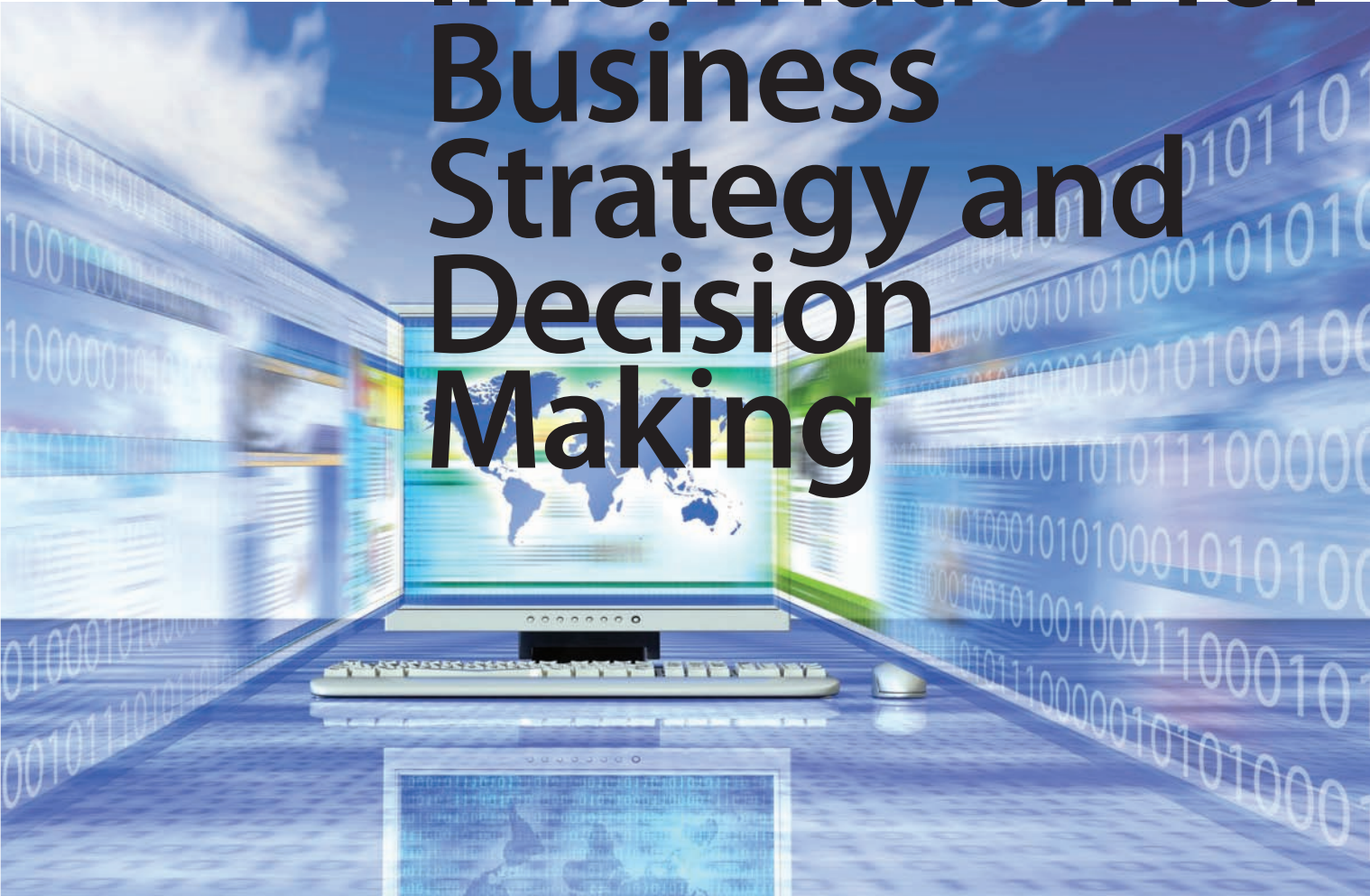


Information for Business Strategy and Decision Making



In this part of the book, we focus on information, one of the four essential resources on which all businesses rely. First, we discuss the information necessary for effective decision making, where it can be found, how it is organized, and how it can be used throughout an organization by those who need it. We also investigate the world of e-business in Chapter 16. In Chapter 17, we then examine the role of accounting and how financial information is collected, stored, processed, presented, and used to better control managerial decision making.

- > CHAPTER 16 Understanding Information and e-Business
- > CHAPTER 17 Using Accounting Information

Understanding Information and e-Business

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Learning Objectives

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What you will be able to do once you complete this chapter:

- 1 Examine how information can reduce risk when making a decision.
- 2 Discuss management's information requirements.
- 3 Outline the five functions of an information system.
- 4 Describe how computers and technology help improve productivity, decision making, communications, sales, and recruiting and training.
- 5 Analyze how computers and technology change the way information is acquired, organized, and used.
- 6 Explain the meaning of e-business.
- 7 Describe the fundamental models of e-business.
- 8 Explore the factors that will affect the future of e-business.

inside business

Net-a-Porter Builds Its Luxury e-Business

Net-a-Porter got its start in 2000, as the global economy was moving into recession and many young e-businesses were struggling or failing. Founder Natalie Massenet was a London-based fashion editor who had just discovered the convenience of online shopping. When she clicked around trying to buy a pair of expensive designer jeans, however, she was surprised to find no way to buy high-end fashions and accessories online.

That's when Massenet decided to start an e-business. She chose the name Net-a-Porter as a play on the French phrase *pret-a-porter*, "ready to wear." Massenet planned a Web site as upscale and glamorous as the world of designer fashion. Each Monday morning she would upload a glitzy new weekly "edition" of her pick of the latest couture collections, complete with tips on what to wear with what—and when.

Believing that affluent, style-conscious women would welcome personalized service, Massenet arranged same-day courier service to deliver Net-a-Porter purchases to homes and offices in central London. (Customers outside London receive their packages via commercial express delivery.) Purchases are packed in chic black boxes to reinforce the e-business's luxury positioning, and Net-a-Porter pays for shipping if customers return or exchange a purchase.

When Net-a-Porter opened its virtual doors, the e-business success was far from assured. Skeptics doubted that women would pay thousands of dollars without seeing the clothing or shoes in person and trying things on. Massenet proved them wrong. She launched Net-a-Porter with a line-up of leading brands such as Jimmy Choo, and her careful attention to service quickly earned her a loyal following. Later, Net-a-Porter expanded with a New York office to serve the U.S. market, including same-day delivery to buyers in central New York City. In 2009, it opened an outlet site featuring designer styles at discount prices.

Together, Net-a-Porter.com and Theoutnet.com now ring up more than \$180 million in annual sales to customers in 170 countries. In 2010, Net-a-Porter was acquired by Richemont, the Swiss company that owns Cartier and other luxury brands. Massenet remains executive chairperson, working with Richemont to continue improving the shopping experience for its customers worldwide.¹

According to the traditional view of retailing, you can't sell expensive, designer fashions on a Web site. And yet, Natalie Massenet—the entrepreneur profiled in the Inside Business opening case—proved the experts were wrong. More than ten years ago, she started Net-a-Porter with one goal in mind: Offer high-quality designer clothing to very selective customers. Today Massenet's Internet businesses generate \$180 million in annual sales to customers in 170 countries. Because the company offers its customers the latest clothing designs and provides excellent customer service, repeat customers visit the Web site on a regular basis to purchase the clothes created by only the best designers. She also made sure that customers receive excellent customer service and information that helps them find just the right type of clothing for all occasions. Simply put, providing information to its customers has helped Net-a-Porter become a very successful online retailer in a very competitive high-fashion world.

Did You Know?

Net-a-Porter.com and its outlet site, Theoutnet.com, ring up more than \$180 million in annual sales to customers in 170 countries.

To improve the decision-making process, the information used by both individuals and business firms must be relevant or useful to meet a specific need. Using relevant information results in better decisions.

Relevant information → Better intelligence and knowledge → Better decisions

For businesses, better intelligence and knowledge that lead to better decisions are especially important because they can provide a *competitive edge* over competitors and improve a firm's *profits*. We begin this chapter by describing why employees need information.

The first three major sections in this chapter answer the following questions:

- How can information reduce risk when making a decision?
- What is a management information system?
- How do employees use a management information system?

Next, we discuss how computers, the Internet, and software—all topics covered in this chapter—are used to obtain the information needed to make decisions and improve productivity on a daily basis. In the last part of this chapter, we take a close look at how firms conduct business on the Internet and what growth opportunities and challenges affect both new and existing e-business firms.

1

Examine how information can reduce risk when making a decision.

How Can Information Reduce Risk When Making a Decision?

As we noted in Chapter 1, information is one of the four major resources (along with material, human, and financial resources) managers must have to operate a business. Although a successful business uses all four resources efficiently, it is information that helps managers reduce risk when making a decision.

Information and Risk

Theoretically, with accurate and complete information, there is no risk whatsoever. On the other hand, a decision made without any information is a gamble. These two extreme situations are rare in business. For the most part, business decision makers see themselves located someplace between either extreme. As illustrated in Figure 16.1, when the amount of available information is high, there is less risk; when the amount of available information is low, there is more risk.

Suppose that a marketing manager for Procter & Gamble (P&G) responsible for the promotion of a well-known shampoo such as Pantene Pro-V has called a meeting of her department team to consider the selection of a new magazine advertisement. The company's advertising agency has submitted two new advertisements in sealed envelopes. Neither the manager nor any of her team has seen them before. Only one selection will be made for the new advertising campaign. Which advertisement should be chosen?

Without any further information, the team might as well make the decision by flipping a coin. If, however, team members were allowed to open the envelopes and

Figure 16.1 The Relationship Between Information and Risk

When the amount of available information is high, managers tend to make better decisions. On the other hand, when the amount of information is low, there is a high risk of making a poor decision.



examine the advertisements, they would have more information. If, in addition to allowing them to examine the advertisements, the marketing manager circulated a report containing the reactions of a group of target consumers to each of the two advertisements, the team would have even more information with which to work. Thus, information, when understood properly, produces knowledge and empowers managers and employees to make better decisions.

Information Rules

Marketing research continues to show that discounts influence almost all car buyers. Simply put, if dealers lower their prices, they will sell more cars. This relationship between buyer behavior and price can be thought of as an information rule that usually will guide the marketing manager correctly. An information rule emerges when research confirms the same results each time that it studies the same or a similar set of circumstances.

Because of the volume of information they receive each day and their need to make decisions on a daily basis, businesspeople try to accumulate information rules to shorten the time they spend analyzing choices. Information rules are the “great simplifiers” for all decision makers. Business research is continuously looking for new rules that can be put to good use and looking to discredit old ones that are no longer valid. This ongoing process is necessary because business conditions rarely stay the same for very long.

The Difference Between Data and Information

Many people use the terms *data* and *information* interchangeably, but the two differ in important ways. **Data** are numerical or verbal descriptions that usually result from some sort of measurement. (The word *data* is plural; the singular form is datum.) Your current wage level, the amount of last year’s after-tax profit for Motorola, and the current retail prices of Honda automobiles are all data. Most people think of data as being numerical only, but they can be nonnumerical as well. A description of an individual as a “tall, athletic person with short, dark hair” certainly would qualify as data.

Information is data presented in a form that is useful for a specific purpose. Suppose that a human resources manager wants to compare the wages paid to male and female employees over a period of five years. The manager might begin with a stack of computer printouts listing every person employed by the firm, along with each employee’s current and past wages. The manager would be hard pressed to make any sense of all the names and numbers. Such printouts consist of data rather than information.

Now suppose that the manager uses a computer to graph the average wages paid to men and to women in each of the five years. The result is information because the manager can use it for the purpose at hand—to compare wages paid to men with those paid to women over the five-year period. For a manager, information presented in a practical, useful form such as a graph simplifies the decision-making process.

The average company maintains a great deal of data that can be transformed into information. Typical data include records pertaining to personnel, inventory, sales, and accounting. Often each type of data is stored in individual departments within an organization. However, the data can be used more effectively when they are organized

data numerical or verbal descriptions that usually result from some sort of measurement

information data presented in a form that is useful for a specific purpose



Is there a database in that box? No, it’s an IBM z9 mainframe computer. IBM computers are often used by large companies to store, update, and process the information used by people throughout an organization. The z9 IBM mainframe computer is one of the most sophisticated, secure computing systems ever built and is equipped with 18 billion transistors—three for every person on the planet.

Discuss management's information requirements.

into a database. A **database** is a single collection of data and information stored in one place that can be used by people throughout an organization to make decisions. Although databases are important, the way the data and information are used is even more important—and more valuable to the firm. As a result, management information experts now use the term **knowledge management (KM)** to describe a firm's procedures for generating, using, and sharing the data and information. Typically, data, information, databases, and KM all become important parts of a firm's management information system.

What Is a Management Information System?

A **management information system (MIS)** is a system that provides managers and employees with the information they need to perform their jobs as effectively as possible. The purpose of an MIS (sometimes referred to as an information technology system or simply IT system) is to distribute timely and useful information from both internal and external sources to the managers and employees who need it (see Figure 16.2). Today, most medium-sized to large business firms have an information technology (IT) officer. An **information technology (IT) officer** is a manager at the executive level who is responsible for ensuring that a firm has the equipment necessary to provide the information the firm's employees and managers need to make effective decisions.

Today's typical MIS is built around a computerized system of record-keeping and communications software so that it can provide information based on a wide variety of data. After all, the goal is to provide needed information to all employees and managers.

A Firm's Information Requirements

Employees and managers have to plan for the future, implement their plans in the present, and evaluate results against what has been accomplished in the past. Of course, the specific types of information they need depend on their work area and on their level within the firm.

Today, many firms are organized into five areas of management: *finance*, *operations*, *marketing*, *human resources*, and *administration*. Managers in each of these areas need specific information in order to make decisions.

database a single collection of data and information stored in one place that can be used by people throughout an organization to make decisions

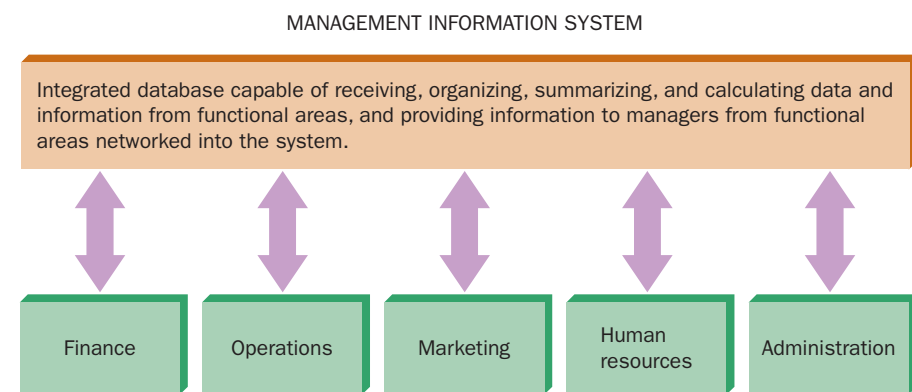
knowledge management (KM) a firm's procedures for generating, using, and sharing the data and information

management information system (MIS) a system that provides managers and employees with the information they need to perform their jobs as effectively as possible

information technology (IT) officer a manager at the executive level who is responsible for ensuring that a firm has the equipment necessary to provide the information the firm's employees and managers need to make effective decisions

Figure 16.2 Management Information System (MIS)

After an MIS is installed, employers and managers can get information directly from the MIS without having to go through other people in the organization.



Source: Ricky W. Griffin, *Management*, 10/e (Mason, OH: Cengage Learning, 2011). Reprinted by permission.

- *Financial managers* obviously are most concerned with their firm's finances. They study its debts and receivables, cash flow, future capitalization needs, financial statements, and other accounting information. Of equal importance to financial managers is information about the present state of the economy, interest rates, and predictions of business conditions in the future.
- *Operations managers* are concerned with present and future sales levels, current inventory levels of work in process and finished goods, and the availability and cost of the resources required to produce products and services. They also must keep abreast of any innovative production technology that might be useful to the firm.
- *Marketing managers* need to have detailed information about their firm's products and the products offered by competitors. Such information includes pricing strategies, new promotional campaigns, and products that competitors are test marketing. Information concerning the firm's customers, current and projected market share, and new and pending product legislation is also important to marketing managers.
- *Human resources managers* must be aware of anything that pertains to the firm's employees. Key examples include current wage levels and benefits packages both within the firm and in firms that compete for valuable employees, current legislation and court decisions that affect employment practices, union activities, and the firm's plans for growth, expansion, or mergers.
- *Administrative managers* are responsible for the overall management of the organization. Thus, they are concerned with the coordination of information—just as they are concerned with the coordination of material, human, and financial resources.



Numbers and charts. What does it all mean? Good question. The fact is that few managers and employees would be able to perform their jobs without accurate and up-to-date information. Because it is so important, most organizations invest large amounts of money to ensure that the firm's employees have access to the information they need to make decisions on a daily basis.

First, administrators must ensure that all employees have access to the information they need to do their jobs.

Second, administrative managers must also ensure that the information is used in a consistent manner throughout the firm. Suppose, for example, that General Electric (GE) is designing a new plant that will open in five years. GE's management will want answers to many questions: Is the capacity of the plant consistent with marketing plans based on sales projections? Will human resources managers be able to staff the plant on the basis of employment forecasts? And do sales projections indicate enough income to cover the expected cost of the plant?

Third, administrative managers must make sure that all managers and employees are able to use the IT that is available. Certainly, this requires that all employees receive the skills training required to use the firm's MIS. Finally, administrative managers must commit to the costs of updating the firm's MIS and providing additional training when necessary.

Size and Complexity of the System

An MIS must be tailored to the needs of the organization it serves. In some firms, a tendency to save on initial costs may result in a system that is too small or overly simple. Such a system generally ends up serving only one or two management levels or a single department. Managers in other departments “give up” on the system as soon as they find that it cannot process their data.

Almost as bad is an MIS that is too large or too complex for the organization. Unused capacity and complexity do nothing but increase the cost of owning and operating the system. In addition, a system that is difficult to use probably will not be used at all.

Outline the five functions of an information system.

How Do Employees Use a Management Information System?

To provide information, a management information system (MIS) must perform five specific functions. It must (1) collect data, (2) store the data, (3) update the data, (4) process the data into information, and (5) present the information to users (see Figure 16.3).

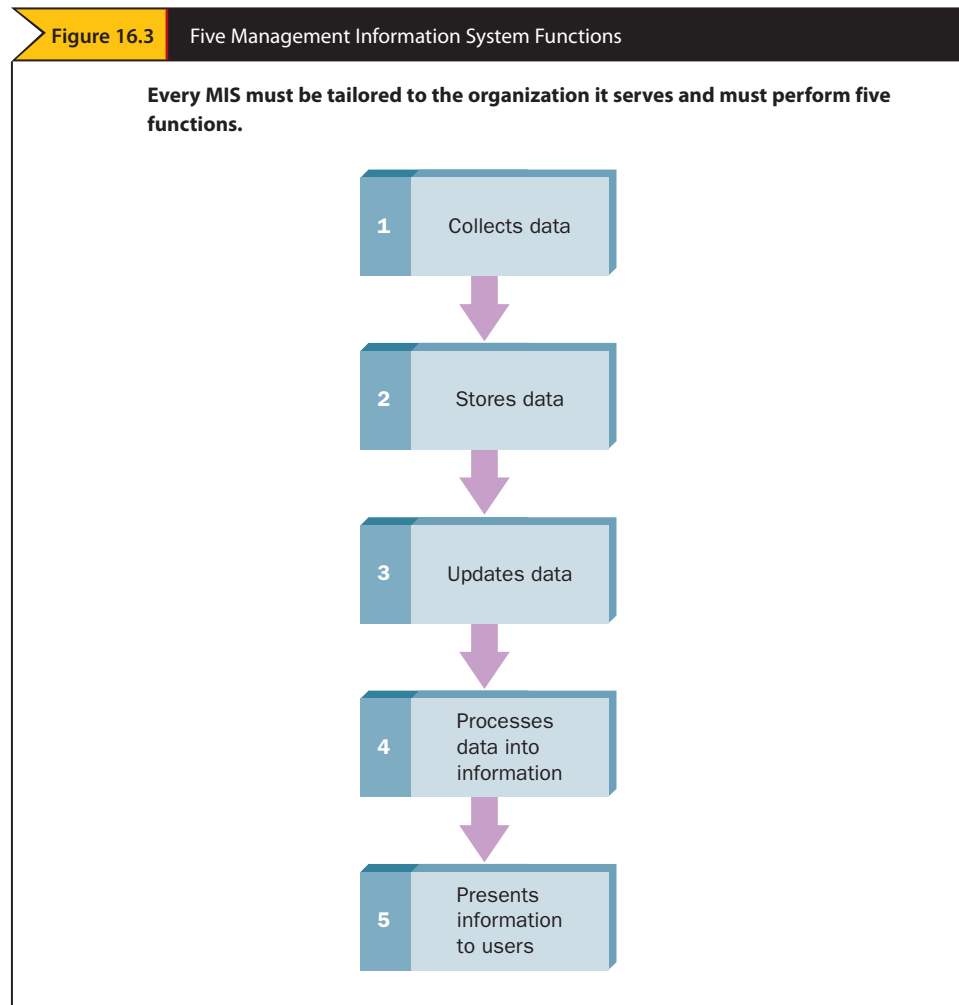
Step 1: Collecting Data

A firm's employees, with the help of an MIS system, must gather the data needed to establish the firm's *data bank*. The data bank should include all past and current data that may be useful in managing the firm. Clearly, the data entered into the system must be *relevant* to the needs of the firm's managers. And perhaps most important, the data must be *accurate*. Irrelevant data are simply useless; inaccurate data can be disastrous. There are two data sources: *internal* and *external*.

Internal Sources of Data Typically, most of the data gathered for an MIS come from internal sources. The most common internal sources of information are managers and employees, company records and reports, and minutes of meetings.

Past and present accounting data can also provide information about the firm's transactions with customers, creditors, and suppliers. Sales reports are a source of data on sales, pricing strategies, and the effectiveness of promotional campaigns.

Figure 16.3 Five Management Information System Functions



Human resources records are useful as a source of data on wage and benefits levels, hiring patterns, employee turnover, and other personnel variables.

Present and past production forecasts also should be included in the firm's data bank, along with data indicating how well these forecasts predicted actual events. Specific plans and management decisions—regarding capital expansion and new product development, for example—should be incorporated into the MIS system.

External Sources of Data External sources of data include customers, suppliers, bankers, trade and business publications, industry conferences, online computer services, government sources, and firms that specialize in gathering data for organizations. For example, a marketing research company may acquire forecasts pertaining to product demand, consumer tastes, and other marketing variables. Suppliers are also an excellent source of information about the future availability and costs of raw materials and component parts. Bankers often can provide valuable economic insights and projections. The information furnished by trade and business publications and industry conferences is usually concerned as much with future projections as with present conditions. Legal issues and court decisions that may affect a firm are discussed occasionally in local newspapers and, more often, in specialized publications such as *The Wall Street Journal*, *Fortune*, and *BusinessWeek*. Government publications such as the *Monthly Labor Review* and the *Federal Reserve Bulletin* are also quite useful as sources of external data, as are a number of online computer services.

Whether the source of the data is internal or external, always remember the following three cautions:

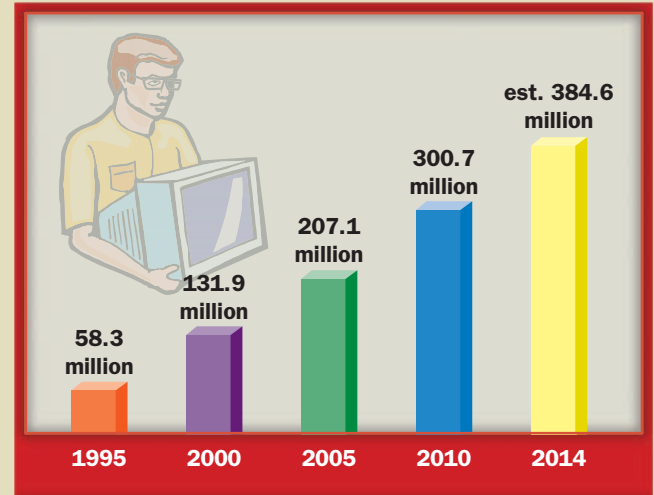
1. The cost of obtaining data from some external sources, such as marketing research firms, can be quite high.
2. Outdated or incomplete data usually yield inaccurate information.
3. Although computers generally do not make mistakes, the people who use them can make or cause errors. When data (or information) and your judgment disagree, always check the data.

Step 2: Storing Data

An MIS must be capable of storing data until they are needed. Typically, the method chosen to store data depends on the size and needs of the organization. Small businesses may enter data and then store them directly on the hard drive inside an employee's computer. Generally, medium-sized to large businesses store data in a larger computer system and provide access to employees through a computer network. Today, networks take on many configurations and are designed by specialists who work with a firm's IT personnel to decide on what's best for the company.

More Computers in Record Numbers

In an attempt to gather information, individuals and businesses are purchasing more computers in record numbers. (Numbers represent actual sales or sales projections for computers around the globe—in millions.)



Source: The Computer Industry Almanac, Inc. Web site at <http://www.c-i-a.com> (accessed May 25, 2010).

Step 3: Updating Data

Today, an MIS must be able to update stored data regularly to ensure that the information presented to managers and employees is accurate, complete, and up-to-date. The frequency with which the data are updated depends on how fast they change and how often they are used. When it is vital to have current data, updating may occur as soon as the new data are available. For example, Giant Food, a grocery store chain operating in the eastern part of the United States, has cash registers that automatically transmit data on each item sold to a central computer. The computer adjusts the store's inventory records accordingly. In some systems, the computer may even be programmed to reorder items whose inventories fall below some specified level. Data and information may also be entered into a firm's data bank at certain intervals—every 24 hours, weekly, or monthly.

Step 4: Processing Data

Some data are used in the form in which they are stored, whereas other data require processing to extract, highlight, or summarize the information they contain. **Data processing** is the transformation of data into a form that is useful for a specific purpose.

For verbal data, this processing consists mainly of extracting the pertinent material from storage and combining it into a report. Most business data, however, are in the form of numbers—large groups of numbers, such as daily sales totals or production costs for a specific product. Fortunately, computers can be programmed to process such large volumes of numbers quickly. While such groups of numbers may be difficult to handle and to comprehend, their contents can be summarized through the use of statistics. A **statistic** is a measure that summarizes a particular characteristic of an entire group of numbers.

data processing the transformation of data into a form that is useful for a specific purpose

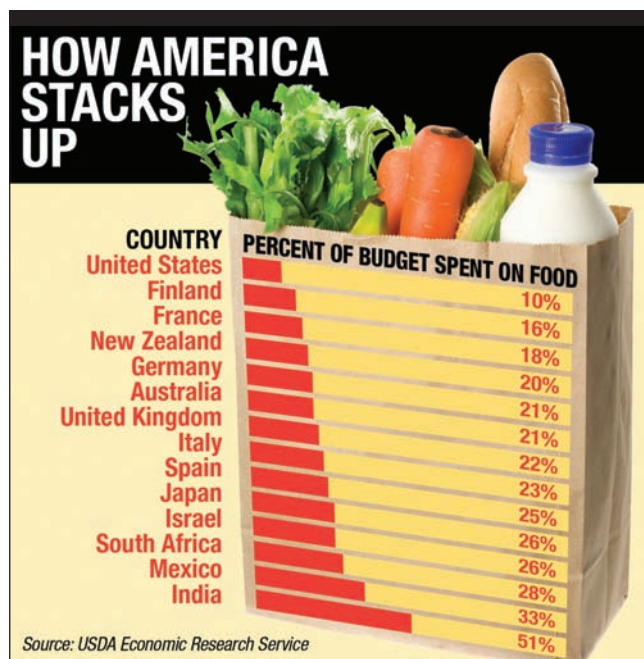
statistic a measure that summarizes a particular characteristic of an entire group of numbers

Step 5: Presenting Information

An MIS must be capable of presenting information in a usable form. That is, the method of presentation—reports, tables, graphs, or charts, for example—must be appropriate for the information itself and for the uses to which it will be put.

Business Reports Verbal information may be presented in list or paragraph form. Employees often are asked to prepare formal business reports. A typical business report includes (1) an introduction, (2) the body of the report, (3) the conclusions, and (4) the recommendations.

The *introduction*, which sets the stage for the remainder of the report, describes the problem to be studied in the report, identifies the research techniques that were used, and previews the material that will be presented in the report. The *body* of the report should objectively describe the facts that were discovered in the process of completing the report. The body also should provide a foundation for the conclusions and the recommendations. The *conclusions* are statements of fact that describe the finding contained in the report. They should be specific, practical, and based on the evidence contained in the report. The *recommendations* section presents suggestions on how the problem might be solved. Like the conclusions, the recommendations should be specific, practical, and based on the evidence.



Source: USDA Economic Research Service

Why visual displays are important! Visual displays, like the bar chart in this photo, are often more interesting than if the same information was described in a written report. Here, food costs (as a percent of budget) for people in different countries are illustrated using a bar chart. Because it's easier to compare data when visual displays are used, the eye can quickly pick out the most important information.

Visual Displays and Tables A visual display can also be used to present information and may be a diagram that represents several items of information in a manner that makes comparison easier. Figure 16.4 illustrates examples of visual displays generated by a computer. Typical visual displays include:

- Graphs
- Bar charts
- Pie charts

A tabular display is used to present verbal or numerical information in columns and rows. It is most useful in presenting information about two or more related variables. A table, for example, can be used to illustrate the number of salespeople in each region of the country, sales for different types of products, and total sales for all products (see Table 16.1). Information that is to be manipulated—for example, to calculate loan payments—is usually displayed in tabular form.

Tabular displays generally have less impact than visual displays. However, displaying the information that could be contained in a multicolumn table such as Table 16.1 would require several bar or pie charts.

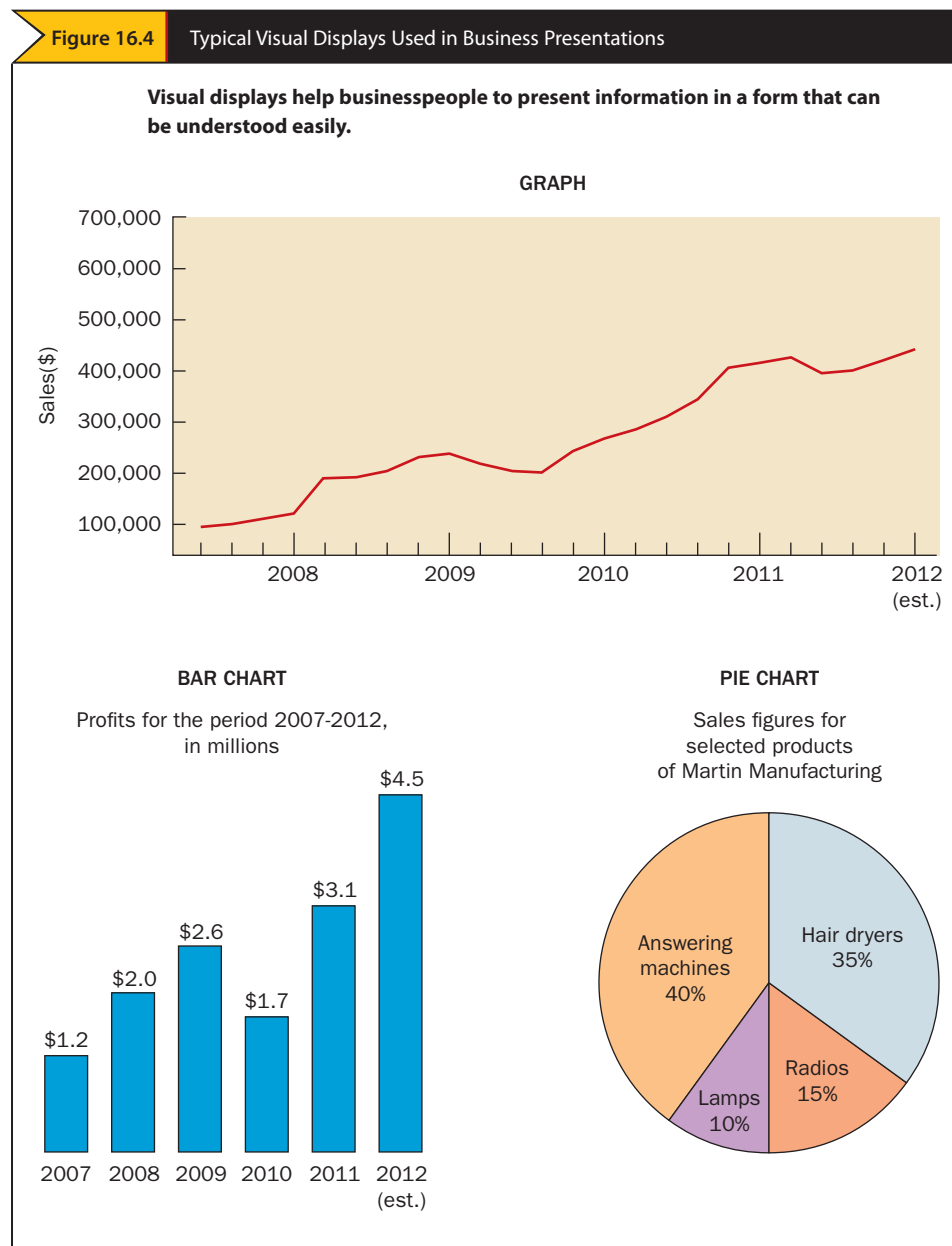


Table 16.1 Typical Three-Column Table Used in Business Presentations

Tables are most useful for displaying information about two or more variables.			
All-Star Technology Projected Sales			
Section of the Country	Number of Salespeople	Consumer Products (\$)	Industrial Products (\$)
Eastern territory	15	1,500,000	3,500,000
Midwestern territory	20	2,000,000	5,000,000
Western territory	10	1,000,000	4,000,000
TOTAL	45	4,500,000	12,500,000

4

Describe how computers and technology help improve productivity, decision making, communications, sales, and recruiting and training.

Improving Productivity with the Help of Computers and Technology

In this section, we examine several solutions to challenges created when a firm or its employees use computers and the Internet. In each case, a solution is always evaluated in terms of its costs and compared with the benefits a firm receives, generally referred to as a *cost/benefit analysis*. Typical areas of concern for a business include decision making, communications, sales, recruiting and training employees, business software applications, and virtual offices.

Making Smart Decisions

How do managers and employees sort out relevant and useful information from the spam, junk mail, and useless data? Three different applications can actually help to improve and speed the decision-making process for people at different levels within an organization. First, a **decision-support system (DSS)** is a type of computer program which provides relevant data and information to help a firm's employees make decisions. It also can be used to determine the effect of changing different variables and answer "what if" type questions. For example, a manager at Michigan-based Pulte Homes may use a DSS to determine prices for new homes built in an upscale, luxury subdivision. By entering the number of homes that will be built along with different costs associated with land, labor, materials, building permits, promotional costs, and all other costs, a DSS can help to determine a base price for each new home. It is also possible to increase or decrease the building costs and determine new home prices for each set of assumptions with a DSS. Although similar to a DSS, an **executive information system (EIS)** is a computer-based system that facilitates and supports the decision-making needs of top managers and senior executives by providing easy access to both internal and external information.

An **expert system** is a type of computer program that uses artificial intelligence to imitate a human's ability to think. An expert system uses a set of rules that analyze information supplied by the user about a particular activity or problem. Based on the information supplied, the expert system then provides recommendations or suggests specific actions in order to help make decisions. Expert systems, for example, have been used to schedule manufacturing tasks, diagnose illnesses, determine credit limits for credit-card customers, evaluate loan applications, and develop electronic games.

Helping Employees Communicate

One of the first business applications of computer technology was e-mail. Once software was chosen and employees trained, communications could be carried out globally within and outside a firm at any time, 24 hours a day, seven days a week. Today, e-mail is also being used as a direct link between businesses and customers. For example, many brokerage and financial firms like Charles Schwab and Fidelity Investments use e-mail to stay in contact with customers and promote different investment products.

decision-support system (DSS) a type of computer program that provides relevant data and information to help a firm's employees make decisions

executive information system (EIS) a computer-based system that facilitates and supports the decision-making needs of top managers and senior executives by providing easy access to both internal and external information

expert system a type of computer program that uses artificial intelligence to imitate a human's ability to think

Today, employers expect that their employees will be able to use e-mail to communicate with other employees and customers. Although it takes practice, the following seven tips will help you improve your ability to effectively use e-mails.

1. *Most Important:* Think about what you are really saying in an e-mail. Don't put something in an e-mail that you wouldn't say face-to-face to another person. In addition, remember that it is very easy for the reader to forward your e-mail to everyone in the company—even when it was meant for just the original reader.
2. Write perfect subject lines. After your name, the subject line is often the next information the reader sees. Make sure your subject line captures the reader's attention.
3. Talk about one subject in an e-mail. Including more than one idea, concept, or issue in an e-mail can make your e-mail confusing.
4. Keep e-mails short. Long e-mails with long sentences intimidate readers. Often, readers skip important information and miss the most important point because they get tired of reading.
5. Be careful when using all caps. Using ALL CAPS is like shouting and should only be used when you really want to emphasize an important point.
6. Do not use the reply all option unless everyone needs to see your response. Send your response to only the people who really need to see it.
7. Don't hit the send button until you are ready to send the e-mail. Often, people accidentally hit the send button before they are finished writing an e-mail. A better approach is to leave the address line blank until you have finished and reread your e-mail. Once completed, enter the address of the recipient(s) and hit send.

Groupware is one of the latest types of software that facilitates the management of large projects among geographically dispersed employees, as well as such group activities as problem solving and brainstorming. Suppose that the home office of a software development firm in a major city has been hired to prepare customized software for a client in another city. The project team leader uses groupware to establish guidelines for the project, check availability of employees around the world, give individuals specific work assignments, and set up a schedule for work completion, testing, and final installation on the client's computer. The team leader is able to monitor work progress and may intervene if asked or if problems develop. When needed, people from various locations, possessing an array of knowledge and skills, can be called to the "workspace" created on the computer system for their contribution. When the work is finally completed, it can be forwarded to the client's computer and installed.

Besides being useful in project management, groupware provides an opportunity to establish a collaborative learning system to help solve a specific problem. A **collaborative learning system** is a work environment that allows problem-solving participation by all team members. By posting a question or problem on the groupware site, the team leader invites members, who may be located anywhere in the world, to submit messages that can help to move the group toward a solution.

Assisting the Firm's Sales Force

Internet-based software application programs, sometimes referred to as customer relationship management programs, focus on the special information needs of sales personnel. For example, sales force automation programs support sales representatives with organized databases of information such as names of clients, status of pending orders, and sales leads and opportunities, as well as any related advice or recommendations from other company personnel. Consider what happens when a sales representative for the pharmaceutical division of a company such as Johnson & Johnson is planning to visit doctors, health care providers, and hospitals in the Chicago area. A sales force automation software program can provide information about what the results were of the last contacts, who else in the pharmaceutical firm has interacted with the client, and previous purchases the client has made.

groupware one of the latest types of software that facilitates the management of large projects among geographically dispersed employees as well as such group activities as problem solving and brainstorming

collaborative learning system a work environment that allows problem solving participation by all team members



Apps Become Big Business

Apps—small software programs that users download to run on cell phones and iPods—are becoming big business. Some apps, such as the game Trism, are just for fun; some, such as Recorder, which records voices with the touch of a button, have both business and personal uses.

In the past 18 months, more than 3 billion apps for iPhones and iPods have been downloaded from Apple's App Store. With Microsoft, Google, and many other companies setting up sites featuring apps for handheld wireless devices, experts see app sales soaring to \$30 billion within a few years. No wonder thousands of entrepreneurs are busy developing and marketing apps for consumer and business use.

Steve Demeter, who created Trism for the iPhone, is a successful app entrepreneur. He



began as a software developer for a major bank but spent nights and weekends writing and polishing the code for Trism. After his game was ready for release, Demeter submitted it for App Store approval and sent copies to influential reviewers. The game was an instant sensation, generating thousands of dollars in sales in its first two months. Now Demeter is a full-time app developer, with a number of promising ideas in the works. He tells budding app entrepreneurs to ask themselves: "Does my app convey something unique and interesting in 10 to 15 seconds?"

Sources: Bill Shea, "New iPad May Fuel 'Gold Rush' for App Makers," *Crain's Detroit Business*, February 1, 2010, 1; Douglas MacMillan, Peter Burrows, and Spencer E. Ante, "Inside the App Economy," *BusinessWeek*, October 22, 2009, http://www.businessweek.com/magazine/content/09_44/b4153044881892.htm; Gary Marshall, "App Store Millionaires Share Their Secrets," *Tech Radar*, February 5, 2009, <http://www.techradar.com/news/phone-and-communications/other-phones/app-store-millionaires-share-their-secrets-524586>; Kira Bindrim, "Big App-le, indeed: Rush Is on," *Crain's New York Business*, October 19, 2009, 2.

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As sales representatives complete their visits, information about what was learned should be entered into the sales force automation system as soon as possible so that everyone can use the latest information.

Recruiting and Training Employees

A common icon on most corporate Web sites is a link to "Careers" or "Employment Opportunities." Firms looking for people with specialized skills can post their employee needs on their Web sites and reach potential candidates from around the globe. This is an extremely important method of recruiting employees for positions where labor shortages are common and individuals with the *right* skills are in high demand.

Furthermore, software programs can help large firms such as GE, ExxonMobil, and General Mills to establish a database of potential employees. This is an especially important function for a firm that receives thousands of unsolicited employment applications from people all over the world. The cost of organizing and processing this information is high, but software can reduce this expense when compared with a paper-based system.

Large and midsize companies also spend a great deal of money on educational and training programs for employees. By distributing information about the firm, products and services, new procedures, and general information to employees through the Internet for reading and study at convenient times and places, firms can reduce training costs dramatically. Often, these sites may be needed only on rare occasions; however, it is important that employees know that the information exists and where it is. Furthermore, revision and distribution of changes to this type of information are much easier if the information is provided on the company's Web site.

Telecommuting, Virtual Offices, and Technology

Today more and more employees are using telecommuting, virtual offices, and technology to perform typical work activities. In Chapter 10, *telecommuting* was defined as employees working at home all the time or for a portion of the work week. Although we do not want to cover the same topic again, it is important to understand how technology enables workers to work any place—at home, in an airport, in a hotel room, or even in an automobile. Simply put: The ability to use technology—computers, e-mail, software, the Internet, and phones—makes telecommuting and virtual offices a reality. Although there are different definitions of a virtual office, for our purposes a **virtual office** allows employees to work at any place where they have access to computers, software, and other technology that enables them to perform their normal work activities.

For both employees and employers, the chief benefits of telecommuting and virtual offices include:

- Higher job satisfaction and increased productivity.
- Greater independence and flexible work hours.
- Reduced commuting costs and time required to commute to an office.
- Lower employee turnover.
- New employment opportunities for employees with physical disabilities, new mothers, and people living in remote areas.

Although experts predict that the use of telecommuting, virtual offices, and technology will all increase in the future, there are certain factors to consider that can create problems for employees working in a virtual office. Typical challenges include feelings of isolation and exploitation, working too many hours, lack of support from managers, inability to access needed files and information, and fear of performance evaluations. Still, employers have found that if the right person is selected, the benefits of telecommuting and virtual offices outweigh the disadvantages. The key is often finding the right person.

Business Applications Software

Early software typically performed a single function. Today, however, *integrated* software combines many functions in a single package. Integrated packages allow for the easy *linking* of text, numerical data, graphs, photographs, and even audio-visual clips. A business report prepared using the Microsoft Office package, for instance, can include all these components.

Integration offers at least two other benefits. Once data have been entered into an application in an integrated package, the data can be used in another integrated package without having to reenter the data again. In addition, once a user learns one application, it is much easier to learn another application in an integrated package. From a career standpoint, you should realize that employers will assume that you possess, or will possess after training, a high degree of working comfort with several of the software applications described in Table 16.2.

Computer Backup and Disaster Recovery

Anyone who has ever used a computer understands how frustrating it can be when data and information are lost. For individuals, the frustration often turns to anger, but life goes on. For a business, lost data and information can threaten the very existence of the firm and its ability to operate on a day-to-day basis. In fact, the majority



Improving productivity is just a handheld device

away. In a competitive business environment, a company's sales representatives must stay in contact with their customers. In this photo, a sales representative is text messaging information about current inventory levels and product availability to one of his customers.

Table 16.2 Current Business Application Software Used to Improve Productivity

Word processing	Users can prepare and edit written documents and store them in the computer or on a memory device.
Desktop publishing	Users can combine text and graphics in reports, newsletters, and pamphlets in professional reports.
Accounting	Users can record routine financial transactions and prepare financial reports at the end of the accounting period.
Database management	Users can electronically store large amounts of data and transform the data into information.
Graphics	Users can display and print pictures, drawings, charts, and diagrams.
Spreadsheets	Users can organize numerical data into a grid of rows and columns.

of businesses lose some data and information because of computer viruses, hackers, power failures, equipment breakdowns, defective software, and even floods, tornadoes, hurricanes, ice storms, and other natural disasters every year. Although many business owners think it won't happen to their firm, the risk is real. According to Symantec, a leading security software company, "the average small or midsize business has experienced three technology failures in the past 12 months, with the leading causes being virus or hacker attacks, power outages, and natural disasters. The cost of these outages: an estimated \$15,000 per day."²

To avoid losing data and information stored on a computer system, most firms begin by creating backup files. **Computer backup** is a process of storing data, information, and computer systems on secondary computer systems that can be accessed if a firm's main computer system fails. Although no single set of guidelines will protect every business, computer experts recommend the following:³

- *Schedule data and information backups.* Although both manual and automated backup procedures can be established, automated procedures are usually preferred because manual systems are time-consuming and can be prone to errors.
- *Backup computer systems.* A business must also backup the computer systems that are needed to access recovered data and information.
- *Keep backups off-site.* A separate location for backup files is always recommended because of the possibility of a fire, flood, or other natural disaster destroying your primary computer system.
- *Test backup systems.* It is not enough to just develop a plan for data, information, and computer systems recovery. The plan must be tested on a regular basis to make sure that it works.

Finally, a decision must be made to determine who is responsible for computer backup and disaster recovery. Many businesses choose to make their employees responsible for computer backup and disaster recovery. Other businesses choose outside vendors that will provide these important services for a fee. Regardless, the important point to remember is that a plan for computer backup and disaster recovery must be developed and then used to protect important data, information, and computer systems.

computer backup a process of storing data, information, and computer systems on secondary computer systems that can be accessed if a firm's main computer system fails

information society a society in which large groups of employees generate or depend on information to perform their jobs

5

Analyze how computers and technology change the way information is acquired, organized, and used.

Using Computers and the Internet to Obtain Information

We live in a rapidly changing **information society**—that is, a society in which large groups of employees generate or depend on information to perform their jobs. Today, businesses are using the Internet to find and distribute information to global users. The Internet is also used for communicating between the firm's employees and its customers. Finally, businesses use the Internet to gather information about competitors' products, prices, and other business strategies. Clearly, the Internet is here to stay.

The Internet and Networks

The **Internet** is a worldwide network of computers linked through telecommunications. Enabling users around the world to communicate with each other electronically, the Internet provides access to a huge array of information sources. The Internet's most commonly used network for finding information is the World Wide Web. The **World Wide Web** (or more simply, **the Web**) is the Internet's multimedia environment of audio, visual, and text data. Today, connections to the Internet include simple telephone lines or faster digital subscriber lines (DSLs) and cabled broadband that carry larger amounts of data at quicker transfer speeds. **Broadband technology** is a general term referring to higher speed Internet connections that deliver data, voice, and video material. With new wireless technology, it is possible to access the Internet by using your laptop computer, cellular phone, and other wireless communications devices.

In addition to business sites, the World Wide Web has a wide array of government and institutional sites that provide information to a firm's employees and the general public. There are also online sites available for most of the popular business periodicals.

An **intranet** is a smaller version of the Internet for use within a firm. Using a series of customized Web pages, employees can quickly find information about their firm as well as connect to external sources. For instance, an employee might use the intranet to access the firm's policy documents on customer warranties or even take a company-designed course on new products and how to introduce them to customers. Generally, intranet sites are protected, and users must supply both a user name and a password to gain access to a company's intranet site. *Note:* Although the term *intranet* was popular in the 1990s, it was often confused with the Internet. Although still used today, many computer experts use the term *LAN* (which stands for local-area network) to describe intranet applications used within a company. More information about different types of computer networks, including LANs, is provided below.

Both the Internet and intranets are examples of a computer network. A **computer network** is a group of two or more computers linked together that allows users to share data and information. Today, two basic types of networks affect the way employees and the general public obtain data and information. A **wide-area network (WAN)** is a network that connects computers over a large geographic area, such as a city, a state, or even the world. The world's most popular WAN is the Internet.⁴ In addition to the Internet, other WANs include private corporate networks (sometimes referred to as virtual private networks, or VPNs) and research networks. A **local-area network (LAN)** is a network that connects computers that are in close proximity to each other, such as an office building or a college campus. LANs allow users to share files, printers, games, or other applications.⁵ Typically, LANs also allow users to connect to the Internet.

Accessing the Internet

In order to access the Internet or a computer network, computers and software must be standardized. Establishing standards is vital to ensuring that a Hewlett-Packard computer in McPherson, Kansas, can "talk" with a Dell computer in San Francisco, California.

The search for available information often begins with a specific Web site address or a search engine. Every Web site on the Internet is identified by its Uniform Resource Locator (URL), which acts as its address. To connect to a site, you enter its URL in your Web browser. A Web browser such as Windows Internet Explorer or Mozilla Firefox is software that helps users to navigate around the Internet and connect to different Web sites. The URLs of most corporate sites are similar to the organizations' real names. For instance, you can reach IBM by entering <http://www.ibm.com>. The first part of the entry, *http*, sets the software protocols

Internet a worldwide network of computers linked through telecommunications

World Wide Web (the Web) the Internet's multimedia environment of audio, visual, and text data

broadband technology a general term referring to higher speed Internet connections that deliver data, voice, and video material

intranet a smaller version of the Internet for use within a firm's computer network

computer network a group of two or more computers linked together that allows users to share data and information

wide-area network (WAN) a network that connects computers over a large geographic area, such as a city, a state, or even the world

local-area network (LAN) a network that connects computers that are in close proximity to each other, such as an office building or a college campus

for proper transfer of information between your computer and the one at the site to which you are connecting. *Http* stands for *HyperText Transfer Protocol*. Both *http* and *www* are frequently omitted from a URL because your computer adds them automatically when you enter the rest of the address. *HyperText* refers to words or phrases highlighted or underlined on a Web page; when you select these, they link you to other Web sites.

To find a particular Web site, you can take advantage of several free search programs available on the Web, such as Google, Yahoo!, and AltaVista. To locate a search engine, enter its URL in your browser. Some URLs for popular search engines are <http://www.altavista.com>, <http://www.google.com>, and <http://www.yahoo.com>.

The home page for many search engines provides a short list of primary topic divisions, such as careers, news, shopping, yellow pages, and weather, as well as a search window where you can enter the particular topic you are looking for.

Creating Web Sites

Today, employees and the general public connect to the Internet, enter a Web address, or use a search engine to access information. That information is presented on a Web site created and maintained by business firms; agencies of federal, state, or local governments; or educational or similar organizations. Because a Web site should provide accurate information, great care is required when creating a Web site. Generally, once a *template* or structure for the Web page has been created, content such as text or images can be inserted or changed readily, allowing the site to remain current.

What the Web site says about a company is important and should be developed carefully to portray the “right” image. Therefore, it is understandable that a firm without the internal human resources to design and launch its Web site will turn to



Often the search for information begins with a search engine like Yahoo! Internet search engines make finding information on the Internet easy. With a click of your computer's mouse, you can find the latest news stories, information about products and services, investment research, and even information about new movies and the current weather.

© Vicki Beaver

Table 16.3 Tips for Web Site Development

Whether you build your site from scratch, use a Web design software program, or hire outside professionals, make sure that your Web site conveys not only the “right” image but also useful information about your company or organization.		
1.	Develop a theme.	A Web site is like a book and needs a theme to tie ideas together and tell an interesting story.
2.	Determine how much information to include on your site.	Get a handle on the type and amount of information that will be contained on your site. Although it is tempting to include everything, you must be selective.
3.	Plan the layout of your site.	Think about how you want your site to look. Web sites that combine color, art, and links to narrative material are the most useful.
4.	Add graphics.	Obtain graphics that illustrate the types of data and information contained on your site. Choose colors and photographs carefully to make sure that they add rather than detract from the site.
5.	Outline the material for each page.	Generally, the opening, or home, page contains basic information with links to additional pages that provide more detailed information.
6.	Develop plans to update the site.	It is important to develop a plan to update your site on a regular basis. Too often, sites are “forgotten” and contain dated or inaccurate material.
7.	Make sure that your site is easy to use.	Stand back and take a look at your site. Is your site confusing, or does it provide a road map to get from point A to point B? If you have trouble getting information, others will too.

the talents of creative experts available through Web consulting firms. Regardless of whether the Web site is developed by the firm’s employees or outside consultants, the suggestions listed in Table 16.3 should be considered when creating materials for a firm’s Web site.

Once a Web site is established, most companies prefer to manage their sites on their own computers. An alternative approach is to pay a hosting service that often will provide guaranteed user accessibility, e-business shopping software, site-updating services, and other specialized services.

Defining e-Business

In Chapter 1, we defined *business* as the organized effort of individuals to produce and sell, for a profit, the products and services that satisfy society’s needs. In a simple sense, then, **e-business**, or **electronic business**, can be defined as the organized effort of individuals to produce and sell, for a profit, the products and services that satisfy society’s needs *through the facilities available on the Internet*. As you will see in the remainder of this chapter, e-business is transforming key business activities.

Organizing e-Business Resources

As noted in Chapter 1, to be organized, a business must combine *human, material, informational, and financial resources*. This is true of e-business, too (see Figure 16.5), but in this case, the resources may be more specialized than in a typical business. For example, people who can design, create, and maintain Web sites are only a fraction of the specialized human resources required by e-businesses. Material resources must include specialized computers, sophisticated equipment and software, and high-speed Internet connections. Computer programs that track the number of customers who view a firm’s Web site are generally among

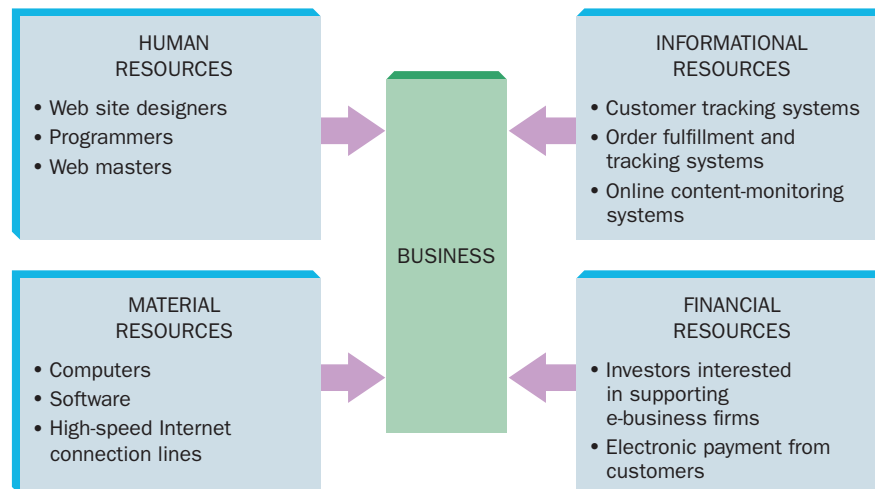
6

Explain the meaning of e-business.

e-business (electronic business) the organized effort of individuals to produce and sell, for a profit, the products and services that satisfy society’s needs through the facilities available on the Internet

Figure 16.5 Combining e-Business Resources

While all businesses use four resources (human, material, informational, and financial), these resources typically are more specialized when used in an e-business.



outsourcing the process of finding outside vendors and suppliers that provide professional help, parts, or materials at a lower cost



One way to reduce customer service costs. Many American companies are outsourcing customer service to high-tech companies in India. The main reason: lower labor costs for educated and affordable customer service representatives. In this photo, future customer service employees attend a class at Infosys Technologies' training center at its sprawling corporate campus in Mysore, India.

the specialized informational resources required. Financial resources, the money required to start and maintain the firm and allow it to grow, usually reflect greater participation by individual entrepreneurs and investors willing to invest in a high-tech firm instead of conventional financial sources such as banks.

In an effort to reduce the cost of specialized resources that are used in e-business, many firms have turned to outsourcing. **Outsourcing** is the process of finding outside vendors and suppliers that provide professional help, parts, or materials at a lower cost. For example, a firm that needs specialized software to complete a project may turn to an outside firm located in another part of the United States, India, or an Eastern European country.

Satisfying Needs Online

Think for a moment about this question: “Why do people use the Internet?” For most people, the Internet can be used to purchase products or services and as a source of information and interaction with other people. Today, more people use the Internet to satisfy these needs than ever before. Let’s start with two basic assumptions.

- The Internet has created some new customer needs that did not exist before creation of the Internet.
- e-Businesses can satisfy those needs, as well as more traditional ones.

Restoration Hardware (<http://www.restorationhardware.com>), for instance, gives customers anywhere in the world access to the same virtual store of hardware and decorative items. And at eBay’s global auction site, customers can, for a small fee, buy and sell almost anything. In each of these examples, customers can use the Internet to purchase a product or service.

© AP Images/Gurinder Osan



The Ethics of Ethical Hacking

Can hacking be ethical? That's the question at the heart of the debate over ethical hacking, in which security experts test the vulnerability of a computer network to outside attacks by criminal or malicious hackers. The goal of ethical hacking is to identify a network's weak points and strengthen defenses against data corruption or theft.

Many companies use ethical hacking to guard against criminal hacking. NCR, one of the world's largest ATM manufacturers, funds ethical-hacking research to stop would-be hackers and viruses before crimes occur. NCR worked with the University of Abertay, Dundee in Scotland to create undergraduate and graduate courses in ethical hacking. The U.S. Department of Defense requires its computer security professionals to meet specific guidelines for analyzing and responding to unauthorized network entry. One way to meet those requirements is by becoming a Certified Ethical Hacker.

However, is it ethical for security researchers at universities or independent companies to use hacking as they study system intrusions? One university researcher says that his actions in detecting and halting a particular hacking attack could be misconstrued as illegal. Rather than wait for government authorities to go through the lengthy process of investigating and taking action, the researcher decided he had to move quickly to identify the firms at risk and stop the damage, even before he received official permission. "We are studying criminal activity, and some of the things we do can't be distinguished from the criminals themselves," the researcher says. Do you think this kind of hacking is ethical?

Sources: Elizabeth Montalbano, "DoD Approves Ethical Hacker Certification," *InformationWeek*, March 2, 2010, <http://www.informationweek.com>; Alan Cane, "Data Fills the Airwaves—But Who Is Listening In?" *Financial Times*, June 18, 2009, 4; "NCR, University Join to Fight ATM Fraud," *American Banker*, August 10, 2009, 6; Jon Brodtkin, "The Legal Risks of Ethical Hacking," *Network World*, April 24, 2009, <http://www.networkworld.com>.

In addition to purchasing products, the Internet can be used by both individuals and business firms to obtain information. For example:

- Internet users can access newspapers, magazines, and radio and television programming at a time and place convenient to them.
- The Internet provides the opportunity for two-way interaction between an Internet firm and the viewer. A Web site like <http://CNN.com> and other news-content sites encourage dialogue among users in chat rooms and exchanges with the writers of articles posted to the site.
- Customers can respond to information on the Internet by requesting more information about a product or posing specific questions, which may lead to purchasing a product or service.
- Finally, the Internet allows customers to choose the content they are offered. Knowing the interests of a customer allows an Internet firm to direct appropriate, smart advertising to a specific customer. For example, someone wanting to read articles about the New York Yankees might be a potential customer for products and services related to baseball. For the advertiser, knowing that its advertisements are being directed to the most likely customers represents a better way to spend advertising dollars.

Creating e-Business Profit

Business firms can increase profits either by increasing sales revenue or by reducing expenses through a variety of e-business activities.

Increasing Sales Revenue Each source of sales revenue flowing into a firm is referred to as a **revenue stream**. One way to increase revenues is to sell merchandise on the Internet. Online merchants can reach a global customer base 24 hours a day, seven days a week because the opportunity to shop on the Internet is virtually unrestricted. However, shifting revenues earned from customers inside a real store to revenues earned from these same customers online does not create any real new revenue for a firm. The goal is to find *new customers* and generate *new sales* so that *total revenues are increased*.

revenue stream a source of revenue flowing into a firm



Intelligent information systems also can help to generate sales revenue for Internet firms such as Amazon.com. Such systems store information about each customer's purchases, along with a variety of other information about the buyer's preferences. Using this information, the system can assist the customer the next time he or she visits the Web site. For example, if the customer has bought a Taylor Hicks or Carrie Underwood CD in the past, the system might suggest CDs by similar artists who have appeared on the popular televised talent-search program *American Idol*.

Although some customers in certain situations may not make a purchase online, the existence of the firm's Web site and the services and information it provides may lead to increased sales in the firm's physical stores. For example, <http://Honda.com> can provide basic comparative information for shoppers so that they are better prepared for their visit to an automobile showroom.

In addition to selling products or services online, e-business revenue streams are created by advertising placed on Web pages and by subscription fees charged for access to online services and content. For example, Hoover's Online (<http://www.hoovers.com>), a comprehensive source for company and industry information, makes some of its online content free for anyone who visits the site, but more detailed data are available only by paid subscription. In addition, it receives revenue from companies that are called sponsors, who advertise their products and services on Hoover's Web site.

Many Internet firms that distribute news, magazine and newspaper articles, and similar content generate revenue from commissions earned from sellers of products linked to the site. Online shopping malls, for example, now provide groups of related vendors of electronic equipment and computer hardware and software with a new method of selling their products and services. In many cases, the vendors share online sales revenues with the site owners.

Reducing Expenses Reducing expenses is the second major way in which e-business can help to increase profitability. Providing online access to information

that customers want can reduce the cost of dealing with customers. Sprint Nextel (<http://www.sprint.com>), for instance, is just one company that maintains an extensive Web site where potential customers can learn more about cell phone products and services and current customers can access personal account information, send e-mail questions to customer service, and purchase additional products or services. With such extensive online services, Sprint Nextel does not have to maintain as many physical store locations as it would without these online services. We examine more examples of how e-business contributes to profitability throughout this chapter, especially as we focus on some of the business models for activity on the Internet.

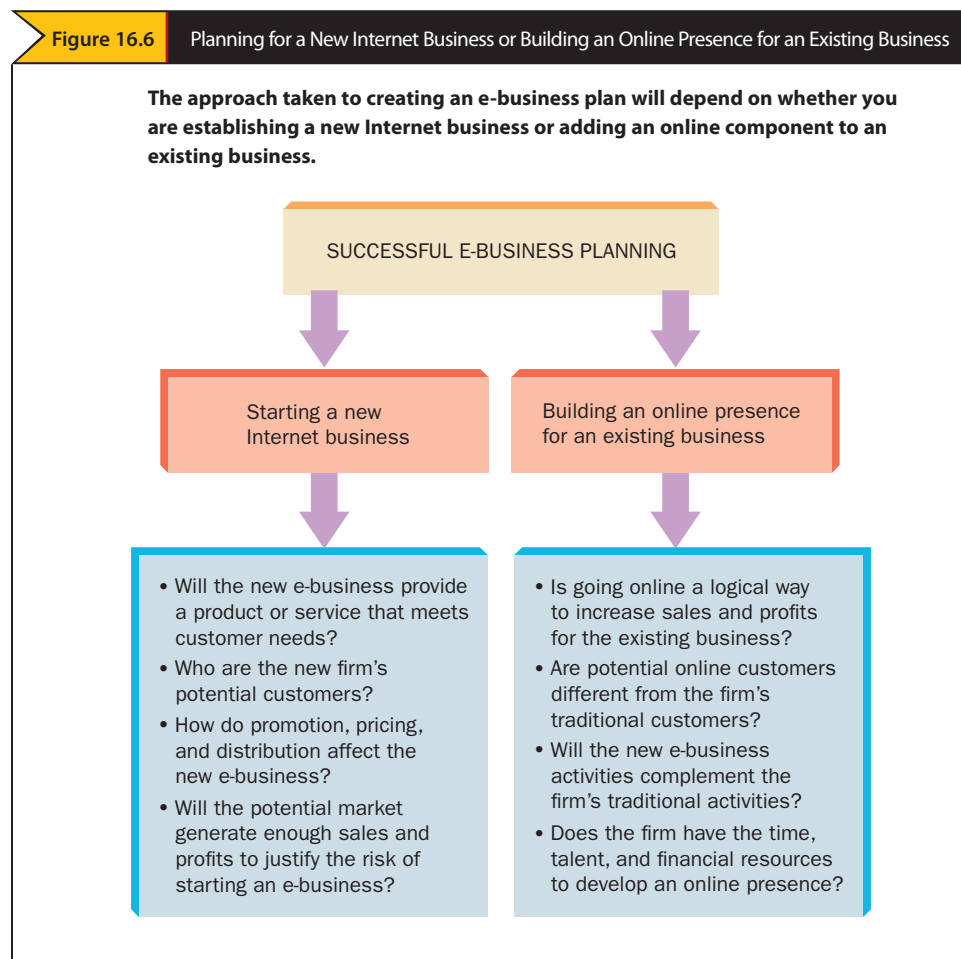
Describe the fundamental models of e-business.

Fundamental Models of e-Business

One way to get a better sense of how businesses are adapting to the opportunities available on the Internet is to identify e-business models. A **business model** represents a group of common characteristics and methods of doing business to generate sales revenues and reduce expenses. Each of the models discussed in the following text represents a primary e-business model. Regardless of the type of business model, planning often depends on if the e-business is a new firm or an existing firm adding an online presence—see Figure 16.6. It also helps to remember the definition of e-business that was included at the beginning of the last section. Finally, keep in mind that to generate sales revenues and earn profits, a business—especially an e-business—must meet the needs of its customers.

Business-to-Business (B2B) Model

Many e-businesses can be distinguished from others simply by their customer focus. For instance, some firms use the Internet mainly to conduct business with other



business model represents a group of common characteristics and methods of doing business to generate sales revenues and reduce expenses

Microsoft®
OneApp™

Unlocking the Potential of Feature Phones

Microsoft OneApp, a new software application that will allow feature mobile phones to run mobile apps like Facebook, Twitter, Windows Live Messenger, and other popular apps and games.



Microsoft Unlimited Potential. **UP**

Microsoft's OneApp technology unlocks the potential of new phones. Using Microsoft's software application, cell phone users can access Facebook, Twitter, and Windows Live Messenger; pay bills; and get the latest news. What's nice about OneApp is that Microsoft (and programmers working with Microsoft) adds new applications for e-business on a regular basis.

businesses. These firms are generally referred to as having a **business-to-business** (or **B2B**) model.

When examining B2B firms, two clear types emerge. In the first type, the focus is simply on facilitating sales transactions between businesses. For example, Dell manufactures computers to specifications that customers enter on the Dell Web site. A large portion of Dell's online orders are from corporate clients who are well-informed about the products they need and are looking for fairly priced, high-quality computer products that will be delivered quickly. Basically, by building only what is ordered, Dell reduces storage and carrying costs and rarely is stuck with unsold inventory. By dealing directly with Dell, customers eliminate costs associated with wholesalers and retailers, thereby helping to reduce the price they pay for equipment.

A second, more complex type of B2B model involves a company and its suppliers. Today, suppliers use the Internet to bid on products and services they wish to sell to a customer and learn about the customer's rules and procedures that must be followed. For example, Ford has developed a B2B model to link thousands of suppliers that sell the automobile maker parts worth billions of dollars each year. Although the B2B site is expensive to start and maintain, there are significant savings for Ford. Given the potential savings, it is no wonder that many other manufacturers and their suppliers

are beginning to use the same kind of B2B systems that are used by the automakers. In fact, suppliers know that to be a "preferred" supplier for a large firm that may purchase large quantities of parts, supplies, or raw materials, they must be tied into the purchaser's B2B system.

Business-to-Consumer (B2C) Model

In contrast to the B2B model, firms such as Barnesandnoble.com and Landsend.com clearly are focused on individual consumers. These companies are referred to as having a **business-to-consumer** (or **B2C**) model. In a B2C situation, understanding how consumers behave online is critical to a firm's success. Typically, a business firm that uses a B2C model must answer the following questions:

- Will consumers use Web sites merely to simplify and speed up comparison shopping?
- Will consumers purchase services and products online or end up buying at a traditional retail store?
- What sorts of products and services are best suited for online consumer shopping?

In addition to providing round-the-clock global access to all kinds of products and services, B2C firms often attempt to build long-term relationships with their customers. Often, firms will make a special effort to make sure that the customer is satisfied and that problems, if any, are solved quickly. Specialized software also can help build good customer relationships. Tracking the decisions and buying preferences as customers navigate a Web site, for instance, helps management to make well-informed decisions about how best to serve such customers. In essence, this is Orbitz.com's online selling approach. By tracking and analyzing customer data, Orbitz can provide individualized service to its customers. Although a "little special attention" may increase the cost of doing business for a B2C firm, the customer's repeated purchases will repay the investment many times over.

business-to-business (or B2B) model a model used by firms that conduct business with other businesses

business-to-consumer (or B2C) model a model used by firms that focus on conducting business with individual consumers

Table 16.4 Other Business Models that Perform Specialized e-Business Activities

Although modified versions of B2B or B2C, these business models perform specialized e-business activities to generate revenues.	
Advertising e-business model	Advertisements that are displayed on a firm's Web site in return for a fee. Examples include pop-up and banner advertisements on search engines and other popular Internet sites.
Brokerage e-business model	Online marketplaces where buyers and sellers are brought together to facilitate exchange of goods and services. Examples include eBay (http://www.ebay.com), which provides a site for buying and selling virtually anything.
Consumer-to-consumer model	Peer-to-peer software that allows individuals to share information over the Internet. Examples include LimeWire (http://www.limewire.com), which allows users to exchange digital media files.
Subscription and pay-per-view e-business models	Content that is available only to users who pay a fee to gain access to a Web site. Examples include investment information provided by Standard & Poor's (http://www2.standardandpoors.com) and business research provided by Forrester Research, Inc. (http://www.forrester.com).

Today, B2B and B2C models are the most popular business models for e-business. And yet, there are other business models that perform specialized e-business activities to generate revenues. Most of the business models described in Table 16.4 are modified versions of the B2B and B2C models.

The Future of Computer Technology, the Internet, and e-Business

Since the beginning of commercial activity on the Internet, developments in computer technology and e-business have been rapid and formidable with spectacular successes such as Google, eBay, and Yahoo! However, the slowdown in e-business activity that began in 2000 caused a shakeout of excessive optimism in this new-business environment. Once again, a larger-than-usual number of technology companies and e-business firms struggled or even failed during the economic crisis that began in fall 2007. Today, most firms involved in computer technology and e-business use a more intelligent approach to development. The long-term view held by the vast majority of analysts is that the Internet and e-business will continue to expand along with related computer technologies. For example, according to Forrester Research, Inc., the popularity and growth of consumer broadband access to the Internet have pushed marketers to allocate more money to interactive marketing that utilizes computer technology to understand the customer's purchasing decisions. As a result, Forrester predicts that advertisers will spend more than \$61 billion on interactive marketing by 2012.⁶

Internet Growth Potential

To date, only a small percentage of the global population uses the Internet. In 2010, estimates suggest that about 1.8 billion of the nearly 7 billion people in the world use the Web.⁷ Clearly, there is much more growth opportunity. Americans comprise 12 percent of all users.⁸ Of the 307 million people making up the American population, 223 million use the Internet. With approximately 73 percent of the American population already being Internet users, potential growth in the United States is limited.⁹ On the other hand, the number of Internet users in the world's developing countries is expected to increase dramatically. There will also be additional growth as more people begin to use smart-phones and mobile devices. Because of worldwide growth and an increase in wireless computing devices, Computer Industry Almanac projects that worldwide users will exceed 2.1 billion by 2012.¹⁰

Firms that adapt existing business models to an online environment will continue to dominate development. For example, books, CDs, clothing, hotel

8

Explore the factors that will affect the future of e-business.

Introducing Web Meeting 6

Embed recordings with ease.



ReadyTalk

A new way to sell, market, train, and communicate. ReadyTalk allows users to use its Web meeting software to “meet” with clients located any place in the world. The software is easy to use and can be used for Web seminars, online meetings, and conference calls. Sessions can also be recorded for future use, which can save users both time and money.

accommodations, car rentals, and travel reservations are products and services well-suited to online buying and selling. These products or services will continue to be sold in the traditional way, as well as in a more cost-effective and efficient fashion over the Internet.

Although the number of global Internet users is expected to increase by 2012, that’s only part of the story. Perhaps the more important question is why people are using the Internet. Internet users may want to obtain information about a firm’s products or services. As mentioned earlier in this chapter, all experts agree that the number of businesses using the e-business B2B or B2C models to sell products or services or to provide customers with information is increasing. All experts agree that this trend will continue. In addition to obtaining information about products or services, many people use the Internet to become part of a social network. In addition to advertising through social media—a topic discussed in the marketing chapters—the Internet is often used to promote social network sites. A **social network site** is a Web site (often called a social site) that functions like an online community of Internet users where you can share your personal profile, messages, and photographs with family and friends. All

social sites also provide users with a method to meet other people and gather and share information about special interests, hobbies, religion, and politics. Businesses like Dell Computer, Starbucks, and Macy’s also use social sites to post information about products and services and obtain information from customers. The most common social networking sites include Facebook, MySpace, and Twitter. Some social sites, like LinkedIn, can also be useful when you are looking for employment or developing a network of professionals to help you advance your career. **CAUTION:** Prospective employers often use information on social sites to learn about future employees. Reading profiles and viewing photographs has become standard procedure for human resources departments in many companies. Therefore, think before you post inappropriate language or photographs on your social site.

Ethical and Legal Concerns

The social and legal concerns for the Internet and e-business extend beyond those shared by all businesses. Essentially, the Internet is a new “frontier” without borders and without much control by governments or other organizations.

Ethics and Social Responsibility Socially responsible and ethical behavior by individuals and businesses on the Internet are major concerns. For example, **spamming**, the sending of massive amounts of unsolicited e-mails, is an ethical issue. Sorting through what many recipients view as *junk e-mail* is, if nothing else, a waste of resources that costs the individual time and their employer money.

Another ethically questionable practice in cyberspace is the unauthorized access and use of information discovered through computerized tracking of users once they are connected to the Internet. Essentially, a user may visit a Web page and unknowingly receive a small piece of software code called a **cookie**. This cookie can track where the user goes on the Internet and measure how long the user stays at any particular Web site. Although this type of software may produce valuable customer information, it also can be viewed as an invasion of privacy, especially since users may not even be aware that their movements are being monitored.

Besides the unauthorized use of cookies to track online behavior, there are several other threats to users’ privacy and confidentiality. Monitoring an employee’s **log-file records**, which record the Web sites visited, may be intended to help employers

social network site a Web site (often called a social site) that functions like an online community of Internet users where you can share your profile, messages, and photographs with family and friends

spamming the sending of massive amounts of unsolicited e-mails

cookie a small piece of software sent by a Web site that tracks an individual’s Internet use

log-file records files that store a record of the Web sites visited

© AP Images/PRI NewsFoto/ReadyTalk

police unauthorized Internet use on company time. However, the same records can also give a firm the opportunity to observe what otherwise might be considered private and confidential information. Today, legal experts suggest that, at the very least, employers need to disclose the level of surveillance to their employees and consider the corporate motivation for monitoring employees' behavior.

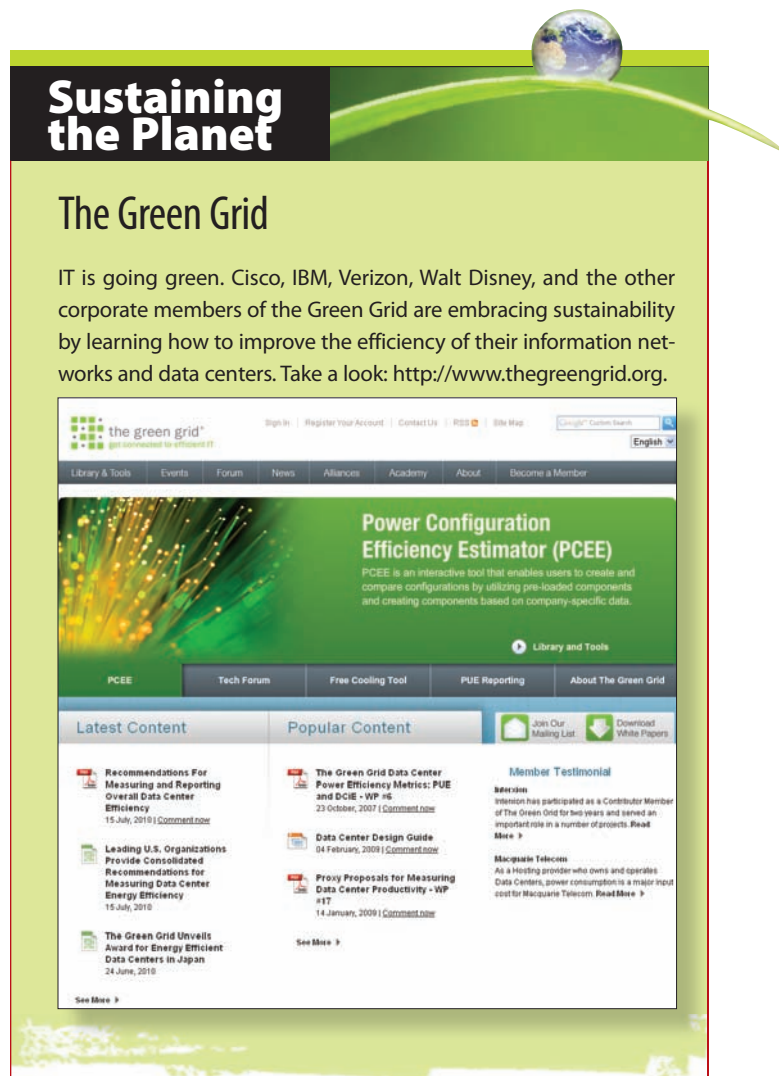
Some firms also practice data mining. **Data mining** refers to the practice of searching through data records looking for useful information. Customer registration forms typically require a variety of information before a user is given access to a site. When this is combined with customer-transaction records, data mining analysis can provide what might be considered private and confidential information about individuals or groups. For instance, assume an individual frequents a Web site that provides information about a life-threatening disease. If this information is sent to an insurance company, the company might refuse to insure this individual, thinking that there is a higher risk associated with someone who wants more information about this disease.

Internet Crime Because the Internet is often regarded as an unregulated frontier, both individuals and business users must be particularly aware of online risks and dangers. For example, a general term that describes software designed to infiltrate a computer system without the user's consent is **malware**. Malware is often based on the creator's criminal or malicious intent and can include computer viruses, spyware, deceptive adware, and other software capable of criminal activities. A more specific term used to describe disruptive software is computer virus. A **computer virus**, which can originate anywhere in the world, is a software code designed to disrupt normal computer activities. The potentially devastating effects of both malware and computer viruses have given rise to a software security industry.

In addition to the risk of computer viruses, identity theft is one of the most common computer crimes that affects both individuals and business users. A 2010 study conducted by Javelin Strategy and Research determined that more than 11 million Americans were victims of identity theft in just one year.¹¹ Most consumers are also concerned about fraud. Because the Internet allows easy creation of Web sites, access from anywhere in the world, and anonymity for the creator, it is almost impossible to know with certainty that the Web site, organization, or individuals that you believe you are interacting with are what they seem. The Javelin study also indicated that the total cost associated with identity theft *and* fraud amounted to more than \$54 billion during the same 12-month period.¹² As always, caveat emptor ("let the buyer beware") is a good suggestion to follow whether on the Internet or not.

Future Challenges for Computer Technology and e-Business

Today, there is more information available than ever before. Although individuals and business users may think we are at the point of information overload, the amount of information will only increase in the future. In order to obtain more information in the future, both individuals and business users must consider the cost of obtaining information and computer technology. For a business, the ability to obtain information or sell products or services with the click of a computer mouse is



data mining the practice of searching through data records looking for useful information

malware a general term that describes software designed to infiltrate a computer system without the user's consent

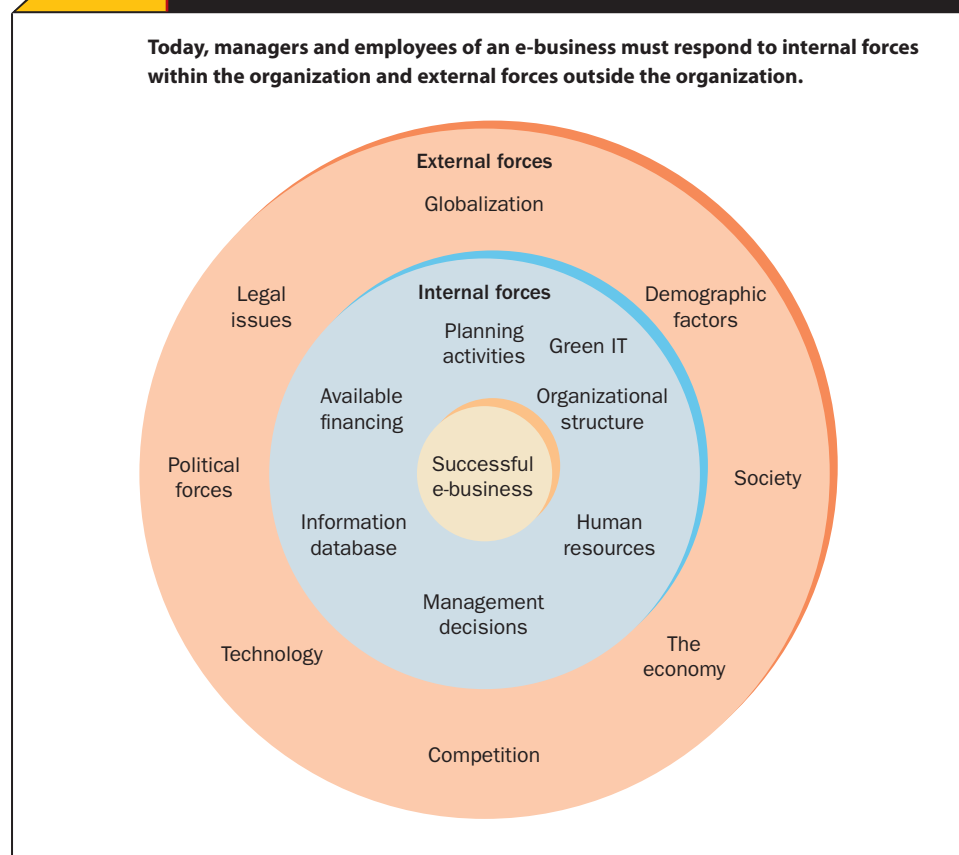
computer virus a software code designed to disrupt normal computer operations

expensive. In an effort to reduce expenses, some companies are using cloud computing. **Cloud computing** is a type of computer usage in which services stored on the Internet are provided to users on a temporary basis. When cloud computing is used, a third party makes processing power, software applications, databases, and storage available for use on-demand from anywhere, via the Internet. Instead of running software and storing data on their employer's computer network or their individual computers, employees log onto the third party's system and use (and pay for) only the applications and data storage they actually need. In addition to just cost, there are a number of external and internal factors that a business must consider.

Although the environmental forces at work are complex, it is useful to think of them as either *internal* or *external* forces that affect computer technology and e-business. Internal environmental forces are those that are closely associated with the actions and decisions taking place within a firm. As shown in Figure 16.7, typical internal forces include a firm's planning activities, organization structure, human resources, management decisions, information database, and available financing. A shortage of skilled employees needed for a specialized project, for instance, can undermine a firm's ability to sell its services to clients. Unlike the external environmental forces affecting the firm, internal forces such as this one are more likely to be under the direct control of management. In this case, management can either hire the needed staff or choose to pass over a prospective project. In addition to the obvious internal factors that affect how a computer technology company or e-business firm operates, a growing number of firms are concerned about how their e-business activities affect the environment. The term **green IT** is now used to describe all of a firm's activities to support a healthy environment and sustain the planet. Many offices, for example, are reducing the amount of paper they use by storing data and information on computers.

In contrast, external environmental forces are factors affecting e-business planning that originate from outside the organization. These forces are unlikely

Figure 16.7 Internal and External Forces that Affect an e-Business



cloud computing a type of computer usage in which services stored on the Internet are provided to users on a temporary basis

green IT a term used to describe all of a firm's activities to support a healthy environment and sustain the planet

© AP Images/PRNewFoto/ReadyTalk

to be controllable by an e-business firm. Instead, managers and employees of an e-business firm generally will react to these forces, attempting to shield the organization from any undue negative effects and finding ways to take advantage of opportunities in the ever-changing e-business environment. The primary external environmental forces affecting e-business planning include globalization, demographic, societal, economic, competitive, technological, and political and legal forces.

In this chapter, we have explored a business firm's need for information and how a computer, the Internet, and technology can help people to obtain the information they need. We also examined how e-business is changing the way that firms do business. In Chapter 17, we examine the accounting process, which is a major source of information for business.

return to inside business

Net-a-Porter

Fashionistas seeking the trendy new look by Chloé, Stella McCartney, or Marc Jacobs depend on Net-a-Porter for instant access to high fashion. This e-business pioneered luxury apparel retailing on the Internet, pampering its customers with hand delivery and free returns. Founder Natalie Massenet remembers: "A lot of people said, 'It won't work, people won't buy a £5,000 dress online,' but this was the way I wanted to shop. I love fashion and I wanted it to come to me."

Net-a-Porter's success caught the attention of Richemont, which took a minority stake in the e-business in 2002 and purchased the rest eight years later. Today, its U.K. and U.S. sites, including the outlet site, feature more than 300 fashion brands and attract up to 3 million visitors every

month. Combining personalized service with extras such as video runway shows and weekly fashion reports has made Net-a-Porter a must-click online destination for customers who want to stay in vogue.

Questions

1. Of the environmental forces affecting e-business, which seem to have had the most influence on Net-a-Porter's success, and why?
2. This chapter mentions two ways that e-businesses can increase profits. Net-a-Porter has concentrated on increasing sales revenue. How might Net-a-Porter reduce expenses without sacrificing the personal service that built its reputation?

SUMMARY

Summary

1 Examine how information can reduce risk when making a decision.

The more information a manager has, the less risk there is that a decision will be incorrect. Information produces knowledge and empowers managers and employees to make better decisions. Without accurate and timely information, individual performance will be undermined. Consequently, so will the performance of the entire organization. Because of the volume of information they receive each day and their need to make decisions on a daily basis, businesspeople use information rules to shorten the time spent analyzing choices. Information rules emerge when business research confirms the same results each time it studies the same or a similar set of circumstances.

Although many people use the terms *data* and *information* interchangeably, there is a difference. Data are numerical or verbal descriptions that usually result from some sort of measurement. Information is data presented in a form that is useful for a specific purpose. A database is a single collection of data and information stored in one place that can be used by people throughout an organization to make decisions. Although databases are important, the way the data and information are used is even more important. As a result, management information experts now use the term *knowledge management* (KM) to incorporate a firm's procedures for generating, using, and sharing the data and information contained in the firm's databases.

2 Discuss management's information requirements.

A management information system (MIS) is a means of providing managers with the information they need to perform their jobs as effectively as possible. The purpose of an MIS (sometimes referred to as an information technology system or simply IT system) is to distribute timely and useful information from both internal and external sources to the decision makers who need it. The specific types of information managers need depend on their area of management and level within the firm. The size and complexity of an MIS must be tailored to the information needs of the organization it serves.

3 Outline the five functions of an information system.

The five functions performed by an MIS system are collecting data, storing data, updating data, processing data into information, and presenting information. Data may be collected from such internal sources as company records, reports, and minutes of meetings, as well as from the firm's managers. External sources include customers, suppliers, bankers, trade and business publications, industry conferences, online computer services, and information-gathering organizations. An MIS must be able to store data until they are needed and to update them regularly to ensure that the information presented to managers is accurate, complete, and timely. Data processing is the MIS function that transforms stored data into a form useful for a specific purpose. Large groups of numerical data are usually processed into summary numbers called statistics. Finally, the processed data (which now can be called information) must be presented for use. Verbal information generally is presented in the form of a report. Numerical information most often is displayed in graphs, charts, or tables.

4 Describe how computers and technology help improve productivity, decision making, communications, sales, and recruiting and training.

Today, many employees use computers and the Internet to improve productivity and performance and communicate with other employees while at the office or away from the office. Three different applications—decision-support systems, executive information systems, and expert systems—can help managers and employees to speed and improve the decision-making process. Another application in the workplace is electronic mail, or simply e-mail, which provides for communication within and outside the firm at any time, 24 hours a day, seven days a week. An extension of e-mail is groupware, which is software that facilitates the management of large projects among geographically dispersed employees as well as such group activities as

problem solving and brainstorming. The Internet and a sales force automation software program can provide a database of information that can be used to assist a sales representative. The Internet also can be used to improve employee training and recruitment while lowering costs. Now, with the help of technology, more and more employees are telecommuting and using virtual offices. A number of software applications—word processing, desktop publishing, accounting, database management, graphics, and spreadsheets—can all help employees improve productivity. Today, business firms have systems in place to backup important data and information.

5 Analyze how computers and technology change the way information is acquired, organized, and used.

We live in an information society—one in which large groups of employees generate or depend on information to perform their jobs. To find needed information, many businesses and individuals use the Internet. The Internet is a worldwide network of computers linked through telecommunications. Firms also can use an intranet (local-area network) to distribute information within the firm. Both the Internet and intranets are examples of a computer network. A computer network is a group of two or more computers linked together to allow users to share data and information. Today, two basic types—local-area networks (LANs) and wide-area networks (WANs)—affect the way employees and the general public obtain data and information. Today, employees and the general public connect to the Internet, enter a Web address, or use a Web search engine to access information. That information is presented on a Web site created and maintained by business firms; agencies of federal, state, and local governments; or educational or similar organizations. Because a Web site should provide accurate information, great care is required when creating a Web site.

6 Explain the meaning of e-business.

e-Business, or electronic business, can be defined as the organized effort of individuals to produce and sell, for a profit, the goods and services that satisfy society's needs *through the facilities available on the Internet*. The human, material, information, and financial resources that any business requires are highly specialized for e-business. In an effort to reduce the cost of e-business resources, many firms have turned to outsourcing.

Using e-business activities, it is possible to satisfy new customer needs created by the Internet as well as traditional ones in unique ways. Meeting customer needs is especially important when an e-business is trying to earn profits by increasing sales and reducing expenses. Each source of revenue flowing into the firm is referred to as a revenue stream.

7 Describe the fundamental models of e-business.

e-Business models focus attention on the identity of a firm's customers. Firms that use the Internet mainly to conduct business with other businesses generally are referred to as having a business-to-business, or B2B, model. When examining B2B firms, two clear types emerge. In the first type of B2B, the focus is simply on facilitating sales transactions between businesses. A second, more complex type of the B2B model involves a company and its suppliers. In contrast to the focus of the B2B model, firms such as Amazon or eBay clearly are focused on individual buyers and so are referred to as having a business-to-consumer, or B2C, model. In a B2C situation, understanding how consumers behave online is critical to the firm's success. Successful B2C firms often make a special effort to build long-term relationships with their customers. While B2B and B2C models are the most popular e-business models, there are other models that perform specialized e-business activities to generate revenues (see Table 16.4).

8 Explore the factors that will affect the future of e-business.

Because of the advent of commercial activity on the Internet, developments in e-business have been rapid and formidable. Today, most firms involved in e-business use a more intelligent approach to development. The long-term view held by the vast majority of analysts is that the Internet will continue to expand along with related technologies. While approximately 73 percent of Americans now have access to the Internet, it is expected that worldwide users will exceed 2.1 billion by 2012. When you consider the future of computer technology, the Internet, and e-business, social networks, ethics and social responsibility, and Internet crime are all factors that must be considered in the future. Although the environmental forces at work are complex, it is useful to think of them as either internal or external forces that affect an e-business. Internal environmental forces are those that are closely associated with the actions and decisions taking place within a firm. In contrast, external environmental forces are those factors affecting an e-business originating outside an organization.

Key Terms

You should now be able to define and give an example relevant to each of the following terms:

data (465)	executive information system (EIS) (472)	broadband technology (477)	business-to-business (or B2B) model (484)
information (465)	expert system (472)	intranet (477)	business-to-consumer (or B2C) model (484)
database (466)	groupware (473)	computer network (477)	social network site (486)
knowledge management (KM) (466)	collaborative learning system (473)	wide-area network (WAN) (477)	spamming (486)
management information system (MIS) (466)	virtual office (475)	local-area network (LAN) (477)	cookie (486)
information technology (IT) officer (466)	computer backup (476)	e-business (electronic business) (479)	log-file records (486)
data processing (470)	information society (476)	outsourcing (480)	data mining (487)
statistic (470)	Internet (477)	revenue stream (481)	malware (487)
decision-support system (DSS) (472)	World Wide Web (the Web) (477)	business model (483)	computer virus (487)
			cloud computing (488)
			green IT (488)

Review Questions

1. In your own words, describe how information reduces risk when you make a personal or work-related decision.
2. What are information rules? How do they simplify the process of making decisions?
3. What is the difference between data and information? Give one example of accounting data and one example of accounting information.
4. List the five functions of an MIS.
5. What are the components of a typical business report?
6. Describe the three types of computer applications that help employees, managers, and executives make smart decisions.
7. How can computers and software help the firm's employees communicate, increase sales, and recruit and train employees?
8. Explain the differences between the Internet and an intranet. What types of information does each of these networks provide?

9. What is the difference between a wide-area network (WAN) and a local-area network (LAN)?
10. What factors should be considered when a firm is developing a Web page?
11. What are the four major factors contained in the definition of e-business?
12. How do e-businesses generate revenue streams?
13. What are the two fundamental e-business models?
14. Give an example of an unethical use of computer technology by a business.
15. What is the difference between internal and external forces that affect an e-business? How do they change the way an e-business operates?

Discussion Questions

1. Do managers really need all the kinds of information discussed in this chapter? If not, which kinds can they do without?
2. How can confidential data and information (such as the wages of individual employees) be kept confidential and yet still be available to managers who need them?
3. Why are computers so well suited to management information systems (MISs)? What are some things computers *cannot* do in dealing with data and information?
4. How could the Internet help you to find information about employment opportunities at Coca-Cola, Johnson & Johnson, or Microsoft? Describe the process you would use to access this information.
5. Can advertising provide enough revenue for an e-business to succeed in the long run?
6. Is outsourcing good for an e-business firm? The firm's employees? Explain your answer.
7. What distinguishes a B2B from a B2C e-business model?

Video Case 16.1

How E*Trade Uses e-Business

E*Trade, the highly successful financial and banking services company, offers many quick and easy-to-use online investment and financial planning tools, which most of its customers rely on for their investment transactions. The company has only 28 brick-and-mortar retail branches around the United States for in-person service, but E*Trade users hold nearly 5 million bank and brokerage accounts with the company. E*Trade is so adept at e-business that it sees the Internet as "just another medium," though it is a particularly useful one. Says one of the company's senior vice presidents, "Our customers want to communicate with us very efficiently, very effectively, and they choose to do it online." Increasingly, in fact, thousands of those customers are using mobile phone applications, called Mobile-Pro, to contact E*Trade, get investing information, and conduct their trades. E*Trade has made investing as quick and convenient as accessing the company's Web site from a computer, but now more portable.

"We have industry-leading applications (for) the high-active trader to the new-to-online-investing," says another senior vice president, "letting those customers invest with confidence regardless of who they are. I think that becomes a real differentiator for us as a company. . . . We're the first one to offer the ability for a customer to trade on a BlackBerry, and today, our biggest growth area has been with the iPhone." E*Trade was also the first online investing company to build an iPad application. "We had it out there for our

customers, day one, when Apple released the iPad. . . . We've seen many customers switch their accounts over to E*Trade because we had this app starting day one." The company is very pleased with customers' response to its phone apps, which were designed to be very similar in look and feel. "If you've used one," says the firm, "you can virtually use almost any of them."

Investment tools available from E*Trade's Web site around the clock include trading charts, streaming news and stock quotes, live "watch" lists, and screening tools, as well as a new customer-feedback link. Global markets on which E*Trade's customers can buy and sell securities are in Canada, France, Germany, Hong Kong, Japan, and the United Kingdom. As one of the company's executives says, "It's not really about finding the trade, but it's about finding it first. So we've got to deliver speed and reliability on a particular platform." Securities trade instantaneously online when the stock exchanges are open, on the next trading day if not, or when a particular security meets the customer's stated buy or sell price. If a customer has a problem or question, E*Trade maintains customer service teams and an online customer service center 24 hours a day, seven days a week.

SmartMoney magazine recently gave E*Trade its highest rating for excellence based on its trading tools, banking services, and customer service. Barron's also gave the firm high marks for trade experience and technology, usability, customer service, and cost. Because it doesn't sell any of its own

investment vehicles, E*Trade is able to offer fair and competitive pricing, including special prices for high-volume traders. Its well-organized Web site also provides a wide array of free research and educational materials for investors of all types, from the novice to the very experienced, and in different formats including webinars, short videos, written articles, and other resources that users can access at their own convenience, whether they want to start investing, diversify their portfolio, or plan their retirement as an employee or a small-business owner. “At E*Trade you’ll never stop learning,” says the Web site, “and that’s a good thing.”¹³

Questions

1. Each year E*Trade helps millions of individuals evaluate and invest in publicly traded companies. It also operates a Corporate Services business that helps firms, from start-ups to *Fortune* 500 companies, manage their stock plans. What type of business model(s) is E*Trade using?
2. What are some of the ways in which E*Trade works to strengthen its competitive position as an e-business?
3. What are some of the advantages offered by E*Trade’s mobile apps? How do these capitalize on the capabilities of the Internet?

Case 16.2

How eBags Does e-Business



More than 500 luggage stores in the United States closed in the travel slump that began September 11, 2001. eBags, the online luggage and handbag retailer, was just a few years old at the time, and a few thousand dollars away from turning its first profit. However, like many other firms, it immediately set up a way for customers to donate money in the wake of the terrorist attacks, collecting almost a quarter of a million dollars.

“We were about four days into it,” remembers co-founder Jon Nordmark, “when we realized ‘Oh my God, we’re not getting any orders.’” As fellow co-founder and senior vice president Peter Cobb describes the situation, the fall off in travel hurt luggage sales, and troubled economic times compounded the firm’s bad news. “We were really just in a foxhole waiting for nuclear winter to end,” he says.

The company moved fast, however, expanding its product offerings to include “day” bags such as briefcases, backpacks, purses, and laptop carriers. Another strength was its policy of drop shipping, ordering from suppliers only when customers order from eBags and letting suppliers ship products directly to customers. As a result, eBags avoids the usual retail problem of needing to have a lot of stock on hand to meet demand. “This drop ship model is the reason we’re alive,” Cobb says. “We don’t have to spend tens of millions [of dollars] buying products and putting them in a warehouse.” Thanks to quick action and good business planning, the company managed to turn a profit that year and never looked back.

Today, eBags is a \$100 million company with about 100 employees and has sold over 7 million bags since its founding. As the biggest online retailer of luggage and bags of all kinds and a leader in the use of Internet technology, it offers 40,000 different products from 520 brands. Inspired by its fund-raising success after 9/11, the company also continues its commitment to the community, giving more than \$500,000 to breast cancer research and donating thousands of bags and packs to foster children around the United States.

As eBags has grown, it’s become more sophisticated in its use of technology. For example, the company segments its database of 1 million customers and can target individuals in different groups with personalized messages based on

their previous purchases and other details. It also offers its products through eBay and other online channels.

Hallmarks of eBags’ award-winning Web site are multiple photographs of each product, full-color images in every available color instead of mere swatches, and videos starring employees who seek out and interview up-and-coming New York and Los Angeles designers to showcase their products on the site. Google Maps help shoppers locate other new designers around the country. Specialized search tools locate specific products, like airline-approved carry-on luggage. Unlimited customer reviews—as many as 4,000 for one popular product and more than 1.5 million overall—encourage customers to rate products and read others’ comments. Visitors can even post their own videos. “What we’re really saying is, ‘It’s your whiteboard,’” says Cobb.

The company developed most of these interactive software applications in-house. They’re costly to maintain, requiring a staff of 40 people and an annual budget of about \$10 million. However, eBags believes they contribute directly to sales, which doubled in one recent year and continue to grow. “It is important for us to have unlimited customer reviews, so we do it ourselves,” says Cobb. “An outside vendor might limit you to 100 customer reviews. When you go outside, you tend to be forced to cut corners on innovation—you have to dilute the customer experience to be like everyone else.”¹⁴

For more information about this company, go to <http://www.ebags.com>.

Questions

1. What are some of the reasons eBags has grown to be so successful?
2. What information do you think a company like eBags collects from its Web site? How might eBags use such data to improve its customer service and its business performance?
3. eBags was one of the first online stores to allow customer reviews on its Web site, and now sells its in-house technology to non-competing retailers. What other steps do you think an e-business like eBags might take to keep growing in the future?

Building Skills for Career Success



1 JOURNALING FOR SUCCESS

Today, more and more people use the Internet to purchase products or services. And yet, many people are reluctant to make online purchases because of identity and privacy issues. Still others are “afraid” of the technology.

Assignment

1. Have you ever used the Internet to purchase a product or service? If you answered yes, why did you purchase online as compared with purchasing the same product or service in a traditional retail store?
2. In your own words, describe whether the online shopping experience was a pleasant one. What factors contributed to your level of satisfaction or dissatisfaction?
3. If you answered no, describe why you prefer to shop in a traditional retail store as compared with shopping on the Web.

2 EXPLORING THE INTERNET

Computer technology is a fast-paced, highly competitive industry in which product life cycles sometimes are measured in months or even weeks. To keep up with changes and trends in hardware and software, MIS managers routinely must scan computer publications and Web sites that discuss new products.

A major topic of interest among MIS managers is groupware, software that facilitates the management of large projects among geographically dispersed employees, as well as group activities such as problem solving and brainstorming.

Assignment

1. Use a search engine and enter the keyword “groupware” to locate companies that provide this type of software. Try the demonstration edition of the groupware if it is available or read case studies where groupware has been used to manage a large project.
2. Based on your research of this business application, why do you think groupware is growing in popularity?
3. Describe the structure of one of the groupware programs you examined as well as your impressions of its value to users.

3 DEVELOPING CRITICAL-THINKING SKILLS

To stay competitive in the marketplace, businesses must process data into information and make sure that information is readily available to decision makers. For this, many businesses rely on a management information system (MIS). The purpose of an MIS is to provide managers with accurate, complete, and timely information so that they can perform their jobs as effectively as possible. Because an MIS must fit

the needs of the firm it serves, these systems vary in the way they collect, store, update, and process data and present information to users.

Assignment

1. Select a local company large enough to have an MIS. Set up an interview with the person responsible for managing the flow of information within the company.
2. Prepare a list of questions you will ask during the interview. Structure the questions around the five basic functions of an MIS. Some sample questions follow:
 - a. *Collecting data.* What types of data are needed? How often are data collected? What sources produce the data? How do you ensure that the data are accurate?
 - b. *Storing data.* How are data stored?
 - c. *Updating data.* What is the process for updating?
 - d. *Processing data.* Can you show me some examples of the types of data that will be processed into information? How is the processing done?
 - e. *Presenting information.* Would you show me some examples (reports, tables, graphs, charts) of how the information is presented to various decision makers and tell me why that particular format is used?
3. At the end of the interview, ask the interviewee to predict how the system will change in the next three years.
4. In a report, describe what you believe the strengths and weaknesses of this firm’s MIS are. In addition, describe the most important thing you learned from the interview.

4 BUILDING TEAM SKILLS

To provide marketing managers with information about consumer reactions to a particular product or service, business researchers often conduct focus groups. The participants in these groups are representative of the target market for the product or service under study. The leader poses questions and lets members of the group express their feelings and ideas about the product or service. The ideas are recorded, transcribed, and analyzed.

Assignment

1. Working in a small team, select a product or service to research—for example, your college’s food service or bookstore or a new item you would like to see stocked in your local grocery store.
2. Create a list of questions that can be used to generate discussion about the product or service with focus-group members.
3. Form a focus group of five to seven people representative of the market for the product or service your team has selected.

- During the group sessions, record the input. Later, transcribe it into printed form, analyze it, and process it into information. On the basis of this information, make recommendations for improving the product or service.
- In a report, describe your team's experiences in forming the focus groups and the value of focus groups in collecting data. Use the report as the basis for a three- to five-minute class presentation.

5 RESEARCHING DIFFERENT CAREERS

Firms today expect employees to be proficient in using computers and computer software. Typical business applications include e-mail, word processing, spreadsheets, and graphics. By improving your skills in these areas, you can increase your chances not only of being employed but also of being promoted once you are employed.

Assignment

- Assess your computer skills by placing a check in the appropriate column in the following table:
- Describe your self-assessment in a written report. Specify the skills in which you need to become more proficient, and outline a plan for doing this.

Software	Skill Level			
	None	Low	Average	High
e-Mail				
Word processing				
Desktop publishing				
Accounting				
Database management				
Graphics				
Spreadsheet				
Groupware				
Internet research				