

CHAPTER 13

E-Commerce: Digital Markets and Digital Goods

LEARNING OBJECTIVES

After reading this chapter, you will be able to answer the following questions:

1. What are the unique features of e-commerce, digital markets, and digital goods?
2. How has Internet technology changed business models?
3. What are the various types of e-commerce and how has e-commerce changed consumer retailing and business-to-business transactions?
4. What is the role of m-commerce in business and what are the most important m-commerce applications?
5. What are the principal payment systems for electronic commerce?

OPENING CASE: NEXON GAMES: E-COMMERCE GOES SOCIAL

The opening case, “Nexon Games: E-Commerce Goes Social,” illustrates the evolution of e-commerce from that of simply buying goods or services online. Nexon’s business model and others like Second Life show that consumers are no longer content to simply surf Web sites or even just buy things. Users now want to experience social contact with others that emulates offline experiences. Nexon capitalized on the idea of social gaming and expanded it to a virtual storefront selling “social experiences, not packaged product.” Advances in technology allow businesses to offer that experience.

Students are very familiar with most of the ideas presented in this chapter from a user’s standpoint. The task is to look behind the scenes and analyze how businesses are using technology to gain a competitive advantage and expand their operations to incorporate new channels that e-commerce provides.

13.1	ELECTRONIC COMMERCE AND THE INTERNET
-------------	---

Along with online selling, electronic commerce leads to significant changes in the way products are customized, distributed, and exchanged and the way consumers search and bargain for products and services and consume them. In short, the electronic commerce

revolution is transforming how we do business. Processes (e.g., manufacturing, inventorying, corporate financial management, and operation), and business-to-business processes (e.g., supply chain management and bidding) are affected by the same technology and networks as are business-to consumer processes. Even government functions like education, social, and political processes undergo changes.

Stress to students that e-commerce is a virtual market. Electronic commerce is not limited to buying and selling products online. For example, a neighbourhood store can open a Web store and find the world on its doorstep. Along with customers, it will also find its suppliers, accountants, payment services, government agencies, and competitors online. These online, digital partners demand changes in the way we do business from production to consumption, and they affect companies that might think they are not part of electronic commerce. You can use Wal-Mart, the largest retail company in the world, as an example.

E-COMMERCE TODAY

The text provides useful statistics to demonstrate the solid growth in e-commerce. Many companies that failed during the “dot.com” bust did so because they didn’t have solid business plans, not because e-commerce as a whole wasn’t a good idea.

The Internet has proved to be the perfect vehicle for e-commerce because of its open standards and structure. No other methodology or technology has proven to work as well as the Internet for distributing information and bringing people together. It’s cheap and relatively easy to use it as a conduit for connecting customers, suppliers, and employees of a firm. No other mechanism has been created that allow organizations to reach out to anyone and everyone like the Internet.

The Internet allows big businesses to act like small ones and small businesses to act big. The challenge to businesses is to make transactions not just cheaper and easier for themselves but also easier and more convenient for customers and suppliers. It’s more than just posting a nice looking Web site with lots of cute animations and expecting customers and suppliers to figure it out from there. Web-based solutions must be easier to use and more convenient than traditional methods if a company hopes to attract and keep customers.

Customers and suppliers are learning how to use the new technologies to gather information about the firm’s products or services and compare them to the competition. It’s easier and faster than ever before. Therefore, any business wishing to stay ahead of the game needs to appreciate that fact and change their processes and methodologies. If they don’t, they may not be in business much longer.

You can discuss the benefits of using Internet technology to enable the digital firm. You should spend a few minutes with your students discussing the many benefits, including lower transaction and agency costs, bypassing intermediaries, the ability of trading partners to directly communicate with each other, the ability to connect disparate

systems, reduced delivery time for goods and services, 24-hour availability, and replacing the existing distribution channels.

WHY E-COMMERCE IS DIFFERENT

Most of us are so used to the Internet that we take it for granted. Let's look at the factors that make E-commerce so revolutionary from anything we've seen before.

Ubiquity

Ubiquity: 24/7 365 days a year, anytime, anywhere. New **marketspaces** change the balance of power from being business-centric to customer-centric. Transactions costs for both businesses and customers are reduced.

Global Reach

The Internet opens markets to new customers. If you live in Toronto and yearn for Atlantic lobster, you can order it from a Web site and receive it the next day. You benefit from new markets previously not available, and the Atlantic fishery benefits from new customers previously too expensive to reach.

Universal Standards and Universal Technical Standards

One of the primary reasons e-commerce has grown so quickly and has become so widespread is due to the universal standards upon which the technology is built. Businesses do not have to build proprietary hardware, software, or networks in order to reach customers thereby keeping **market entry costs** to a minimum. Customers can use the universally accepted Internet tools to find new products and services quickly and easily thereby keeping **search costs** to a minimum. It truly is a win-win situation for both sides.

Richness

The **richness** of information available to customers, coupled with information merchants are able to collect about them is opening up new opportunities for both businesses and consumers. Consumers can access more information than was previously available and businesses collect more information than they were previously able to. The reach of Web sites offering products and services is far greater than previously possible. Think about that for a minute. People are no longer limited to businesses in the local neighborhood. Conversely, businesses can now reach out to thousands and millions more potential customers than was ever possible before.

Interactivity

E-commerce originally presented simple, static Web sites to customers with limited possibilities of interactivity between the two. Now, most major retailers and even small shops, use a variety of ways to communicate with customers and create new relationships around the globe.

Information Density

While many people complain about having too much information pouring from the Internet, it provides **information density** like no other medium. Consumers enjoy **price transparency** allowing them to comparison shop quickly and easily. **Cost transparency** is another benefit consumers enjoy that they've never had available as readily as what they can find on the Internet. On the other hand merchants gather much more information about customers and use it for **price discrimination**.

Personalization/Customization

The neighborhood merchant probably knows most customers by name and remembers their personal preferences. That same cozy relationship can now be extended to the Internet through a variety of **personalization** and **customization** technologies. Interactivity, richness, information density, and universal standards help make it possible.

Social Technology

Users have ability to create and control information on the Internet, as well as to communicate and share content.

KEY CONCEPTS IN E-COMMERCE: DIGITAL MARKETS AND DIGITAL GOODS

Discuss with your students how the Internet has unbundled the information about products and services from the actual products and services. Ask your students how many have shopped for a car recently. Ask the students to compare how they would shop for a car today as opposed to how they might have shopped for a car ten years ago. Use this discussion to illustrate how the unbundling of information is disrupting traditional business models. If you have the time, ask your students to visit the Microsoft Network Canada Autos Web site. How do sites such as this one reduce information asymmetry?

Even if you don't use the Web sites to purchase insurance or a loan, you can still take the information to your bank and insurance agent and perhaps get them to renegotiate. Because you were able to gather information from the Internet rather than physically travelling from bank to bank, or insurance company to insurance company, your **search costs** were much lower.

Because of the information you've gathered from the Web, the bank and insurance company no longer have the advantage of **information asymmetry**. That is, the bank and insurance company thought they had more information about the transaction than you did; therefore they had the upper-hand. But once you gained more information about the transaction than you previously had, you were able to get better rates. The demise of information asymmetry is a phenomenon that is occurring in many consumer and business transactions and is directly attributable to the Internet.

On the other hand, the Internet allows an insurance company to quickly and easily adjust the information provided to you thus lowering its **menu costs**. It can just as easily engage in **dynamic pricing** based on information it gathers from and about you.

Disintermediation, removing the middleman, has allowed many companies to improve their profits while reducing prices. In our example, insurance companies are using disintermediation to remove the local agent from the transaction between itself and the customer. Airlines have steadily removed the travel agent from transactions with customers thereby reducing their costs. Other industries are following in their footsteps slowly but surely.

WINDOW ON ORGANIZATIONS: STONYFIELD FARM AND OTHERS BLOG FOR COMMUNICATION

This describes how the company is using blogs to help create more intimate relationships with its customers and set itself apart from its competitors.

TO THINK ABOUT QUESTIONS

- 1. What are Stonyfield Farm's business model and business strategy? What challenges and problems does the company face? What challenges face Tucows?**

Stonyfield Farm's business model is built on their "personality". They are committed to staying in touch with their loyal and committed customer base, and they are passionate about keeping their "grass roots" image. They are using a multi-pronged business strategy in that they have product differentiation (organic product), focus on special market niche (people who treasure healthy foods and want to protect the environment), and strengthening customer intimacy (through blogs).

Expansion left management fearing that it would lose touch with its loyal and committed customer base. Traditional media-based advertising was expensive and wouldn't help the company "connect" with the kinds of people it was trying to reach. The company prefers "word-of-mouth" approaches to get its message to customers in ways that were more compatible with its grassroots, organic, activist "people-friendly" image. The company is turning to blogs to further personalize its relationship with customers and reach even more people.

Tucows is challenged because of copyright legislation, and users may be concerned if the downloads are legal. The blog can address these issues, as well as provide technical advice. In addition, the company gets feedback from its users.

- 2. How do blogs help the company solve these problems and compete in the industry?**

Stonyfield felt that they could use blogs to create a more personal relationship with consumers that were different from the traditional selling relationship. By analyzing blogs, marketers are able to see what is being said online about new products, old products, and ad campaigns. Blog-watching services that monitor popular blogs claim that "blog watching" can be cheaper and faster for analyzing consumer interests and sentiment than traditional focus groups and surveys.

Stonyfield actually were publishing and maintaining five different blogs, but retired three of them because they were not attracting enough readers. They are now only maintaining two blogs: Baby Babble and Bovine Bugle. Stonyfield posts new content to each of the blogs daily, five days a week. Readers can subscribe to these blogs and automatically receive updates when they become available. They can also respond to the postings.

As organic foods go mainstream, the blogs help the company show how its brand differs from others and invite customers to help them in that effort. Blogs are an excellent advertising media to use. They are especially effective in market niches of “like-minded consumers”.

Tucows learns from the users how to make the site more accessible, and hears of their concerns. And, by addressing the user concerns and providing advice they keep the customer returning.

3. What are the advantages and disadvantages of using blogs for companies such as Stonyfield Farm and Tucows?

As indicated in the case, the benefits of Stonyfield's blogs have yet to be quantified, but management has faith that there are real benefits. Some of the benefits that management feels that blogs have helped with include:

- Creating a positive response to the brand by providing readers with something that inspires them or piques their interest.
- Easy brand recognition and recall.
- Increases customer loyalty and retention rates for their product.
- Attracts new customers because of what it represents (organic, nostalgic childhood memories, wholesome, etc.)
- Excellent and inexpensive form of advertising media capable of reaching extremely large markets with minimal costs.

Again, at Tucows the advantages are not quantified yet, but could be measured by return visits and activity on the blog, some of which can be translated into improvements by Tucows.

The main disadvantage is the time that it takes to create content, and monitor the content provided by others.

MIS IN ACTION QUESTIONS

Visit Stonyfield Farm's Web site and explore each of its blogs. Read some of the postings and related material. Then answer these questions:

1. Describe the kind of topics discussed on Stonyfield Farm's blogs. Are they closely related to Stonyfield's products? What kinds of people would they attract?

Student responses will differ but there are lots of examples (meet a farmer, organic information, healthy living, etc.) They are directed at involved consumers and consumers that are interested in the environment.

2. Is there any other content on the blog pages to promote Stonyfield products? Describe what you see and how it might help the company.

Yes, advertisements are placed on the pages. There are also endorsements, special offers, coupons and recipes to promote purchasing their products.

3. What types of content does Tucows have on its blog? Does Tucows need more than one blog? What additional blogs would you recommend for Tucows?

Most of the information is technical and promotional. It should discuss issues around software copyright and could be used to educate users as well as provide a political forum.

4. Should all companies use blogs to reach their customers? Why or why not?

Blogs can be effective tools, but there are other more “push” types of technology such as newsletters and social networks like Facebook that can be effective. Many companies are using Twitter, Facebook, and YouTube to reach their customers. Stonyfield seems to be using these technologies.

Digital Goods

If products can be digitized, they can be sold and distributed on the Internet. Music and books have been the forerunner. Now we're seeing movies and television shows taking the same path. **Digital goods** are much cheaper to produce in the long run with little or no distribution costs compared to traditional channels. Digital goods marketplaces also provide relatively cheap and efficient channels for merchants who otherwise could not afford to reach customers on a global scale. Independent musicians and moviemakers are finding tremendous opportunities for reaching new audiences through the Internet that they couldn't reach before.

Advertising dollars are moving from traditional outlets to Internet-based outlets at alarming rates. That puts tremendous pressure on traditional mediums such as television channels and newspapers to get in on the paradigm shift. Businesses must now find new ways to chase the consumer instead of the consumer chasing the business.

INTERNET BUSINESS MODELS

Table 13-5 in the text shows some of the new business models the Internet has enabled digital firms to undertake. Many of these businesses simply would not be possible without the technologies offered by the Internet.

COMMUNICATION AND SOCIAL NETWORKING

The Internet has also allowed businesses and consumers to establish new types of relationships not previously possible. FTD.com, the flower Web site, offers you the opportunity to store birthdays, anniversaries, and other special occasions on their computer. A few days before the event, FTD.com will send you an e-mail reminder to order flowers. You simply click on the Web site URL in the e-mail, select the flowers you want sent, and enter your credit card information. The whole transaction takes less than ten minutes and the recipient will love you for being so thoughtful. That's richness and reach that neither the consumer nor the business was ever able to establish before the Internet.

Just as magazines and newspapers can't exist without advertising, so, too, is the case with many Web sites. But unlike traditional print media, **banner ads** allow more targeted advertising. However, many companies are realizing that banner ads are not as effective as they once were because most Web users have learned to ignore them. **Pop-up ads** are now being used, although they too are often ignored by consumers. Pop-up ads are displayed over a Web page as you're perusing the site; pop-under ads are displayed in a separate browser window beneath your main browser window and remain there until you close them. What we're seeing now is a whole new line of consumer products that help prevent this type of advertising from reaching your computer screen.

People are very social beings so it's not surprising to find they are using the Internet to fulfill their need to connect with other people socially and professionally. **Social networking sites** such as MySpace.com and Facebook.com let people make new friends, find new jobs, and exchange information easily and quickly with a larger circle of people than through any other medium. Although some of these sites pose slight personal danger if misused, they fulfill the basic need people have to communicate with others.

Social networking is so appealing that it has inspired a new type of e-commerce experience called **social shopping**. Social shopping sites provide for online meeting places for people to swap shopping ideas.

Digital Content, Entertainment, and Services

We mentioned before if it can be digitized, it can be bought and sold through the Internet. Digital content can also be distributed through the Internet. Many television-based and radio newscasts have companion Web sites. It's not unusual for a broadcaster to give the audience a brief synopsis of a news article with the reminder to "visit our Web site for more information." That way, they can reach a larger audience through several different outlets instead of just one.

Podcasting is a method of publishing audio broadcasts via the Internet. Podcasts are becoming a popular way for content providers to reach new audiences. You are no longer tethered to a computer if you want to hear an audio broadcast of music, commentary, how-to instructions, or just about anything else you can imagine. Many universities now offer podcasts of professors' lectures so students can download the content and take it with them on their portable audio devices. Many textbook publishers, including the one for this text, offer companion podcasts of the book content to provide students more ways to engage the course content.

If you use a *portal* Web site such as Yahoo.com as the first site up on your browser, it tracks your preferences through software and determines that you much prefer music sites instead of gardening sites. Therefore, ads appearing on the pages will usually direct you to the latest offerings of music and not maple trees. Some sites gather information from various sources and offer it to you in a consolidated format. These online **syndicators** relieve you from having to access many different sites to get the information you want.

e-Bay is called the “biggest garage sale in the world.” It would be impossible for this type of dynamic pricing business to exist without the Internet. Interesting to note is the fact that e-Bay is one of a handful of **pure-play** Internet companies to consistently show a profit. As we found out through the dot.com bust, profits *are* still an important part of a business's success. The Internet allows pure-play or **clicks-and-mortar** business models to offer richness and reach in ways never before possible. It's up to the business to adapt to the new technologies and methodologies offered to remain competitive and profitable.

Bottom Line: E-commerce firms now have more opportunities to reach customers, suppliers, and partners through Internet channels. The new technology allows a digital firm to deepen its richness of information and reach. The Internet has also given digital firms the opportunity to create new business models or reshape their current model.

WINDOW ON TECHNOLOGY: CAN J&R ELECTRONICS GROW WITH E-COMMERCE

TO THINK ABOUT QUESTIONS

1. Analyze J&R Electronics using the competitive forces and value chain models. What is its business model and business strategy? How does it provide value?

J&R Electronics uses differentiation to separate it from its competitors. Its prices are very competitive. It maintains a vast inventory that has a reputation for being on the leading edge of new technology. It has a penchant for being first to market with new products or the latest versions of already popular products. It has a good sense of technology trends that it caters to before other stores, especially big box national chain retailers. Customer service is enhanced by knowledgeable workers.

2. What is the role of the Internet in J&R's business strategy? Is it providing a solution to J&R's problems? Why or why not?

In 2000, 30 percent of J&R Electronics' \$400 million in revenue was generated by its Web site. Since then it's added Web 2.0 concepts by using videos and customer reviews. Customers use those features for educational purposes and comparison-shopping. It added an online loyalty program that brings customers directly to its site rather than using intermediaries who it would have to pay. It's using a guided selling application that collects shopper input and narrows the product catalog to individual customer requirements and preferences. It provides interactive recommendations, putting more product information into customer hands, thereby reducing information asymmetry.

3. Can J&R keep up with the competition since it is more or less a local brand competing with nation-wide chains? How would you measure its success in keeping up with the competition?

Keeping up with competitors and measuring success against national retail chains is all relative. The company made a conscious decision early on not to open more brick-and-mortar stores intentionally. That in itself limits its reach. However, using the Web, J&R Electronics has expanded past a single storefront to millions of potential customers through the ubiquity, richness, information density, and personalization/customization of the Web. Using those features, it's been able to greatly expand its sales.

MIS IN ACTION QUESTIONS

Visit J&R's online store at JR.com, then answer the following questions:

1. What features described in this case are you able to find on the site?

Students should be able to find all of the features described in this case.

2. How effective is the implementation of these features? Do they seem to be achieving the goals that J&R set for them?

Answers to this question will vary based on student perceptions of the site. However, the site allows users to share their product opinions with others through the use of Digg, del.icio.us.com, e-mail and reviews. Apparently the features seem to be achieving the goals that J&R set for them based on the fact that it contracted with the Toy advertising agency to coordinate its TV, print, radio events, digital, and in-store promotions.

3. Compare JR.com to the Web sites of Visions or BestBuy. Evaluate them in terms of product selection and availability, tools for providing product

information and customer services, and ease of use. Which site would you use to purchase a computer or MP3 player? Why?

Again, answers will vary, especially the question about which site students would use to purchase a computer or MP3 player. The important point to take from this question is the ability to critically examine a Web site and determine how effective it is for ease-of-use, customer convenience, and how well it meets the eight unique features of e-commerce highlighted in Table 13-2.

13.2 ELECTRONIC COMMERCE

Here students are introduced to electronic commerce categories, related terminology, and types of electronic payment systems. The discussion of mobile commerce is of particular interest in this section. Ask your students to identify the advantages and disadvantages that might be associated with using handheld wireless devices.

Students will also enjoy learning more about electronic payment systems. Ask your students to visit TRUSTe at <http://www.truste.org> to see how they are creating certified security and privacy ratings of electronic transactions in order to improve online business practices and build public confidence in Internet commerce.

There are literally millions of Web pages on the Internet that provide a forum for discussing issues and a way to make information available in a global setting. The biggest distinction in the new business paradigm is the concept of electronic money. Implementation of electronic payment systems is in its infancy and still evolving. Have students share their online shopping experiences and use the discussion as a springboard for evaluating the principal electronic payment systems.

TYPES OF ELECTRONIC COMMERCE

E-commerce is divided into three major categories to make it easier to distinguish between the types of transactions that take place.

- **Business-to-consumer (B2C):** Most visible
- **Business-to-business (B2B):** Greatest dollar amount of transactions
- **Consumer-to-consumer (C2C):** Greater geographic reach

As you know, there are many products and services offered through traditional Web sites. But as we continue to expand the reach of the Internet to wireless devices, businesses are figuring out how to offer more products and more services through new channels dubbed **mobile commerce** or **m-commerce**. Not only can you purchase your airline ticket through a traditional Web site but you can instantly find out about flight delays or cancellations through your cell phone or handheld computer as you travel to the airport. Using your handheld computer you can purchase and download an electronic book to read while you wait for the airplane to take off.

ACHIEVING CUSTOMER INTIMACY: INTERACTIVE MARKETING, PERSONALIZATION, AND SELF-SERVICE

Throughout this chapter we've discussed all the new opportunities and channels available to customers and merchants. We tend to think of a great deal of disassociation between buyers and sellers when we think of doing business in cyberspace though. Actually the opposite is true. Let's look at how the Internet closes the gap between customers and businesses.

Interactive Marketing and Personalization

E-tailing (electronic retailing) Web sites must offer more than just 24/7 shopping if they want to be leaders.

Lands' End at <http://landsend.com> offers interactive shopping aids such as:

2. **Lands' End Live:** Call a phone number and a real, live person will assist you in finding what you're looking for on the Web site.
3. **My Virtual Model:** Submit your body measurements and other personal information. You can "try on" clothes on the Web site before you purchase them. You can even check how items coordinate in color and style.
4. **Sartorial Origins:** Discover the Myth of the White Sale.
5. **Shop with a Friend:** Two people can log on and shop together. Purchases can be consolidated into one shopping cart with one payment.

Other companies are finding that the Web offers excellent customer service tools, which save them money in personnel costs and gives customers what they want, when they want it. UPS offers online package status checking by updating its computers within minutes every time a package passes each checkpoint. The sender and recipient can track the package through the Web and know its whereabouts instantaneously.

Web personalization allows companies to create one-to-one relationships with customers and suppliers that simply aren't possible outside Internet-enabled transactions. The cost of gathering marketing information in traditional channels is extremely high and the data gathered may not yield as much information as a company would hope. But with the Internet, companies can gather information that gives them a truer picture of what the customer is actually purchasing or looking for by using **clickstream tracking tools**. The information is more comprehensive, coherent, and current than data gathered in traditional methods.

Amazon.com (and Amazon.ca), probably the most talked-about consumer retail Web site, doesn't just sell books and CDs. It also offers book reviews from other customers, links to other books related to the one they're purchasing, and the opportunity to purchase gifts for friends and relatives that are then gift-wrapped and sent out for them. Amazon.com is moving into other markets such as online auctions and now offers many different services, such as travel through a partnership with Expedia.com and a baby registry through Babies-R-Us. This is just one example of how the Internet allows companies to

use **collaborative filtering** software to offer customer personalization that simply isn't available through any other channel. Students can be asked to compare www.chapters.indigo.ca with www.amazon.ca for the tools each offer.

Blogs and Wikis

Businesses use blogs (short for weblogs) to communicate with customers and suppliers to announce new products or services and to garner feedback about company services. An excellent example of effective business uses of blogs is the one by Sun Microsystems, Inc. President and Chief Operating Officer Jonathan Schwartz (<http://blogs.sun.com/jonathan/>) who uses his blog to communicate with employees, vendors, outside software developers, and others interested in the company. He discusses policies and procedures with customers and users of the company's products and services. More valuable than that, he receives feedback from those outside the company and can use the information to help improve how the company meets its customer demands.

Blogs help companies build customer loyalty and intimacy never before possible. Moblogs (mobile phone-based blogs) and vblogs (video-based blogs) are useful outlets for advertising and product placement. Companies can pitch their products through blogs and make marketing less intrusive or banal for customers. The totality of blog-related Web sites is often referred to as the **blogosphere**.

A useful feature that has been coupled with blogs is that of Real Simple Syndication or RSS for short. The process allows you to place a small program on your computing device that alerts you to new information posted to Web sites you've marked. When a blogger posts a new entry to your favourite site, you receive an alert and can immediately click on the RSS feed to review the posting. RSS can also be used on a variety of news-related Web sites to help you keep current on breaking headlines.

Customer Self-Service

If you're having trouble using a new software program, your first thought may be to call the company that produced the program. You first have to find the number, and then are put on hold for a long time. When you finally get through to a customer service technician, he directs you to the company's Web site containing FAQs (Frequently Asked Questions) about the software. You find the answer to your question plus more information about other features you didn't even know about. You could have saved yourself a lot of time and effort by first accessing the company's Web site.

The Lands' End Web site is an excellent example of how businesses are adapting their **call centres** with Internet technologies. If you can't find what you want on the site, you can call Lands' End and a customer service technician will help guide you through the site. She will even post pictures right on your computer of products you may be interested in.

BUSINESS-TO-BUSINESS (B2B) ELECTRONIC COMMERCE: NEW EFFICIENCIES AND RELATIONSHIPS

Before the Internet, transactions between businesses were based on long-term relationships and geographic restrictions. It wasn't practical or cost efficient to search out buyers or suppliers nationwide. That's all changed thanks to new technologies made available through **electronic data interchanges** (EDI) and the Internet. EDI processes allow companies to connect their information systems to each other and make transactions flow seamlessly between the systems. It's faster, cheaper, and less error-prone.

The Internet is slowly replacing EDI as the preferred method of **procurement** between businesses. EDI systems usually required proprietary systems while the Internet provides an open standard, universally accepted method of exchanging data for processes such as procurement and B2C commerce.

It's also cheaper and easier through online **private industrial networks**, also known as **private exchanges** for the buyer to find the cheapest prices and the seller to find new customers. Neither buyers nor sellers are restricted to doing business with one or two partners in a particular geographic area.

Businesses and both buyers and sellers are enjoying tremendous cost savings by using **net marketplaces** or *e-hubs*. B2B e-commerce is reducing the buyers' costs by allowing them to shop around for the lowest prices. B2B e-commerce is reducing the sellers' costs by allowing them to automate the purchasing transaction and reach a greater number of potential buyers.

The types of **net marketplaces** available for B2B e-commerce include the following:

- **Vertical:** Specific industries
- **Horizontal:** Various functions across all industries
- **Branded:** Private exchanges across a broad range of industries

Exchanges also allow businesses to offer a broader range of services to other businesses that simply wasn't possible before the Internet. Staples, the office supply store, were restricted to offering in-store purchases of paper, pencils, and other supplies to other businesses. The buyer had to physically go to the store and wander through the aisles. Price comparison was limited at best to guessing whether Staples had the lowest price. Staples now offers an online exchange from which other businesses can not only order office supplies but also use business services such as payroll pricing, human resources management, legal and insurance services, and many others that weren't profitable or possible in the past. Staples.com is able to provide these online services by partnering with others to create new efficiencies and relationships through the Internet.

While the burst in the dot-com bubble has caused some companies to slow their e-commerce efforts, hardly any of them are totally abandoning Internet integration altogether. The benefit from the dot-com fiasco is that companies are planning their e-commerce efforts better and making their systems more stable and secure.

Bottom Line: The three categories of e-commerce, B2C, B2B, and C2C, offer businesses endless possibilities for expanding their products and services. Customers have far more opportunities through customer-centered retailing and interactive marketing and personalization to gather information and make more economical and convenient purchases.

13.3 M-COMMERCE

Cell phones aren't just for making phone calls anymore. Now they take photographs, send text messages, used as tracking devices, and for purchasing goods and services. What was once a very simple device has now turned in to a personal, portable computing device that's changing the very nature of commerce worldwide.

M-COMMERCE SERVICES AND APPLICATIONS

M-Commerce extends the ubiquitous Internet and computing to new heights. No longer does a business have to wait for customers to find it. It can go out and find new customers quickly and easily. As you wander through downtown shops or the mall, a business will know you're near and send a message to your mobile computing device detailing lunch specials. These services are popular in Europe and Southeast Asia.

Content and Location-Based Services

Subscribers to NTT DoCoMo wireless services in Japan can access wireless Web sites to check out a multitude of products and services including trade stocks, newspapers, movie shows, restaurants and others.

Banking and Financial Services

Customers can use mobile phones to their check banking account balances, transfer funds between accounts, and pay bills from their accounts.

Wireless Advertising

Wireless service providers are starting to include advertising on their sites.

Games and Entertainment

Cell phones have quickly turned into portable entertainment platforms. Mobile phone services offer downloadable digital games and ringtones (digitized snippets of music that play on mobile phones when a user receives or places a call). Just go to the local

electronics shop or telephone service providers to see just what is available on a cell phone these days.

ACCESSING INFORMATION FROM THE WIRELESS WEB

Although cell phones, PDAs, and other handheld mobile devices are able to access the Web at anytime and from anyplace, the amount of information that they can actually handle at one time is very limited. Until 3G broadband services come into widespread use, these devices will not be able to transmit or receive large amounts of data. **Wireless portals** feature content and services optimized for mobile devices to steer users to the information they are most likely to need.

M-COMMERCE CHALLENGES

The following improvements must be made by businesses and the telecommunication industry in order to increase acceptability of m-commerce:

- Keyboards and cell phone screens
- Data transfer speeds
- Memory and power supplies for devices
- Web content

Bottom Line: Although mobile commerce is still in its infancy, consumers are embracing the products and services available through the technology. The challenges must be addressed collectively by businesses, industries, and customers.

13.4 ELECTRONIC COMMERCE PAYMENT SYSTEMS

Various forms of electronic payment systems are taking shape to make Internet-based purchases easier and more secure.

TYPES OF ELECTRONIC PAYMENT SYSTEMS

Many of us don't want to use credit cards on Internet sites because we don't trust the technology. Or, we simply can't bring ourselves to give someone our credit card information sight unseen. Many banks, credit card companies, and merchants are working very hard to devise new technologies to make it safer and more secure to shop on the Internet by developing systems such as **digital credit card payment systems**. **Digital wallets** offer convenience to buyers and sellers by storing information accessible only to those authorized.

Sometimes it costs more to process a transaction than the monetary value of the transaction. That's one of the big issues facing some online merchants. For instance, if you want to purchase just one song from your favourite CD, you may be willing to spend

only 75¢ for the song. The credit card transaction may cost the merchant \$1. It stands to reason that not many merchants are going to look favourably on that deal. Using **micropayment** systems makes it more palatable to the merchant. Not many online sites are currently using this form of payment, but it holds much promise for smaller transactions on the Internet.

When the credit card was introduced years ago, many people simply refused to believe that products and services could be purchased without cold hard cash. Now they are as ubiquitous as the greenback. In our new electronic world, various online payment systems such as **digital cash** (also known as *electronic cash* or *e-cash*), **accumulated balance digital payment systems**, **digital credit card payment systems**, and **stored value payment systems** are just a few more ways the computer industry and merchants worldwide will continue to make it easier and safer to make purchases online.

Smart cards haven't become as popular in North America as they are in European and Asian countries. In addition to storing personal information, you can also use them in place of coins and bills. The first major experiment with them in the United States was at the 1996 Atlanta Olympics. There, people didn't have to use typical currency at all; if they wanted a Coke, they swiped their smart card through the machine's reader and out popped a can. If they wanted a newspaper, they used their smart card instead of half a dozen coins. The prepaid phone cards you can buy almost anywhere are the most popular form of monetary smart cards in America.

As customer-to-customer (C2C) e-commerce continues to grow, a secure, trustworthy, payment system is required. That's where **peer-to-peer payment systems** such as PayPal come in. Their Web site explains, "PayPal is the preferred payment service for online auctions, and for online community and group Web sites. PayPal's service, free to consumers, can be used from PCs or Web-enabled mobile phones."

A couple more fast-growing payment services offered on the Internet are **digital chequeing** and **electronic bill presentment and payment systems**. The latter is gaining popularity as people become more used to our wired world. Even though most bill payment systems cost extra money, users find it worth it because they don't have to worry about overdue bills and charges.

DIGITAL PAYMENT SYSTEMS FOR M-COMMERCE

One of the drawbacks to all these various forms of payment systems is the lack of standardization. As with any emerging technology or service, each company is vying to be the industry leader. But having so many different systems and methodologies leads to confusion by the consumer and extra expense by the merchant. Another problem with micropayment systems is that the average consumer is reluctant to go through the hassle required to make purchases for miniscule amounts of money. The music industry has tried to set up a system buyers can use to purchase just one song from an album instead of the whole album. So far, most potential customers aren't inclined to make purchases for just 99¢. The industry promises a shake-out in the next few years and eventually we will have fewer, thus more efficient, payment systems.

Bottom Line: Electronic commerce payment systems offer safe and efficient methods of payments for e-commerce transactions. These digital payment systems provide the functionality for e-commerce to continue its expansion in Canada and around the globe.

SUMMARY

1. What are the unique features of e-commerce, digital markets, and digital goods?

E-commerce involves digitally enabled commercial transactions between and among organizations and individuals. There are seven unique features of e-commerce technology: E-commerce technology is ubiquitous, meaning that it is available just about everywhere a computer can connect to the Internet. It has global reach, permitting commercial transactions to cross cultural and national boundaries far more conveniently and cost effectively than is true in traditional commerce. It operates according to universal standards by all nations around the world, whereas most traditional commerce technologies differ from one nation to the next. It provides information richness, enabling an online merchant to deliver to an audience of millions complex and rich marketing messages with text, video, and audio in a way not possible with traditional commerce technologies, such as radio, television, or magazines. It is interactive, meaning it allows for two-way communication between merchant and consumer and enables the merchant to engage a consumer in ways similar to a face-to-face experience but on a much more massive, global scale. It increases information density (the total amount and quality of information available to all market participants). It permits personalization and customization: Merchants can target their marketing messages to specific individuals by adjusting the message to a person's name, interests, and past purchases.

The Internet has created a digital marketplace where millions of people are able to exchange massive amounts of information directly, instantly, and for free. Digital markets are said to be more “transparent” than traditional markets. Information asymmetry is reduced. Digital markets are very flexible and efficient, with reduced search and transaction costs, lower menu costs, and the ability to change prices dynamically based on market conditions. Digital markets provide many opportunities to sell directly to the consumer, bypassing intermediaries, such as distributors or retail outlets.

Digital goods are goods, such as music, video, software, newspapers, magazines, and books, which can be delivered over a digital network. Once a digital product has been produced, the cost of delivering that product digitally is extremely low. New business models based on delivering digital goods are challenging bookstores, publishers, music labels, and film studios that depend on delivery of traditional goods.

2. How has Internet technology changed business models?

The Internet radically reduces the cost of creating, sending, and storing information while making that information more widely available. Information is not limited to traditional physical methods of delivery. This unbundling of information from traditional value chain channels is having a disruptive effect on old business models, and it is creating new business models. Some of the traditional channels for exchanging product information have become unnecessary or uneconomical, and business models based on the coupling of information with products and services may no longer be necessary.

The Internet can help companies create and capture profits in new ways by adding value to existing products and services or by providing the foundation for new products and services. Many different business models for electronic commerce on the Internet have emerged, including virtual storefronts, information brokers, transaction brokers, Net marketplaces, content providers, online service providers, virtual communities, and portals. Business models that take advantage of the Internet's capabilities for communication, community-building capabilities, and digital goods distribution have become especially prominent.

3. What are the various types of e-commerce, and how has e-commerce changed consumer retailing and business-to-business transactions?

The three major types of electronic commerce are business-to-consumer (B2C), business-to-business (B2B), and consumer-to-consumer (C2C). Another way of classifying electronic commerce transactions is in terms of the participants' physical connections to the Web. Conventional e-commerce transactions, which take place over wired networks, can be distinguished from mobile commerce, or m-commerce, which is the purchase of goods and services using handheld wireless devices.

The Internet provides a universally available set of technologies for electronic commerce that can be used to create new channels for marketing, sales, and customer support and to eliminate intermediaries in buy-and-sell transactions. Interactive capabilities on the Web can be used to build closer relationships with customers in marketing and customer support. Firms can use various Web personalization technologies to deliver Web pages with content geared to the specific interests of each user, including technologies that deliver personalized information and ads through m-commerce channels. Companies can also reduce costs and improve customer service by using Web sites, as well as e-mail and even telephone access to customer service representatives, to provide helpful information.

B2B e-commerce generates efficiencies by enabling companies to locate suppliers, solicit bids, place orders, and track shipments in transit electronically. Businesses can use their own Web sites to sell to other businesses or use Net marketplaces or private industrial networks. Net marketplaces provide a single, digital marketplace based on Internet technology for many buyers and sellers. Net marketplaces can be

differentiated by whether they sell direct or indirect goods, support short or long-term purchasing, or serve vertical or horizontal markets. Private industrial networks link a firm with its suppliers and other strategic business partners to develop highly efficient supply chains and to respond quickly to customer demands.

4. What is the role of m-commerce in business, and what are the most important m-commerce applications?

M-commerce uses the Internet for purchasing goods and services as well as for transmitting messages using wireless mobile devices. It is especially well-suited for location-based applications, such as finding local hotels and restaurants, monitoring local traffic and weather, and providing personalized location-based marketing. Mobile phones and handhelds are being used for mobile bill payment; banking; securities trading; transportation schedules updates; and downloads of digital content, such as music, games, and video clips.

Wireless portals (mobile portals) feature content and services optimized for mobile devices to steer users to the information they are most likely to need. M-commerce requires special digital payment systems that can handle micropayments because most m-commerce purchases today are for very small amounts.

M-commerce represents a tiny fraction of all online purchases because wireless mobile devices can't display merchandise very well. Mobile phones have tiny keyboards, small screens, and slow data transfer speeds (9.6 to 14.4 Kbps). M-commerce will benefit from interoperable payment systems for wireless devices and faster wireless networks to support more data-rich communication.

5. What are the principal payment systems for electronic commerce?

The principal electronic payment systems for electronic commerce are digital credit card payment systems, digital wallets, accumulated balance digital payment systems, stored value payment systems, digital cash, peer-to-peer payment systems, digital chequeing, and electronic billing presentment and payment systems. Accumulated balance systems, store value systems (including smart cards), and digital cash are useful for small micropayments.

KEY TERMS

The following alphabetical list identifies the key terms discussed in this chapter.

Accumulated balance digital payment systems — systems enabling users to make micropayments and purchases on the Web, accumulating a debit balance on their credit cards or telephone bills.

Banner ad — a graphic display on a Web page used for advertising. The banner is linked to the advertiser's Web site so that a person clicking on it will be transported to the advertiser's Web site.

Blogosphere — totality of blog-related Web sites.

Business-to-business (B2B) electronic commerce — electronic sales of goods and services among businesses.

Business-to-consumer (B2C) electronic commerce — electronic retailing of products and services directly to individual consumers..

Call centre — an organizational department responsible for handling customer service issues by telephone and other channels.

Clicks-and-mortar — business model where the Web site is an extension of a traditional bricks-and-mortar business.

Clickstream tracking — tracking data about customer activities at Web sites and storing them in a log.

Collaborative filtering — tracking users' movements on a Web site, comparing the information gleaned about a user's behaviour against data about other customers with similar interests to predict what the user would like to see next.

Consumer-to-consumer (C2C) electronic commerce — consumers selling goods and services electronically to other consumers.

Cost transparency — the ability of consumers to discover the actual costs merchants pay for products.

Customization — the modification of a software package to meet an organization's unique requirements without destroying the package software's integrity.

Digital cash — currency that is represented in electronic form that moves outside the normal network of money.

Digital chequeing — systems that extend the functionality of existing chequeing accounts so they can be used for online shopping payments.

Digital credit card payment systems — secure services for credit card payments on the Internet that protect information transmitted among users, merchant sites, and processing banks.

Digital goods — goods that can be delivered over a digital network.

Digital wallet — software that stores credit card, electronic cash, owner identification, and address information, and provides this data automatically during electronic commerce purchase transactions.

Disintermediation — the removal of organizations or business process layers responsible for certain intermediary steps in a value chain.

Dynamic pricing — pricing of items based on real-time interactions between buyers and sellers that determine what an item is worth at any particular moment.

Electronic billing presentment and payment systems — systems used for paying routine monthly bills that allow users to view their bills electronically and pay them through electronic funds transfers from banks or credit card accounts.

Electronic data interchange (EDI) — the direct computer-to-computer exchange between two organizations of standard business transactions, such as orders, shipment instructions, or payments.

Exchanges — third-party Net marketplaces that are primarily transaction oriented and that connect many buyers and suppliers for spot purchasing.

Information asymmetry — situation where the relative bargaining power of two parties in a transaction is determined by one party in the transaction processing more information essential to the transaction than the other party.

Information density — the total amount and quality of information available to all market participants, consumers, and merchants.

Market entry costs — the cost merchants must pay simply to bring their goods to market.

Marketspace — a marketplace extended beyond traditional boundaries and removed from a temporal and geographic location.

Menu costs — merchants' costs of changing prices.

Micropayment — payment for a very small sum of money, often less than \$10.

Mobile commerce (m-commerce) — the use of wireless devices, such as cell phones or handheld digital information appliances, to conduct both business-to-consumer and business-to-business e-commerce transactions over the Internet.

Net marketplaces — digital marketplaces based on Internet technology linking many buyers to many sellers.

Peer-to-peer payment systems — electronic payment systems for people who want to send money to vendors or individuals who are not set up to accept credit card payments.

Personalization — ability of merchants to target their marketing messages to specific individuals by adjusting the message for a person's name, interests, and past purchases.

Podcasting — method of publishing audio broadcasts via the Internet, allowing subscribing users to download audio files onto their personal computers or portable music players.

Pop-up ads — ads that open automatically and do not disappear until the user clicks on them.

Price discrimination — selling the same goods, or nearly the same goods, to different targeted groups at different prices.

Price transparency — the ease with which consumers can find out the variety of prices in the market.

Private exchange — another term for a private industrial network.

Private industrial networks — Web-enabled networks linking systems of multiple firms in an industry for the coordination of transorganizational business processes.

Procurement — sourcing goods and materials, negotiating with suppliers, paying for goods, and making delivery arrangements.

Pure-play — business models based purely on the Internet.

Richness — measurement of the depth and detail of information that a business can supply to the customer as well as information the business collects about the customer.

Ringtones — digitized snippets of music that play on mobile phones when a user receives or places a call.

Search costs — the time and money spent locating a suitable product and determining the best price for that product.

Smart card — a credit-card-size plastic card that stores digital information that can be used for electronic payments in place of cash.

Social networking sites — online community for expanding users' business or social contacts by making connections through their mutual business or personal connections.

Social shopping — sites that provide online meeting places for people to swap shopping ideas.

Stored value payment systems — systems enabling consumers to make instant online payments to merchants and other individuals based on value stored in a digital account.

Syndicators — business aggregating content or applications from multiple sources, packaging them for distribution, and reselling them to third-party Web sites.

Transaction costs — the costs of participating in a market.

Wireless portals — portals with content and services optimized for mobile devices to steer users to the information they are most likely to need.

REVIEW QUESTIONS

1. **What are the unique features of e-commerce, digital markets, and digital goods? Name and describe four business trends and three technology trends shaping e-commerce today.**

Students can answer this question by including information outlined in Table 13-1, which lists several business and technology trends shaping e-commerce today.

List and describe the seven unique features of e-commerce technology.

Table 13-2 outlines seven unique features of e-commerce that include:

- E-commerce technology is ubiquitous, meaning that it is available just about everywhere a computer can connect to the Internet.
- It has global reach, permitting commercial transactions to cross cultural and national boundaries far more conveniently and cost effectively than is true in traditional commerce.
- It operates according to universal standards shared by all nations around the world, whereas most traditional commerce technologies differ from one nation to the next.
- It provides information richness, enabling an online merchant to deliver to an audience of millions complex and rich marketing messages with text, video, and audio in a way not possible with traditional commerce technologies, such as radio, television, or magazines.
- It is interactive, meaning it allows for two-way communication between merchant and consumer and enables the merchant to engage a consumer in ways similar to a face-to-face experience but on a much more massive, global scale.
- It increases information density (the total amount and quality of information available to all market participants).
- It permits personalization and customization: Merchants can target their marketing messages to specific individuals by adjusting the message to a person's name, interests, and past purchases.

Define a digital market and digital goods, and describe their distinguishing features.

Digital markets are said to be more “transparent” than traditional markets. Table 13-3 describes distinguishing features of digital markets. The Internet has created a digital marketplace where millions of people are able to exchange massive amounts of information directly, instantly, and for free. Information asymmetry is reduced. Digital markets are very flexible and efficient, with reduced search and transaction costs, lower menu prices, and the ability to change prices dynamically based on market conditions. Digital markets provide many opportunities to sell directly to the consumer, bypassing intermediaries, such as distributors or retail outlets. Other features include delayed gratification, price discrimination, market segmentation, switching costs, and network effects.

Digital goods are goods that can be delivered over a digital network. Digital goods include goods, such as music, video, software, newspapers, magazines, and books. Once a digital product has been produced, the cost of delivering that product digitally is extremely low. New business models based on delivering digital goods are challenging bookstores, publishers, music labels, and film studios that depend on delivery of traditional goods.

2. How has Internet technology changed business models?

Explain how the Internet is changing the economics of information and business models?

The Internet radically reduces the cost of creating, sending, and storing information while making that information more widely available. Information is not limited to traditional physical methods of delivery. This unbundling of information from traditional value chain channels is having a disruptive effect on old business models, and it is creating new business models. Some of the traditional channels for exchanging product information have become unnecessary or uneconomical, and business models based on the coupling of information with products and services may no longer be necessary.

The Internet can help companies create and capture profits in new ways by adding extra value to existing products and services or by providing the foundation for new products and services. Many different business models for electronic commerce on the Internet have emerged, including virtual storefronts, information brokers, transaction brokers, Net marketplaces, content providers, online service providers, virtual communities, and portals. Business models that take advantage of the Internet's capabilities for communication, community-building capabilities, and digital goods distribution have become especially prominent.

Name and describe six Internet business models for electronic commerce. Distinguish between a pure-play Internet business model and a clicks-and-mortar business model.

Table 13.5 identifies eight Internet business models.

- Virtual storefronts sell physical products directly to consumers or individual businesses.
- Information brokers provide product, pricing, and availability information to individuals and businesses; they generate revenue from advertising or from directing buyers to sellers.
- A transaction broker saves users money and time by processing online sale transactions and generates a fee each time.
- An online marketplace provides a digital environment where buyers and sellers meet, search for and display products, and establishes prices for those products; it can provide online auctions and reverse auctions.
- A content provider creates revenue by providing digital content, such as digital news, music, photos, or video over the Web.
- An online service provider provides online services for individuals and businesses and generates revenue from subscription or transaction fees and from advertising.
- Social networks provide an online meeting place where people with similar interests can communicate and find useful information.
- A portal provides an initial point of entry to the Web along with specialized content and other services.

Note: A pure-play business model is based purely on the Internet. A clicks-and-mortar business model has a Web site that is an extension of a traditional bricks-and-mortar business.

3. What are the various types of e-commerce, and how has e-commerce changed consumer retailing and business-to-business transactions?

Name and describe the various categories of electronic commerce.

The three major types of electronic commerce are business-to-consumer (B2C), business-to-business (B2B), and consumer-to-consumer (C2C).

- Business-to-consumer involves retailing products and services to individual shoppers. Barnes&Nobel.com is an example of business-to-consumer electronic commerce.
- Business-to-business involves the sale of goods and services among businesses. Millpro.com provides business-to-business electronic commerce.
- Consumer-to-consumer involves consumers selling directly to consumers. An example of consumer-to-consumer electronic commerce is eBay.com.

Electronic commerce transactions can also be classified based on the participants' physical connections to the Web. Participants can use wired networks or mobile commerce.

Explain how the Internet facilitates sales and marketing for individual customers, and describe the role played by Web personalization.

The Internet enables a company to create closer, cost-effective relationships with its customers. The company can use the Internet to provide information, service, support, and in many instances, the product over the Web. The Internet facilitates direct sales over the Web, interactive marketing and personalization, and customer self-service.

The Internet digitally enables the firm. The firm can link to customers and suppliers so that electronic commerce, automating business-to-business transactions such as invoices, purchase orders, and sometimes payments (digital cash and electronic funds transfer) are economically and technically feasible.

In many instances, the customer can purchase a product or service from a company's Web site. A Web site also allows potential customers to obtain information about the products, distributors, and service centres. The information about distributors allows a company to use the Web site to market, while avoiding channel conflict. A FAQ (frequently asked questions) list can allow support for the product without tying up phone lines with common, easily answered questions. Such FAQs can raise customer comfort with the product and the company.

Web personalization directly tailors the Web content to the specific user and at a low cost. Personalization helps firms form a lasting relationship with an individual customer.

Explain how the Internet can enhance customer service.

Customer service starts with the ease customers have in researching products themselves, and then the ease of purchasing. Then, when the product has arrived (whether it is a digital product delivered over the Internet or a physical product delivered by mail or express delivery), the customer can obtain help on its usage over the Internet, often very easily. As was noted in question 5, FAQs provide support for easy questions, such as instructions for assembly or use of products or services. Answers to questions can be e-mailed from the Web site without making customers wait for telephone support. Many customers are happy with an answer even if it takes eight hours to receive, as long as they know they are going to get it. Further, with chat or Internet telephony linked to the site, customers can talk to representatives. Many vendors, such as Dell, have people assigned to answer the questions or complaints of users. The Internet is also an easy, fast way to place orders because it reduces conversation, misunderstanding, errors, and time.

Explain how Internet technology supports business-to-business electronic commerce.

Business-to-business transactions can occur via a company Web site, net marketplace, or private exchange. Web sites make it easy to sell and buy over the Internet, compare suppliers, products, and prices, and even find out how others feel about the product. Further, supply chain linkages through intranets and extranets can support JIT, reduce cycle times, and other practices of continuous improvement. Because of the ease and

efficiencies brought by the Internet, business-to-business participants can save a significant amount of money and time.

Define and describe Net marketplaces, and explain how they differ from private industrial networks (private exchanges).

A net marketplace is a single digital marketplace based on Internet technology linking many buyers to many sellers. The net marketplace is an important business model for B2B e-commerce because some net marketplaces serve vertical markets for specific industries and other net marketplaces serve horizontal markets, selling goods that are available in many different industries. Also, net marketplaces can sell either direct goods or indirect goods. Net marketplaces are more transaction-oriented and less relationship-oriented than private industrial networks.

4. What is the role of m-commerce in business and what are the most important m-commerce applications?

List and describe important types of m-commerce services and applications.

The most popular categories of m-commerce services and applications for mobile computing include:

- Information-based service: Applications include instant messaging, e-mail, searching for a movie or restaurant using a cell phone or handheld PDA.
- Transaction-based services: Applications include purchasing stocks, concert tickets, music, or games; searching for the best price for an item using a cell phone and buying it in a physical store or on the Web.
- Personalized services: Services that anticipate what a customer wants based on that person's location or data profile, such as updated airline flight information or beaming coupons for nearby restaurants.

Explain how wireless portals help users access information on the wireless Web.

Wireless portals feature content and services optimized for mobile devices to steer users to the information they are most likely to need. Voice portals accept voice commands for accessing Web content, e-mail, and other electronic applications from a cell phone or standard telephone.

Describe some of the barriers to m-commerce.

M-commerce represents a tiny fraction of all online purchases because wireless mobile devices can't display merchandise very well. Mobile phones have tiny keyboards, small screens, and slow data transfer speeds (9.6 to 14.4 Kbps). M-commerce will benefit from interoperable payment systems for wireless devices and faster wireless networks to support more data-rich communications.

5. What are the principal electronic payment systems for electronic commerce?

Name and describe the principal electronic payment systems used on the Internet.

Table 13-6 summarizes the electronic payment systems. The electronic payment systems discussed in the chapter include digital credit card payment, digital wallet, accumulated balance payment, stored value payment systems, digital cash, peer-to-peer payment systems, digital chequeing, and electronic billing presentment and payment.

- Digital credit card payment systems provide secure services for credit card payments on the Internet and protect information transmitted among users, merchant sites, and processing banks.
- Digital wallets store credit card and owner identification information and provide these data automatically during electronic commerce purchase transactions.
- Accumulated balance payment systems accumulate micropayment purchases as a debit balance that must be paid periodically on credit card or telephone bills.
- Stored value payment systems enable customers to make instant online payments from a value stored in a digital account. A smart card is a credit card-size plastic card that stores digital information and can be used for electronic payments.
- Digital cash is an electronic form of currency, moves outside the normal network of money, and is used for micropayments or larger purchases.
- A peer-to-peer payment system is an electronic payment system for people who want to send money to vendors or individuals who are not set up to accept credit card payments.
- A digital cheque is an electronic cheque with a secure digital signature.
- An electronic billing presentment and payment system is used to pay routine monthly bills; it allows users to view their bills electronically and pay them through electronic funds transfers from bank or credit card accounts.

Describe the types of payment systems used in m-commerce.

Although still in their infancy in the United States, other countries like Japan use three kinds of mobile payment systems:

- Stored value systems charged by credit cards or bank accounts
- Mobile debit cards tied to personal bank accounts
- Mobile credit cards

Japanese cell phones act like mobile wallets, containing a variety of payment mechanisms. Consumers can pay merchants by simply waving the cell phone at a merchant payment device that accepts payments.

DISCUSSION QUESTIONS

1. How does the Internet change consumer and supplier relationships?

One clear change is that consumers can research products and services online and then make their purchases on the Internet. As the Internet increases the richness and range of information that is available, it shrinks information asymmetry.

As the Internet is at the centre of digital integration, it is changing the way consumers and suppliers interact. The Internet is responsible for creating new business models and promotes customer-centered retailing, direct sales over the Web, interactive marketing and personalization, m-commerce, and customer self-service.

In today's competitive environment, suppliers must increasingly offer their consumers product variety and mass customization without increased delivery times. In order to meet these requirements, suppliers must deliver goods and services in a timely manner. However, delivery performance depends on many different factors, such as finished parts inventory levels and work-in-progress. Suppliers can track these factors inexpensively through the use of information systems.

2. The Internet may not make corporations obsolete, but the corporations will have to change their business models. Do you agree? Why or why not?

Most students will probably agree, but whichever way they go, they must support their case. If you have students on both sides of the issue, lead a discussion that challenges the position of both sides.

The Internet will paint a completely different picture of business in the new millennium. As companies transform to remain competitive in the Digital Age, they will adopt a new business model, putting aside the one that has been in place since the Industrial Age began two hundred years ago.

The Internet is certainly driving tremendous changes, and it is important to note that these changes are self-perpetuating and happening much faster than ever before. There are seven megatrends where the Internet's impact is changing how business. These trends are found in every industry and every country around the world. The megatrends include:

- New channels are revolutionizing sales and brand management.
- The balance of power may be shifting to the customer.
- Competition is intensifying across all dimensions.
- The pace of business is fundamentally accelerating.
- Companies are transforming into extended enterprises.
- Companies are reevaluating how they, their partners, and their competitors add value.

- Knowledge is becoming more of a key strategic asset.

Instead of inwardly-focused companies “sticking to their knitting,” we will see extended enterprises; instead of companies with circumscribed relationships with their suppliers and customers, we will see a myriad of electronic relationships and shared processes; instead of a hierarchical chain of command, we will see virtual teams, empowered to make decisions on behalf of the company. Without the Internet, none of this would be possible.

TEAMWORK: PERFORMING A COMPETITIVE ANALYSIS OF E-COMMERCE SITES

Form a group with three or four of your classmates. Select two businesses that are competitors in the same industry and that use their Web sites for electronic commerce. Visit these Web sites. You might compare, for example, the Web sites for iTunes and Napster, Amazon.ca and Chapters.Indigo.ca, or TDAmeriTrade and Scottrade. Prepare an evaluation of each business's Web site in terms of its functions, user friendliness, and ability to support the company's business strategy. Which Web site does a better job? Why? Can you make some recommendations to improve these Web sites? If possible, use Google Sites to post links to Web pages, team communications announcements, and work assignments; to brainstorm; and to work collaboratively on project documents. Try to use Google Docs to develop a presentation of your findings for the class.

Answers for this project will vary as students will select different businesses from which to do the comparison. The simplest method would be to go directly to each of the company's main Web page as listed in the question.

In their analysis, students could set up a spreadsheet table to evaluate each of the two businesses they are making their comparisons against. They should include fields for functions, user friendliness, and ability. By using a simple weighted factor scale and assigning weights to each feature in order of their perceived importance they will arrive at a score that they can use to determine which Web site they feel does a better job.

There are many criteria for evaluating Web sites. Your students can use the following criteria to evaluate the Web sites:

- **Accuracy:** Is the material free of error (typos, spelling, grammar, etc.)? Are the sources for factual information in the material clearly identified? Can you verify them?
- **Objectivity:** Is any bias present? To what extent is the material meant to persuade? Is this clearly stated? Is the page an advertisement or some other kind of promotional material? Would any surrounding advertisements influence the materials contents or results? Are the advertisements clearly separate from the resource contents?
- **Coverage:** Who is the intended audience?

- **Currency:** When was the site last updated? Does it rely on the most current available information? If not, is the reason clearly stated and justified?
- **Authority:** Who is the author? Are his credentials stated? How knowledgeable is he? Who is the site sponsor? Is there an organization affiliated with the site or its author? Can you find out more about its purposes and intent? (Hints: examine the URL. Is it .org? .com? .edu? Go up a few levels to learn more about the host organization.)

When evaluating a business and its Web site, most any business will do as long as it has competition. Students may even want to examine the Internet strategy for your university or college. If students use the local college or university, they can examine the appropriate uses of the Internet for the university. Students may need to examine uses beyond what the university is doing. The university may keep students or alumni informed of campus events, allow prospective students virtual tours, and accept appointments for visits. Many universities allow prospective students to apply over the Internet. What else can be done? Could registration take place over the Internet? Can students pay tuition over the Internet or query their balances or even their GPAs? Does the university deliver courses over the Internet?

Certainly when they visit Chapters.Indigo.ca or Amazon.ca, your students will see many similarities. Ask your students to consider why more people use one rather than another. Ask your students to examine the ability to look up account balances, get recommendations, and receive reviews. Does this matter? A site that is too rich in graphics, movies, or sounds may take so long to load that it is not too useful.

LEARNING TRACK MODULES

1. *E-Commerce Challenges: The Story of Online Groceries*
2. *Build an E-commerce Business Plan*
3. *Hot New Careers in E-commerce*

Students will find Learning Track Modules on these topics at the MyMISLab for this chapter.

HANDS-ON MIS: PROJECTS

Management Decision Problems

1. Columbiana: a small, independent Caribbean island that wants to develop its tourist industry and attract more visitors. How can a Web presence help? What Internet business model would be appropriate? What functions should the Web site perform?

A Web site has the potential to introduce thousands and millions of people to a little known resort destination at a significantly lower cost than other forms of marketing. The Web site can highlight the island's accommodations and show off its attractions. Web-

cams could be established around the island to give potential tourists and visitors insight into the island's main attractions. A Web site makes it easier for potential visitors to contact hotels and book accommodations. The Web site can connect with airlines and provide information about flights with the ability to purchase airline tickets on partnering Web sites. Potential business models, depending on the features available on the site, include information broker, transaction broker, and even a social network where people with similar interests in these kinds of destinations can meet and discuss.

2. Company-sponsored blog: Explore the Web sites of the following companies: Nygard, Canadian Tire, Tim Horton's, and Air Canada. Determine which of these Web sites would benefit most from adding a company-sponsored blog to the Web site. List the business benefits of the blog. Specify the intended audience for the blog. Decide who in the company should author the blog, and select some topics for the blog.

- Nygard: the Web site appears to market apparel to women who reside primarily in major metropolitan areas. A blog, dedicated to the social scene in various cities, written by employees or marketing managers, could address the best places to eat, meet other people, or attend nightclubs.
- Canadian Tire: a how-to expert could establish a blog and advise consumers on different projects they can participate in around the house. A separate blog could be written for those engaged in automotive. An electronics expert could write a blog extolling the virtues and features of many of the products the store sells. It would be targeted towards customers who are confused by all the technical specifications of products. A how-to-install-it blog could also be authored by an expert that would take input from other customers who've already had to endure the quandaries of installing some of the more sophisticated equipment on sale.
- Tim Horton's: a blog written by an expert on coffee and tea brews would be a big hit with consumers. It would help introduce new flavors to customers who would purchase more products.
- Air Canada: A blog could be written by travel experts on destinations, good deals, travel tips, and safety issues. The site could help sell more tickets and reduce travellers' frustrations with safety precautions.

IMPROVING DECISION MAKING: USING SPREADSHEET SOFTWARE TO ANALYZE A DOT-COM BUSINESS

Software skills: Spreadsheet downloading, formatting, and formulas
Business skills: Financial statement analysis

Publicly-traded companies, including those specializing in e-commerce, are required to file financial data with the System for Electronic Document Analysis and Retrieval (SEDAR). By analyzing this information, you can determine the profitability of an e-commerce company and the viability of its business model.

Pick one company that conducts e-commerce on the Internet, for example, Sears Canada. Study the Web pages that describe the company and explain its purpose and structure. Use the Web to find articles that comment on the company. Then visit the SEDAR Web

site at www.sedar.com, select your company, and select View This Public Company's Documents to access the company's news releases and financial reports showing income statements and balance sheets. Select only the sections of the financial reports containing the desired portions of financial statements that you need to examine, and download them into your spreadsheet. Create simplified spreadsheets of the company's balance sheets and income statements for the past three years.

The data for this exercise is in the file named Ch13_Analyze_a_Dot_com_Question.pdf located in the Chapter 13 folder.

- 1. Is the company a dot-com success, borderline business, or failure? What information forms the basis of your decision? Why? When answering these questions, pay special attention to the company's three-year trends in revenues, cost of sales, gross margins, operating expenses, and net margins. See the MyMISLab for Chapter 13 for definitions of these terms and how they are calculated.**
- 2. Prepare an overhead presentation (with a minimum of five slides), including appropriate spreadsheets or charts, and present your work to your professor and classmates.**

Students' solutions will vary, depending on the company they select and the time period over which it is analyzed. The files provided here are merely for purposes of illustration and the income statement and balance sheet have been simplified. If students lack prior knowledge of financial statements, the instructor may have to devote extra time to explaining income statements, balance sheets and financial ratios. Alternatively, students can find material on understanding financial statements on financial Web sites such as Ameritrade (www.ameritrade.com) or the Small Business Knowledge Base <http://www.bizmove.com/finance/m3b2.htm>.

The suggested answer is in a file named Ch13_Analyze_a_Dot-com_Solution.xls located in the Chapter 13 folder.

ACHIEVING OPERATIONAL EXCELLENCE: EVALUATING E-COMMERCE HOSTING SERVICES

Software skills: Web browser software

Business skills: Evaluating e-commerce hosting services

You would like to set up a Web site to sell towels, linens, pottery, and tableware from Portugal and are examining services for hosting small business Internet storefronts. Your Web site should be able to take secure credit card payments and to calculate shipping costs and taxes. Initially you would like to display photos and descriptions of 40 different products. Visit Yahoo! Small Business, GoDaddy, and Volusion and compare the range of e-commerce hosting services they offer to small

businesses, their capabilities, and costs. Also examine the tools they provide for creating an e-commerce site. Compare these services and decide which you would use if you were actually establishing a Web store. Write a small report indicating your choice and explaining the strengths and weaknesses of each.

In addition to writing a report explaining the strengths and weaknesses, ask them to apply the concepts of this chapter to their reports or at least to discuss them. Some of the topics should be electronic payment systems, dynamic pricing, banner and pop-up ads, and the Internet business models.

YAHOO! Small Business Merchant Solutions		
Starter	Standard	Professional
\$39.95/month 1.5% transaction fee \$50 setup fee	\$99.95/month 1.0% transaction fee \$50 setup fee	\$299.95/month .75% transaction fee \$50 setup fee

GoDaddy.com		
Economy Plan	Deluxe Plan	Unlimited Plan
3 mo: \$4.99/mo	1 mo: \$6.99/mo	1 mo: \$14.99/mo
12 mo: \$4.74/mo SAVE 5% [†]	12 mo: \$6.64/mo SAVE 5% [†]	12 mo: \$14.24/mo SAVE 5% [†]
24 mo: \$4.50/mo SAVE 10% [†]	24 mo: \$6.29/mo SAVE 10% [†]	24 mo: \$13.49/mo SAVE 10% [†]
36 mo: \$4.25/mo SAVE 15% [†]	36 mo: \$5.94/mo SAVE 15% [†]	36 mo: \$12.74/mo SAVE 15% [†]

Volusion.com		
Steel Plan	Bronze Plan	Silver Plan
\$19 ⁹⁵ .	\$39 ⁹⁵ .	\$59 ⁹⁵ .
This hosting service offered dozens of features that were directed more towards e-commerce than the others.		

Please see the file named Ch13_Hosting_Services_Solution.xls in the Chapter 13 folder.

CASE STUDY: FACEBOOK'S DILEMMA?

Case Study Questions

1. What concepts in this chapter are illustrated in this case?

Eight unique features of e-commerce technology are obviously illustrated in this case: ubiquity, global reach, universal standards, richness, interactivity, information density, personalization/customization, and social technology (Table 13-2) The following elements of Table 13-1, The Growth of E-commerce, also are illustrated: breadth of e-commerce offerings continue to grow; small businesses and entrepreneurs continue to flood the e-commerce marketplace; wireless Internet connections grow rapidly; powerful

handheld mobile devices support a variety of Internet activities; the Internet broadband foundation becomes stronger; RSS grows; and more than half the Internet user population join an online social network.

2. What is the role of e-commerce and Web 2.0 technologies in Facebook's widespread popularity?

Businesses use social networking sites to harvest a vast amount of information about users and their preferences for many different products and services to create carefully targeted promotions. Businesses use the site to interact with potential customers. The sites are so “sticky” that they have become very powerful marketing tools. Users are reluctant to leave for fear of leaving the rest of their friends behind.

The Facebook Platform provides third-party developers a platform for applications like games, plug-in features for user profiles, and other programs which are fully integrated with the Facebook site.

Flixter, an online community for movie fans, has a Facebook application called Movies that allows people to tell their Facebook friends about the movies they've seen and share reviews.

3. Describe the weaknesses of Facebook's privacy policies and features. What management, organization, and technology factors have contributed to those weaknesses?

The company has encountered more than its fair share of controversy along its path to success, mostly concerning its handling and usage of the extensive information it collects from its users.

Management: Facebook assumed it had the consent of users to share information about them that it collected through the Beacon advertising service if they did not use the opt-out feature. Facebook changed Beacon to be an “opt-in” service and gave users the ability to disable it completely. The company utterly failed to grasp the extent to which the service violated its users' privacy as well as the uproar such a service was likely to cause. The same thing occurred when Facebook introduced its News Feed feature.

Organization: The personal information collected on the site represents a mother lode to advertisers, but one that will remain largely untapped if Facebook users do not feel comfortable enough or have sufficient incentive to share it. Users that attempted to delete their accounts were met with resistance and often required outside assistance from watchdog groups.

Technology: privacy and user controls over the information granted to Facebook are the biggest concerns most users have with the site. Facebook grossly miscalculated user privacy demands when it launched the company's Beacon advertising service because it shared information about users that they had not explicitly intended or agreed to share.

The service originally began as an “opt-out” feature. Even after users opted-out, the service continued to send information to Facebook regardless of whether or not the user was logged into Facebook at the time. The company's servers maintain copies of information indefinitely in accounts that have been deactivated.

4. Does Facebook have a viable business model? Explain your answer.

Student answers will vary but should include these elements:

Positive indicators:

- It's one of the largest social networking sites in the world and is growing
- Facebook's interface is simplistic and clean and tends to attract those looking for a crisp, more structured social networking environment
- It represents a unique opportunity for advertisers to reach highly targeted audiences based on their demographic information and narrowly specified criteria
- It represents a gold mine of opportunity because of the information the site has gathered and because of the richness of the social networking environment.
- Part of its status as a first-mover in the social networking marketplace helps attract more users

Negative indicators:

- It has created large numbers of hostile users because of its privacy violations
- Facebook's own popularity will injure its chances to attract advertisers to its site, claiming that the engaging and immersive environment that draws visitors to the site makes users less likely to click on ads
- Skeptics also believe that the current application system, where applications tend to support one another via advertising through other applications without the aid of extensive outside advertising, is an unsustainable model over the long term. So far, only 200 Facebook applications have attracted more than 10,000 users per day and 60 percent failed to attract even 100 daily users.
- It remains to be seen whether or not the company can turn its heavy site traffic and trove of personal information into new revenue streams.

5. If you were responsible for coordinating Facebook's advertising, how would you balance the desire to become increasingly profitable with the need to protect the privacy of your users?

Answers will vary, but students could mention the following:

- The toughest task for Facebook will be to continue to preserve the privacy of its members while monetizing the user data it has collected.
- Many users may not even be aware or care about the dissemination of their personal information. The benefits of being part of Facebook may outweigh the reservations its users have regarding their privacy.
- Facebook now provides privacy controls that allow users to sort friends into groups and grant access to parts of their profiles.

- Some advertisers have pulled out of Facebook's advertising programs when they learned about the privacy concerns raised by users.
- Security of data storage is important
- Need to educate users on the privacy policy and the associated risks
- Ensure that users are not children
- Use technology to allow users to control the extent of their sharing
- You could look at the possibility of no-ad sites for a subscription fee
- Make sure you only allow reputable advertisers who adhere to the same privacy guidelines as you do