Management (e-CRM)

- The open source movement and companies like SugarCRM (sugarcrm.com/crm) will effectively compete with the on-demand market.
- CRM will be integrated more often with strategies for social networking.

Section B.3 REVIEW QUESTIONS
1. What are some of the critical steps in implementing an enterprise CRM?
2. Describe some of the major enterprise systems with which a CRM needs to be integrated.
3. What is on-demand CRM?
4. Why is it hard to justify a CRM?
5. What are some of the future directions of CRM?

MANAGERIAL ISSUES

1. How does CRM fit in our overall strategy? Companies are often divided into those that are product-centric, those that are sales-centric, and those that are customer-centric. Regardless of a company’s overall strategy, in today’s world where customers are king, no company can ignore the importance of CRM and the importance of creating a customer-centric culture.

2. Is CRM justified? Often, the benefits of CRM are hard to quantify. Even when there are clear metrics, the actual payoffs are not likely to be realized in the short term. A company needs to take a long-term view of its customers and their value to the company. This is why some experts say that it is best to think of CRM as customer life-cycle management (CLM).

3. Where should we start? In some ways a CRM is like an ERP—an umbrella term encompassing a wide range of interconnecting applications. Any attempt to tackle the entire collection is likely to result in failure. For this reason, most companies are better off focusing on a few key applications that have a potential for a quick return (e.g., customer self-service).

4. Are we better off going outside? Because of the success of companies like Salesforce.com, many companies are turning to on-demand CRM. In many instances, the payoffs from on-demand CRM can be realized fairly quickly. However, on-demand is not without its hassles (e.g., integrating with in-house systems), and the benefits can only be realized if a company has a well-defined strategy and understands that it is likely to rest on process changes that have little to do with outsourcing the technology.

SUMMARY

1. CRM, CLTV, technical requirements, and justifications. The success of virtually every business rests on its customers. CRM is at the core of this success, providing a business model and set of operating practices designed to maximize profitable revenue from targeted customers. In an effective CRM, a customer is viewed as a lifetime income stream, not as a set of independent transactions. For CRM to be truly effective, an organization must first understand who its customers are and what their lifetime value (LTV) is. Electronic CRM (e-CRM) is the electronically delivered or managed subset of CRM. The key building blocks of CRM and e-CRM are their operational, analytical, and collaboration components.

2. CRM applications. The major CRM applications are closely aligned with the key building blocks of a CRM. The applications can be grouped into one of four major categories: customer-facing applications,
customer-touching applications, customer-centric applications, and online networking applications. Today, many of these applications are designed to help businesses better understand customers and to improve customer self-service.

3. CRM implementation. The success of a CRM implementation depends on three Cs and a T—culture, commitment of top management, communication, and technology. While business processes are probably more important than technology, the integration of a CRM system with existing systems plays an important role in reaping the overall benefits of a CRM. Two of the reasons it is difficult to justify undertaking a major CRM implementation is that the benefits are intangible and it takes a long time to reap them. Given the long time to pay off, many companies have turned to on-demand, hosted systems.

KEY TERMS

- Autoresponders B-6
- CRM analytics B-10
- Customer interaction center (CIC) B-4
- Customer relationship management (CRM) B-2
- Data warehouse B-11
- Electronic customer relationship management (e-CRM) B-2
- FAQ page B-10
- On-demand CRM B-15
- Sales force automation (SFA) B-7
- Web self-service B-8

QUESTIONS FOR DISCUSSION BY INDIVIDUAL STUDENTS

1. Many question the short-term return on investment of CRM tools. Explain why.
2. How would you convince a CEO to invest in Web self-services? With what issues could the CEO counter your advice?
3. Discuss how CRM can increase the profitability of a business.
4. Discuss when on-demand CRM is more beneficial than in-house CRM (see Patton and Wailgum 2006, and Overby 2006).

TOPICS FOR CLASS DISCUSSION

1. Discuss the different types of CRM analytics.
2. Select a few online retailers and describe how they could use CRM analytics to improve their product presentations and customer service.

INTERNET EXERCISES

1. Enter support.dell.com and examine all the services available. Examine the tracking services Dell provides to its customers. Write a report about customer service at Dell.
2. Go to inquira.com. Download the white paper titled “Smart CRM.” What do they mean by the term? What role does knowledge management play in CRM? What are the key benefits that a company obtains by using knowledge management for customer support and service?
3. Enter oracle.com/siebel and crmondemand.com. Find what each offers in its CRM OnDemand product. Why does Siebel collaborate with IBM’s OnDemand program?
TEAM ASSIGNMENTS AND PROJECTS

1. Each team should select an overnight delivery service company (FedEx, UPS, U.S. Postal Service, and so on). The team will then identify all the online customer service features offered by the company. Each team then will try to convince the class that its company provides the best customer service.

2. For most companies the benefits of CRM are only realized by focusing on maximizing a customer’s lifetime value (LTV). Using Hughes (2009) as a reference, how is LTV calculated and how does it differ from ROI and profitability?

3. Each team is assigned a CRM software company (e.g., Oracle, Salesforce, SAP, Microsoft, or Infor). Find the company’s leading products and prepare a presentation of their capabilities.

4. Go to sugarcrm.com. Run the demo on the site. Prepare a report describing the types of CRM products it offers, what makes its products unique, and some of the benefits and limitations of this type of CRM product line.

Closing Case

HOW BANK AUSTRIA USES DATA MINING TO IDENTIFY POTENTIAL CUSTOMERS

With the latest global credit and banking crisis, it is now more important than ever for banks to deploy CRM technologies to optimize the speed and accuracy of their marketing efforts. In Austria, the country’s largest bank—Bank Austria Creditanstalt (BA-CA; bankaustria.at)—is relying on the innovative use of data mining tools to accomplish the task. Based on the use of these tools, BA-CA routinely undertakes new marketing campaigns every couple of weeks. The overall result has been an increase in take-up rates from 1 percent to 3 to 5 percent. This represents about a €50 million increase in new business per season (like the spring season).

The use of data mining was part of a larger sales and marketing improvement program. Key to the success of the program was BA-CA’s ability to conduct 14-day marketing campaigns based on relevant customer data. While BA-CA had tried various data mining tools in the past, its existing systems were too time-consuming and complex to meet the 14-day requirement.

One of the difficulties in employing data mining is that it usually requires sophisticated skills and knowledge to deploy the systems and interpret the results. Knowing this, BA-CA chose a new data mining system from KXEN (kxen.com) as the analytical base for their “high speed” marketing campaigns. The system is touted for its ease of use as well as its easy integration with existing systems.

Conceptually, the architecture of BA-CA’s new data mining system was very similar to architecture depicted in Exhibit B.3. More specifically, information on previous and prospective bank customers is stored across six servers each with an SQL server data mart. There are some 4.5 terabytes of data held in the data marts. Next, data from the marts is fed to the KXEN system to produce an analytical model using KXEN’s proprietary data mining techniques. The results from the analytical model are fed through BA-CA’s bank scoring engine on a weekly basis. BA-CA uses the results from this process to predict propensity to buy, customer segmentation (cluster analysis), and retention analysis. The results from the overall analysis are feedback to the data marts where they are used to inform their marketing campaigns.

It is difficult to determine the exact impact of any specific campaign because there are always multiple campaigns running in parallel. However, as noted, the bank feels that on average the campaigns have a success rate of target customer deals in the area of 3 to 5 percent. In the past it was 1 percent or less.

Sources: Compiled from KXEN (2007) and kxen.com (accessed May 2009).

Questions

1. Why was BA-CA interested in implementing data mining?
2. Describe how the BA-CA data mining system works.
3. What were the major benefits of the BA-CA data mining system?
REFERENCES


Greenberg, P. “Say Goodbye to CRM as We Once Knew It.” Searchcrm.com, January 4, 2006. searchcrm.techtarget.com/originalContent/0,289142,sid11_gci1155499,00.html (accessed May 2009).


