



## Chapter 10

# E-commerce: Digital Markets, Digital Goods

### Video Cases

*Video Case 1: Deals Galore at Groupon*

*Video Case 2: Etsy: A Marketplace and Community*

*Video Case 3: Ford Manufacturing Supply Chain: B2B Marketplace*




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#### LEARNING OBJECTIVES

- Describe the unique features of e-commerce, digital markets, and digital goods.
- Describe the principal e-commerce business and revenue models.
- Explain how e-commerce has transformed marketing.
- Explain how e-commerce has affected business-to-business transactions.
- Describe the role of m-commerce in business and the most important m-commerce applications.
- Describe the issues that must be addressed when building an e-commerce presence.




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**Groupon's Business Model: Social and Local**

- **Problem:** Competing with other business models utilizing social and local commerce in group couponing; large number of competitors
- **Solution:** Get big quick to build a brand to prevent competitors from finding audience
- Demonstrates use of localization and social networking technologies in generating new business models
- Illustrates the difficulties many social networking sites have in showing a profit or monetizing

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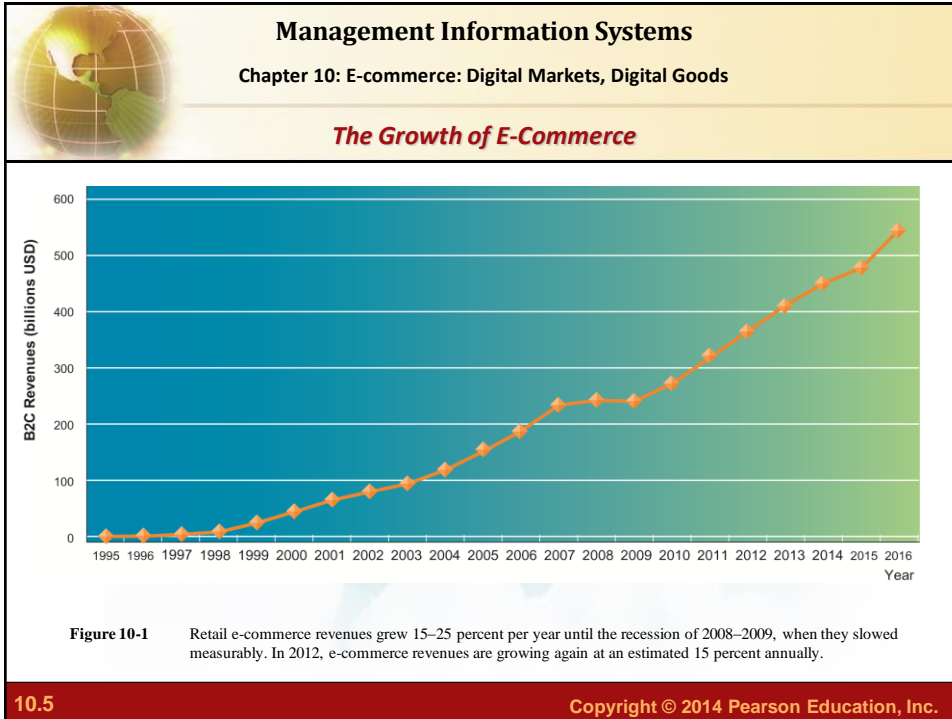
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**E-commerce and the Internet**

- **E-commerce:** Use of the Internet and Web to transact business.
- Began in 1995 and grew exponentially; still stable even in a recession.
- Companies that survived the dot-com bubble burst and now thrive.
- E-commerce revolution is still in its early stages.

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**E-commerce and the Internet**

- **Eight unique features of Internet and Web as commercial medium**
  - Ubiquity
  - Global reach
  - Universal standards
  - Richness
  - Interactivity
  - Information density
  - Personalization/customization
  - Social technology

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**E-commerce and the Internet**

- **Ubiquity**
  - Internet/Web technology available everywhere: work, home, and so on, anytime.
  - Effect:
    - Marketplace removed from temporal, geographic locations to become “marketspace”
    - Enhanced customer convenience and reduced shopping costs
  - Reduces transaction costs
    - Costs of participating in market

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**E-commerce and the Internet**

- **Global reach**
  - The technology reaches across national boundaries, around Earth
  - Effect:
    - Commerce enabled across cultural and national boundaries seamlessly and without modification.
    - Marketspace includes, potentially, billions of consumers and millions of businesses worldwide.

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**E-commerce and the Internet**

- **Universal standards**
  - **One set of technology standards: Internet standards**
  - **Effect:**
    - Disparate computer systems easily communicate with one another
    - Lower market entry costs—costs merchants must pay to bring goods to market
    - Lower consumers' search costs—effort required to find suitable products


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**E-commerce and the Internet**

- **Richness**
  - **Supports video, audio, and text messages**
  - **Effect:**
    - Possible to deliver rich messages with text, audio, and video simultaneously to large numbers of people.
    - Video, audio, and text marketing messages can be integrated into single marketing message and consumer experience.


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- **Interactivity**
  - The technology works through interaction with the user.
  - **Effect:**
    - Consumers engaged in dialog that dynamically adjusts experience to the individual.
    - Consumer becomes co-participant in process of delivering goods to market.

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E-commerce and the Internet

- **Information density**
  - Large increases in information density—the total amount and quality of information available to all market participants
  - **Effect:**
    - Greater price transparency
    - Greater cost transparency
    - Enables merchants to engage in price discrimination


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- **Personalization/Customization**
  - Technology permits modification of messages, goods
  - Effect:
    - Personalized messages can be sent to individuals as well as groups.
    - Products and services can be customized to individual preferences.


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- **Social technology**
  - The technology promotes user content generation and social networking
  - Effect:
    - New Internet social and business models enable user content creation and distribution, support social networks
    - Many-to-many model

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E-commerce and the Internet

- **Effect of the Internet on the marketplace:**
  - **Reduces information asymmetry**
  - **Offers greater flexibility and efficiency because of:**
    - Reduced search costs and transaction costs
    - Lower menu costs
    - Greater price discrimination
    - Dynamic pricing
  - **May reduce or increase switching costs**
  - **May delay gratification: effects dependent on product**
  - **Increased market segmentation**
  - **Stronger network effects**
  - **More disintermediation**

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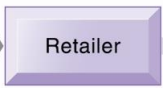




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*The Benefits of Disintermediation to the Consumer*

		Cost per Sweater
		\$48.50
		\$40.34
		\$20.45

**Figure 10-2** The typical distribution channel has several intermediary layers, each of which adds to the final cost of a product, such as a sweater. Removing layers lowers the final cost to the consumer.

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**E-commerce and the Internet**

- **Digital goods**
  - **Goods that can be delivered over a digital network**
    - For example: music tracks, video, software, newspapers, books
  - **Cost of producing first unit is almost entire cost of product**
  - **Costs of delivery over the Internet very low**
  - **Marketing costs remain the same; pricing highly variable**
  - **Industries with digital goods are undergoing revolutionary changes (publishers, record labels, etc.)**

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**E-commerce: Business and Technology**

- **Three major types of e-commerce**
  - **Business-to-consumer (B2C)**
    - Example: BarnesandNoble.com
  - **Business-to-business (B2B)**
    - Example: ChemConnect
  - **Consumer-to-consumer (C2C)**
    - Example: eBay
- **E-commerce can be categorized by platform**
  - **Mobile commerce (m-commerce)**

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**E-commerce: Business and Technology**

- **E-commerce business models**
  - E-tailer
  - Transaction broker
  - Market creator
  - Content provider
  - Community provider
  - Portal
  - Service provider

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***Interactive Session: Organizations***

**Walmart, Amazon, and eBay: Who Will Dominate Internet Retailing?**  
*Read the Interactive Session and discuss the following questions*

- Analyze each of these companies using the value chain and competitive forces models.
- Compare the three companies' e-commerce business models. Which is the strongest? Explain your answer.
- Which company is likely to have the strongest retail e-commerce growth in the future? Why?

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E-commerce: Business and Technology

- **E-commerce revenue models**
  - Advertising
  - Sales
  - Subscription
  - Free/Freemium
  - Transaction fee
  - Affiliate

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E-commerce: Business and Technology

- **Social networking and the wisdom of crowds**
  - **Most popular Web 2.0 service: social networking**
    - Social shopping sites: Swap shopping ideas with friends
  - **Wisdom of crowds**
  - **Crowdsourcing**
    - Large numbers of people can make better decisions about topics and products than a single person.
  - **Prediction markets**
    - Peer-to-peer betting markets on specific outcomes (elections, sales figures, designs for new products)

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### E-commerce: Business and Technology

- **E-commerce marketing**
  - **Internet provides new ways to identify and communicate with customers.**
  - **Long tail marketing:**
    - Ability to reach a large audience inexpensively
  - **Behavioral targeting:**
    - Tracking online behavior of individuals on thousands of Web sites
  - **Internet advertising formats**
    - Search engine marketing, display ads, rich media, e-mail, and so on

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### *Web Site Visitor Tracking*

E-commerce Web sites have tools to track a shopper's every step through an online store. Close examination of customer behavior at a Web site selling women's clothing shows what the store might learn at each step and what actions it could take to increase sales.

**Figure 10-3**








The shopper clicks on the home page. The store can tell that the shopper arrived from the Yahoo! portal at 2:30 PM (which might help determine staffing for customer service centers) and how long she lingered on the home page (which might indicate trouble navigating the site). Tracking beacons load cookies on the shopper's browser to follow her across the Web.

The shopper clicks on blouses, clicks to select a woman's white blouse, then clicks to view the same item in pink. The shopper clicks to select this item in a size 10 in pink and clicks to place it in her shopping cart. This information can help the store determine which sizes and colors are most popular. If the visitor moves to a different site, ads for pink blouses will appear from the same or different vendor.

From the shopping cart page, the shopper clicks to close the browser to leave the Web site without purchasing the blouse. This action could indicate the shopper changed her mind or that she had a problem with the Web site's checkout and payment process. Such behavior might signal that the Web site was not well designed.

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#### Web Site Personalization

Firms can create unique personalized Web pages that display content or ads for products or services of special interest to individual users, improving the customer experience and creating additional value.

**Figure 10-4**

User ↔ Web site

Based on your portfolio and recent market trends, here are some recommendations.

Welcome back, Steve P. Munson. Check out these recommended titles: One Minute Manager  
Leading Change  
Results-Based Leadership

Sarah, Here are the items you want to bid on: Halogen reading lamp  
Portable reading lamp  
LED book reading lamp

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#### How an Advertising Network Works

Advertising networks and their use of tracking programs have become controversial among privacy advocates because of their ability to track individual consumers across the Internet.

**Figure 10-5**

**MERCHANT SITE**                      **ADVERTISING NETWORK**

DoubleClick.Net                      User Profile Database

- Merchant server connects to DoubleClick ad server
- Ad server reads cookie; checks database for profile
- Ad server selects and serves an appropriate banner ad based on profile
- Consumer requests Web page from ad network member site
- DoubleClick follows consumer from site to site through use of tracking programs

**CONSUMER**                      **Network Member Firms**

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E-commerce: Business and Technology

- **Social e-commerce:**
  - **Based on digital social graph**
    - Mapping of all significant online relationships
- **Four features of social e-commerce driving its growth**
  - Social sign-on
  - Collaborative shopping
  - Network notification
  - Social search (recommendations)

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E-commerce: Business and Technology

- **Social media:**
  - Fastest growing media for branding and marketing
- **Social network marketing:**
  - Seeks to leverage individuals influence over others in social graph
  - Target is a social network of people sharing interests and advice
  - Facebook' s “Like button”
  - Social networks have huge audiences
    - Facebook: 150 million U.S. visitors monthly

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*Interactive Session: Management*

**Social Commerce Creates New Customer Relationships**  
*Read the Interactive Session and discuss the following questions*

- Assess the management, organization, and technology issues for using social media to engage with customers.
- What are the advantages and disadvantages of using social media for advertising, brand building, market research, and customer service?
- Give some examples of management decisions that were facilitated by using social media to interact with customers
- Should all companies use Facebook and Twitter for customer service and advertising? Why or why not? What kinds of companies are best suited to use these platforms?

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**E-commerce: Business and Technology**

- **B2B e-commerce**
  - U.S. B2B trade in 2012 is \$16 trillion
  - U.S. B2B e-commerce in 2012 is \$4.1 trillion
  - Procurement requires significant overhead costs, which Internet and networking helps automate
  - Variety of Internet-enabled technologies used in B2B
    - Electronic data interchange (EDI)
    - Private industrial networks (private exchanges)
    - Net marketplaces
    - Exchanges


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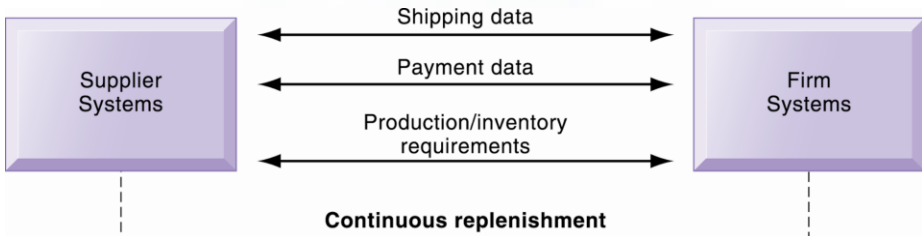
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E-commerce: Business and Technology

- **Electronic data interchange (EDI)**
  - Computer-to-computer exchange of standard transactions such as invoices, purchase orders.
  - Major industries have EDI standards that define structure and information fields of electronic documents.
  - More companies are increasingly moving toward private networks that allow them to link to a wider variety of firms than EDI allows and share a wider range of information in a single system.

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*Electronic Data Interchange*



```

graph LR
    S[Supplier Systems] <--> |Shipping data| F[Firm Systems]
    S <--> |Payment data| F
    S <--> |Production/inventory requirements| F
    S -.-> |Continuous replenishment| F
  
```

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**Figure 10-6** Companies use EDI to automate transactions for B2B e-commerce and continuous inventory replenishment. Suppliers can automatically send data about shipments to purchasing firms. The purchasing firms can use EDI to provide production and inventory requirements and payment data to suppliers.






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E-commerce: Business and Technology

- **Private industrial network (private exchange)**
  - Large firm using extranet to link to its suppliers, distributors, and other key business partners
  - Owned by buyer
  - Permits sharing of:
    - Product design and development
    - Marketing
    - Production scheduling and inventory management
    - Unstructured communication (graphics and e-mail)

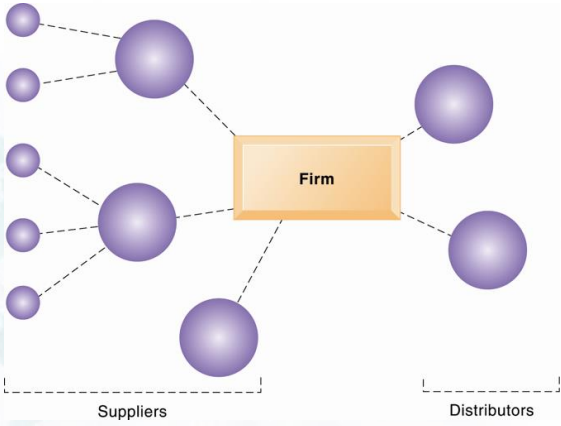
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*A Private Industrial Network*

A private industrial network, also known as a private exchange, links a firm to its suppliers, distributors, and other key business partners for efficient supply chain management and other collaborative commerce activities.

**Figure 10-7**




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E-commerce: Business and Technology

- **Net marketplaces (e-hubs)**
  - Single market for many buyers and sellers
  - Industry-owned or owned by independent intermediary
  - Generate revenue from transaction fees, other services
  - Use prices established through negotiation, auction, RFQs, or fixed prices
  - May focus on direct or indirect goods
  - May be vertical or horizontal marketplaces

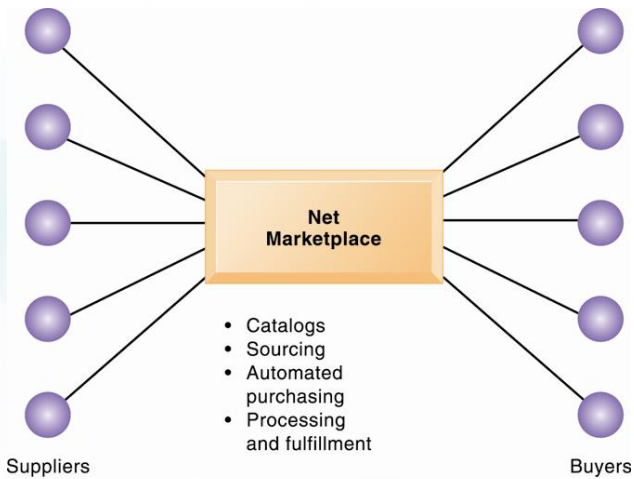
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*A Net Marketplace*

Net marketplaces are online marketplaces where multiple buyers can purchase from multiple sellers.

**Figure 10-8**



```

graph LR
    subgraph Suppliers
        S1(( ))
        S2(( ))
        S3(( ))
        S4(( ))
        S5(( ))
    end
    subgraph Buyers
        B1(( ))
        B2(( ))
        B3(( ))
        B4(( ))
        B5(( ))
    end
    subgraph NetMarketplace [Net Marketplace]
        direction TB
        N1[Catalogs]
        N2[Sourcing]
        N3[Automated purchasing]
        N4[Processing and fulfillment]
    end
    S1 --- NetMarketplace
    S2 --- NetMarketplace
    S3 --- NetMarketplace
    S4 --- NetMarketplace
    S5 --- NetMarketplace
    NetMarketplace --- B1
    NetMarketplace --- B2
    NetMarketplace --- B3
    NetMarketplace --- B4
    NetMarketplace --- B5
    
```

Suppliers Buyers

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**E-commerce: Business and Technology**

- **Exchanges**
  - **Independently owned third-party Net marketplaces**
  - **Connect thousands of suppliers and buyers for spot purchasing**
  - **Typically provide vertical markets for direct goods for single industry (food, electronics)**
  - **Proliferated during early years of e-commerce; many have failed**
    - Competitive bidding drove prices down and did not offer long-term relationships with buyers or services to make lowering prices worthwhile.

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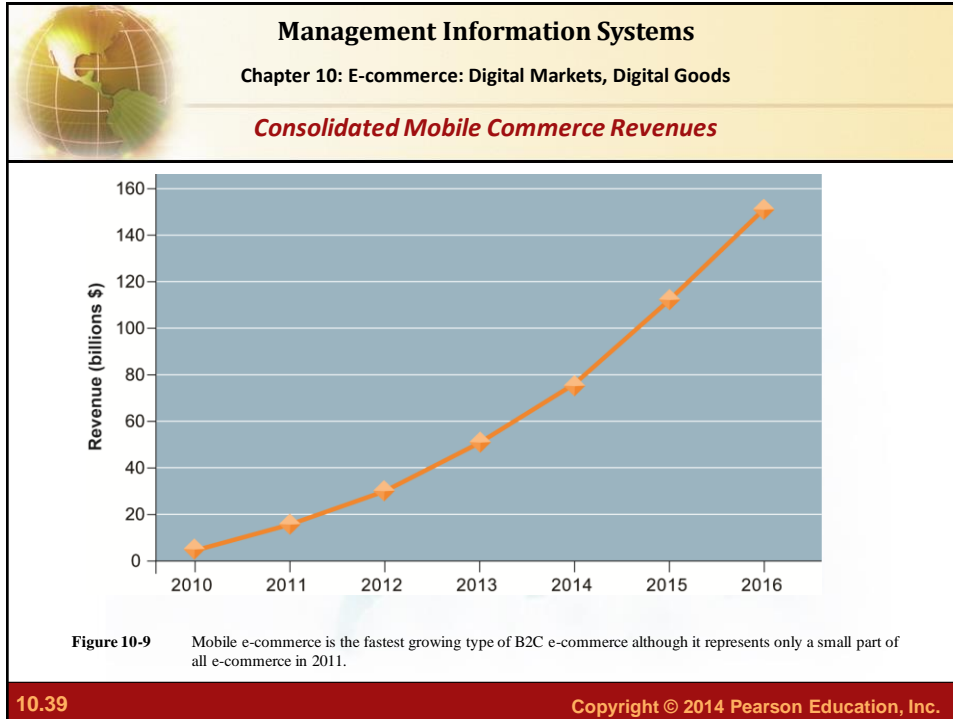
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**The Mobile Digital Platform and Mobile E-commerce**

- **M-commerce**
  - **In 2012 is 10% of all e-commerce**
  - **Fastest growing form of e-commerce**
    - Some areas growing at 50%
  - **Four billion mobile phone users worldwide**
  - **Main areas of growth**
    - Retail sales at top Mobile 400 (Amazon, eBay, etc.)
    - Sales of digital content (music, TV, etc.)
    - Local search for restaurants, museums, stores

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**The Mobile Digital Platform and Mobile E-commerce**

- **Location-based services**
  - Used by 74% of smartphone owners
  - Based on GPS map services
  - **Types**
    - Geosocial services
      - Where friends are
    - Geoadvertising
      - What shops are nearby
    - Geoinformation services
      - Price of house you are passing

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**The Mobile Digital Platform and Mobile E-commerce**

- **Other mobile commerce services**
  - **Banks, credit card companies provide account management apps**
  - **Mobile display advertising**
    - iAd, AdMob, Facebook
  - **Games and entertainment**
    - Downloadable and streamable services
    - Games
    - Video, short films, movies, TV shows
    - Music and ring tones

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**Building an E-commerce Web Site**

- **Pieces of the site-building puzzle**
  - **Assembling a team with the skills required to make decisions about:**
    - Technology
    - Site design
    - Social and information policies
    - Hardware, software, and telecommunications infrastructure
  - **Customer's demands should drive the site's technology and design.**

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**Building an E-commerce Web Site**

- **Business objectives**
  - The capabilities the site should have
    - Business decisions should drive technology
  - Example: execute a transaction payment
- **System functionality**
  - Technology needed to achieve objective
  - Example: a shopping cart or other payment system
- **Information requirement**
  - Specific data and processes needed
  - Example: secure credit card clearing, multiple payment options

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**Building an E-commerce Web Site**

- **Alternatives in building the Web site:**
  - **Completely in-house**
  - **Mixed responsibility**
  - **Completely outsourced**
    - Co-location
- **Web site budgets**
  - **Several thousand to millions per year**
  - **50% of budget is system maintenance and content creation**

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*Choices in Building and Hosting Web Sites*

**BUILDING THE SITE**

		In-house	Outsource
HOSTING THE SITE	In-house	<b>COMPLETELY IN-HOUSE</b> Build: In Host: In	<b>MIXED RESPONSIBILITY</b> Build: Out Host: In
	Outsource	<b>MIXED RESPONSIBILITY</b> Build: In Host: Out	<b>COMPLETELY OUTSOURCED</b> Build: Out Host: Out

**Figure 10-10** You have a number of alternatives to consider when building and hosting an e-commerce site.

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*Components of a Web Site Budget*

**Figure 10-11**

Component	Percentage
Design	30%
Marketing	20%
Content development	15%
Hardware	10%
Software	10%
Hosting service	10%
Telecommunications	5%

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