12

Customer Relationship Management

LEARNING OBJECTIVES

After reading this chapter, you should be able to:

- Understand the customer relationship process.
- Know the evolution, current status, and categories of the customer relationship management (CRM) system.
- Understand the components and architecture of CRM systems.
- Examine the CRM life cycle and its relationship with other enterprise software.
- Examine the impact of CRM on an organization.

CASE 12-1
Opening Case
Walt Disney's CRM Strategy

Disney was founded on October 16, 1923. The company presently has a wide portfolio of businesses, ranging from film to animation, theme parks, distribution, retail, television, music, and almost every aspect of the entertainment industry. Their commitment to entertainment has made them one of the leading and arguably the most popular entertainment companies in the world. Disney's total revenue for 2005 was $32 billion, and they currently employ 133,000 full-time employees worldwide, with significantly more part time. Disney currently has approximately 100 million people per year visit their stores and theme parks across the globe.

In order to improve the customer experience at Disney while simultaneously lowering the customer service cost, Disney is integrating such cutting-edge information technologies as the Internet, customer relationship management (CRM), and mobile connectivity. One example of this technology leveraging is Destination Disney. Disney experienced data issues that would make simple tasks such as tracking repeat customers while visiting their parks. Disney wants all the data accessible in real time to track the individual customer's buying behavior and personal preferences to be able to create easy-to-book Web sites for groups of people to plan their Disney activities.

Another example is the creation of a mobile CRM device called "Pal Mickey," a 10½-inch-tall stuffed doll with a central processing unit, an internal clock, small speakers, and a powerful infrared sensor in its nose. Disney park visitors are often frustrated with long lines and crowds at the amusement parks after paying a high entrance fees. Pal Mickey acts as a virtual tour guide, providing tips on which rides have the shortest lines and information on events. As the doll moves through the park, the sensor receives a wireless data upload from one of the 500 infrared beacons concealed in park lampposts, rooftops, and bushes that transmit location-centric information from a Disney data center. The signals let Pal Mickey know when to inform the owner of an event. For example, when it receives a new piece of information from a nearby beacon, it giggles and vibrates to indicate that it has something new to say. Squeeze its hand or stomach and Pal Mickey will tell you about an upcoming parade, a shorter line at another ride, or trivia on the current location of the park. With more than 700 prerecorded message variations, Pal Mickey always has something to say, whether it's telling a child a corny joke or keeping kids entertained with interactive games while they wait in line.

Pal Mickey is an example of bridging the gap between static customer support and dynamic customer support based on the customers' behavioral preferences, physical location, and movements at any given time. In other words, it's all about "dynamically matching data with context—a new concept and the next big development in the evolution of CRM," in the view of futurist Paul Saffo, research director of the Institute for the Future in Menlo Park, California, a technology think tank. Another futurist and business strategy guru, C.K. Prahalad, the Harvey C. Fruehauf Professor of Business Administration at the University of Michigan Business School and coauthor of *The Future of Competition* (Harvard Business School Press), agrees: "Disney is experimenting with a customer strategy

that goes beyond today's CRM," he said, "using not just the data, but data in the context of individual customer behavior."

Due to technical and other problems, Disney has discontinued Pal Mickey since 2008 but supports customers who own a Pal Mickey and bring it to their theme parks. However, Disney has developed two new CRM applications recently, "Mobile Magic" with Verizon Wireless phones and several others with Apple's iPhone. These applications provide guests access to real-time park information similar to the Pal Mickey. Mobile Magic allows you access to real-time information on wait times for rides, return times for "fast pass" (which is another technology that prints a ride-specific card with a time on it when the guest can come back and wait in an express line), and information on character locations. This application also includes a GPS-enabled mobile map, which shows you your current location while you are wandering the theme parks. You can scroll through an extensive list of locations and easily route to any location you choose whether it be a character greeting or a short line for a ride that you found on the application or directions to a dinner you have reservations for in the park. The Apple iPhone applications include the following: (1) The "Walt Disney World Maps" application contains full-size maps for the Magic Kingdom, Epcot, and other Disney theme parks in Orlando. For each map, you can look for individual rides or attractions and make a schedule of the things you want to visit. You can also find your location on the map; (2) the "Disney World Dining," which includes full menus for all 160 restaurants and also locates the restaurants closest to you, with one-touch dialing for the Disney dining reservations number; and (3) several others such as the "Disney World Park Hours," "Disney World Notescast," "Disney World Wait Times Free," and "Mouse Memo." The appendix at the end of this chapter provides more details on these iPhone applications. Disney also relies on its guests to provide real-time updates to things like the wait times for rides, which really creates a network of people who are users and updaters of the applications.

What do you think about Disney's CRM strategy? Will Pal Mickey and newer mobile phone applications enhance the customer experience? Why?

PREVIEW

Disney's CRM strategy is methodical, logical, and organized. Business strategy plays a very important role in any CRM implementation. A good strategy coupled with a well-defined set of requirements, identification of key success factors, and good partnerships will usually lead to success in CRM technology. Disney's goal is to reduce the hassle for visitors to the park by creating a more personalized environment, with IT at the core. According to Disney CIO Russ Berry, "The role of IT is changing. It's not simply an organization that deploys technology, but one that now integrates technology from a lot of different angles to improve the customer experience." The complexity of implementing a CRM system in a company like Disney is to be able to adapt to the changing requirements of the customers during the implementation of a system. The implementation alone can take years for a project with as wide a scope and expectations of what this system will mean to Disney.

CRM focus should always be on customer experience. Because customer expectations often change, it is important for the company to understand that CRM implementation needs to be *customer driven* more than *technology driven.* That is, CRM implementation must involve

people, process, and systems, rather than just a narrowly defined IT application. Investments in CRM technology that are technology driven have not been very profitable. In 2003, Gartner Group published a report stating that 75 percent of all CRM initiatives fail overall. Another report from Forrester Research also indicated that CRM spending was more than $13 billion in 2005, with less than half of all purchasers of CRM satisfied that their CRM systems achieved the business benefits they had expected. "Achieving positive ROI for CRM initiatives has often been a difficult task," said Bruce Culbert, cofounder and executive director of BPT Partners.[1]

This chapter will provide an overview of CRM systems, their evolution, and the types of CRM. In addition, it will discuss the customer relationship function and processes, the CRM technology, and the implementation life cycle of CRM. The chapter will conclude with the implications of CRM technology on management.

WHAT IS CRM?

When the term *customer relationship management* is mentioned, it automatically brings to mind such well-known software vendors as Siebel and Salesforce.com. In fact, CRM is much more than the software utilized to store, analyze, and manage customer relationships. A true CRM integrates corporate strategy, business methodology, and technology to accomplish a myriad of goals for companies that want to operate in a customer-driven environment. For example, Pal Mickey integrates with Disney's customer-driven strategy by providing real-time interaction with the customer and being responsive to their needs for quick information. It also solves the problem during peak loads when Disney employees cannot provide quick and accurate information. CRM as a concept is as old as business itself. No business can survive without understanding its customers and having a positive relationship with them. CRM provides support for the front-end customer facing functionality (e.g., marketing, sales, and customer service), which are usually not available in traditional ERP systems. Even though the ERP system focus is more on providing systems support for employees and business partners of an organization, the CRM system focus is on supporting the requirements of customers and clients of the organization. As seen in the Disney case, CRM's role is to improve the customer experience, thereby increasing revenues of the organization.

CRM Evolution

In the 1980s and through the mid-1990s, companies started using IT to automate customer processes with discrete customer-centric applications (e.g., sales force automation (SFA) for managing prospects and sales activities, customer center support systems for complaint management, and marketing automation for advertising campaigns and customer segmentation). In the late 1990s, companies began to take a full 360-degree view of a customer, as shown in Figure 12-1, and they started integrating these discrete systems into what is now known as CRM.

CRM began in response to a changing market environment as mass marketing gave way to focused segment marketing and finally to target marketing an individual. Mass marketing techniques presented one message to a wide and varied base and relied upon the notion that the more frequently you presented messages to the consumer, the greater odds you have of piquing the interest of a new or existing customer. As media proliferated and multiplied, mass marketing proved expensive, and measuring return on advertising dollars was ambiguous at best.

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[1] RWD Technologies and BPT. (October 7, 2005). Partners Align Forces to Revolutionize Return on Investment in the CRM Industry. *CRM Today.* www.crm2day.com/news/printnews.php?id=115828 (accessed November 2005).
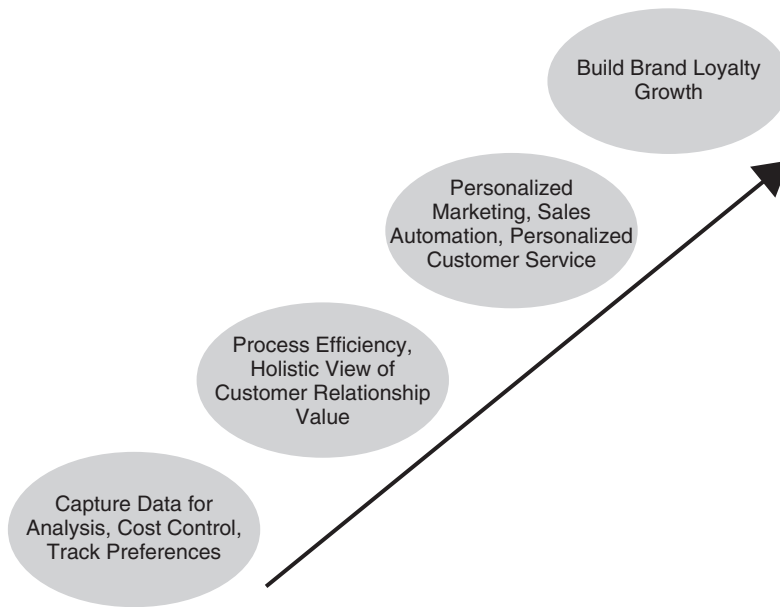
Build Brand Loyalty
Growth

Personalized
Marketing, Sales
Automation, Personalized
Customer Service

Process Efficiency,
Holistic View of
Customer Relationship
Value

Capture Data for
Analysis, Cost Control,
Track Preferences

FIGURE 12-1   Evolution of CRM Programs

Enabled by new technologies that collected consumer data, companies progressed to focused segment marketing. Such tools as preference and satisfaction surveys, demographic collection, focus group data, and point-of-sales collection technology gave industry a better glimpse at why a customer purchased certain services and goods, along with the relative satisfaction level or impression he or she had with a company or brand. This turned the tide in marketing, manufacturing, operations, and customer service as all industries relied upon customers to dictate the product and not internal forces. By using technology to analyze consumer data, companies have found that incremental sales to loyal, repeat customers (i.e., existing customers) is much more profitable than acquiring new customers. This shifted the emphasis on maximizing the customer's experience with the brand and spawned the customer relationship discipline that gave way to CRM software.

The expectations of a CRM system have evolved over time. Organizations first implemented CRM to capture customer data for analysis to find out what aspects of their goods and services are important to their clients. A customer file is started from an initial point of marketing contact, whether it originated with a phone call inquiry to customer service before a sale, a purchased lead generation list service, a request for literature, an organized event, or a completed warranty or registration form. The software can track all aspects of sales from lead source tracking to meetings with a sales representative, thereby automating the sales process. After a sale, such customer service and support activity as complaint resolution or satisfaction feedback is captured. Each point of contact with an individual customer can be recorded as they conduct business with a company. This allows development of a business process across marketing, sales, and customer service. One limitation of this first-generation CRM was that this information did not filter to the management level. There was no corporate-wide sharing of customer experiences and adjustments of corporate strategy or tactic based on the CRM knowledge.

The second evolution of CRM began with the improvement in techniques of data gathering and analysis. Organizations could get a true picture of the economic value of a relationship with the customer, and it was sometimes contrary to the amount of sales attributed to an individual client. A holistic view of a client's sales may reveal that the cost of marketing, selling, and servicing the client negates much of the profit realized by a sale. Likewise, companies utilized the analysis results to customize processes for greater efficiency and effectiveness. For instance, many scaled back call centers, as consumers opted to attain information through Internet-based inquiries, resulting in cost savings for the corporation. No longer just "customer focused," CRM allowed for individual, customer-based measures of goods and services that, in turn, corporations used to customize customer experiences. Automatic, personalized marketing (e.g., rewards for purchases and customized promotions) became possible. Initiating sales contact, where, when, and how the client likes to receive contact, and, finally, adjusting the level of customer service according to customer need and profitability. Management had access to the CRM knowledge and used it to understand more fully the past and current business environment and to forecast the direction of their businesses. CRMs were fully integrated with enterprise-wide data collection and analysis systems.

In the 1960s, Lane Furniture Company used a unique analytical CRM system to predict future sales of furniture.[2] Lane's goal was to predict the overall level of sales of furniture in the U.S. market six months in advance. Through "data mining" on many industries that it purchased and obtained from publicly available sources, the company's statisticians (the data miners of their day) figured out that the strongest predictor of furniture sales six months in the future was the current month's national, regional, and local new car sales figures. The relationship was a negative one (i.e., the lower the car sales were for the current month, the higher furniture sales would be in six months). Armed with this analysis, Lane consistently made the right decisions on their furniture inventory and when to advertise to a receptive market. Lane used data from their CRM system, broadly defined as a predictive tool that gave it an "insight advantage" over their competitors.

CRMs have also triggered consumer advocates due to the fine line crossed by these systems on individual privacy. Profiling customers often involves data collection and close observation that create a feeling of "Big Brother is watching." Recent Internet technologies have become very intrusive in collecting data without consumer knowledge. CRMs indirectly encourage this behavior of collecting and tracking customers as they navigate through various software and Web sites. On one hand, tracking and profiling are the key tools for effective CRM; on the other, they create various negative feelings on the company image and brand in the mind of customers. A good CRM strategy should therefore incorporate the privacy and ethical principles discussed in Chapter 10.

CRM Today

CRM software is continuously evolving. Globalization and ubiquitous connectivity are forcing companies to reevaluate how to deliver value to customers. Globalization has leveled the playing field for large and small companies to deliver similar products at low cost with an abundance of options for customers. A Web-surfing customer today has much more bargaining power with the help of the Internet and can change a vendor any time with a click of a button. To be successful in this competitive environment, companies have to deliver both quality products and unique and

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[2] Stanton, A., and Rubenstein, H. (2005). The Discipline of CRM. www.CRMGuru.com (accessed December 15, 2006).

dynamic experiences for the customer depending on his or her current "context" or the customer's precise physical location, time, and needs,[3] as shown earlier in the Disney case.

Companies that have realized the tactical value of CRM (i.e., reducing costs, improving process and communication, and managing customers) are discovering that CRM can also yield strategic value for a corporation. According to Montgomery Research, Inc.,[4] there is a shift in CRM focus from cost reduction to building brand loyalty and growth. The information collected and analyzed in a CRM program can be used to create a unique branded experience for each client. The theory is, if you can create a unique and meaningful experience for your customer, they will remain loyal to your brand, which will, in turn, increase sales. A study by Gartner Research[5] predicts double-digit increases, between 9 and 11 percent, in CRM software sales until the next decade.

Types of CRM

Various criteria can be used to categorize CRM systems. From a functionality perspective there are two types of CRMs: one related to customer service or support and the other to sales force automation. From a business strategy perspective, CRM systems can be categorized by three complementary perspectives, as shown in Table 12-1. Finally, from an implementation perspective, CRM systems can be operational, analytical, and collaborative.[6]

OPERATIONAL CRM   Operational CRM systems provide front- and back-end support for sales and marketing, administrative personnel, or customer service processes. They improve

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TABLE 12-1   Business Strategy Perspective of CRM[7]

Business
- promotes customer-centric approach
- customer segmenting
- one-on-one marketing
- increase customer retention

Technology
- foster close customer relationship
- analyze customer information
- coherent view of customer

Customer
- increased interaction opportunity
- increase customer loyalty
- better "word-of-mouth" advertising

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[3] Prahalad, C. K., and Ramaswamy, V. (2004). *The Future of Competition: Co-Creating Unique Value with Customers.* Cambridge, MA: Harvard Business School Press.

[4] The CRM Evolution Continues. (2006). From Relationship Management to Experience Management, Montgomery Research Inc., San Francisco, CA. www.crmproject.com/documents.asp?d_ID=3780

[5] Flinders, K. (September 18, 2006). Gartner Predicts Steady Rise in CRM Market. *MicroScope,* 6.

[6] Shahnam, E. The Customer Relationship Management Ecosystem. *Application Delivery Strategies Delta 724.* www.metagroup.com/communities/crm/ads724.htm (accessed November 17, 2003).

[7] Teo, T., Devadoss, P., and Pan, S. (2006). Towards a Holistic Perspective of CRM implementation: A Case Study of HDB, Singapore. *Decision Support Systems,* 42, 1613–1627.

the efficiency of CRM delivery and support processes. They are often embedded in campaign management and customer help desks. They are integrated with the corporate databases to provide a single and consistent view of the customer from anywhere in the organization.

ANALYTICAL CRM Analytical CRM systems provide tools for collection and analysis of data gathered during the operational process to help create a better relationship and experience with clients or end users. They store and value add customer knowledge for better understanding of customer needs and behavior. Analytical CRMs utilize sophisticated data warehousing, OLAP, and data mining software for planning, monitoring, and analyzing business activities and to support business intelligence needs.

COLLABORATIVE CRM Collaborative CRM systems deal with the interaction points between the organization and the customer. These outlets are referred to as channels. Common channels are the telephone, e-mail, Internet, and fax, among other forms of communication to facilitate open and effective communication with the variety of customers with a multitude of preferences. CRMs today integrate these channels via an integrated CRM portal that provides a gateway for customers to access information and to interact electronically with the company.

CUSTOMER RELATIONSHIP PROCESSES

CRM's role is to balance the corporate needs with successful fulfillment of customer needs. CRM needs a tight integration with business processes that involve customers. In addition, customer processes are hard to model because they rely on the underlying supply of knowledge on products, markets, and customers. Thus, a CRM cannot automate all the customer relationships, and it is often considered a knowledge-intensive process. Nonetheless, a good CRM should provide support for the following functions:[8]

- capture and maintain of customer needs, motivations, and behaviors over the lifetime of the relationship
- facilitate the use of customer experiences for continuous improvement of this relationship
- integrate marketing, sales, and customer support activities measuring and evaluating the process of knowledge acquisition and sharing

Research in the support of customer relationships processes has shown that these processes can be categorized into three areas: delivery processes, support processes, and analysis processes.

CRM Delivery Processes

The delivery processes focus on direct contact with the customer to support the sequence of activities to solve a specific problem (e.g., buying a car). Campaign management, sales management, service management, and complaint management are the key customer delivery processes that need CRM support.

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[8] Geib, M., Reichold, A., Kolbe, L., and Brenner, W. (2005). Architecture for CRM Approaches in Financial Services. *Proceedings of the Thirty-Eighth Hawaii International Conference on System Sciences.* Track 8, 240b.

CAMPAIGN MANAGEMENT   The key goal of campaign management is to generate "leads" or potential clients for the organization. It involves planning, realization, control, and monitoring of relationships aimed at current and potential customers. Today's marketing campaigns require individualized or segmented contacts with the consumers with a feedback channel for consumers to interact.

SALES MANAGEMENT   The goal of sales management is to convert the lead generated by campaign management into a potential customer. It requires a thorough understanding of the customers' needs and provides alternatives to satisfy their requirements and to close the deal.

SERVICE MANAGEMENT   The goal of service management is to provide ongoing support for the client and to assist in the operation of the product or service purchased by the customer (e.g., through help desk support or contract or billing support). The underlying objective is to maintain an ongoing relationship with the customers, making sure they remain satisfied and will potentially buy more products or services in the future.

COMPLAINT MANAGEMENT   Sale of products or services often creates dissatisfaction with consumers that needs to be monitored and managed effectively. The goal is to improve customer satisfaction by directly addressing the complaint of the customer and supporting a continuous improvement process to increase customer retention in the long run.

CRM Support Processes

The customer support processes focus on supporting activities with customer contact rather than facilitating direct customer contact. These include market research, loyalty management, and others.

MARKET RESEARCH   Market research focuses on systematic design, collection, analysis, and reporting of data, and on findings relevant to specific sales activity in an organization.[9] This process involves integration of external and internal data from a wide variety of sources.

LOYALTY MANAGEMENT   In today's market, with increasing competition and decreasing customer loyalty, loyalty management provides the processes to optimize the duration and intensity of relationships with customers. It can increase the switching costs of the customers by providing incentives like the frequent-flyer programs or churn management tools, which provide early warning on customers planning to switch to competitors.

CRM Analysis Processes

These back-end processes collect, consolidate, and analyze customer knowledge collected from other CRM processes. The knowledge generated from these processes provides support to such customer contact processes as campaign management and loyalty management, thereby improving their effectiveness.

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[9] Kotler, P. (2003). *Marketing Management,* 11 ed. Englewood Cliffs, NJ: Prentice-Hall.

LEAD MANAGEMENT   The focus of this process is on organizing and prioritizing contacts with the prospective customers. It involves integration with campaign management and service management, as well as customer profiling. A sub process of lead management is customer scoring, which uses quantitative and qualitative measures to rank the customer based on his or her interest in the product or service. This filtering process allows for more precise target marketing, and it lowers the contact costs.

CUSTOMER PROFILING   The focus of this process is to develop a marketing profile of every customer by observing his or her buying patterns, demographics, buying and communication preferences, and other information that allows categorization of the customer. The knowledge generated from this process feeds into campaign management, sales management, service management, and the other processes discussed earlier. In addition, this process allows more individualized contact with the customer.

FEEDBACK MANAGEMENT   A good CRM requires a closed-knowledge management loop that consolidates, analyzes, and shares the customer information collected by CRM delivery and support processes with the analysis process, and vice versa. The loop can provide a road map for continuous improvement process for the company's products and services. A good system will discard unnecessary data and focus mainly on the knowledge useful for making better decisions.

CRM TECHNOLOGY

The two key technologies applicable to customer service are CRM and call center technologies. Even though call center technology focuses on facilitating better communication between a customer and the telephone operator, CRM technology implements a companywide business strategy in an effort to reduce costs and enhance service by solidifying customer loyalty. There is a wide variety of CRM software in the marketplace.[10] With the rise of the Internet, data mining and analytics techniques have advanced to where they can be considered an integral component of CRM. True CRM brings together information from all data sources within an organization (and where appropriate, from outside the organization) to give one, holistic view of each customer in real time. This allows customer-facing employees in customer support to make quick, yet informed, decisions in resolving customer problems and issues. On one end you have call center technology being sold as CRM, and on the other extreme you have knowledge management systems also being sold as CRM software. How can you go about deciding what deserves your time and attention?

CRM Components

CRM is typically associated with so-called front-office functions (e.g., marketing, sales, customer service, and knowledge management, which includes data analysis, mining, and knowledge sharing) as shown in Figure 12-2.

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[10] See http://en.wikipedia.org/wiki/Category:CRM_software (accessed January 15, 2007).
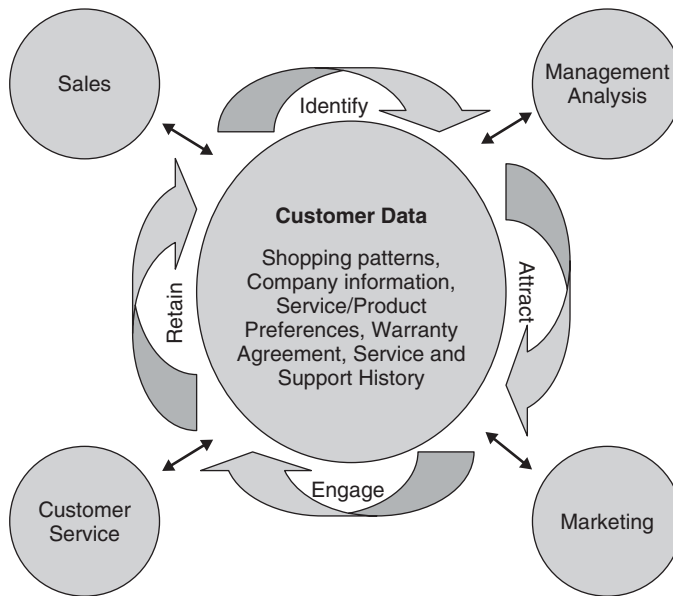
FIGURE 12-2   CRM Components.

MARKET RESEARCH   The two key functionalities here are campaign management and market analysis. Campaign management provides support for preparing such things as marketing budgets, ad placement, sales targeting, and response management. Marketing analysis tools provide statistical and demographic analysis, Web site traffic monitoring, and profiling tools. With the amount of data collected today, these tools provide sophisticated segmenting and targeting capabilities in real time.

SALES FORCE AUTOMATION (SFA)   Sales force automation software has been around since long before CRM became a buzzword. Some of the current CRM vendors were originally in the SFA market. SFA tools provide basic functionality for sales personnel to automate sales lead distribution and tracking, sales reporting, pipeline management, contacts centralization and management, and group collaboration. In addition, they include such software for sales managers and executives as opportunity management, forecasting, reporting, analytics, and customizable dashboard capabilities so that they can be confident that their teams are producing at their full capacity. The goal of SFA software is to give businesses the upper hand with their sales data and to empower sales reps to spend more time selling and less time on administration.

CUSTOMER SERVICE AND SUPPORT   The customer service function has gone through major changes since the advent of the Internet. Online help desks have become a common source for customers to find quick answers to complex technical questions. Customer service originally consisted of setting up a call center with access to a customer database and the frequently asked questions (FAQs) Web site page. Today, with sophisticated CRM back ends, companies have been able to consolidate the two areas into help desk support centers. Customer service functionality typically includes help desk ticket management software, e-mail, interactive chat, Web telephony, and other interaction tools connected to a fully integrated customer database, which is

connected to the supply chain management and ERP application. These tools can be accessed by a trained help center agent or by customers directly via the Internet.

DATA MINING AND ANALYTICS   The amount of data being generated by the Web-driven business has been a driver for data mining and analytics functionality because it represents an extension of existing product lines rather than the creation of new ones. Such businesses as Amazon and eBay generate gigabytes of data per day, and even small Web sites easily generate megabytes of data. These data must be collected, sorted, organized, and analyzed for trends, demographics, cross-selling opportunities, and identification of other sales patterns. Sophisticated OLAP and data mining software are often integrated with CRM packages.

CRM Packages and Vendors

Recently, several major enterprise software vendors have announced new suites or services in the CRM area, although, these new offerings do not offer all major functions associated with the preceding categories. Big CRM vendors provide more features than do the smaller vendors, but there is no software package that can work directly off the shelf. Most CRM packages will require moderate-to-extensive customization and integration to provide the features necessary for a company. The ability of a company to implement various CRM solutions can depend on the size of the company. A large company will have a better chance to find a CRM package to match their needs. CRM vendors today provide software for big and small businesses (Table 12-2).

CRM Architecture

CRM systems architecture can utilize connections to multiple sources of data to provide support and service representatives detailed information that can aid a customer experience, increase sales revenue, and provide more efficient and faster real-time data.

The CRM hardware architecture (see Figure 12-3) depends on a number of factors and considerations. Typical CRM systems follow client–server architecture. The system environment would consist of the following components:

- Application server: runs either front-end processing or querying data and possibly a Web interface for the CRM system.
- Database server: houses the back-end database and possibly retrieves information from other database systems in the company to present through the application server.
- Web server: used if the CRM provides an extranet access point for such external users as vendors or customers and an intranet access point for employees.

Factors to consider when building the hardware architecture should be based on scalability for future growth, performance of the end-user and back-end processing, and security requirements

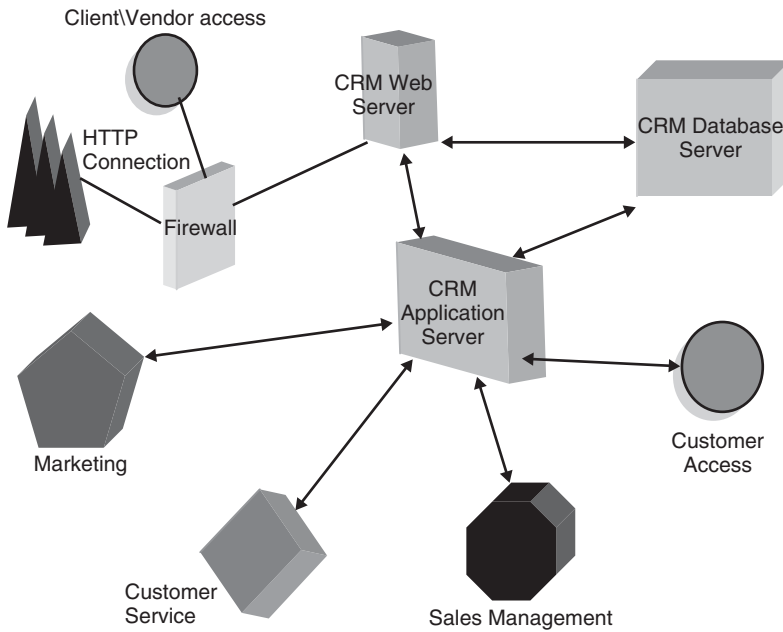| TABLE 12-2 CRM Vendors by Company Size	
Target Market	**Vendor**
Large Enterprises	Siebel, Vantive, Clarify, and Oracle
Midsize Firms	Servicesoft, Onyx, Pivotal, Remedy, and Applix
Small Companies	Goldmine, Multiactive, and SalesLogix

FIGURE 12-3   CRM Architecture.

of the CRM system. Hundreds of users could require multiple application and database servers, or hundreds of Internet users could require multiple Web servers.

The CRM software architecture is usually the standard client–server configuration. This can be best described as a company wants using a standard browser for a Web-based client. Choosing hosted architecture where the vendor hosts the CRM system or choosing an in-house CRM architecture is based on the requirements of the system. Customization is usually easier in-house, whereas scalability and performance are better in hosted models.

A good CRM system needs to be fully integrated with the enterprise resource planning and transaction systems, knowledge management system, and office automation and communication systems. CRM systems typically process such well-structured information as customer contact data and profiles. They are supported by knowledge management systems, which provide such unstructured information as documents and rule-based systems for guidance, and by ERP systems, which provide access to the transaction data. For example, customer support or help desk staff will need detailed information about the product and details on customer transactions from the ERP system and guidance on how to resolve the customer complaint from the knowledge management system.

On-Demand CRM

High-speed secure Internet connectivity has recently spurred a lot of interest and demand in hosted CRM systems. Using thin-client architecture, such vendors asNetSuite, Inc. and Salesforce.com have provided firms with the option of a scalable CRM application suite via a browser and pay a per-month, per-user set fee. Such vendors as Siebel, RightNow, Microsoft, and Oracle have all started offering hosted CRM solutions to small and large business

(e.g., Merrill Lynch, ABN Amro, Cisco, and Nortel).[11] A wide variety of services like customization and data movement from hosted environment to a company server are offered to lure companies into hosted CRM services. Even though there are many advantages for on-demand CRM (e.g., avoiding the headaches of installing, upgrading, and maintaining CRM applications), one key concern many companies have is what happens when the hosted application service provider experiences downtime. For example, Salesforce.com's service was down due to a major system outage in 2005.

SAP, which started its on-demand services in 2007 with lot of fanfare and great expectations of having thousands of their small-business customers using the Business By-Design[TM], finds itself struggling with only 100 customers.[12] "It was not as successful as expected. "You can do everything you want under lab conditions, but when you are in the real world, sometimes things look a bit different," says Rainer Zinow, SAP's senior vice president for Business ByDesign. SAP's entry to the on-demand area illustrates a broader and natural business system's progression from point solutions to suite solutions—from CRM for the sales and support people to ERP for all lines of business. While innovators such as Salesforce.com have pioneered and proved the viability of on-demand business systems, the industry will be further advanced as vendors expand the scope of their offerings to include fully integrated, enterprise-wide solutions. While some players such as Salesforce will approach this with heavy reliance on partnership models (like App Exchange), other vendors such as SAP are delivering a broader and deeper system with less reliance on third-party solutions. Each approach is valid; however, expect SAP to replicate their on-premise success in the newer on-demand world.

Small businesses are slowly shifting to on-demand software due to high costs of installation, maintenance, and security. NetSuite, another company offering on-demand CRM, has added project management, billing, and other applications to its software suite. Microsoft Corp. has also introduced a Business Productivity Suite, which offers small- and medium-size businesses e-mail, Web site, file sharing, and other software services at low monthly leases, which they find are getting popular with small businesses as they are becoming aware of the benefits of on-demand software.

According to market researcher IDC, the software-as-a-service (SaaS) industry is slated to increase sales to $40.5 billion by 2014, up from just $13.2 billion last year. IDC predicts that in 2010 the shift to subscription software will result in nearly $7 billion less worldwide traditional software license revenue. Around the globe, including Europe, Middle East, and Africa, on-demand accounts for just a small piece of the software-as-a-service market, 13 percent last year, according to IDC, versus 74 percent in the Americas. By 2014, this region will increase its share of such sales to 35 percent.

Microsoft had also announced that Microsoft Dynamics CRM on-demand will be available in 40 markets and 41 languages by the end of 2010. Microsoft Dynamics CRM 2011 offers familiar, intelligent, and connection experiences for users both inside and outside an organization. It also enables MS partners, including independent software vendors, global system integrators, and value-added resellers, to quickly create, package, and distribute Microsoft Dynamics CRM extensions and custom solutions. In conjuction with this release, Microsoft has started new Microsoft Dynamics Marketplace Web site, integrated within Microsoft Dynamics CRM 2011, which offers an online catalog for partners to market and distribute solutions to

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[11] Mohamed, A. (September 5, 2006). Web Services Lead the Way to CRM. *Computer Weekly*, 34.
[12] http://online.wsj.com/article/SB10001424052748703499604575512452496458586.html?KEYWORDS=SAP+AG#printMode#ixzz10vesNSRH

Microsoft Dynamics customers. The marketplace enables customers to quickly search, discover, and apply industry-specific applications and solution extensions from Microsoft and its partners to help them accelerate and extend their CRM and ERP implementations.

"We are excited to get the new release of Microsoft Dynamics CRM. The new features will give us even more power and flexibility to create and easily customize CRM solutions to meet the unique business needs of our customers and help them be more productive," said Jason Hunt, Avanade CRM and xRM evangelist. "We are also looking forward to the introduction of Microsoft Dynamics Marketplace, as it opens up new opportunities that will enable us to expand our reach and get our CRM solutions out to a broader, global audience."[13]

CRM LIFE CYCLE

As mentioned earlier, a customer relationship management system life cycle involves focus on people, procedures, company philosophy, and culture, rather than just information technology (see Figure 12-4). Up-front planning can minimize costly process and technology changes. The first step is to adequately outline the corporate CRM goals and the practical process changes that have to occur before focusing on possible technology solutions. It helps to identify a baseline and to understand how core processes are currently accomplished, the key people who are involved, and how the information is currently handled. Identify inefficiencies and areas of opportunity. A CRM program should ultimately be integrated into the company's philosophy and brand.

Functional requirements must be considered before making a decision on the architecture. These are extremely important pieces in implementing a CRM system. Functional requirements are the set of requirements defined by the key stakeholders of the CRM implementation. A functional requirements document should be created and reviewed by all key project stakeholders to determine if all the essential processing and functionalities are present during the implementation. Success or failure of the implementation is directly related to a thorough functional requirements
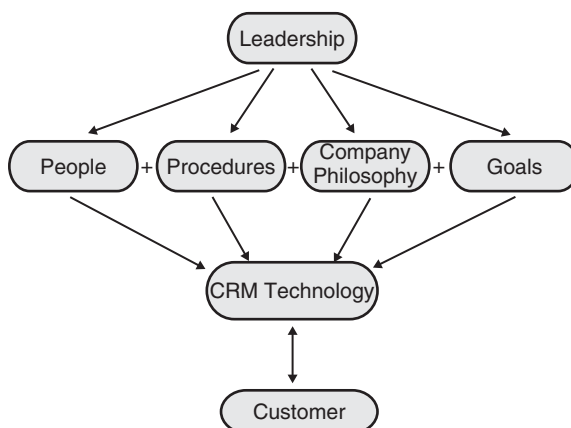

FIGURE 12-4   CRM Life Cycle.

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[13] Microsoft Demonstrates Next-Generation CRM Release at Worldwide Partner Conference; Upcoming release delivers "The Power of Productivity" for businesses and introduces the Microsoft Dynamics Marketplace for on-demand and on-premises solutions. (July 12, 2010). *Anonymous.* PR Newswire. New York.

document. This document should be the outline for how the project progresses and be set as the measurable mark to the implementation to control scope of the project. A well-thought-out architecture can help the life cycle of a CRM system and minimize the implementation risks.

If a corporation is attempting to replace a myriad of legacy systems and software programs (e.g., ACT! Databases, Access Databases, or older call center software), sufficient time and resources are needed to implement CRM. Even when employees give input to the end product, there may be an adjustment period as they learn the new tools and adjust to CRM. Training is vital as well as visible support from the executive level. Deadlines should be flexible to account for the organization's ability to change, not a delivery schedule set by a vendor. It is crucial that management clearly defines and communicates how CRM fits into the corporate vision. Then they must demonstrate their commitment by allotting money, time, training, and personnel. Responsibility for the success of the CRM program should not lie solely with the IT department. A cross-functional team that includes IT, sales, marketing, customer service, and management among other users, should be assembled to ensure its implementation. IT must recommend technology that fits with the organization's goals, finances, and other resources.

There are many CRM products to choose from, depending upon the complexity of the information needed and the resources to manage the program. IT may recommend a hosted CRM from an application service provider such as Salesforce.com, which offers a relatively quick implementation for basic functions (e.g., sales force automation). Hosted CRM programs offer a less-expensive alternative to supporting licensed software. It has also become the choice for small to midsized companies that often lack enough internal IT professionals to manage other options.

On the other hand, purchasing a software license for a CRM package not only enables a company-wide integration but also requires significant technical support and implementation time. It is still regarded as the better choice for those corporations who require complexity and security. Gerry Quinn, chief operating officer at Qosina Inc., a medical components distributor company, stated, "We didn't want to put our sales pipeline out there in a hosted environment with someone else controlling the servers." He had heard horror stories about application service providers in the dot-com era (e.g., some closing their doors without giving notice to clients, leaving them with no system and no way to re-create one, and others selling the customer data they hosted). Even though he knows that most hosted CRM providers today are much more reliable, Quinn adds, "Putting our proprietary information outside our firewall, spam filter, intrusion detection, and virus-scanning software would be putting a great deal of faith in the hosting company. We may not have the same global resources as larger hosting companies, but at least internally we can hold someone accountable."[14]

Success can be measured in a number of different ways. At the beginning of a CRM implementation, management and personnel should agree upon the metrics that need to be captured by the software. For instance, such simple measures as sales dollars, order frequency, and demographics can be married with such more complex metrics as shopping patterns, product preference, and the value of an interaction. Throughout the customer experience, employees will need access to varied views of the data and management will need to use the metrics reports to attain a regular status check on the company. All should be considered before deciding upon a technology solution.

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[14] Stephanie Overby, S. (2006). *The Truth About On-Demand CRM*, CXO Media Inc. www.cio.com/archive/011506/on_demand.html (accessed January 15, 2006).

IMPLICATIONS FOR MANAGEMENT

Managers introducing a CRM system in their company should remember that there are management implications for introducing a new system.

CRM is a strategic business solution and not a technical solution. Management therefore must not introduce CRM technology as an afterthought; rather, it must be part of the enterprise management solution. When organizations make a decision on a new ERP system, they also need to incorporate CRM in their vision because it is much easier and economical to implement CRM with the ERP system, rather than to do them separately. Even when a company does not have a budget to implement them together, it is still advisable to have a CRM solution in their vision and planning efforts and to roll out the two technologies at two different time periods. Another reason management should consider CRM as a business solution is that successful CRM implementation requires a proper mix of good people, business processes, and information technology. Management is in the best position to decide on this mix.

CRM should not be implemented as a single system or at one time. Companies should try to implement a system step by step (i.e., function by function). When considering a CRM implementation, there will be pieces of systems scattered all over (e.g., in sales (maybe a few), customer service). Start with the one where the need is most critical. Make sure there is buy-in from individual users and departments, as well as from management. Furthermore, the CRM implementation team needs the ongoing monitoring and involvement of top management; otherwise, their company may have a great CRM solution, but it will not be used effectively to improve the company's bottom line.

CRM systems come in a variety of shapes and sizes, but there is no real off-the-shelf solution. Every CRM implementation is unique and must be customized to the needs of the organization. CRM systems include a basket of technologies (i.e., market research, sales automation, and customer service) that can be implemented as a hosted solution or installed in-house on the company servers. There are benefits and drawbacks for each option that management needs to evaluate based on the organization's business, resources, in-house capabilities, and other factors. Another choice that management has to make is whether to go for a best-of-breed CRM solution or to select one vendor to support all the CRM requirements. In recent years, the CRM market is moving toward few vendors due to consolidation, mergers, and acquisitions, so selecting one vendor does have its advantages in vendor support and maintenance.

Even though CRM provides a great solution for one-on-one individualized marketing, it also provides good mechanisms for privacy and ethical violations. CRM and other technology-based processes that collect data on consumers have come under fire because there is great potential for the misuse of information. Organizations spend millions of dollars to keep databases secure from theft, loss, damage, or manipulation from hackers. Unscrupulous corporations have been accused of using customer data to coerce buyers by using high pressure or fear. There is also some debate whether the collection of consumer data encroaches upon one's right to privacy. Legislation has been passed that restricts collecting data from children, although they are a powerful buying segment. Many companies have pledged not to sell collected data to outside vendors or, if an Internet-based transaction is the source of data, consumers are often given the choice to opt out of such offers. Still, much of the CRM activity is self-regulated because the government cannot effectively regulate a constantly evolving technology.