Learning Goals

1. Discuss how the Internet provides new routes to business success.
2. Describe the increasing diversity of Internet users.
3. Summarize the Internet’s four functions and give examples of each.
4. List the major forms of business-to-business e-commerce.
5. Name the major forms of business-to-consumer e-commerce.
6. Describe some of the challenges associated with Internet selling.
7. Describe how companies develop and manage successful Web sites.
8. Explain how global opportunities result from technological advances.
The Internet is an ocean of opportunity for businesses. It’s also a place where many businesses can—and do—drown, simply because of its size and the number of predators lurking in its waters. Existing brick-and-mortar companies want to take advantage of the Internet to broaden their markets and streamline their operations, and some new companies are starting business solely on the Internet. They all have something in common: the need to establish their presence with a Web site. An effective Web site—one that is easy to find and easy to use—is essential for any company that wants to do business on the Internet. If the site is also attractive and offers useful information, it can build excitement and interest. But most companies don’t know how to build the sites themselves. They don’t have the technology or the expertise. And amateur-looking sites don’t cut it anymore. In fact, numerous do-it-yourself sites have failed. That’s where Razorfish glides into the picture.

Razorfish was founded in 1995 by Jeff Dachis and Craig Kanarick when they recognized that many fledgling Web sites failed because of poor design. Many sites drove consumers away because people couldn’t figure out how to navigate through them, let alone conduct any kind of transaction. Dachis and Kanarick decided they would become the link between a business and its customers by designing and building better sites. “Everybody’s slapping all this stuff together,” says Dachis. “They aren’t thinking about what the users want.” Dachis and Kanarick named their company after a spiny-finned Mediterranean fish, just because its picture looked kind of cool in the dictionary. But the name has become synonymous with cutting-edge Web site design.

The Razorfish team’s approach is to get to know their customers and understand the big picture before digging into the details of design. When working with the brokerage firm Charles Schwab Corp., Razorfish employees met with Schwab’s executives to hammer out the broker’s goals for its online division, Schwab.com. Since one of Schwab’s main goals was to attract new customers to the site and offer them an opportunity to open an account there, Razorfish designers eventually decided that the site’s “Open an Account” link should be placed at the upper left-hand corner of the home page, where it would be simple to spot. Since many of Schwab’s competitors downplay that link on their sites, Razorfish’s approach was to highlight it, making it easy for new customers to use.

In addition to interviewing Schwab executives, Razorfish designers interviewed online traders, including some of its own employees. They asked questions such as “What’s great about the online trading experience? What’s terrible?” Then they put the answers to work. Razorfish also learned that many people were still using old-fashioned, small monitors, which meant that designers couldn’t fill up the screen with unnecessary bells and whistles. And it’s not good to allow important information to “fall off the screen,” forcing the user to scroll up and down or back and forth. So the Schwab site had to be tightly designed.

Then came the appearance of the site itself, which had to match the company’s image. Schwab ultimately chose a pinstriped motif in soft blues. “It’s a very business-oriented, strong, Wall Street-like color palette,” notes Thomas Mueller, creative director for Razorfish.

With five offices in Europe and three in the United States, Razorfish has designed sites for brick-and-mortar companies such as CBS Corp. as well as Internet-based firms—called dot-coms—running the gamut from the Smithsonian Institution to underwear manufacturer Joe Boxer. In Britain, Razorfish has designed sites for the Spice Girls, NatWest, the Millennium Dome, the Paramount Comedy Channel, and British Aerospace. “The demand is still extremely high,” remarks Mark Curtis, strategic solutions director for Razorfish. The market for our kind of services is expanding at a rate of nearly 150 percent a year.” One industry watcher says that concentrating on Europe is a good strategy for Razorfish. Because Europe is a few years behind the United States in business conducted on the Internet, Razorfish can learn from mistakes U.S. businesses make and can capture its share of the growing market in Europe.

The next time you log on to the Internet, pay attention to the sites you visit. Which do you like the most? Which do you hardly glance at? Razorfish wants to know what will make you and millions of other online shoppers return to its customers’ sites and click that “buy now” key. They won’t be the only fish in the Internet sea, but they are determined to be the strongest—and the sharpest.1
CHAPTER OVERVIEW

Like Razorfish and other businesses worldwide, more and more firms in every industry are operating in cyberspace. Increasingly, executives are asking themselves, “What does Internet technology mean to me and my business?” The Internet offers contemporary businesspeople a source of information, a means of communication, and a channel for buying and selling, all rolled into one. And the Internet offers tremendous opportunities for those who are willing to make the leap online.

In this chapter we describe the ways that the Internet is revolutionizing the face of business. We begin with an overview of the Internet, including its origins, scope, and components. Then we describe how individuals and businesses use the Internet. Later, we review electronic commerce and its implications for both businesses and consumers, including how companies use Web sites to further their objectives. The Internet also drives the globalization of business, so we investigate how e-commerce is helping companies take advantage of opportunities around the globe.

THE INTERNET: KEY TO BUSINESS SUCCESS

Want to find the cheapest price for a new car, computer, hotel room, or insurance? How about movie reviews and a schedule of what’s playing in your neighborhood? Suppose you want to sell DVD players to affluent Mexican shoppers but don’t know the size of the market or the applicable regulations. Just go online. With a few clicks of your computer’s mouse, you can find the answer to just about any question. Besides looking up information, you can trade messages with friends and colleagues, join in an online discussion, play interactive games, listen to music, and make purchases. No wonder the average adult Internet user is expected to devote almost two years of his or her remaining life to online activities.

Although many people think of the Internet as a fairly recent development, it actually began in 1969 as a Department of Defense experiment that involved networking four computers to facilitate communications in the event of a nuclear war. Until about 1993, the Internet (or Net) remained an obscure computer network with few commercial applications. Today, however, this all-purpose, global network allows computer users anywhere to send and receive data, sound, and video content. Its growth has been phenomenal, with host computers doubling annually. By 2001, Internet users numbered 375 million people worldwide. By 2005, one person in ten will be a regular Internet user. In the United States, almost two-thirds of all Americans 12 years of age and older used the Internet in a recent year, and almost half of those logged on daily.²

A major factor in the Internet’s growth was the introduction of technology that provided point-and-click access to the World Wide Web (or Web, for short). The Web is an interlinked collection of graphically rich information sources within the larger Internet. Web documents are organized into Web sites composed of electronic pages that integrate text, graphics, audio, and video elements. The pages include hypertext links, highlighted words or images that, when clicked on, whisk the user to other documents. Browsers are software programs that help users navigate the Web to locate, retrieve, and display information. By typing in search words or simply clicking on hypertext links, users can explore the Web. The most widely used Web browsers are Netscape Navigator and Microsoft Internet Explorer.

Today the Web is the most popular Internet resource. From just 100 Web sites in 1993, the scope of the Web has grown to more than 25 million registered domain names today.³ A domain name is a Web site address. Although not every domain name has an operating Web site, the incredible increase in only a few years shows that the scope and potential of the Web are enormous.

Although the Internet has been considered an industry for only a few years, online transactions are already generating hundreds of billions of dollars in revenues.

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They Said It

“The Net is a 10.5 on the Richter scale of economic change.”

Nicholas Negroponte (b. 1945)
American writer and director of the MIT Media Laboratory
In addition, many types of companies are selling the hardware and software required for Internet use as well as providing support services. Telecommunications companies provide local and long-distance network transmission lines, and computer and electronics manufacturers supply resources that help to complete the Internet’s infrastructure. Software developers create programs for a host of Internet applications such as multimedia transmissions and Web page design. Entertainment and media companies develop the content that Web surfers see, and service businesses offer Web site design and specialized software for electronic commerce. U.S. businesses spend an estimated $120 billion annually to develop or improve their presence on the Internet. Also, many companies sell advertising on their Web pages to generate revenue.

**How the Internet Works**

The Internet is a remarkable system of cooperating networks. In seconds, you can send e-mail from Montana to Hong Kong, search the archives of European newspapers, plan your next vacation, gather product information, or buy a best-selling novel.

To understand how this complex system of networks operates, follow the journey of an e-mail message that you send to a friend in a different state. In the example shown in Figure 7.1, your message begins its Internet journey at your personal computer (PC), from which it travels through phone lines; modems convert digital data into analog form compatible with the phone lines. The data arrives at the modems of your Internet service provider (ISP), an organization that provides access to the Internet through its own series of local networks. Thousands of ISPs offer local Internet access to North American cybernauts.

This process is similar but faster if your friend has newer broadband technology, such as a digital subscriber line (DSL), a cable modem, or a satellite link to the Internet. With DSL, data travel over standard telephone lines between computers and telephone switching stations, but a DSL router or modem makes the data move at higher frequencies and much faster speeds. This technology permits voice and DSL transmissions to be transmitted simultaneously over the same phone line, and the Internet connection is continuous, so the user does not have to dial up for

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**BUSINESS DIRECTORY**

- **Internet (or Net)** world-wide network of interconnected computers that lets anyone with access to a personal computer send and receive images and data anywhere.
- **World Wide Web (Web)** collection of resources on the Internet that offers easy access to text, graphics, sound, and other multimedia resources.
- **Web site** integrated document composed of electronic pages that integrate text, graphics, audio, and video elements, as well as hypertext links to other documents.
- **Internet service provider (ISP)** organization that provides access to the Internet, usually via the public telephone network.
Internet service. A cable connection uses the same line that supplies cable television programming. Satellite hookups have been relatively slow to catch on in the United States, where phone service is inexpensive and reliable. However, users in other countries have been faster to adopt satellite technology, which allows them to connect to the Internet from a cellular phone as well as a computer. In Finland, more than two-thirds of people use cell phones to connect to the Internet and look up information, send e-mail, and even make purchases.\(^5\) But wireless technology is catching on in the U.S., as it offers faster downloading than a standard phone hookup can deliver. Wireless capabilities enable new applications of the Internet, such as General Motors’ OnStar dashboard communications system, which lets drivers access the Internet from their cars. Drivers with OnStar can use the Internet to find a restaurant, make reservations, get driving directions, and even call for help if they have a flat tire along the way.\(^6\)

What happens when the message reaches the recipient’s ISP network? The answer to this question requires a basic understanding of client/server systems. The message you sent is stored with the ISP’s server, a larger, special computer that holds information and then provides it to clients on request. A client is another computer or device that relies on the resources of one or more servers for help with its own processing. Traditionally, clients have been desktop PCs, but Internet users are increasingly connecting from various other devices, including laptop and palmtop computers, televisions, and cell phones. Servers efficiently distribute resources to a network of client computers as needed. When your friend wants to check his or her e-mail, the message travels back through phone, DSL, or cable lines or via wireless transmission to his or her modem.

The ISP functions as the intermediary for its customers. Monthly or hourly user fees cover the cost of equipment such as ISP modems, servers, related software, proprietary and leased networks, and in some cases original content. Some ISPs offer free services to consumers, but the trade-off for users is being forced to view large amounts of advertising posted on the site. Although many of them consider this barrage of ads more annoying than paying monthly subscription fees, the number of users of free ISP services continues to grow.

Who’s on the Net?

Although the Internet was born in the United States, its users now live on every continent. At the beginning of the 21st century, 43 percent of Internet users were in the U.S., but the share of users from other countries is growing. By 2006, about three-quarters of the Internet user population will live outside the U.S.\(^7\) As Figure 7.2 shows, of the world’s 375 million Internet users, the four nations with the largest concentrations of Net users are located on three different continents: North America (United States), Asia (Japan), and Western Europe (Germany and the United Kingdom). South America, the fourth continent represented among the top ten, lists Brazil as the nation with the largest concentration located south of the equator.

Recent studies of U.S. Internet users reveal some major trends toward an increasingly diverse Net population:

- Although the Internet was once dominated by men, the gender gap has narrowed. Women now represent more than half of Internet users in the United States and a sizable share in other nations—more than a third in the United Kingdom and Germany and four in ten in Sweden.\(^8\) Women were estimated to be 45 percent of the Internet’s global population in 2001.\(^9\)
The earliest users of the Internet were disproportionately white and Asian American, but black and Hispanic Americans are now obtaining Internet access at a faster rate.

The average age of users is rising. The fastest-growing share of the Internet population is adults 45 years of age and older, and this age group spends more time on the Internet than 18- to 24-year-olds.

Net users tend to be more affluent and to attain higher levels of education than the general population.

Time spent online is rising, taking away from television and newspapers, as well as time spent in stores and with family and friends.

Just as the population of individuals using the Internet is becoming more like the overall population, so is the mix of businesses on the Internet. A Web site once set a company apart as “high-tech,” but most large businesses have by now established an Internet presence. Today, two of every five U.S. small businesses have Web sites, and more than two-thirds of them are connected to the Internet. Small businesses owned by women and minorities use the Net most often.

**Using the Net’s Four Functions**

What do these “Netizens” do online? As Figure 7.3 shows, one or more of the primary functions are performed on the Web: communication, information gathering and sharing, entertainment, and business transactions (e-commerce).

**Communication**

Most people go online to communicate. For both households and businesses, the most popular application of the Internet in the U.S. is e-mail. In fact, e-mails now outnumber regular mail by ten to one. Its popularity is easy to understand: e-mail is simple to use, travels quickly, and can be read at the receiver’s convenience. Also, longer documents can be sent as attachments to e-mail messages.
A more recent adaptation of e-mail is **instant messaging**. With this application, when someone sends a message, it is immediately displayed on the recipient’s computer screen. As sender and recipient reply to one another, they can communicate in real time.

Another popular way to communicate online is through chat rooms. Chat rooms provide a forum in which a group of people can share messages. When someone sends a message, it is displayed for all to see. Users join chat sessions on topics that interest them. The resulting **online communities** are not only personally satisfying but an important force for businesses. Some companies participate in or even sponsor such communication. Playing Mantis has built a successful business manufacturing and selling car models and action figures from the 1960s. If you have older relatives who long for a model Corvette Stingray or The Phantom or Green Hornet action figures, you can send them to Playing Mantis to satisfy that need. In addition to manufacturing the toys, the company generates interest in them by participating in online chat rooms. Customer service manager Lisa Greco routinely participates in these discussions. In the mid-1990s, when online communication was still new, a Web site called Hobbytalk began sponsoring a bulletin board for collectors of Playing Mantis’s line of Polar Lights models, later adding boards for other product lines. Greco routinely logs on to answer questions and announce new products. Over the years, regular visitors to the site have developed a sense of belonging to it—and a passion for Playing Mantis and its products. When Playing Mantis modernized its Web site, the launch was a mess, but high-tech members of this unofficial community patiently surfed the site and posted recommended fixes. Within days, the company got the site running properly. Greco and the other managers of Playing Mantis are convinced that this type of communication gives them an unbeatable edge—customers who feel like part of the company.15
Voice technology is now coming to the Web, and videoconferencing won’t be far behind. Internet telephony allows users to use their computers to dial up and speak to friends and business associates alike. Voice messages are divided into segments called packets, which move over the transmission lines and are reassembled at the receiving end. Although the voice quality is currently not as good as regular telephone service and some packets can arrive out of sequence, the quality and reliability will improve in the future.

Businesses also use the Internet to communicate promotional messages. Marketers use the Web to build brand relationships and offer goods and services via e-mail, advertisements, sweepstakes, and more. Use of the Internet as a tool for marketing communications is discussed in Chapter 16.

Information In a recent consumer survey, 82 percent of Web users said getting information was one of the reasons they use the Internet. Internet users meet their need for information at commercial sites such as AskJeeves and Northern Light, which search for information on topics entered by the user. Or they may visit online publications such as the Chicago Tribune’s and The Wall Street Journal’s online editions. Government sites provide a wealth of free data in the public domain. Newsgroups provide a forum for participants to share information on selected topics. Another fast-growing area of the Internet consists of sites providing online educational services. John Chambers, chief executive officer (CEO) of Cisco Systems, recently wrote in a New York Times editorial, “Education over the Internet is going to be so big, it’s going to make E-mail usage look like a rounding error.” One-third of U.S. colleges now offer some sort of accredited degree online, and private investment in education-related Internet companies more than doubled every year throughout most of the 1990s. These companies include publishers, schools, and corporate training services.

With such an enormous variety of possibilities, some of the most popular Web sites are portals, sites designed to be a user’s starting place when entering the World Wide Web. The most widely visited Web sites are Yahoo! (www.yahoo.com), America Online (www.aol.com), and Microsoft Network (www.msn.com). All of these sites serve as portals, offering links to search engines, weather reports, news, yellow pages, maps, and other popular types of information, as well as e-mail, chat rooms, and the ability to bookmark favorite sites in order to click to them directly in the future.

Many sites specialize in particular types of information. For example, Travelocity, Expedia, Lowest Fare, and a number of other sites search for airline flights that meet the user’s criteria for date, city, and price. Visitors to the UPS Web site (www.ups.com) can check the delivery status of their packages. Other sites offer product reviews, maps and driving directions, stock prices, sports coverage, and much, much more.

Businesses turn to the Web to gather information about their rivals and to assess industry trends. Executives can visit competitors’ Web sites to learn about new-product announcements and check financial reports. They can read trade and business publications online and visit the Web sites of their professional organizations. Business-oriented Web portals offer links useful to businesspeople. The CEO Express Web site offers links to business publications, industry statistics, travel services, search engines, and other sites that can help with a manager’s work. Other companies, including
Yahoo!, Viador, and Microsoft, set up portals tailored to the individual needs of their business customers. These corporate portals combine a company’s data with information from the Internet.

Companies can also use the interactive technology of the Internet to gather information about their customers. For example, some sites ask visitors for personal information through registration or sweepstakes entry forms. Figure 7.4 shows a sweepstakes site run by fastfreefun.com. To enter, visitors to this site provide their name, e-mail address, and other information. Sites that accept online orders gather the user-provided data, such as shipping addresses, along with purchase data. Even sites that do not ask for data can track the usage patterns of visitors to the site. With each type of data, marketers can adapt content, services, and advertising to their typical Web site users.

As an information source, the Internet is only as reliable as the individuals and companies who provide the information published there. Articles posted on Encyclopedia Britannica’s Web site are likely to be more objective than Web sites put up by individuals to promote a particular viewpoint. Likewise, the ease of sending e-mail messages has markedly increased the speed with which people disseminate so-called urban legends, such as the story that the AIDS virus was on needles in gasoline pumps or flesh-eating viruses were found on banana peels. Because of the spread of misinformation, some practical cautions are essential for Web information gatherers:

- Know your source. Whenever you read information on the Web, make sure you have identified the provider of the information. Is it a reputable publication or news service, a known expert, or an organization or person with a position to promote? Recently, there has been a rash of attempts to manipulate stock prices by posting misinformation on investment sites. The rumor spreaders then try to cash in on the wild swings in stock prices—and they hurt other investors in the process.19 The moral? Check the accuracy of information on the Web before acting on it.
- Investigate information by checking more than one source. The old saying “If it sounds too good to be true, it probably is” applies to the Internet just as it does in the rest of the world.
- Don’t believe all the e-mail announcements forwarded to you, especially messages that urge you to “forward this to 20 friends.” Check out the story at one of the Web sites that specialize in squelching false rumors and urban legends. These include the U.S. Department of Energy’s Computer Incident Advisory Capability (CIAC), at ciac.llnl.gov, and About.com’s Web pages titled “Virus Hoaxes” and “Urban Legends and Folklore.” These sites are not only informative, but highly entertaining.

Entertainment Besides reading urban legends, Internet users are finding other entertainment online, including everything from concert Webcasts to online gaming. Some Internet users even participate in more than one form of entertainment at once. A study of children using the Internet found that 86 percent of teenage girls who go
online listen to the radio at the same time. Other Web surfers manage to watch television while they are online. These mixed-media users, whom marketers call "telewebbers," number an estimated 44 million in the U.S.

Online providers of entertainment can offer competitive prices, speed, and boundless services. Games, radio programming, short movies, and music clips are available online, sometimes for free, with the costs borne by advertising on the Web site. And after decades of predictions that we will someday do most of our reading on computer screens, the technology finally seems to be in place. Products like the Rocket eBook allow users to download a book's contents from the Internet and read it on a
handheld device that simulates a book. In 2000, Stephen King’s novel *Riding the Bullet* became the first mass-market book published exclusively in electronic format. In the first day of the book’s release, 400,000 copies were downloaded—or at least ordered, since the huge demand caused backups at booksellers’ Web sites. That traffic may have indicated pent-up demand for high-tech publishing or perhaps the fact that the book was free on the first day it was offered.\(^{21}\) Other titles have been published both in paper and electronically, including Mario Puzo’s *Omerta* and Arthur Golden’s *Memoirs of a Geisha*.

The availability of free content poses some ethical and business challenges, discussed later in the chapter. However, those issues are unlikely to chase entertainment off the Internet.

**Business Transactions: E-Commerce** A newer application of Web technology, electronic business transactions, are growing at lightning speed. Customers can not only learn about companies and their products on the Internet but complete purchases. As discussed in Chapters 13 and 15, this gives the Web a key role in businesses’ sales and distribution strategies. Organizations from multinational corporations to individual entrepreneurs have established a Web presence or have begun planning one. Today customers can go online to buy everything from toys and books to cars and business equipment. As growing numbers of companies sell their products on the Web, business success requires understanding the Web’s advantages and its limitations and incorporating its use into a firm’s overall business plans and strategies. The owners of Camera World built on its solid reputation when they took the business online, as the “Clicks and Mortar” box described.

A Web presence builds awareness of a company’s products and brands, provides the means for one-on-one communication with customers, and can allow customers to place orders from anywhere in the world, at any time of day. At Ticketmaster’s Web site, customers can purchase tickets to the upcoming Fiona Apple concert, printing them out on their own printer. They can also look up local entertainment listings and even sign up for an online dating service to find someone to invite to the concert.\(^{22}\) These activities are the substance of electronic commerce, called e-commerce for short.

**THE SCOPE OF ELECTRONIC COMMERCE**

When a Silicon Valley giant like Oracle needs office furniture, its people naturally look online. They head for the Web site of a furniture company called CRI. By entering a password, they can view pages tailored to their purchase history, where they can see specifications, prices, and order forms. Not only does the site let customers place orders, but it allows them to plan office layouts by viewing, revising, and commenting on drawings. In addition, CRI plans to offer customers access to information about the status of their current orders and ways the company has resolved any past problems with their orders. So, the Web not only enables CRI and its customers to complete transactions, it also provides speedy, effective customer service.\(^{23}\)

Like CRI and Oracle, companies around the world are discovering the advantages of electronic commerce (e-commerce), marketing goods and services over the Internet by exchanging information between buyers and sellers, while in the process minimizing paperwork and simplifying payment procedures. As with other types of buyer–seller interaction, e-commerce involves a chain of events for customer and seller. It starts with product information; moves through the order, invoicing, and payment processes; and ends with customer service.

The first wave of e-commerce brought techniques such as charge-card approval systems, point-of-sale terminals, scanners, and even early Internet selling—all activities focused mainly on lowering sellers’ costs. As more firms discover the benefits of e-commerce, and as the Internet offers progressively more affordable services for
almost any business, power begins to shift toward buyers, who gain access to a wider range of vendors.

A number of innovations promote both business-to-business and business-to-consumer e-commerce. One is encryption systems, which enable users to gather credit card numbers and other personal data required for completing transactions while protecting the security of purchasers. Another is the growing use of broadband technologies, which enable users to download more data at much faster speeds. Broadband makes technologies such as video and audio streaming more enjoyable and thus more attractive to users. With such developments, the number of businesses participating in e-commerce is growing fast. More than half of U.S. companies today have sold products online, twice the number making such sales just four years ago.²⁴

The growth of e-commerce has attracted an army of specialized software firms and other service suppliers that provide expertise for firms taking their first steps into this competitive arena. As Figure 7.5 describes, global computer giant IBM offers its business customers both software and services designed to build virtual stores that go far beyond traditional Web sites. Although IBM originally was known as a producer of mainframe computers, it now generates one-fourth of its revenue from sales related to e-commerce—75 percent of that from software, services, and related technology. The company has a huge staff of consultants working on jobs ranging from designing Web sites to converting huge databases from “legacy” (old mainframe) systems to Internet systems. IBM will even run e-commerce systems for companies that want to outsource this activity. The company also sells its own personal computers online and offers answers to technical questions on its Web site. It even trains employees over the Internet as well as in classrooms. As a result, IBM’s Internet presence is both generating sales and slashing costs.²⁵

Profiting from E-Commerce

Much of the hype about e-commerce centers on sales of goods and services over the World Wide Web, but online product sales represent only one of several ways to generate revenue online. For example, two e-commerce businesses called Ezgov.com and GovWorks.com are partnering with governments to set up Web sites at which citizens can interact with government agencies to register cars, pay taxes, look for government jobs, and participate in government auctions, among other activities. The companies generate revenues by charging users a fee for each transaction and selling advertising space on their sites.²⁶

So far, however, only a minority of companies report profits from their Web sites. Of sites catering to business customers, 27 percent were reported to be profitable in their first year. In contrast, among the sites that have survived at least three years, 42 percent claim to be profitable.²⁷ Profitability among online retailers—companies selling to consumers rather than business customers—is most common among those that already had off-line customers, including catalog retailers like Lands’ End and Hanover Direct, whose catalogs include Gump’s, the Company Store, and International Male. Such businesses have an advantage because consumers are more familiar with them and are reminded of the Web sites every time they look at the companies’ catalogs.²⁸

As Figure 7.6 shows, the business potential of e-commerce involves more than sales transactions.
Companies also establish an Internet presence to expand beyond their geographic boundaries to reach new markets, cut costs, and improve customer relationships. Putting massive industrial catalogs on the Web, for example, saves publishing and postage costs. With a few keystrokes, customers can send orders and service requests directly from their computers to the seller’s computer—cutting the need for inbound telemarketing personnel and other customer service representatives.

The two main types of e-commerce are transactions between businesses and transactions between businesses and customers. Both are offering new opportunities, but business-to-business e-commerce is taking the lead. Business-to-business transactions are fueling the growth of e-commerce and forging new relationships along the way.

**Business-to-Business Transactions Lead the Way**

One of the oldest applications of technology to business transactions is electronic data interchange (EDI), computer-to-computer exchanges of invoices, purchase orders, price quotations, and other business documents between buyers and sellers. EDI requires compatible hardware and software systems to exchange data over a network. Use of EDI cuts paper flow, speeds the order cycle, and reduces errors. In addition, by receiving daily inventory status reports from vendors, companies can set production schedules to match demand.

Wal-Mart was one of the first major corporations to adopt EDI in the early 1990s. In fact, the retailer refused to do business with distributors and manufacturers that did not use compatible EDI standards. EDI is one of the major reasons Wal-Mart was able to operate with the efficiency that made it a market leader. It can buy just the products its customers want, just when it needs to restock its shelves, a system known as quick response.

From those early efforts to computerize business transactions, companies have taken the next technological leap—to the Internet—and are reaping rewards for doing so. Business-to-business e-commerce, known as B2B, is the use of the Internet for business transactions between organizations. One-fourth of all B2B transactions are expected to take place on the Internet in 2003, amounting to $2.8 trillion. This penetration of e-commerce is predicted to increase to more than 40 percent of B2B sales by 2005. Those sales are spread out across many businesses. The number of U.S. businesses engaged in B2B e-commerce is expected to grow from 30 percent to more
than 90 percent in one year. Cisco Systems, Intel, and IBM are among the companies that generate billions of dollars in revenues online each year.

In addition to generating revenues from product sales, B2B e-commerce also provides detailed product descriptions whenever they are needed and slashes order-processing expenses. Business-to-business transactions, which typically involve more steps than consumer purchases, can be much more efficient on the Internet. Orders placed over the Internet typically contain fewer errors than handwritten ones, and when mistakes occur, the technology can quickly locate them. So, the Internet is an attractive option for business buying and selling. In some industries, relying on the Internet to make purchases can reduce costs by one-eighth.

Initially, companies used their own Web sites to conduct isolated B2B transactions. Now the types of transactions and sites have become more varied. The principal forms of B2B e-commerce include electronic exchanges, extranets, and private exchanges.

Electronic Exchanges  The earliest B2B e-commerce usually consisted of a company setting up a Web site and offering products to any buyer willing to make online purchases. More recently, businesses are buying and selling through electronic exchanges, Web-based marketplaces that cater to a specific industry’s needs. General Motors, Ford, DaimlerChrysler, Renault, and Nissan are jointly investing in the start-up of an online parts exchange, called Covisint. Their plan, expanding on each company’s earlier individual effort, is to create a global system through which each automaker can order all its parts and supplies. The contractors and subcontractors who participate can also buy from one another. The automakers hope that by posting planned design changes and actual production data on the system, they will encourage more efficient operations—for themselves and their suppliers. As Figure 7.7 shows, such savings can ultimately reduce the cost of a car by hundreds of dollars. The automakers also hope the system will bring auto manufacturers closer to building cars to meet individual orders, rather than trying to anticipate demand. The “Clicks and Mortar” box explores another industry that has benefited from an electronic exchange, this time in the form of an auction.

The steel industry has also seen the advantages of electronic exchanges. At two Web sites, MetalSite.com and e-Steel.com, steel companies post data about product selection, availability, and prices. Steel buyers can visit the sites to look for the best deal and place orders. Steel makers benefit because they can find buyers for the excess inventory, and the buyers can find greater selection and better prices than they usually did when shopping by placing one phone call after another. LTV Corp., a U.S. steel-making giant, has used the Web site to unload tons of inventory, making the company more competitive with its foreign rivals. Francis P. Mangano, an LTV manager, says that without MetalSite, “we would have been selling roughly half of what we are selling now.”

Another example is the retail industry, which has set up the WorldWide Retail Exchange, in which nearly a dozen retailers, including Kmart, Safeway, and Britain’s Marks & Spencer, conduct transactions with their suppliers. As with the automakers and steel industry, the retailers expect the exchange to help them reduce their overall cost of purchasing supplies and inventory and operate more efficiently. A notable holdout among exchange participants is Wal-Mart, the world’s largest retailer. The firm’s management believes that its participation in such a venture is more likely to benefit its competitors than to help Wal-Mart.
FreeMarkets Brings the Gavel Down on Prices

Background. Picture a bunch of ordinary purchasers scattered around the country, hunched over their computers, linked to each other and to a home base via the Internet. At home base, which looks like the control room of the Starship Enterprise, more computers hum and whir while a huge video screen displays rapidly changing prices. Look more closely, and you'll see that the prices are actually falling. You've already figured out that this is an Internet auction. But this isn't eBay, where the prices rise as buyers slap bids on everything from antique dolls to yard-sale mugs. This is FreeMarkets, where suppliers compete for the business of organizational buyers who might be purchasing anything from gears to printed circuit boards used in manufacturing their goods. FreeMarkets was founder Glen Meakem's idea.

What Happened? While working at General Electric, Meakem proposed that the company set up a system whereby suppliers would compete for General Electric's orders in live, open, electronic auctions. The Internet was still in its infancy, and servers were yet to appear. Yet Meakem was so enthusiastic that he exclaimed, "This idea will transform the global economy!" General Electric declined to become involved. Although GE is now considered one of the most-admired corporations, it was slow to adopt Internet technology; in 1994, when Meakem made his proposal, it was considered a nonissue.

The Response. Meakem decided to strike out on his own, founding FreeMarkets. Meakem understood that manufacturers spend roughly one-third of every dollar in sales on parts; about $5 trillion a year globally goes toward the purchase of industrial parts. In addition, the purchase process is usually inefficient, involving huge amounts of time and paperwork. Meakem decided to cut through the red tape. He developed a system whereby suppliers promise to deliver parts on a standardized schedule, with identical payment terms and inventory arrangements. The only variable is price. FreeMarkets consults with buyers and screens suppliers so that, by the time an auction takes place, each is familiar with the process and has the most information possible about issues such as quality ratings and manufacturing processes. The online auction itself takes less than half an hour. The price starts high and moves downward. On their own computer screens, sellers can see exactly how much their competitors have bid and how low they must drop to make the sale.

Today and Counting. So far, buyers and sellers love the system, and FreeMarkets claims a market cap of $7 billion. Giants like General Motors, United Technologies, Raytheon, Emerson Electric, and Quaker Oats, who thought they already knew how to play the parts-purchasing game, have found themselves saving another 15 percent on parts, materials, and services through FreeMarkets. "This FreeMarkets auction idea is revolutionizing procurement as we know it," says Kent Brittan, vice president of supply management of United Technologies. In fact, General Motors loves the system so much it has set up its own. Meakem isn't thrilled about the move, but it was bound to happen sooner or later. After all, imitation is the sincerest form of flattery.

QUESTIONS FOR CRITICAL THINKING
1. Think of an industry in which you think FreeMarkets might work well. Write a brief memo describing why you think your industry would benefit from online auctions.
2. As competition such as the General Motors program begins to appear, what steps can FreeMarkets take to stay ahead?


Extranets and Private Exchanges Internet commerce also offers an efficient way for businesses to collaborate with suppliers, partners, and customers through extranets, secure networks used for e-commerce and accessible through the firm’s Web site by external customers, suppliers, or other authorized users. Extranets go beyond ordering and fulfillment processes by giving selected outsiders access to internal information. As with other forms of e-commerce, extranets provide additional benefits such as enhanced relationships with business partners. Intelsat, which operates global communications satellites, has an extranet called Intelsat Business Network (IBN). The more than 2,300 users of IBN log on from 400 organizations to check the availability of satellite capacity, view satellite maps, download corporate documents, and participate in discussion groups. Users can personalize their IBN account so that it shows information about only the services they use.

Security and access authorization remain critical issues, and most companies create virtual private networks that protect communications traveling over public communications media. These networks control who uses a company’s resources and what users can access. Also, they cost considerably less than leasing dedicated lines.
The next generation of extranets is the **private exchange**, a secure Web site at which a company and its suppliers share all types of data related to e-commerce, from product design through delivery of orders. A private exchange is more collaborative than a typical extranet, so this type of arrangement has sometimes been called “e-commerce.” The participants can use it to collaborate on product ideas, production scheduling, distribution, order tracking, and any other functions a business wants to include. Partners in a private exchange often form strategic alliances, similar to those described in Chapter 4. IBM has been creating a private exchange for its Personal Systems Group to use for product design, procurement, and logistics. The system permits IBM employees to identify qualified suppliers that can provide necessary components. The suppliers, in turn, can look up IBM’s sales data and forecasts to manage their own inventory. As Figure 7.8 shows, companies like CNF can participate in an exchange by providing services and data related to distributing goods.

Another variant of extranets is an **intranet**, which provides similar capabilities but limits users to an organization’s employees. Intranets are discussed in Chapter 17.

**Business-to-Consumer Transactions Gain Ground**

One area of e-commerce that has consistently grabbed news headlines and attracted new fans is Internet shopping. Known as **business-to-consumer e-commerce**, or B2C, it involves selling directly to consumers over the Internet. Driven by convenience and improved
security for transmitting credit-card numbers and other financial information, online retail sales, sometimes called e-tailing, have surpassed $30 billion and are climbing. Even with these increases, Internet retail sales are still a tiny fraction of the overall retail market. Only seven-tenths of one percent of all retail sales occur online. In some product categories—computers, books, and audio and video recordings—online retailing has reached at least 10 percent of the market. Figure 7.9 lists the top five products purchased online. Other popular online purchases include entertainment services, computer hardware, and specialty gift items.

A wide array of B2C e-commerce products are available. Industries such as investment and banking, online reservations and sales for travel and vacations, traditional retailing, and online auctions offer consumers a staggering array of products with just the click of a mouse. E-commerce has even invaded the staid world of legal services. At the Web site of eLawForum Corp., potential clients can describe their needs for legal work and invite bids from law firms. Assessing a lawyer's credentials and character online is difficult, so the approach might be too risky when the stakes are high. However, the cost-saving potential is attractive for someone looking to handle routine matters. For lawyers, eLawForum offers a way to attract new clients.

Microsoft’s Expedia online travel service represents another popular Internet business application. In addition to providing information and booking flights, hotel reservations, and auto rentals, the Web site supplies “insider” tips designed to resemble conversations with travelers who have recently visited the chosen destinations.

**E-tailing and Electronic Storefronts**  Major retailers are staking their claims in cyberspace. Many have set up electronic storefronts, Web sites where they offer items for sale to consumers. Wal-Mart received such a positive response to the launch of its electronic storefront that it expanded online product offerings from 2,500 to 40,000 items. Macy’s and Bloomingdale’s department stores have put their bridal registry, personal shopping, and interior-decorating services online. In a recent month, the top 20 Web retailers, measured in terms of the number of buyers, included such well-known names as Amazon.com, Ticketmaster, Barnes and Noble, Sears, Staples, and JCPenney. Generally, retailers provide an online catalog at which visitors click on items they want to buy. These items are placed in a file called an electronic shopping cart. When the shopper indicates that he or she wants to complete the transaction, the items in the electronic shopping cart are listed on the screen, along with the total amount due, so that the customer can review the whole order and make any changes desired before making a payment.

Online retail selling works best for nontechnical products like flowers, books, compact discs, and travel and financial services. Even the sale of somewhat technical items, such as personal computers, has proven enormously successful through the combination of low prices, user-friendly Web sites, and 24-hour customer support offered by firms like Dell Computer and Gateway. In general though, cybershoppers like familiar goods that they can safely purchase without touching or trying out first. Marketing research firm Jupiter Communications predicts that the fastest-growing categories
of online sales to consumers will be groceries, housewares, toys and specialty gifts like gourmet food, music, apparel, and videos.42

Developing Safe Online Payment Systems In response to consumer concerns about the safety of sending credit card numbers over the Internet, companies have developed secure payment systems for e-commerce. The most common forms of online payment are electronic cash, electronic wallets, and smart cards. Netscape Communications is one of several organizations that encrypt any sensitive information to protect consumers. Encryption is the process of encoding data for security purposes. When such a system is active, users see a special icon that indicates that they are at a protected Web site.

To increase consumer security, a group of companies, including Visa, MasterCard, and various technology suppliers, banded together to create Secure Electronic Transaction (SET), an industrywide standard for secure Internet payment transactions. Buyers using SET register with a bank and pay for purchases with electronic cash from their accounts using digital certificates that verify their identities. Adopting a standard technology provides consistency among merchants, card companies, software developers, and financial institutions. CyberCash is one company that specializes in providing secure online payment systems by incorporating SET into its encryption system.

An electronic wallet is another online payment method. An electronic wallet is a computer data file at an e-commerce site’s checkout counter that contains not only electronic cash but credit card information, owner identification, and address. With electronic wallets, customers do not have to retype personal information each time they make a purchase at that site. Consumers simply click on the electronic wallet after selecting items, and their credit card payment information, name and address, and preferred mailing method is transmitted instantly.

Besides using electronic cash or wallets, online consumers have other choices for making payments. Smart cards—plastic cards that store encrypted information on embedded computer chips rather than magnetic strips—are convenient and better protected, so they are among the most popular methods of Internet payment. A smart card “reader” attaches to a shopper’s computer, where the card is swiped for payment. In addition to storing e-cash, smart cards can also store data from several credit card companies, a driver’s license number, and even health information. Other companies, including PayPal, Billpoint, and eMoneyMail, are offering online transfers of cash. When directed by the user, these programs send payments from a bank or credit card account to the recipient’s account.43

E-Commerce Challenges

As noted earlier, e-commerce has its problems and challenges. Consumers are concerned about protecting their privacy and being victimized by Internet fraud, frustrated with unreliable and hard-to-use Web sites, and annoyed over the inconveniences of scheduling deliveries and returning merchandise. Businesses are concerned about fair use of their trademarks and copyrights, potential conflicts with business partners, and difficulty in measuring the effectiveness of Internet-based promotion. In addition to these issues, governments are looking to e-commerce for increased sales tax revenue. Internet retailers and government officials are now locked in a debate over the collection of sales tax for online purchases, as discussed in the “Solving an Ethical Controversy” box. Figure 7.10 summarizes the roadblocks to e-commerce.

Internet Security and Privacy Online security poses a major roadblock to the acceptance of consumer e-commerce, because consumers worry that information about them will become available to others without their permission. Marketing research indicates that privacy is the top concern of Internet users.44 As the earlier discussion of Internet payments explained, concern about the privacy of credit card
numbers has led to the use of secure payment systems. To add to those security systems, e-commerce sites require passwords as a form of authentication—that is, to determine that the person using the site is actually the one authorized to have access to the account. More recently, electronic signatures have become a way to enter into legal contracts such as home mortgages and insurance policies online. In 2001 a new federal law allows companies and individuals to use e-signatures. With an e-signature, an individual obtains a kind of electronic identification and installs it in his or her Web browser. Signing the contract involves looking up and verifying the buyer’s identity with this software.

Thanks to cookies, the automatic data collection method introduced in Chapter 2, Web users leave electronic trails of personal information about their buying and viewing habits. The way that companies use cookies has the potential both to make visits to the Web site more convenient and to invade computer users’ privacy. DoubleClick abandoned a plan to merge its data on Web use with a database of catalog orders, which would have given the company the ability to target online advertising to individual consumers based on their shopping habits. Similarly, Amazon.com received such bad press over its plan to publicize customer shopping information by company or group, called Purchase Circles, that it now allows customers to request removal of their names. With a reported 23 million customers, Amazon’s customer database is one of the largest online, and keeping its customers happy is critical to its success.

Most consumers want assurances that any information they provide won’t be sold to others without their permission. In response to these concerns, online merchants have been taking steps to protect consumer information. For example, many Internet companies have signed on with Internet privacy organizations like TRUSTe, shown in Figure 7.11. By displaying the TRUSTe logo on their Web sites, they indicate that they have promised to disclose how they collect personal data and what they do with the information. Prominently displaying a privacy policy is an effective way to build customers’ trust.
A policy is only as good as the company publishing it, though. Consumers have no assurances about what happens if a company is sold or goes out of business. Now-defunct Toysmart.com promised customers that it would never share their personal data with a third party. But when the company landed in bankruptcy court, it considered selling its database, one of its most valuable assets. And Amazon.com has told customers openly that if it or part of its business is purchased at some point, its database would be one of the transferred assets.

With these concerns, it is no wonder that some companies are profiting by selling software designed to protect privacy. For example, a program called Freedom enables the user to set up online identities, called “nyms.” Online activity done under a nym uses encryption that makes the activity untraceable—even for law enforcement officials. Another package called PersonaValet allows users to determine which personal data to reveal when they visit Web sites that have installed software that works with PersonaValet.

Such privacy features may become a necessary feature of Web sites if consumer concerns continue to grow. They also may become legally necessary. Already in the United States, the Children’s Online Privacy Protection Act (COPPA) requires that Web sites targeting children younger than 13 years of age obtain “verifiable parental consent” before collecting any data that could be used to identify or contact individual users, including names and e-mail addresses. Congress has also begun considering laws to protect the privacy of adult users.

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**E-Commerce and Taxes: Should They Meet?**

**PRO**

1. Many states depend on sales taxes for revenues, and those revenues will decrease as shoppers increasingly turn to the Internet. States already lose some sales tax revenues to certain out-of-state mail-order and catalog sales. Failure to collect sales taxes will also ultimately hurt local brick-and-mortar businesses that are required to charge sales tax—and also pay property taxes—causing further erosion of the local tax base.

2. A tax break actually benefits consumers in upper income brackets, because they are the ones who can afford the computers as well as the goods and services offered on the Internet. Poorer consumers are thus stuck paying sales taxes when they shop at local businesses.

3. Several plans have been presented to calculate a simplified, streamlined sales tax so that it can be calculated and collected easily by both large and small Internet vendors, including the Streamlined Sales Project. New software technology will also aid in implementation.

**CON**

1. Collecting a sales tax will hamper the growth of e-commerce.

2. Introducing a sales tax will be extremely complicated, costing businesses more to implement than the actual taxes themselves.

3. Internet sales actually promote business activity elsewhere, for instance, increased shipping and other distribution functions, and so offset lost tax revenues.

**SUMMARY**

Internet retailers like the freedom that a moratorium on taxes gives them. It provides them time to get sites up and running and, they hope, turn a profit. State and local officials, as well as brick-and-mortar businesses, fear that a continued ban on Internet sales tax will erode their own tax base and profitability. The issue has already gone before Congress more than once, and it will not go away anytime soon. The debates will continue over the need for breaks to allow new e-commerce sites to develop and the need for a level playing field for all businesses to compete.

Security concerns are not limited to consumers. Employees are realizing that their employers can monitor their online behavior and e-mail messages at work. Some companies even specialize in helping employers use such information. Tacit Knowledge Systems builds a database from key terms in employees’ e-mail. The primary objective is to help a company identify which employees have knowledge that they can contribute to the company—for example, knowledge about a particular competitor or type of product. Of course, many employees might be uncomfortable with their employer tracking what they write about. So, Tacit’s software allows employees to decide which aspects of their personal profile they want to make public.52

Companies, too, are concerned about the privacy of their data, and with good reason. An employee of Legend Airlines recently discovered that an employee of American Airlines had logged into Legend’s area of the Sabre scheduling and ticketing network. The American employee had correctly guessed the password of an acquaintance who worked at Sabre, using it to look up schedule information for Legend, and then failed to log off the system. The Legend employee discovered the intrusion a week later when the Sabre system wouldn’t let the employee make scheduling changes because someone else—the American employee—was logged on. American insists that its employee was acting in good faith, and Sabre has since increased the security of its passwords.53

To prevent such intrusions, companies install combinations of hardware and software called firewalls to keep unauthorized Net users from tapping into private corporate data. A firewall is an electronic barrier between a company’s internal network and the Internet that limits access into and out of the network. However, an impenetrable firewall is difficult to find. A determined and skilled hacker can often gain access. So, it is important for companies to test their Web sites and networks for vulnerabilities and provide backups of critical data in case an intruder breaches security measures.

Internet Fraud Fraud is another barrier to e-commerce, and as more people go online, this crime is increasing. The Federal Bureau of Investigation and Department of Justice reported online auctions as the number-one source of fraud. They have logged more than 1,000 complaints a week and expect that rate to increase to 1,000 a day as the Internet Fraud Complaint Center becomes more widely used.54 Auction fraud ranges from merchandise that does not match the description the bidder was given, such as fraudulent paintings, to products that were purchased but never delivered.

Investment scams are the second most common crime. Unreliable company information posted anonymously on the Web by disgruntled employees or predators who want to cash in on a stock’s rise or fall are the most common “cyberseams.” The misinformation can vary from untrue reports of problems with company products to
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character attacks on executives—anything to change the public’s view of a company.\textsuperscript{55} Law enforcement officials are gearing up to pursue online criminals, but untangling the layers of hidden online identities is proving difficult, though not impossible, to do. In the meantime, consumers and companies are being hurt by these fraudulent acts.

Traffic Jams Caused by System Overload  It sounded like a Web surfer’s dream: the entire Encyclopedia Britannica available free online, for anyone with Internet access. Internet users anywhere could use that trusted source to look up articles on world history, art, or any other topic covered by that respected publication. But when the encyclopedia’s content first became available, the reality was more like a nightmare. Users completely overloaded the Web site, and Encyclopedia Britannica’s computers couldn’t handle the traffic. The company went back to the drawing board and hired Akamai Technologies to handle content delivery through its own system of computers. A month later, the site relaunched successfully.\textsuperscript{56} As Encyclopedia Britannica and Victoria’s Secret—which suffered a similar traffic jam during the Webcast of a lingerie fashion show—have discovered, the Internet’s increasing popularity has also increased the likelihood of delays and service outages, even as more users depend on their links. In addition, hackers can tie up a Web site with programs that flood it with inquiries. Whatever the cause of these traffic jams, they are costly in terms of lost business and frustrated customers.

Solutions to these problems are on the way. Internet service providers are adding capacity, and networking equipment manufacturers have recently introduced new technology capable of handling higher volumes of Internet traffic than older devices could manage. Many businesses also operate backup systems to ensure availability of Internet connections to customers. Companies like Akamai distribute content among thousands of computer servers, so that traffic to a Web site can be rerouted if it becomes too heavy.

Poor Web Site Design and Service  For e-commerce firms to attract customers—and keep them—companies must meet customer expectations. The biggest customer expectations are that they’ll be able to find what they want without frustration and get questions answered. This obvious point has been a challenge on the digital frontier of cyberspace. Web sites are not always well designed and easy to use. In fact, two-thirds of Web shopping carts are abandoned before a customer places an order.\textsuperscript{57} In other words, among the people who start selecting items to buy online, most of them change their minds before making a purchase. As Figure 7.12 suggests, some types of retailers have done much better than others in making online shopping a positive experience.

Surprisingly, many Web sites can receive e-mail but do not have a system for replying to the messages. Brightware, a provider of e-mail software, tested e-mail capabilities by sending a simple question—Who is your CEO and how do I contact him or her?—from a fictitious person to the biggest U.S. corporations at their e-mail addresses. The question was ignored by 62 percent of the companies, an increase from a similar test the year before. Among the companies that did reply, some took as long as two weeks. Commented Preston Dodd, an analyst with Jupiter Communications,
"It’s like giving somebody your phone number and they call for five days without getting an answer."  

Unreliable Delivery and Returns Another challenge to successful e-commerce is merchandise delivery and returns. Retailers sometimes have trouble making deliveries to on-the-go consumers. And consumers don’t want to wait for packages to be delivered. Also, if customers aren’t satisfied with products, then they have to arrange for pickup or send packages back themselves. Several new companies are working to fill the need for reliable delivery and returns. PaxZone has established local businesses in the Chicago area that will receive shipments from retailers and arrange for returns from customers. The service is free to consumers, but the company charges a fee to the retailer, which benefits by not having to make repeated deliveries. An Arlington, Virginia, company called Brivo Systems has developed software that works with a “smart box” for home deliveries. Internet orders are given unique passwords, which the delivery person uses to gain access to the drop box.  

Lack of Retail Experience “Pure-play” dot-coms—companies that started their lives online, without a history of traditional stores or catalogs—usually lack the expertise of running warehouses, customer service centers, and other aspects of selling to and satisfying customers. The 1999 Christmas season was the first big season of online retailing. Some 22 million consumers spent more than $5 billion on the Internet, but many of them were unimpressed with the experience. The ugly duckling of the season was the Toys ‘R’ Us Web site, which launched to great fanfare, then found it could not meet the demand. In mid-December, the company announced it could not guarantee delivery by Christmas Day, and dismayed parents around the country scrambled to find other sources of toys. The “Business Hits and Misses” box describes some retailers’ and shoppers’ experiences with holiday e-tailing.  

In contrast, Lands’ End, which made its name as a service-oriented catalog retailer of classic clothing, has so far maintained its image online. As the company’s Internet sales approach $100 million, its reliable distribution system has kept pace with the demand. Lands’ End uses the same system for online sales as for its catalog orders. Because of expertise in all parts of retailing, companies that combine their brick-and-mortar operations with e-commerce are gaining ground over those with little or no experience.  

Competition and Disagreements Among Buyers and Sellers Companies spend time and money to nurture relationships with their partners. But when a manufacturer uses the Internet to sell directly to customers, it can compete with its usual partners. Retailers often have their own Web sites, and they don’t want their suppliers, the manufacturers, competing with them for sales. As e-commerce broadens its reach, producers must decide whether these relationships are more important than the potential of selling directly on the Web.  

Mattel, well known for producing toys such as Barbie, Cabbage Patch dolls, and Matchbox cars, sells most of its products in toy stores and toy departments of other retailers, such as Wal-Mart. The company wants an Internet presence, but it would cut the retailers out of this important source of revenue if it sold toys online to consumers. Mattel cannot afford to lose the goodwill and purchasing power of giant retailers like Toys ‘R’ Us and Wal-Mart. So, the company sells only specialty products online, including pricey American Girl dolls, which were never sold in these stores, and software games. In contrast, upscale toy retailers can sell Mattel products on the Internet competing with Mattel.  

Pricing is another potential area of conflict. In their eagerness to establish themselves as Internet leaders, some companies have sold merchandise at unprofitable prices. This price slashing undercut profits. American Leather sells custom leather furniture through upscale retailers, and each dealer serving a geographic area has an exclusive contract for the collections it offers in its area. But at least one dealer began
The Big Holiday Headache

Holiday season 1999 was supposed to be the year that Internet retailers did everything except actually slide down chimneys to deliver toys. According to different sources, online sales for the year hovered between $8 billion and $10 billion, more than double the year before. Brick-and-mortar retailers like JCPenney and Toys "R" Us hung out their Web shingles, and Internet startups like eToys, CDNow, and SmarterKids.com, got ready to rake in the money. As executives of these companies went to sleep at night, more than visions of sugar plums danced in their heads.

As it turned out, 22 million shoppers did spend more than $5 billion between Thanksgiving and Christmas. But it wasn’t without a struggle. And if the major glitches hadn’t occurred, that number might have been much higher. It seemed that the Grinch was determined to steal Christmas from the Web.

Web sites proved to be poorly designed and difficult to use. Customer frustrations mounted. When one customer logged on to JCPenney.com to order pajamas for his grandchildren, he clicked the paj’s into his electronic shopping cart and then spent an hour trying to delete unwanted items that appeared there. When he finally found his way back to the main menu to process his final order, he discovered that some of the items he wanted were out of stock. Disgusted at the waste of his time, he canceled the whole order. Gap.com offered hundreds of products online but lacked a way for consumers to search through them. Wal-Mart.com didn’t allow first-time shoppers to drop anything into their shopping carts without going through a lengthy check-in process.

Then there’s the issue of supply and demand. So many shoppers decided to try making holiday purchases online that many companies—like JCPenney—simply ran out of stock. Perhaps the most publicized—and disastrous—story was of toysrus.com, which began the season with fanfare and a huge ad campaign designed to attract shoppers to the site. But by December, it was clear that the toy retailer couldn’t fill all its orders, and large numbers of frustrated parents and grandparents were left empty-handed. Some e-customers were so put off by the experience that they vowed never to shop on the Internet again. “I doubt I will ever shop again online for Christmas,” says one. “It is not worth the wait, lies, ill-informed customer service reps, and the hassle and stress.”

All of this stress translates to real numbers. Only 2 percent of consumers who visit an online store actually buy anything, whereas in the “real” shopping world, more than 50 percent of consumers who visit a brick-and-mortar mall make a purchase, says one. What can online retailers learn from this experience?

“Reality caught up with the hype,” remarks Lise Buyer, an e-tailing analyst at Credit Suisse First Boston. Even Buyer had a bad online experience. She tried to order a television as a gift for her dad from Amazon.com, until she learned that the shipping charges would be $100. But companies seem to be making sincere efforts to win back customers. One solution is to turn to the experts: software developers who can fix the glitches on Web sites. Barnes & Noble is considering a new tool from Inxight Software to help customers browse through its enormous databases. Interactive Pictures offers software to hotels, real estate brokers, and even auto manufacturers that allows customers to experience goods and services online with more realistic three-dimensional pictures. PeopleSupport is helping companies improve their customer service by providing online service representatives for their Web sites.

Retailers who work out the kinks in the way they deliver goods and services to their customers likely will survive; those who don’t, won’t. Either way, it’s a pretty safe bet that in holiday seasons to come, they will be better prepared for the holiday spirit of giving.

QUESTIONS FOR CRITICAL THINKING

1. In addition to making Web sites easier to navigate, what steps might online retailers take to be prepared for busy holiday seasons?
2. In addition to difficult Web sites and lack of inventory, what other problems might online retailers face? What might be some potential solutions to these problems?
3. Although the primary function of the sites discussed here is e-commerce, how might these companies expand their functions to attract more customers and develop long-term relationships with them?

favorite cartoon series, *Pokémon*, by saving episodes on his family’s home computer network. Her friends wanted to watch, too, so Simon posted them on a Web page for them to download. Eventually, he expanded the Web site to list television shows typed in from the newspaper TV listings, with instructions to click on Record and Play buttons to watch shows on demand. Thanks to a recommendation from a site called Netsurfer, Simon’s site soon had tens of thousands of registered users, and would-be investors were contacting Simon. Then a dozen major entertainment companies, including Time Warner and Walt Disney Co., sued Simon for illegally broadcasting their programming. Their reaction is similar to that of recording companies when MP3 made downloading music files relatively easy and popular.

Even the choice of domain names can cause headaches for companies that have spent millions of dollars to develop a good reputation and widespread recognition. When the Internet was new and few companies understood the value of a Web presence, some individuals registered domain names that used companies’ brand names, as well as the names of celebrities. When the companies got ready to go online, they were surprised to find that someone else had the right to use their name in cyberspace. At first, trade name owners had little recourse, but the legal environment has begun to change. The Anticybersquatting Consumer Protection Act imposes fines on people who in bad faith intend to profit from registering or using a domain name that is identical or similar to a company’s trademark or an individual’s name. The challenge for companies trying to protect their intellectual property is that the law requires them to show in court that the other party is using their name in bad faith in order to profit from it.

Companies have used a variety of approaches to protect themselves in the free-wheeling world of the Internet. When a dissatisfied customer set up a Web site at www.dunkindonuts.org to post complaints about the food at Dunkin’ Donuts, the doughnut chain initially threatened to sue him for misusing its trademarks. Instead, it arranged to buy the site and use it as a tool for obtaining consumer opinions, which brought a constructive end to a difficult situation. Ford Motor Co. at first thought it had something wonderful when Robert Lane, a diehard fan of the Ford Mustang, set up sites to share information about his favorite automobile. The company even gave him a press pass so he could write news for his fellow Mustang lovers. Anonymous sources sent Lane confidential company documents, and he regularly destroyed them until he became dissatisfied with the company. Ford began asking Lane to modify his site but rebuffed his requests that it sponsor his site. Lane began publishing the proprietary documents, and Ford sued him for publishing its trade secrets. Before Lane shut down the site, he posted about 100 more Ford documents there.

Not every company has had such an alliance backfire. Lucasfilm worked with fan sites for *Phantom Menace* to build excitement before the release of that Star Wars episode. Fan sites also drove much of the success of another movie, *The Blair Witch Project*. The winners in cyberspace have to figure out how to participate in an environment where the flow of information is not always within their control. When information can zip around the globe within seconds, an after-the-fact lawsuit is not much protection.

**MANAGING A WEB SITE: DOING BUSINESS ON THE INTERNET**

Business Web sites serve many purposes. They broaden customer bases, provide immediate accessibility to current catalogs, accept and process orders, and offer personalized customer service. As technology becomes increasingly easy to use, anyone with a computer equipped with a modem can open an Internet account and place a simple Web site on the Internet. How people or organizations use their sites to achieve their goals determines whether their sites will succeed. Figure 7.13 lists some key questions to consider in developing a Web site.
Developing Successful Web Sites

Tod Johnson, CEO of the Media Metrix marketing research firm, notes, “It’s easy to build a bad Web site, harder to build a good one.”67 When judging Web sites, success means different things to different businesses. One firm might feel satisfied by maintaining a popular site that conveys company information or reinforces name recognition—just as a billboard or magazine ad does—without requiring any immediate sales activity. Web sites like those of The New York Times and USA Today draw many visitors who want the latest news, and Yahoo!, Netscape, C/Net, and ESPNSportsZone are successful because they attract millions of visitors. High-traffic sites like these add to their success by selling advertising space to other businesses.

Internet merchants need to attract customers who transact business on the spot. Some companies find success by hosting Web sites that offer some value-added service to create goodwill for potential customers. Organizations like the Mayo Clinic and accounting giant Ernst & Young provide useful information or links to related sites that people frequently visit. But to get people to stay at the site and complete a transaction, the site must also be secure, reliable, and easy to use.

Planning and Preparation What is the company’s goal for its Web site? Answering this question is the first and most important step in the Web site development process. As we saw in the opening vignette, for Charles Schwab, the primary objective was to sign up new customers. So, the discount broker’s Web site designers put a link called “Open an Account” prominently in the upper left-hand corner of the home page. In addition, to reinforce Schwab’s image as a respectable investment firm, the site uses a businesslike color scheme suggesting pinstripes.68 Objectives for the Web site also determine the scope of the project. If the company’s goal is to sell merchandise online, the site must incorporate a way for customers to place orders and ask questions about products, as well as links to the company’s databases to track inventory and deliveries. As in this example, the plan includes not only the appearance of the Web site but also the company’s behind-the-scenes resources for making the Web site deliver on its promises.

Other key decisions include whether to create and maintain a site in-house or to contract with outside experts. Some companies prefer to retain control over content and design by producing their own sites. However, since acquiring the expertise to develop Web sites can be very time-consuming, hiring specialists may prove a more cost-effective option. Major companies have such complex needs that specialists are essential, so companies such as Macromedia are enlisted to provide both software and consulting services to clients for their Web sites, as illustrated in Figure 7.14.

Naming the Web site is another important early step in the planning process. A domain name should reflect the company and its products and be easy to remember. For companies in the United States, the last part of the domain name identifies an affiliation category. Examples include .com for businesses, .org for organizations, .gov for government sites, and .edu for educational institutions. For companies outside the United States, the last part of the domain name identifies the country of origin, such as .ca for Canada and .jp for Japan. In addition to the existing dot-com, dot-gov, and dot-org addresses, seven new suffixes were approved and added to the Internet’s naming system in late 2000. The new suffixes include .aero, .biz, .coop, .info, .museum, .name, and .pro. These suffixes were created to alleviate overcrowding in the .com domain and represent the first major addition of Internet addresses in more than a decade. With millions of dot-com names already registered, the search for a unique, memorable, and easily spelled name can be difficult.
When Andrew Busey decided to create an e-commerce site for home furniture, he first thought of ForMyHome.com, which he was able to register, but it just wasn’t catchy enough. So Busey and the design firm that was developing his site pondered the alternatives. Furniture.com was already taken, and its owner wanted $1 million for it. Eventually, they settled on Living.com. Not only is the name easy to spell, but the term is general enough to make sense if the site broadens its offerings beyond furniture. However, the California Association of Realtors had already registered the name. Busey negotiated the right to use the name in exchange for more than $100,000. The willingness of companies like Living.com to pay for the right to use a particular domain name reinforces the importance of this business asset. Living.com’s competition appreciates the importance of domain names, too. Furniture.com has since registered three misspellings, Livng.com, Livign.com, and Lv-ing.com, giving it the potential to capture customers with poor typing skills by setting up links to Furniture.com at those Web addresses.69

Content and Connections

Content is one of the most important factors in determining whether visitors return to a site. People obviously are more inclined to visit a site that provides material that interests them. Many e-commerce Web sites try to distinguish themselves by offering information or online communities along with a chance to buy. For example, Tavolo is an electronic storefront for gourmet cooking supplies, and it lures traffic to the site with weekly menu planners, printer-ready recipes, and features that convert menus between metric and U.S. measurement systems, adjust measurements for different numbers of servings, and create shopping lists for weekly menus.70 Many sites offer links to other sites that may interest visitors. Hyperlinks to related Web sites increase exposure and traffic, but they can also take visitors away before they buy anything.

Standards for good content vary for every site, but available resources should be relevant to viewers, easy to access and understand, updated regularly, and written or displayed in a compelling, entertaining way. When the World Wide Web was a novelty, a page with a picture and a couple of paragraphs of text seemed entertaining. But such “brochureware” falls far short of meeting today’s standards for interactivity, including the ability to accept customer data and orders, keep up-to-the-minute inventory data, and respond quickly to customer questions and complaints. Also, today’s Internet users are less patient about figuring out how to make a site do what it
promises. They won’t wait ten minutes for a video clip to download or click through five different pages to complete a purchase. So, a good Web site looks simple and intuitive to its users, a quality the developers can guarantee only by testing a site on its intended audience.

After making content decisions and designing the site, the next step is connecting to the Internet by placing the required computer files on a server. Companies can have their own dedicated Web servers or contract to place their Web sites on servers at ISPs or other host companies. Most small businesses lack the necessary expertise to set up and run their own servers; they are better off outsourcing to meet their hosting and maintenance needs. They also need to draw business to their site. This usually requires a listing with the major search engines, like Yahoo!, Lycos, and Excite.

**Costs and Maintenance**

As with any technological investment, Web site costs are an important consideration. The highly variable cost of a Web site includes not only development expenses but also the cost of placing the site on a Web server, maintaining and updating it, and promoting it. A reasonably tech-savvy employee with off-the-shelf software can create a simple piece of brochureware for a few hundred dollars. A Web site that can handle e-commerce will cost at least $10,000 and perhaps millions. Creating it requires understanding of how to link the Web site to the company’s other information systems.71

Although developing a commercial Web site with interactive features can cost tens of thousands of dollars, putting it online can cost as little as $20 a month for a spot on a Web host’s server such as America Online.72 And Web hosts deliver a huge audience. In a typical week, 30 million people visit the AOL site and another 25 million log on to Yahoo!. Like so much new technology, the cost of putting a site on a server is falling. ISPs like America Online, CompuServe, and NetCom host many commercial sites for basic monthly charges depending on the number of Web pages. A number of e-commerce service providers are offering services for a few hundred dollars or even for free. Treadmill Doctor, which repairs treadmills, set up a Web site to answer common questions about that type of exercise equipment. The company used a template from Bigstep.com to create the site and pays Bigstep $14.95 plus $.20 per transaction to host the site. Bigstep allows the company to update the site at no charge.73 Similarly, Hodge Products sells combination locks on its www.combolo.com site, created using template software from a service called Sitematic. To operate the site, Hodge pays just under $40 a month to Sitematic, which processes all the transactions and lets Hodge offer up to 20 different products on its site.74 Some e-commerce service providers also take care of listing the site with search engines, usually for an additional fee.

In addition to installation and connection fees, managers must ensure that their company’s Web site stays current over time. Visitors don’t return to a site if they know the information never changes or that claims about inventory or product selection are not current. Consequently, updating design and content is another major expense. In addition, site maintenance should include running occasional searches to test that links to the company’s Web site are still active.

**Measuring Web Site Effectiveness**

How does a company gauge the return from investing in a Web site? Measuring the effectiveness of a Web site is a tricky process, and a site’s answer depends on the purpose that it serves. Figure 7.15 lists some measures of effectiveness. Profitability is relatively easy to measure in companies that generate revenues directly from online product orders, advertising, or subscription sales. However, a telephone order resulting from an ad on a Web site still shows the sale as a phone sale, not a Web site sale, even though the order originated at the site.

For many companies, revenue is not a major Web site objective. Only about 15 percent of large companies use their Web sites to generate revenue; the rest use them to showcase their products and to offer information about their organizations. For such companies, measures of success include increased brand awareness and brand loyalty, which presumably translate into greater profitability off-line.

Some standards guide efforts to collect and analyze traditional consumer purchase data, such as how many Ohio residents bought new Honda Accords the previous year, watched HBO’s award-winning *The Sopranos*, or tried Burger King’s new french fries. Still, the Internet presents several challenges for marketers. Although information sources are getting better, it is difficult to be sure how many people use the Internet, how often, and what they actually do online. Some Web pages display counters that measure the number of visits. However, the counters can’t tell whether someone has spent time on the page or skipped over it on the way to another site, or whether that person is a first-time or repeat viewer.

Advertisers typically measure the success of their ads in terms of **click-through rates**, meaning the percentage of people presented with a banner ad who click on it, thereby linking to a Web site or a pop-up page of information related to the ad. Recently, the average click-through rate has been declining to about half of one percent of those viewing an ad. This rate is much lower than the 1.0 to 1.5 percent of responses to the average direct-mail advertisement. Low click-through rates have made Web advertising less attractive than it was when it was novel and people were clicking on just about anything online. Selling advertising has therefore become a less reliable source of e-commerce revenues.75

As e-commerce gains popularity, new models for measuring its effectiveness are being developed. A basic measurement is the **conversion rate**, the percentage of Web site visitors who make purchases. A conversion rate of 3 to 5 percent is average by today’s standards.76 A company can use its advertising cost, site traffic, and conversion rate data to find out the cost to win each customer. A company that spends $10,000 to attract 5,000 visitors to a Web site with a 4 percent conversion rate is obtaining 200 transactions, or \(0.04 \times 5,000\). It spent $10,000 for those 200 transactions, so the advertising cost is $50 per transaction, meaning each of those customers cost $50 to acquire through the advertising campaign.

Among all categories of online advertisers, the average cost to get an online customer is $38. For Internet pure-plays, those only transacting business online, the cost is an astronomical $82, but the customer acquisition cost is just $11 per customer for retailers that also sell through stores or catalogs.77 To be profitable, a site with an average conversion rate needs to generate a lot of revenue with each transaction—one reason many Internet start-ups have been having difficulty generating profits. So, e-commerce businesses are trying to boost their conversion rates by ensuring their sites download quickly, are easy to use, and deliver on their promises. At NetGrocer, a low conversion rate meant that people were visiting the site but not buying anything. The Web site led off with a beautiful presentation of the company’s mission statement, so visitors had to wait for it to download, then click through more pages before they could buy their groceries. The company shifted to an emphasis more characteristic of selling food—focus on the products coupled with coupons and fast links to make purchases. Soon the conversion rate had tripled, and the size of an average order grew as well.78
Besides measuring click-through and conversion rates, companies can study samples of consumers. Research firms such as PC-Meter and Relevant Knowledge recruit panels of computer users to track Internet site performance and evaluate Web activity; this service works in much the same way that ACNielsen monitors television audiences. The WebTrends service provides information on Web site visitors, including where they come from, what they see, and the number of “hits,” or visits to the site, during different times of the day. Other surveys of Web users investigate their brand awareness and their attitudes toward Web sites and brands.

THE GLOBAL ENVIRONMENT OF E-COMMERCE

For many companies, future growth is directly linked to a global strategy that incorporates e-commerce. The United States leads the world in technology, communications infrastructure, and ownership of PCs and other consumer technology products, but Netizens live on every continent. Currently, 136 million Americans use the Internet, followed by 83 million in Europe, 69 million in the Asia-Pacific region, and millions more in South America, Africa, and the Middle East. Together, they spend well over $600 million online and are expected to spend ten times that amount in 2004.79

With so many users and so much buying power, the Internet creates an enormous pool of potential customers. Companies can market their goods and services internationally and locate distribution sources and trading partners. Customers can search for products at their convenience, browsing through online catalogs that always show current information. Brothers Sam and Shobit Gupta use the Internet as both a source of demand for their product and a way to work with customers. Their company, NetEcho, designs Web sites. Shobit Gupta supervises a team of designers in New Delhi, India, while Sam Gupta communicates with American clients from his home in Seattle. They start out with conference calls to learn about the culture of the company whose site they are designing. Then the programmers get to work. At the end of each workday, they post their work on the Internet for the client to review. Clients check the progress of the design and send feedback via e-mail, thus skirting the challenges of a 12-hour difference in time zones. Not only do clients get work comparable to that of U.S. design firms, they pay the much lower going rate for Indian programmers. NetEcho’s satisfied clients include Technology Control Corp., which gave NetEcho the assignment to develop its Web site, then returned to the company when it was ready to expand the site.80

One practical implication of this global marketplace is the different languages that buyers and sellers speak. Reflecting the Internet’s origins, more than half of users now communicate in English. However, the remainder use other languages, led by Japanese, German, Chinese, Spanish, and French.81 As Figure 7.16 points out, Web site developers need to consider offering online information in more than one language. So far, however, three of every four Web pages are in English, slowing the adoption of the Internet in non-English-speaking countries.82 Other international differences are important, too. Auction site eBay goofed in the United Kingdom by launching a site with prices given in U.S. dollars. After realizing that its British audience was offended, the company switched to local currency.83

E-commerce can heighten competition. In the virtual global marketplace, rivals can cross the oceans to enter your market. Many manufacturers use the Internet to search through online catalogs for the lowest-priced parts. No longer can local suppliers assume that they have locked up the business of neighboring firms. And U.S. firms cannot expect that their earlier experience with the Internet gives them an edge in foreign markets. Yahoo!, which has been in Europe longer than any other U.S.-based portal, operates eight country-specific versions. They represent 15 percent of Yahoo’s total traffic, but

Business Directory

➤ click-through rate the percentage of people presented with a Web banner ad who click on it.

➤ conversion rate the percentage of visitors to a Web site who make a purchase.
1. Discuss how the Internet provides new routes to business success.

The Internet, a worldwide network of interconnected computers, removes limitations of time and place so that transactions can occur 24 hours a day between people in different countries. It creates opportunities for companies that provide Internet infrastructure, access, and content, as well as for firms that use its resources in their business operations. The Internet offers a cost-effective way for managers to gather com-

Yahoo! enjoys the biggest slice of the market in the United Kingdom. In France, for example, the top portal is Wanadoo, which is the default portal of France’s biggest Internet service provider, France Telecom.

Still, the Internet is a valuable way to expand a company’s reach, especially for small businesses that would otherwise have difficulty finding customers overseas. Some customers are lured by the chance to save money compared with purchasing through other channels. David Butler, a retired sales manager in England, bought a Ford from a Belgian dealer and saved $5,000 off the price he would have paid at home. Inspired, he began shopping for a video camera from retailers based in the United States, where savings would far outweigh the costs of shipping and customs.

WHAT’S AHEAD

The Internet is revolutionizing the way we communicate, obtain information, seek entertainment, and conduct business. It has created tremendous opportunities for B2B and B2C e-commerce. So far, B2B transactions are leading the way online. B2C e-commerce is undergoing a shakeout: Companies that combine expertise in traditional retailing with the new online technology have gained a firmer foothold in cyberspace.

In upcoming chapters, we look at other trends that are reshaping the business world of the 21st century: We explore the critical issues of how companies organize, lead, and manage their work processes; manage and motivate their employees; empower their employees through teamwork and enhanced communication; handle labor and workplace disputes; and create and produce world-class goods and services.
petitive intelligence; perform marketing research; showcase, sell, and in some cases distribute products; and offer customer service and technical support.

2. Describe the increasing diversity of Internet users.
From strictly a U.S. defense network, the Internet has grown to include users all over the world. The gender gap has also narrowed; women now represent roughly half of all Internet users. Ethnic and racial diversity is also increasing, with Asian Americans, African Americans, and Hispanic Americans going online in larger numbers. The average age of Internet users is also rising, reflecting the widespread acceptance of the Net.

3. Summarize the Internet’s four functions and provide examples of each.
The Internet provides a means of communication through e-mail, instant messaging, and chat rooms. Internet telephony and videoconferencing are also being established online. The Net provides information services through search engines and portals, as well as online publications and newsgroups. Net entertainment is growing through online gaming, radio and television programming, electronic publishing, and music and movies. E-commerce, or online business transactions, make up the fourth function. E-commerce takes the form of electronic exchanges, extranets and private exchanges, electronic storefronts, online ticketing, and auctions.

4. List the major forms of business-to-business e-commerce.
Electronic data interchange was an early use of technology to conduct business transactions. E-commerce is the process of selling goods and services through Internet-based exchanges of data. It includes product information; ordering, invoicing, and payment processes; and customer service. In a B2B context, e-commerce uses Internet technology to conduct transactions between two organizations via electronic exchanges, extranets, and private exchanges.

5. Name the major forms of business-to-consumer e-commerce.
In a B2C context, e-commerce uses the Internet to connect companies directly with consumers. E-tailing and electronic storefronts are the major forms of online sales to consumers. Payment methods include electronic cash, electronic wallets, smart cards, and online transfers of cash.

6. Describe some challenges associated with Internet selling.
The growth of Internet retailing is currently limited by consumer security and privacy concerns, fraud, and system overload. In addition, poor Web site design and service, unreliability of delivery and returns, and lack of retail expertise can limit e-commerce success. The Internet can also generate conflict among buyers and sellers. Businesses also face challenges in protecting their intellectual property and proprietary data online.

7. Describe how companies develop and manage successful Web sites.
Businesses establish Web sites to expand their customer bases, increase consumer awareness of their products, improve customer communications, and provide customer service. Before designing a Web site, a company’s decision makers must first determine what they want to achieve with the site. Other important decisions include who should create, host, and manage the site; how to promote it; and how much funding to allocate. Successful Web sites contain informative, up-to-date, and visually appealing content. Sites should also download quickly and be easy to use. Finally, management must develop ways of measuring how well a site accomplishes its objectives.

8. Explain how global opportunities result from e-commerce.
Technology allows companies to compete in the global market and workplace. Even the smallest firms can sell products and find new vendors in international markets. Through its own Web site, a company can immediately reach customers all over the world. Improved communications among employees in different locations create new ways of collaborating on projects.
Other Important Business Terms

- domain name
- digital subscriber line (DSL)
- server
- client
- instant messaging
- online community
- newsgroup
- portal
- electronic data interchange (EDI)
- electronic exchange
- private exchange
- electronic storefronts
- electronic shopping cart
- encryption
- electronic cash
- electronic wallets
- smart cards
- electronic signatures
- Children’s Online Privacy Protection Act (COPPA)
- firewall
- Web host

➤ Review Questions

1. Describe the path your e-mail takes in traveling from your computer to your friend’s. How would this path differ if your friend has a DSL connection?

2. Using the statistics cited in this chapter, construct a profile of the “typical” Internet user.

3. What are the four primary functions performed on the Web? Describe a practical business application of each.

4. Suppose your supervisor asked you to use the Internet to find the best supplier of office furniture for the new site your company is moving to. Explain several precautionary measures you might take as you gather information on furniture companies.

5. Discuss the benefits that a small company might enjoy by establishing a Web presence.

6. Name several ways that companies generate revenue online.

7. What are the differences between B2B and B2C e-commerce?

8. Describe several of the challenges that both businesses and consumers face as they engage in e-commerce. Cite some potential solutions to these problems.

9. If you were to advise the CEO of a company that wants to develop a Web site, what steps would you recommend that the company take to build a successful site?

10. In what ways do companies measure the effectiveness or success of a Web site?

➤ Questions for Critical Thinking

1. Consider the following statement: “To remain competitive in the next decade, every business must have a Web site or at least be connected to the Internet.” Do you agree or disagree? Why? If you disagree, name at least one type of business that you believe could succeed without the Internet.

2. More than 80 percent of Web users say that obtaining information is one of the reasons they use the Internet. How might an adventure travel company use this statistic to attract potential customers to its Web site?

3. Many businesses are banding together to form exchanges that serve large segments of an industry, such as the auto industry. However, Wal-Mart has decided not to follow this route. Do you think this is a wise decision for Wal-Mart? Why or why not?

4. Do you believe that companies should monitor employees’ online behavior and e-mail messages at work? Why or why not? If so, discuss any boundaries you feel should be respected.

5. By setting up a Web site, companies can have instant access to a global marketplace. What are some advantages and disadvantages that a pure-play e-commerce company might encounter in setting up a Web site for global e-commerce? How would the advantages and disadvantages differ for a company with retail experience?

➤ Experiential Exercise

Background: The Internet is a powerful resource for businesses. As the chapter explains, about 30 percent of U.S. businesses are currently engaged in B2B e-commerce, with nearly 90 percent online by 2002.

Directions: Assume you work for Paula Brewer, a small-business owner who is interested in developing a B2B e-commerce site on the Web. Research the Internet to find resources for Brewer to use in developing the company’s new B2B Web site. You may wish to use www.geobiz2biz.com, an online directory with links to more than 100 Web sites for a wide variety of information resources, including the following:

- Web-based business solutions
- B2B auctions
- Procurement services
- Sales force management
- Supplier information
- Publicity/advertising
- Business tools

Print out the home page for either GeoBiz2Biz.com or a similar site you found. Submit a three-page report to Brewer that includes the home page printout of the Web site you recommend to get her started in B2B e-commerce. In the remainder of your report, summarize five links on the Web site you selected that you think are most important for her to visit. For each of the five sites listed in your report, include (1) the reason why you recommend the link as particularly important and (2) any necessary explanations about the link that would be helpful to Brewer.

**Nothing but Net**

1. **B2B.** As noted in the chapter, IBM offers extensive consulting services, software, and hardware for firms engaged in e-commerce. Assume you’re an entrepreneur and you’d like to expand your presence in the B2B market. Visit the IBM e-commerce Web site at [www.ibm.com/e-commerce](http://www.ibm.com/e-commerce)

   Read about the services offered by IBM to B2B entrepreneurs. Prepare a brief oral report to your class summarizing these services and some of the case studies where IBM has assisted firms in their B2B activities.

2. **Rating e-commerce Web sites.** Gomez.com is one of the leading authorities on e-commerce. As such, Gomez.com rates various e-commerce companies. Go to the Gomez.com Web site at [www.gomez.com](http://www.gomez.com)

   Prepare a brief report in which you identify the following:
   a. The highest-rated airline Web site
   b. The highest-rated e-toy Web site
   c. The methods Gomez.com uses to rate e-commerce sites

3. **Internet retailing experience.** Assume the role of a consumer who wishes to purchase the latest best-selling novel over the Internet. The two leading online book-sellers are
   - [www.amazon.com](http://www.amazon.com)
   - [www.bn.com](http://www.bn.com) (Barnes and Noble)

   Visit both sites and learn enough about each site so you can describe them both to a friend, including which you’d recommend and why.

   **Note:** Internet Web addresses change frequently. If you do not find the exact sites listed, you may need to access the organization’s or company’s home page and search from there.

**Video Case 7.1 Lycos**

Lycos is the Internet search engine that is adding new services such as e-mail, chat rooms, shopping, and personal home pages to turn itself into what it calls a “hub.” By that it hopes to become the center of a Web user’s experience on the Internet—a community that personalizes the Web for users.
Flip this book over to preview a chapter from *Contemporary Business: Brief Edition*