Chapter 11

E-Commerce
Learning Objectives

1. Explain what e-commerce is and describe some of the advantages and disadvantages involved with implementing e-commerce.

2. Identify a variety of e-commerce business models and discuss their differences.

3. Discuss the types of Web sites that can be used to implement e-commerce.

4. List several strategies for implementing e-commerce using the Web, including some of the decisions that need to be made, the options available for accepting payments, and the process of designing and developing an effective Web site.
Learning Objectives

5. Outline some sales and marketing strategies that can be used in conjunction with an e-commerce Web site.
6. Discuss some security issues related to e-commerce sites.
Overview

• This chapter covers:
  – Potential advantages and disadvantages of e-commerce for both businesses and consumers
  – Types of e-commerce business models and Web sites
  – The issues a business needs to consider when implementing an e-commerce Web site
  – Sales and marketing strategies for e-commerce Web sites
  – E-commerce security issues
What Is E-Commerce?

• E-Commerce
  – The act of doing business transactions over the Internet or similar technology
  – Has existed for years via private networks (electronic funds transfers, etc.)
  – Now most often performed via the Internet
  – Dot-com
    • An Internet-only store with no physical presence
  – Brick-and-Mortar Store
    • A conventional store with a physical presence
What Is E-Commerce?

• M-Commerce
  – E-commerce carried out via smartphones and other mobile devices
  – Near Field Communications (NFC) uses RFID to facilitate communications between devices
Advantages of E-Commerce

• For Businesses
  – Reduced costs
    • Dot-coms are less expensive than brick-and-mortar stores because there is no physical storefront to maintain
  – Increased customer satisfaction
    • Shopping experience is convenient (open all the time, no driving, etc.)
    • Can send customers personalized information
  – Broader customer base (less geographical restrictions)
  – Potentially higher sales
Advantages of E-Commerce

• For Customers
  – Convenience
  – Higher degree of selection
  – Easier comparison shopping
    • Higher number of merchants to choose from
    • Geographical location is not an issue
    • Shopping bots and other comparison shopping tools are available
  – Potential cost savings
  – Customized products
Technology and You Box

Mobile Payments

- You can make purchases and send money to others via a mobile device
- Mobile payment processing allows payments (typically credit card payments) to be collected via a mobile device
  - Field workers
  - Craft vendors
  - Sales personnel
Disadvantages of E-Commerce

• For Businesses
  – Pressure to be always open, site always working
    • Solid, well designed sites and hosting
  – Lost business due to some customer hesitation to shop online
  – Risk of fraudulent credit card transactions
  – Ease of entry for competitors
Disadvantages of E-Commerce

• For Customers
  – Potential for fraud and other potential security problems
    • Buyer protection programs and using credit card protection can help
  – Not being able to see or touch the goods
    • 3D online stores may help
  – Possible expense of returning merchandise
    • Some click-and-mortar stores allow returns to local stores
• Business-to-Consumer (B2C) Business Model
  – An e-commerce model in which a business provides goods or services to consumers
• Business-to-Business (B2B) Business Model
  – An e-commerce model in which a business provides goods or services to other businesses
  – Intermediary Hubs
    • Bring buyers and sellers together
      – Vertical hubs
      – Horizontal hubs
E-Commerce Business Models

– Consumer-to-Consumer (C2C) Business Model
  • An e-commerce model in which a consumer provides goods or services to other consumers
  • Craigslist and online auctions are common means of C2C transactions

– Business-to-Government (B2G) Business Model
  • An e-commerce model in which a business provides goods and services to government organizations
  • Businesses or individuals paying taxes online etc. can be viewed as G2B and G2C transactions, respectively
E-Commerce Business Models

**BUSINESS TO CONSUMER (B2C)**
Transactions are between businesses and consumers; this site sells computers and other hardware to individuals.

**BUSINESS TO BUSINESS (B2B)**
Transactions are between businesses and other businesses; this site sells printers and other imaging products to businesses.

**CONSUMER TO CONSUMER (C2C)**
Transactions are between consumers and other consumers; this site helps individuals find items for sale in a specific geographic area.

**BUSINESS TO GOVERNMENT (B2G)**
Transactions are between businesses and the government; this site offers businesses a number of online services.
Quick Quiz

1. Which of the following is NOT an advantage of e-commerce for a business?
   a. Reduced cost
   b. Increased customer satisfaction
   c. Reduced competition
2. True or False: Craigslist is an example of a C2C site.
3. A business following the ____________ model sells products directly to consumers.

Answers:
1) c; 2) True; 3) Business-to-consumer (B2C)
Types of E-Commerce Web Sites

• Manufacturer and E-Tailer Sites
  – Manufacturers and online retailers sell directly to customers via their Web sites

• Subscription Sites
  – Sells access to its online content
    • Newspapers and journals
    • E-book rentals
    • Premium social networking services
Types of E-Commerce Sites

- Brokerage Sites
  - Bring buyers and sellers together and earn revenue by charging commissions on sales made via the site
- Online Auctions
  - Allow consumers or businesses to auction products to consumers
  - Buyers bid and highest bidder at the time the auction closes buys the item
  - Seller pays a listing fee and a selling fee based on the final price
  - Some online auction sites have automatic bidding systems
Types of E-Commerce Sites

FIGURE 11-6
How online auctions work.

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Types of E-Commerce Sites

– Financial Brokerages
  • Allow individuals to sell stocks, bonds, futures, etc.
  • Generate revenue by charging commissions or transaction fees

– Real Estate, Travel, and Other Consumer Brokerages
  • Assist consumer in finding resources they desire
    – Real estate
    – Airline tickets
    – Hotel reservations
Types of E-Commerce Sites

- Market and Commodity Exchanges
  - Market Exchange
    - Matches organizations with goods or services to sell with potential buyers
    - Acts as an intermediary between buyer and seller
  - Commodity Exchange
    - Exchange of natural resources and raw goods
      » Energy, cattle, chemicals, and metals
  - Some sites earn a fee for every transaction; some charge sellers an annual membership fee to participate
1. Which of the following is not a type of brokerage site?
   a. E-tailer site
   b. Online auction site
   c. Market exchange

2. True or False: Both manufacturers and online retailers can sell directly to customers via their Web sites.

3. A(n) ___________ site sells online content (music, articles, social networking access, etc.) to individuals.

Answers:
1) a; 2) True; 3) subscription
Implementing Web-Based E-Commerce

FIGURE 11-8
Implementing Web-based e-commerce.

TYPICAL STEPS

1. Select appropriate business models and types of Web sites.

2. Select the desired e-commerce applications.

3. Develop procedures for handling electronic financial transactions.

4. Design and develop an effective e-commerce Web site.

5. Implement appropriate sales and marketing strategies.
Implementing Web-Based E-Commerce

• Step 1: Select Appropriate Business Models and Types of Web Sites
  – More than one type of site can be selected

• Step 2: Select the Desired E-Commerce Applications
  – Determine electronic customer relationship management (eCRM) activities to be included
    • Providing order and shipping information, social media sharing options, online support, etc.
  – Determine which other business systems the Web site will be linked to
Implementing Web-Based E-Commerce

Click to open live chat window

Links to account settings and order status

Social media sharing options

Link to order and return information

FIGURE 11-9
Common eCRM features include order status, return information, and live chat.
Implementing Web-Based E-Commerce

• Step 3: Develop Procedures for Handling Electronic Financial Transactions
  – Need to determine which types will be accepted
  – Order forms should be set up as secure Web pages
  – Credit and Debit Card Processing
    • Most common payment method used for online shopping
    • Most businesses open an e-commerce merchant account, usually from a U.S. bank
      – This bank handles all the credit and debit card transactions
Implementing Web-Based E-Commerce

– Virtual account numbers
  • Disposable credit card numbers used to purchase goods and services and to help alleviate customer’s concerns about security and identity theft
    – Purchases will be charged to the customer’s regular credit card
    – Typically these are single-use numbers
    – Useless if intercepted or stolen

– Other options
  • 3D Secure, OTPs, prepaid credit cards
Implementing Web-Based E-Commerce

**FIGURE 11-10**
E-commerce payment options. Each e-commerce site must decide the payment options to be supported.

- Web page is secure
- Gift card
- Bill Me Later service
- Credit card
- Cash
- PayPal account
Implementing Web-Based E-Commerce

– Online Checkout Services
  • Enable e-commerce customers to check out using information associated with another e-commerce account (such as Amazon.com)

– Online Payment Services
  • Accessed via the Internet and used to make electronic payments to others
  • PayPal
    – Merchants pay a transaction fee
    – Fee is usually lower than regular credit or debit card fees
    – Individual’s credit card number is not revealed to the merchant
  • Other online payment services are Bill Me Later and eBillme
Implementing Web-Based E-Commerce

Adding/Withdrawing Money
Add or withdraw money, as well as view your recent transactions.

Requesting Money
Send a money request or an invoice to others.

Sending Money
Send money via an e-mail address or mobile phone number; the money is either deducted from the account’s balance or charged to a credit card.

Merchant Tools
Add PayPal payment buttons to your site, send invoices, and more.

FIGURE 11-13
How PayPal works.
Implementing Web-Based E-Commerce

– Digital Gift Certificates, Gift Cards, and Coupons
  • Appropriate codes are entered into the Web site at time of purchase

– Digital Wallets
  • Holds a buyer’s information that can be used to speed up online purchase transactions
    – Device-based digital wallets are typically mobile apps for smartphones and media tablets
    – Cloud-based digital wallets hold same type of information as a device-based digital wallet and are accessed online at checkout
Implementing Web-Based E-Commerce

- Site-specific digital wallets store checkout information in the customer’s accounts this for use with purchases on that site only, e.g., Amazon.com
How It Works Box

NFC Digital Wallets

– Digital wallet stored on a smartphone or other mobile device

– Device must support NFC and the specific digital wallet being used (Google Wallet, etc.)

– To make a purchase the user taps the device on the NFC terminal

– Square Wallet just requires you to say your name

– Advantages: Faster checkout, include other items (ID cards, digital coupons, etc.)

– Disadvantages: Competing systems
Implementing Web-Based E-Commerce

• Special Considerations for B2B Financial Transactions
  – B2B Transaction Processing
    • Allows merchants to customize their payment processing plans to fit their needs
    • Can do credit checks, track expenses, do billing, provide escrow services, etc.
  – Order-Fulfillment Companies
    • Provide a distribution network for merchants
    • Can provide order management, customer relationship management services, marketing tools, etc.
Implementing Web-Based E-Commerce

- Step 4: Design and Develop an Effective E-Commerce Web Site
  - Ensure order forms and checkout pages are located on a secure Web server
  - Continue evaluation of security and collected data
  - E-commerce features can be created using:
    - Storefront software
      - Facilitates the creation of an online store
      - Available in installed and cloud versions
    - Shopping cart software
      - Designed to add ordering capabilities to an existing Web site
Implementing Web-Based E-Commerce

Creating the Site
Menu options and wizards are used to input the necessary information, such as the site theme, colors and appearance, products to be sold, checkout options, and more.

The Finished Site
Uses the content and appearance specified when the site was created; many services create both a desktop and mobile version of the site, as shown here.

Figure 11-15
Cloud storefront services can be used to quickly and easily create an e-commerce site.
Implementing Web-Based E-Commerce

- Use good checkout design to avoid shopping cart abandonment
  - Make the checkout process and fast and easy as possible
- Trust/security seals and return/guarantee information can encourage customer trust
Implementing Web-Based E-Commerce

- Step 5: Implement Appropriate Sales and Marketing Strategies
  - Use an Appropriate Domain Name and URL
    - URL should be easy to remember and type
    - Visitors should not have to type a page name (such as index.html) to view the home page of the site
    - Business trademarks are protected by the Anticybersquatting Consumer Protection Act
Social Commerce

– The use of social networking sites to promote online sales
– Can buy products within Facebook via Facebook services and Facebook pages (F-commerce)
– Businesses can place ads on social media pages
– Social media monitoring can provide useful information
Implementing Web-Based E-Commerce

- Include Adequate Customer Service Features
  - Online order tracking
  - Online versions of product instruction manuals
  - Customer service via email or live chat
  - eCRM services
    - Links to displays
    - FAQs
    - Order status
    - Warranty information
- Collect Taxes from Customers Only if Required by Law
Implementing Web-Based E-Commerce

– Display a Privacy Policy and Security Statement
– Promote Your Web Site Sufficiently
  • Use appropriate keyword and description meta tags
  • Submit your site to search sites
  • Consider sponsored links
  • Use social media marketing
  • Use search engine optimization (SEO) and Web analytics to improve your site and to increase search site visibility

FIGURE 11-20
Examples of social media ads.
Implementing Web-Based E-Commerce

**FIGURE 11-19**
Meta tags. Are added to a Web page by the Web page author and are used by search sites when classifying that page in their search databases.
Implementing Web-Based E-Commerce

• Consider banner ads
  – Static ads
  – Dynamic (rich media) ads
  – Can be behavioral (targeted) ads
  – Consider ad retargeting services
  – Banner ad exchanges are an inexpensive option

• Update your site regularly and consider adding incentives for return visits (contests, coupons, etc.)

• Use e-mail marketing techniques (free shipping offers, new product notifications, etc.)
Implementing Web-Based E-Commerce

**FIGURE 11-22**
Banner ads. Are used for marketing purposes and are linked to their corresponding Web sites.

- **STATIC BANNER ADS**
  - These ads are not animated.

- **RICH MEDIA BANNER ADS**
  - These ads contain animated components that play when viewed on a Web page.

- **A video plays within this banner ad.**

- **These ads are part of a set of banners that are displayed one after the other.**
Click Fraud

- Occurs when sponsored links are clicked when there is no interest in that product or service
- Can be clicked by a person or via a botnet
- Typically the motivation is financial
  - Business depleting competitor’s ad budget
  - Individuals clicking ads on their sites to fraudulently earn ad revenue
  - Captcha is being used to help fight click fraud
Security Issues

• Key security points for e-commerce sites
  – Secure transactions
    • Use a secure Web server
  – Secure sensitive documents and files
    • Use encryption
  – Authenticate online business partners
    • Use digital certificates and digital signatures to verify and authenticate the validity of each party involved in the Internet transaction
Quick Quiz

1. PayPal is an example of a(n) ___________.
   a. digital wallet
   b. online payment service
   c. order fulfillment service
2. True or False: A credit and a debit card work the same way on the consumers’ side.
3. All online financial transactions should take place via a(n) ___________ Web server.

Answers:
1) b; 2) False; 3) secure
Summary

• What Is E-Commerce?
• E-Commerce Business Models
• Types of E-Commerce Web Sites
• Implementing Web-Based E-Commerce
• Security Issues