INTRODUCTION
One application of technology that many organizations have adopted over the past few years to enhance customer relations is customer relationship management. This application even has its own acronym — CRM — which has taken its place in the jargon of the information technology (IT) sector.

A key objective of CRM is to establish relationships with each individual customer, rather than treating customers as a mass market based on a product-centric marketing structure. The new model, referred to as customer-centric, relates to each customer as if he or she were the only customer. This is a revolutionary approach for organizations that may have thousands or even millions of customers.

Today’s customers are better educated, better informed, more knowledgeable about technology, and therefore more demanding when it comes to the products and services they buy. Increased competition, with little or no product/service differentiation, further adds to customer purchasing power in the new millennium.

MANAGING RELATIONSHIPS: THE CRM SOLUTION
Successfully managing customer relationships means learning about the behavior and needs of customers,
anticipating future buying patterns, and finding new opportunities to add value to the relationship.

Relationship technologies are the keys to making customer transactions more personal, more individual, and more intimate. Solutions driven by data warehousing systems are designed specifically to expand and enhance relationships with customers — not just process their data. More than ever, relationship technologies are vital to any company wishing to deal with customers, whether through personal contact or via the Internet or other electronic media.

To be effective for both supplier and customer, the objectives of CRM should be aligned with customer needs. Why? Because customers expect a vendor relationship with value. This means looking after purchasing needs — even anticipating these needs — and responding to them.

CRM can help businesses turn detailed customer information into competitive advantage, using a data warehousing system to target and market to their customers. A well-defined CRM solution enables businesses to capture and analyze customer interactions to better understand their requirements, and to build lifetime relationships. With CRM, many organizations have been able to reduce customer “churn,” understand changes in customer buying behavior or life event changes, and focus on customer value.

Organizations that achieve high ratings for customer relationships are those that make the relationship something that the customer values from one particular organization over another. To accomplish this, companies need to look at their experiences with customers — not simply the transactions and demographics, but every customer interaction. These include the phone call to a call center, the click on a World Wide Web site, and the response to a direct mail campaign.

Building data and information technology architecture around each individual customer — the customer-centric model — enables customers to enjoy a seamless and rewarding experience when doing business with a company.

CUSTOMER FEEDBACK
A recent survey by a major consulting firm examined the impact of technology on the delivery of improved customer practices and services. Predictably, the study found that technology alone does not guarantee success in enhancing customer relationships. The key is selecting the right technology to meet customer needs, and the right partner to help implement it.

More than 1300 organizations participated in this survey, which found that:

1. Organizations that improve customer satisfaction also reap a number of important side benefits.
2. Technology alone is not the key to success. Rather, organizations that focus on three areas — technology, processes, and customer needs — are the most successful.

3. Technology plays a dual role for companies, acting as both a driver and enabler of change in achieving effective CRM.

4. Companies with the greatest customer satisfaction ratings were those that integrated the best practices of the three main types of organizations: process focused, customer needs focused, and technology focused.

**DEFINING THE CUSTOMER**

Surveys such as this raise an important and fundamental question for organizations: Who are my customers? The answer may point an organization in several directions, because “customers” take various forms for many organizations and, in today’s market, all of these customer categories enjoy a new range of purchasing power. There are four definable customer categories in most business sectors:

1. **individual** customers who buy products directly from a company
2. **businesses** that buy from a company
3. **distribution channels** that buy products for resale to an end user
4. **internal departments**

All of these customer categories have more power today than ever before, because today’s market forces have made organizations more competitive. Because there is less differentiation in products and services, and more product and supplier choices, switching suppliers or products is easy. It requires little cost and often little effort. In addition, customers expect customization and they have the bargaining power to demand it.

To keep customers, “loyalty” programs and incentives that entice them to stay with a given supplier have become popular and widespread. Often, these programs become an integral part of a corporate CRM strategy.

**THE PRIVACY ISSUE**

The rapid growth of data warehousing as a business tool in a variety of business sectors — including financial, retailing, health care, and travel — has placed new emphasis on the issue of individual privacy, vastly increasing the opportunity and ease with which one’s personal information can be compromised.

Personal privacy is becoming an increasingly important issue for consumers as they become more aware of how organizations with data warehousing systems are gathering, monitoring, and using personal data to develop customer profiles. This is an issue that must be addressed by organizations, and consumers must know that the organizations they do business with have policies and practices to protect personal information.
There are several areas of impact in a CRM system on the privacy of personal information, including:

- **Notice**: providing notice to customers of an organization’s policies and practices regarding personal information
- **Collection and use limits**: how information is collected and how it is used
- **Choice/consent**: letting customers choose which personal information can be used and for what purpose(s)
- **Data quality, access, and correction**: who can access what level of personal information and who can update it
- **Data security**: what measures are taken to protect unlawful or unauthorized use of personal information
- **Accountability**: accepting responsibility for protection of personal privacy

Advances in technology have dramatically altered the global marketplace, offering significant benefits to consumers in terms of greater choice and convenience, and providing companies with availability and access to personal information on a global scale. This ready access has increased the opportunity and ease with which personal information can be obtained and compromised.

There are opportunities for enhancing customer relationships in the development of privacy policies and the implementation of privacy practices. A successful CRM system must be designed with opt-in/opt-out features on consumer data collection. Consumers must have the ability to know and understand what data is being collected. They must also be able to state how that information is being used, who has access to it, and, more generally, what an organization’s privacy policies are with regard to this customer data.

Among the trade associations and industry groups that have endorsed privacy principles, the Online Privacy Alliance, located at www.privacy-alliance.org on the World Wide Web, has established a set of privacy principles for online activities and electronic commerce. These privacy principles involve a combination of technology and operating procedures that address the privacy issues arising from the growth of data warehousing.

There are typically three defined layers of identification data in the logical data model used in a privacy system. These levels determine how personal data is handled in a data warehouse. Opt-out features have also been incorporated into privacy systems, enabling customers to specify which personal data can be accessed:

- **Layer 1**: The first layer in the logical data model is the individual’s identity; that is, name, address, and phone number.
Layer 2: The second layer is more restrictive and will contain personal information such as age, sex, and marital status.

Layer 3: The third layer will contain the most sensitive data, for example, information such as race.

Control of access is the next step in the move to greater protection of personal information. This process involves the restriction of user access to private data by using database “views,” with their associated security. Views are database mechanisms that restrict access to data, and return appropriate subsets of data to authorized users or applications. These views protect personal data in several ways, by:

- restricting access to personal data fields by routine users or applications
- making personal data more anonymous for analytical applications
- preventing access to records relating to opted-out customers to any user or application involved in direct marketing or disclosure of data to third parties

Governments have not been hesitant to regulate and legislate where citizen concerns have come to the fore. In Europe, beginning with the initial Privacy Guidelines adopted in 1980 by the Organization for Economic Cooperation and Development, there has been a steady progression from guidance for collectors of information to, more recently, national and sub-national legislation that places restrictions on the collection and use of personal data.

In 1995, the European Union (EU) adopted the European Directive on Personal Data Protection, which became effective on October 25, 1998. The directive applies restrictions to all forms of personal data processing, both electronic and non-electronic environments, and will affect all companies either operating in Europe or collecting/using European personal data. The Directive’s Article 25 restricts the transfer of personal data about European citizens to third countries unless those countries have adequate personal data protection.

In the United States, privacy issues are already being legislated in several sectors, including financial, health care, and communications; and there is a threat of further legislation at the federal and state levels if companies themselves do not address the privacy/data protection concerns of the consumer. In addition, the United States has been in discussion with the EU regarding implementation of Article 25, and discussions continue regarding a proposed “safe harbor” concept for those companies that self-certify their adherence to defined personal data protection practices.

FOUR STAGES IN THE CRM PROCESS

One definition for CRM describes the process as “an enterprise approach to understanding and influencing customer behavior through continu-
ous, relevant communication to improve customer acquisition, retention, and profitability.” Based on this definition, there are four distinct stages in the development of an effective, efficient CRM process. The first stage is interaction, which involves a series of transactions and interactions that make up a dialog between a customer and an organization. Sales processes are examples of customer interaction.

The second stage is relating. This refers to the application of insightful marketing practices to create relevant interactions that build valued relationships. Connection, the third stage, refers to the mapping and management of interaction points between a consumer and an organization. Finally, in the knowing stage or knowledge discovery, the insight gained through capture and analysis of detailed information is used to create continuous learning.

**Interacting with Customers**

A series of transactions and interactions defines a dialog between a customer and an organization. This dialog may take several forms. For example, transactions could include a product order over the Web or telephone, a cash request from an ATM, a service request, or payment of a monthly bill.

An interaction could include a call for product information, placement of a product in a shopping cart without purchasing it, a complaint about the quality of a product or service, or a request for the status of a shipment. It might also involve a profile update stemming from a life-cycle event, such as a change of address, an increase in family size, or a change in marital status.

Each of these transactions and interactions represents an opportunity to build and develop a relationship with a customer. Even the shortest dialog, such as a change in telephone number or address, represents a change in a customer’s lifestyle. One way of encouraging customer loyalty and retention is to use this insight to interact with a customer in a follow-up mode — with a special marketing offer, for example.

**Relating to a Customer**

Relating to a customer involves the application of insight to create relevant interactions that build valued relationships. This is the stage where market planning comes into play and marketing campaigns are initiated to build value for customers. This is accomplished by offering a customer something of value, to demonstrate and emphasize a desire to retain that customer.

**Connecting with a Customer**

Mapping and managing interaction points between a customer and an organization defines the third stage in customer relationship manage-
ment. These activities involve establishing ongoing procedures for maintaining customer contact — through correspondence, phone calls, personal meetings, or any other one-on-one activity that serves to enhance customer relationships by maintaining customer contact.

**Getting to Know a Customer**

Learning about customers, their purchasing patterns, product preferences, and lifestyle is an important element in the CRM process, and is a fundamental requirement in treating each customer as an individual. This objective can be achieved through constant analysis of each customer’s transaction activity, and will be built on both customer and company activity.

**CRM: GLOBAL APPLICATIONS AND BENEFITS**

At a number of major public and private sector organizations throughout the world, management has turned to sophisticated technologies such as data warehousing to develop and implement CRM systems. The following examples from the telecommunications, financial services, transportation, and entertainment sectors illustrate how important CRM is to these organizations.

**Telecommunications**

In the telecommunications field, CRM has a global reach. Pelephone of Israel, for example, has extended its traditional database management system, which was designed for transaction management for its more than 10 million customers, to a data warehouse application that has enhanced its customer relationship capabilities. Several benefits have resulted from this transformation, to include:

- all detailed customer data can be scanned
- multiple customer models can be developed
- the right customers can be targeted
- there has been a reduction in customer “churn”
- a new range of customer services is being offered
- customer service loyalty has been improved
- known and tangible paybacks have been created

These changes in managing customer relationships enabled the company to confirm that between 50,000 and 70,000 customers remained loyal, rather than moving to the competition.

In Australia, Vodafone, the country’s third largest wireless telephone company with revenues of $1 billion (AS), was faced with deregulation and strong competition. It realized that customer retention was a key re-
quirement to its continued growth. With an effective CRM system, the company was able to retain a significant percentage of its 900,000 wireless customers, as well as reduce churn and increase marketing effectiveness, while growing its organization exponentially.

In Austria, Mobilkom, a leading analog and digital networking company, with 1.2 million users and 85 percent market share, was acquiring 30,000 new customers monthly. Nevertheless, the company faced several internal and eternal challenges as it rapidly grew. These included uncoordinated data systems for billings, long waits by customers for calls to be answered, a low level of customer satisfaction, inaccessibility of detailed data to agents who needed to answer questions, and increased competition due to deregulation.

Mobilkom met these challenges by initiating several major changes in the way in which it managed customer relationships. It implemented a data warehouse system, and integrated a CTI-enabled call center with the data warehousing system. As a result of these changes, the company was able to handle four times as many calls, reduce hold time to 20 seconds, reduce call abandonment by 80 percent, empower agents, increase profits, and improve customer satisfaction ratings.

Financial Services
Typical of the large financial institutions using CRM to enhance their businesses is the California-based Bank of America. This organization has continually invested in data warehousing, using its substantial storehouse of customer data to perform target marketing, resulting in significant success and increased customer retention.

By gathering data on customer habits in savings, mortgages, checking services, credit cards, loans, and time deposits, the Bank of America has been able to develop effective programs for target marketing, credit risk management, portfolio analysis, and retail banking services. The ultimate benefit has been a resultant increase in new business by many millions of dollars, avoidance of risk, and increased profits.

Transportation and Travel
A number of international airlines — including American, British Airways, Quantas, US Airways, Continental, Lufthansa, and Delta — are using data warehousing in a variety of travel-oriented applications.

For example, British Airways uses a data warehousing system for complete business analysis and resource allocation. The range of information it provides includes which customers are traveling, as well as where, when, and how often; an estimate of the resources and inventory required, based on customer-centric data; and the building of a knowledge base of customer actions and transactions, which the organization can use to predict the future and manage its operation.
In addition, British Airways and the six other major international airlines use data warehousing to provide a number of business solutions beneficial to their operations, including:

- online query of all resources and schedules
- the ability to manage planes/loads/usages
- a financial management system
- resource planning and system scheduling
- knowledge transfer to all levels of business users

Travel Unie is one of Europe’s fastest-growing tour operators and specialized travel agencies. Use of a data warehousing system and a focus on CRM has enabled this organization to derive the following benefits.

- in-depth customer profiling, trend, and marketing analysis
- customer service response time of less than one second
- more efficient interaction, more satisfied customers, and a higher tour-booking capability by agents (based on higher response rates from direct mail, call centers and Web sites)
- the capability to provide new products and services for elderly customers

**Entertainment**

Harrah’s owns 18 casinos in eight U.S. states, and is the most recognized and respected brand name in the casino entertainment industry. Using a sophisticated data warehousing system with an effective CRM element, Harrah’s was able to:

- understand, retain, and reward 15 million guests
- encourage customers to remain loyal to the Harrah’s brand across the country and over time
- analyze, predict, and maximize the value of each relationship
- compile hundreds of customer attributes to help determine customer likelihood to visit, predicted spending, opportunities for cross-selling, customer segmentation, and event data
- analyze each customer’s preference, and predict which services and rewards they will respond to in the future
- use call center access to the data warehouse to provide customers with the same service they would get on the floor of their favorite casino

**CRM: A PROCESS, NOT AN EVENT**

Effective and successful customer relationship management is not an event, but a process that needs to be strategically managed at all levels within an organization by everyone involved in customer relationships.
Ultimately, CRM is all about increasing customer profitability by identifying detailed customer segmentation, defining marketing communication strategies, and providing the intelligent decisions to more effectively drive retention, profitability, and customer satisfaction.

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