**Exhibit 11.5** A QR code



You can see QR codes in magazine advertisements and on billboards, restaurant menus, Web pages, blogs, and social networking sites—even on T-shirts and sport­ing gear. In fact, a major reason for their popularity is that they can store (and digitally present) much more data, including URL links, geo coordinates, and text. Businesses, too, may start using more QR codes—on their business cards, coffee mugs, Web sites, pop-up banners, and so forth—to convey information to their business partners. In other words, business employees will no longer need to carry paper documents around with them. QR codes could also be used in trade shows to attract customers to a business's Web site.27

QR codes could offer some challenges. Some users do not scan them for important information such as nutritional facts. According to a recent study conducted at the University of Delaware, only 1 percent of con­sumers used their smartphones to scan the QR code to access extra information. Another 20 percent clicked a link, and about 50 percent used the QR code when a separate scanning device was offered to them 2s

You can create a QR code online for free. One way would be to use the Google URL shortener *(httpil goo*

*.g1),* which automatically creates a QR code for a Web

page each time a URL is shortened.29 Other Web sites cre-

ate QR codes for free as well—for example, [invx.com](http://invx.com). The

information box "QR Codes in Action" highlights several

companies that are using QR codes as a marketing tool.

**QR Codes in Action**

**FINANCE I APPLICATION I REFLECTIVE THINKING I TECHNOLOGY IN SOCIETY**

Sacre Bleu Wine, headquartered in Prior Lake, Minnesota, employs social media—including Facebook, Twitter, and YouTube—for its advertising cam­paigns. And now the company has added a QR code to the labels on its two types of wines: Cabernet Sauvignon and Sauvignon Blanc. The QR code enables the company to deliver important information to its consumers when they purchase its wines. Customers who scan the QR code with their smartphones are transferred to a Web site that includes information on promotions, special offers, and even recommendations, advice, and tips from top chefs regarding mixing and matching the wine with various foods. This is an inexpensive way for the company to promote its products and create customer loyalty.'"

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[Luckylightishutterstock.com](http://Luckylightishutterstock.com)

Here are other examples of companies that are using QR codes in an effec­tive way:

* Best Buy uses QR codes to keep a record of what its customers are scanning in its stores."
* Calvin Klein used QR codes for billboards in 2010."
* Dell Computer has used QR codes for an online contest in which entrants could win a new laptop.34
* McDonald's uses QR codes to display nutritional information."
* Pepsi uses QR codes to push video content.36
* Ralph Lauren uses QR codes to draw consumers into its store locations."
* Starbucks uses QR codes as a payment method."

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|  |
| --- |
| **Questions and Discussions**   1. What are two examples of companies that are using QR codes? For which purpose are they using them? 2. What are two advantages of using QR codes as a marketing tool? What are some potential challenges of this approach? |

**11-lb Global Supply Chain Management**

**Global supply chain management** incorporates management processes around the globe that integrates the network of suppliers, manufacturers, warehouses, and retail outlets in order to source high-quality raw materials, efficiently convert them to finished goods, and ship them in the right quantities to the right locations in a timely manner with the highest possible quality. Similar to domestic SCM, for successful integration of a global supply chain, commu­nication must take place among the following three areas:3°

* Flows of information: purchase orders, shipping notices, and invoices
* Flows of materials: raw and finished products
* Flows of finances: payments and refunds

For a successful implementation of a global supply chain management system, three key factors should be properly integrated: people (with skills and knowledge of the supply chain), processes (sourcing, distribution, transportation, warehousing, sales, and customer service), and SCM technologies including EDI, the Internet, e-marketplace s, online auctions, CPFR, 3D and 4D printing, IoT, RFID, and QR codes.

Most of the benefits and drawbacks of global infor­mation systems discussed in Module 9 apply to global sup­ply chain management. Specific benefits and drawbacks of global supply chain management are listed below:44

**Benefits**

* It will expand sourcing opportunities. Organizations will have a broad selection of workers, materials, and products. This could lead to higher-quality products with lower cost.
* It will enhance and increase access to new customers in new markets and possibly with new needs. This will improve the organization's top line as well as bottom line.
* It will extend growth opportunity as a result of accessing new markets.

**Drawbacks**

* It will create large-scale and challenging management issues including inventory management and distribution issues.

**11-2 CUSTOMER RELATIONSHIP**

**MANAGEMENT**

* It will involve high risks such as natural disasters, port closures, and political uprisings.
* It will involve global competition with other players that are competing for the same resources.
* It will face challenges
    
  for information
    
  collection because
    
  the key elements

of the supply chain network are scattered throughout the world.

* It will face legal issues related to business practices, privacy, and transborder data flow.

**Global supply chain**

**management incorporates management processes around the globe that integrates the network of suppliers, manufacturers,**

**warehouses, and retail outlets in order to source high-quality raw materials, efficiently converted to finished goods, and shipped in the right quantities to the right locations in a timely manner with the highest possible quality.**

**Customer relationship management (CRM) consists of the processes a company uses to track and organize its contacts with customers. It improves services offered to customers and uses customer contact information for targeted marketing.**

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**Customer relationship management (CRM] con­sists** of the processes a company uses to track and orga­nize its contacts with customers. The main goal of a CRM system is to improve services offered to customers and use customer contact information for targeted marketing. Businesses know that keeping and maintaining current customers is less expensive than attracting new custom­ers, and an effective CRM system is useful in meeting this goal.

Marketing strategies in a CRM system focus on long­term relationships with customers instead of transactions. These strategies include identifying customer segments, improving products and services to meet customers' needs, improving customer retention, and identifying a company's most profitable (and loyal) customers. To get the most out of these strategies, a **CRM** system helps organizations snake better use of data, information, and

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knowledge to understand their customers.41 A CRM sys­tem captures information about customer interactions for sales personnel and customer service representatives so they can perform their jobs more effectively and effi­ciently. This information can include customers' prefer­ences, background, income, gender, and education.

CRM is more than just tracking and organizing con­tacts with customers. It gives organizations more com­plete pictures of their customers. CRM systems include tools for conducting complex analyses on customer data, such as a data warehouse and data-mining tools, dis­cussed in Module 3. With these systems, organizations can integrate demographic and other external data with customers' transaction data to better understand cus­tomer behavior. Based on this analysis, organizations can better target products to customers and manage cus­tomer issues, which increases customer satisfaction and retention. In addition, organizations can classify custom­ers based on how valuable they are to the organization and manage them accordingly.

A grocery store offering loyalty cards with dis­counts to its customers is an example of how transac­tion data can be used in a CRM system. Knowing that a customer bought four gallons of milk the previous week does not give a grocery store much information, but with loyalty cards, the store can track all sorts of information on specific customers. When customers apply for loyalty cards, for example, they can be asked to give demographic information, such as name, age, marital status, and address. So, instead of knowing that "Customer 49 bought four gallons of milk last week," a store can learn that "James Smith, 35 years old, married, and residing in zip code 11223, bought four gallons of milk last week." With this information, the store can assume James Smith has young children (or clearly is not lactose intolerant!). In addition, if James Smith pur­chases no cereal that same week, the store can assume he is buying cereal from another store (because with the purchase of that amount of milk and the assump­tion that he has young children, it is likely his children are eating cereal). Therefore, the store decides to send coupons for discounts on cereal to James Smith. This is referred to as "cross-selling"—getting the customer to buy additional products. The store might also send James Smith coupons for a more expensive brand of milk, in the hope that his family will decide it prefers that brand. This practice is called "upselling."

Organizations can also pay external agencies for additional data about their potential customers. This data might be public or semiprivate, such as whether they own their homes, the value of their homes, and their estimated mortgage or rent payments. This gives organi­zations more information to analyze.

With a CRM system, an organization can do the following:42

* Provide services and products that meet customers' needs.
* Offer better customer service through multiple
    
  channels (traditional as well as the Internet).
* Increase cross-selling and upselling of products to increase revenue from existing customers.
* **Help** sales personnel close deals faster by offering data on customers' backgrounds.
* Retain existing customers and attract new ones.

Several IT tools discussed throughout this book are used to improve customer service. For example, e-mail, the Internet, Web portals, and automated call centers have played a major role in CRM systems. E-commerce sites use e-mail to confirm items purchased, confirm shipping arrangements, and send notifications on new products and services. Web portals and extranets, such as [*FedEx.com*](http://FedEx.com)*,* allow customers to perform tasks, such as checking the sta­tus of shipments and arranging a package pickup. Database systems, data warehouses, and data-mining tools are effective in tracking and analyzing customers' buying patterns, which help businesses meet customers' needs. Yet this information could be used to generate predictive analytics that an orga­nization can use for future planning in offering new products and services. The emergence of big data and the Internet of Everything may open up additional channels for reaching customers for increasing revenue and improving customer service. A CRM system includes the following activities:

* Sales automation
* Order processing
* Marketing automation
* Customer support
* Knowledge management
* Personalization technology

These activities, performed by CRM software, are discussed in more detail in the following sections. The "CRM at Delta Air Lines" box highlights CRM applica­tions at Delta Air Lines.

**11-2a CRM Applications**

Typically, CRM applications are implemented with one of two approaches: on-premises CRM or Web-based CRM. Organizations with an established IT infrastructure often choose on-premises CRM, which is implemented much

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like any other IT system. With Web-based CRM, the com­pany accesses the application via a Web interface instead of running the application on its own computers and pays to use CRM software as a service (SaaS), which is simi­lar to Web-hosting services. The SaaS vendor also handles technical issues. (SaaS is covered in more detail in Module 14.) Several software packages are available for setting up a CRM system, including Amdocs CRM *(www.amdocs .conilAboutIPagesidefaultaspx),* Optima Technologies ExSellence *(*[*www.optinia-tech.com*](http://www.optinia-tech.com)*),* Infor CRM *(www .inforcomisolutionskrrn),* and SAP CRM, *(*[*http://help.sap*](http://help.sap.corn/CRM)) *.corn/CRM).* Although these packages vary in capabilities, they share the following features:

* *Salesforce automation—Assists* with such tasks as controlling inventory, processing orders, tracking customer interactions, and analyzing sales forecasts and performance. It also assists with collecting, storing, and managing sales contacts and leads.
* *eCRM or Web-based* CRM AllowsWeb-based customer interaction and is used to automate e-mail, call logs, Web site analytics, and campaign management. Companies use campaign management

to customize marketing campaigns, such as designing a marketing campaign tailored to customers in Southern California or customers in the 18 to 35 age bracket.

* *Survey* management—Automates electronic surveys, polls, and questionnaires, which is useful for gathering information on customers' preferences.
* *Automated customer service—Used* to manage call centers and help desks and can sometimes answer customers' queries automatically.

The integration of CRM, IoT, social media, and ana­lytics has created an environment for CRM that is able to do the following in order to attract new customers and better serve existing customers:4'

* Social CRM—interaction with customers through the Internet and social media.
* Individuation of messaging to customers through analytics using customers' social media information.
* Hypertargeting—delivery of highly customized content to highly specific customer subgroups of the total customer population. This creates personal communication that makes the customer feel special.

**CRM at Delta Air Lines**

**FINANCE I APPLICATION I REFLECTIVE THINKING**

Delta Air Lines serves more than 180 million customers each year. It offers service to 323 destinations in 57 countries on six continents.'



Using Salesforce, Delta has implemented a CRM to assist and improve communication and collaboration among its sales teams. One of the major tasks for which the company needed this program was to enable global sales representatives to share account information and address customers' needs.

Delta used Sales Cloud for account, activity, and contact information. The system provides essential information when sales representatives call on existing accounts or offer services to new customers. An app automates corporate and agency programs and assists sales representatives to track any request.

According to Kristen Shovlin, vice president of Sales Operations, the system gives Delta complete visibility into opportunities and programs across the globe. Sales teams are now able to access the system using their mobile devices and offer customer service anytime and from anywhere. Delta also implemented a Chatter social network for further improving collaboration among the team members. This platform helps employees share files and find needed informa­tion in a timely manner. Chatter has made real-time collaboration a reality at Delta.45

**Questions and Discussions**

1. What are the applications of CRM at Delta Air Lines?
2. How does Chatter help improve customer service?

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**11-2b**

**Personalization is the process**

**of satisfying customers' needs, building customer relationships, and increasing profits by designing**

**goods and services that meet customers' preferences better. It involves not only customers'**

**requests, but also the interaction**

**between customers and the**

**company.**

**Customization allows**

**customers to modify the standard offering, such as selecting a**

**different home page to be**

**displayed each time you open your Web browser.**

**Collaborative filtering (CF)**

**is a search for specific information**

**or patterns using input from**

**multiple business partners and data sources. It identifies groups of people based on common interests**

**and recommends products or services based on what members of the group purchased or did not purchase.**

**Personalization Technology**

**Personalization** is the process of satisfying cus­tomers' needs, building customer relationships, and increasing profits by designing goods and ser­vices that meet custom­ers' preferences better. It involves not only custom­ers' requests but also the interaction between cus­tomers and the company. You are probably familiar with Web sites that tailor content based on inter­ests and preferences. Amazon, for example, suggests products users might enjoy based on past browsing and pur­chasing habits.

**Customization,** which is somewhat different from personalization, allows customers to modify the standard offering, such as selecting a different home page to be displayed each time a browser is opened. As another example, after registering with Yahoo!, a user can customize the start page by choosing preferred layout, content, and colors. There are many examples of customization in retail, too, such as Build-A-Bear Workshops, where children can design their own teddy bears, or Nike, which allows customers to create their own shoes by selecting styles and colors."

Because personalization and customization help companies meet customers' preferences and needs, customers often experience a more efficient shop­ping process and, as a result, are less likely to switch to competitors to get similar products or services. However, using personalization requires gathering a lot of information about customers' preferences and shopping patterns, and some customers get impatient with answering long surveys about their preferences. In addition, collecting this information might affect customers' sense of privacy. For example, drug-store customers might be concerned that the drug store has their prescription histories, that the information might be misused and even affect their insurance coverage.

To ease these concerns, companies should include clear privacy policies on their Web sites stating how personal information is collected and used.

Amazon is known for using personalization to recommend products to customers with the message "Customers who bought this item also bought" fol­lowed by a list of suggestions. Amazon's recommenda­tion system is made up of a huge database containing customers' previous purchases and a recommendation algorithm. When a customer logs on to Amazon, the recommendation system first checks the customer's purchase history- and that of similar customers. Using this information, a list of recommended products is displayed, based on the customer's shopping history and choices by other customers who have similar pur­chase histories. In addition, Amazon gives customers an opportunity to rate the recommendations. The more items the customer purchases and the more recommen­dations the customer rates, the better the recommen­dations are tailored to the customer.47

Many other companies use personalization tech­nology to improve customer service. For example, if you buy a suit from *Nordstrom. core,* the site might suggest shoes or a tie that goes with the suit or a simi­lar suit in the same category. If you buy a song from Apple iTunes, other songs purchased by listeners like you are suggested. Google also provides personalized services for Google account holders. Users can get personalized search results that are reordered based on their searching histories. Avni Shah, Google's prod­uct manager, has explained that if a user has "fly fish­ing" in his or her search history and then searches on "bass," more weight is given to search results that point to Web pages about fish rather than pages about musical instruments. Google also has a bookmark fea­ture so users can save useful search results for later use. Unlike Yahoo!'s MyWeb feature, which saves the text of Web pages, this feature simply saves the link to the page."

**Customization, which is somewhat
  
different from personalization, allows
  
customers to modify the standard
  
offering, such as selecting a different
  
home page to be displayed each time
  
a browser is opened.**



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