Unit- 1

E-commerce, Difference between E-commerce and E-business, Purpose of E-Commerce, Eight Unique Features of E-commerce Technology, Web 2:0, Types of E-commerce, Growth of the Internet and the Web, Origins and Growth of E-commerce, Understanding E-commerce.

Text Book:

Kenneth C. Laudon Carol Guercio Traver, "E-commerce: business, technology, society", Fifth edition, Pearson Prentice Hall, 2009. (Unit-1: Chapter -1)

What Is E-commerce?

- **Use of Internet and Web :** the use of the Internet, the World Wide Web (Web), and mobile apps to transact business.

- **More formally:**
  - ❖ Digitally enabled commercial transactions between and among organizations and individuals
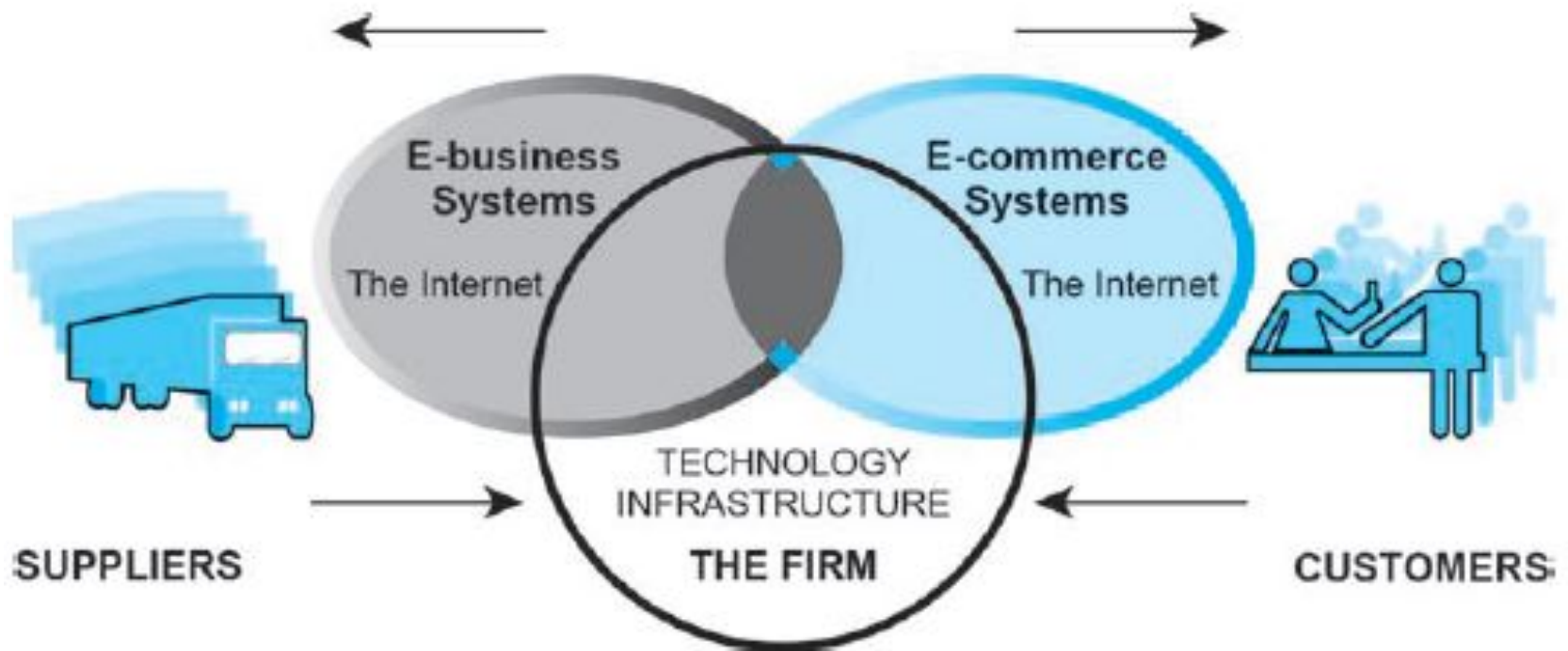
E-commerce vs. E-business

■ **E-business:**

❖ Digital enabling of transactions and processes within a firm, involving information systems under firm's control

❖ Does not include commercial transactions involving an exchange of value across organizational boundaries

E-commerce vs. E-business

- E-commerce and e-business systems blur together at the business firm boundary, at the point where internal business systems link up with suppliers or customers.
- E-business applications turn into e-commerce precisely when an exchange of value occurs.
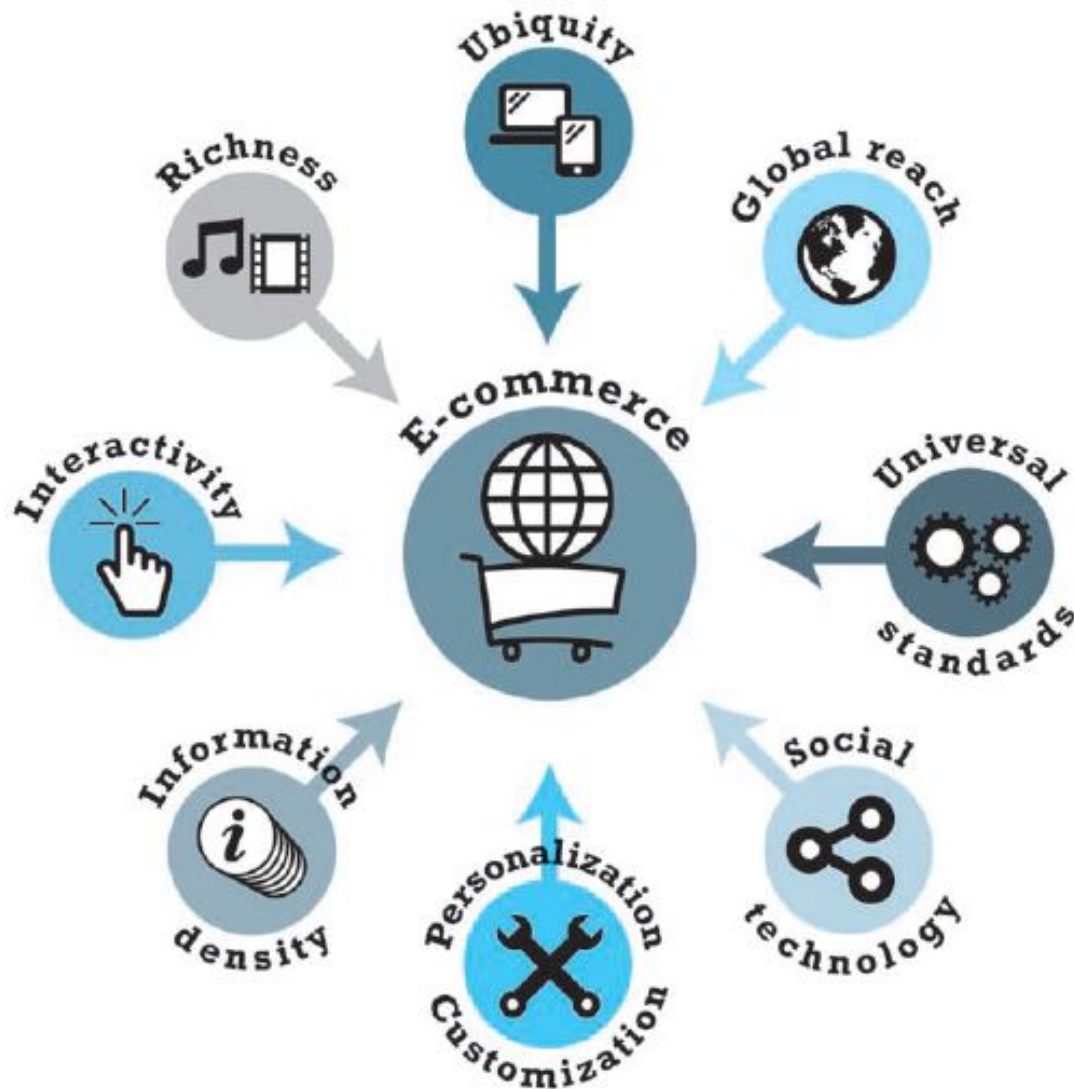
Why Study E-commerce?

- E-commerce technology is different, more powerful than previous technologies

- E-commerce brings fundamental changes to commerce

- **Traditional commerce:**
  - ❖ Consumer as passive targets
  - ❖ Mass-marketing driven
  - ❖ Sales-force driven
  - ❖ Fixed prices
  - ❖ Information asymmetry

Unique Features

Eight Unique Features of E-commerce Technology

1. Ubiquity
2. Global reach
3. Universal standards
4. Information richness
5. Interactivity
6. Information density
7. Personalization/customization
8. Social technology

1. Ubiquity

- In traditional commerce, a **marketplace** is a physical place you visit in order to transact.

- In contrast E-commerce, is characterized by its **ubiquity**: it is available just about everywhere, at all times.

- It **liberates** the market from being restricted to a **physical space** and makes it possible to shop from your desktop, at home, at work, or even from your car, using mobile e-commerce.

- A **marketplace** extended **beyond traditional boundaries** and removed from a temporal and geographic location.

- From a **consumer** point of view, **ubiquity reduces transaction costs—the** costs of participating in a market.

- To transact, it is **no longer necessary** that you **spend time and money** traveling to a market.

- The ubiquity of **e-commerce lowers** the **cognitive energy** required to transact in a market space. *Cognitive energy* refers to the **mental effort required** to **complete a task**. Humans generally seek to reduce cognitive energy outlays.

2. Global reach

- E-commerce technology permits commercial transactions to cross cultural, regional, and national boundaries far more conveniently and cost-effectively .

- More realistically, the Internet makes it much easier for start-up online merchants within a single country to achieve a national audience than was ever possible in the past.

- The total number of users or customers an e-commerce business can obtain is a measure of its **reach.**

- In contrast, most traditional commerce is local or regional—it involves local merchants or national merchants with local outlets.

- For instance, Television and radio stations, and newspapers, are primarily local and regional institutions with limited but powerful national networks that can attract a national audience.

- In contrast to e-commerce technology, these **older commerce technologies do not** easily **cross national boundaries** to a **global audience.**

3. Universal Standards

- The feature of e-commerce technologies is, the technical standards for conducting e-commerce, are **universal standards**—they are shared by all nations around the world.

- In contrast, most traditional commerce technologies differ from one nation to the next.

- The universal technical standards of the Internet and e-commerce greatly lower market entry costs, At the same time, for consumers, universal standards reduce search cost.

- By creating a single, one-world marketspace, where prices and product descriptions can be inexpensively displayed for all to see, price discovery becomes simpler, faster, and more accurate.

- Users of the Internet, both businesses and individuals, also experience network externalities.

- It is possible to easily find many of the suppliers, prices, and delivery terms of a specific product anywhere in the world, and to view them in a coherent, comparative environment.

4. Information richness

- Information **richness** refers to the complexity and content of a message.

- Traditional markets, national sales forces, and small retail stores have great richness: they are able to provide personal, face-to-face service using aural and visual cues when making a sale.

- The Internet has the potential for offering considerably more information richness than traditional media such as printing presses, radio, and television because it is interactive and can adjust the message to individual users.

- Chatting with an online sales person comes very close to the customer experience in a small retail shop.

- The richness enabled by the Internet allows retail and service merchants to market and sell "complex" goods and services that heretofore required a face-to-face presentation by a sales force to a much larger audience.

5. Interactivity

■ With the possible exception of the telephone, e-commerce technologies allow for **interactivity**.

■ This enable two-way communication between merchant and consumer and among consumers.

■ Traditional television cannot ask viewers questions or enter into conversations with them, or request that customer information be entered into a form.

■ In contrast, all of these activities are possible on an e-commerce site and are now commonplace with smartphones, and social networks like Facebook, twitter etc.,

■ Interactivity allows an online merchant to engage a consumer in ways similar to a face-to-face experience.

6. Information density

- E-commerce technologies vastly increase **information density**—the total amount and quality of information available to all market participants, consumers, and merchants alike.

- E-commerce technologies reduce information collection, storage, processing, and communication costs.

- At the same time, these technologies greatly increase the currency, accuracy, and timeliness of information.

- In e-commerce markets, prices and costs become more transparent. *Price transparency* refers to the ease with which consumers can find out the variety of prices in a market.

- *Cost transparency* refers to the ability of consumers to discover the actual costs, merchants pay for products.

- Online merchants can discover much more about consumers; this allows merchants to segment the market into groups willing to pay different prices and permits them to engage in *price discrimination.*

7. Personalization/customization

- Merchants can target their marketing messages to specific individuals by adjusting the message to a person's name, interests, and past purchases.

- The technology also permits **customization**, changing the delivered product or service based on a user's preferences or prior behavior.

- With the increase in information density, a great deal of information about the consumer's past purchases and behavior can be stored and used by online merchants.

- The result is a level of personalization and customization unthinkable with traditional commerce technologies.

- Personalization and customization allow firms to precisely identify market segments and adjust their messages accordingly.

8. Social technology

- E-commerce technologies have evolved to be much more social by allowing users to create and share content with a worldwide community.

- Using these forms of communication, users are able to create new social networks and strengthen existing ones.

- All previous mass media in modern history, including the printing press, use a broadcast model (one-to-many) where content is created in a central location by experts (professional writers, editors, directors, actors, and producers) and audiences are concentrated in huge aggregates to consume a standardized product.

- The Internet provides a unique, many-to-many model of mass communication.

E-COMMERCE TECHNOLOGY DIMENSION	BUSINESS SIGNIFICANCE
Ubiquity—Internet/Web technology is available everywhere: at work, at home, and elsewhere via mobile devices, anytime.	The marketplace is extended beyond traditional boundaries and is removed from a temporal and geographic location. "Marketspace" is created; shopping can take place anywhere. Customer convenience is enhanced, and shopping costs are reduced.
Global reach—The technology reaches across national boundaries, around the earth.	Commerce is enabled across cultural and national boundaries seamlessly and without modification. "Marketspace" includes potentially billions of consumers and millions of businesses worldwide.
Universal standards—There is one set of technology standards, namely Internet standards.	There is a common, inexpensive, global technology foundation for businesses to use.
Richness—Video, audio, and text messages are possible.	Video, audio, and text marketing messages are integrated into a single marketing message and consuming experience.
Interactivity—The technology works through interaction with the user.	Consumers are engaged in a dialog that dynamically adjusts the experience to the individual, and makes the consumer a co-participant in the process of delivering goods to the market.
Information density—The technology reduces information costs and raises quality.	Information processing, storage, and communication costs drop dramatically, while currency, accuracy, and timeliness improve greatly. Information becomes plentiful, cheap, and accurate.
Personalization/Customization—The technology allows personalized messages to be delivered to individuals as well as groups.	Personalization of marketing messages and customization of products and services are based on individual characteristics.
Social technology—User content generation and social networks.	New Internet social and business models enable user content creation and distribution, and support social networks.

Web 2.0

- **User-centered applications and social media technologies**
  - ❖ User-generated content and communication
  - ❖ Highly interactive, social communities
  - ❖ Large audiences; yet mostly unproven business models
  - ❖ Examples: Twitter, YouTube, Instagram, Wikipedia, Tumblr

Web 2.0

- Many of the unique features of e-commerce technology and the Internet come together in a set of applications and social media technologies referred to as **Web 2.0**.

- The Internet started out as a simple network to support e-mail and file transfers among remote computers.

- The Web started out as a way to use the Internet to display simple pages and allow the user to navigate among the pages by linking them together electronically.

The Internet and the Web had evolved to the point where users could create, edit, and distribute content to others; share with one another their preferences, bookmarks, and online personas; participate in virtual lives; and build online communities. This "new" Web is called as Web 2.0.

Examples of Web 2.0 applications and sites

- Twitter
- YouTube
- Instagram
- Wikipedia
- Tumblr

Twitter

- Twitter is a social network/micro-blogging service that encourages users to enter 140-character messages ("tweets").

- Twitter has more than 200 million active users worldwide, sending around 400 million tweets per day and more than 12 billion tweets a month.

- Twitter has begun to monetize its subscribers by developing an ad platform and providing marketing services to firms that want to stay in instant contact with their customers.

YouTube

- YouTube, owned by Google after a $1.65 billion purchase, is the world's largest online consumer-generated video-posting site.

- YouTube is now morphing into a premium video content distributor and video producer, offering feature-length movies, television series, and its own original content.

- According to Google, 72 hours of video are posted to the site every minute! YouTube reportedly streams more than 4 billion videos per day, including more than 600 million a day on mobile devices.

Instagram

- Instagram is a mobile photo-sharing application that allows users to easily apply a variety of different photo filters and borders, and then post the photos to social networks such as Facebook, Twitter, Foursquare, Tumblr, and Flickr.

- Launched in November 2010, Instagram quickly attracted more than 50 million users and in April 2012 was purchased by Facebook for $1 billion

Wikipedia

- Wikipedia allows contributors around the world to share their knowledge and in the process has become the most successful online encyclopedia, far surpassing "professional" encyclopedias such as Encarta and Britannica.

- Wikipedia is one of the largest collaboratively edited reference projects in the world, with more than 4.2 million articles available in English and more than 26 million in total, in 286 languages.

- Wikipedia relies on volunteers, makes no money, and accepts no advertising.

- Wikipedia is consistently ranked as one of the top 10 most visited sites on the Web.

Tumblr

- Tumblr is a combination of blog platform and social network.

- It allows users to easily post text, photos, links, music, videos and more.

- Tumblr hosts almost 110 million blogs, containing over 50 billion posts.

- On a typical day, users make over 70 million posts

Types of E-commerce

- *May be classified by market relationship or technology*

- **Business-to-Consumer (B2C)**
- **Business-to-Business (B2B)**
- **Consumer-to-Consumer (C2C)**
- **Social e-commerce**
- **Mobile e-commerce (M-commerce)**
- **Local e-commerce**

Business-to-Consumer (B2C)

- The most commonly discussed type of e-commerce is **business-to-consumer (B2C) e-commerce**, in which online <u>businesses attempt to reach individual consumers.</u>

- B2C commerce includes purchases of retail goods, travel services, and online content.

- Within the B2C category, there seven different types of business models.

- Seven different B2C business models: portals, online retailers, content providers, transaction brokers, market creators, service providers, and community providers.

Business-to-Business (B2B)

- **Business-to-business (B2B) e-commerce**, in which businesses focus on selling to other businesses, is the largest form of e-commerce.

- There is an estimated more than $20 trillion (US based) in business-to-business exchanges of all kinds, online and offline, suggesting that B2B e-commerce has significant growth potential.

- There are two primary business models used within the B2B arena:

- Net marketplaces, which include e-distributors, e-procurement companies, exchanges and industry consortia, and private industrial networks.

Consumer-to-Consumer (C2C)

- **Consumer-to-consumer (C2C) e-commerce** provides a way for consumers to sell to each other, with the help of an online market maker such as eBay , or the classifieds sites like quikr, olx etc.,

- In C2C e-commerce, the consumer prepares the product for market, places the product for auction or sale, and relies on the market maker to provide catalog, search engine, and transaction-clearing capabilities, so that products can be easily displayed, discovered, and paid for.

Social e-commerce

- **Social e-commerce** is e-commerce that is enabled by social networks and online social relationships.

- It is sometimes also referred to as Facebook commerce, but in actuality is a much larger phenomenon that extends beyond just Facebook.

- The growth of social e-commerce is being driven by a number of factors, including the increasing popularity of

- Social sign-on: The capability of user signing onto Web sites using the Facebook or other social

- Network ID network notification : the sharing of approval or disapproval of products, services, and content via Facebook's Like button or Twitter tweets.

- Online collaborative

- Shopping tools, and

- Social search

Mobile e-commerce (M-commerce)
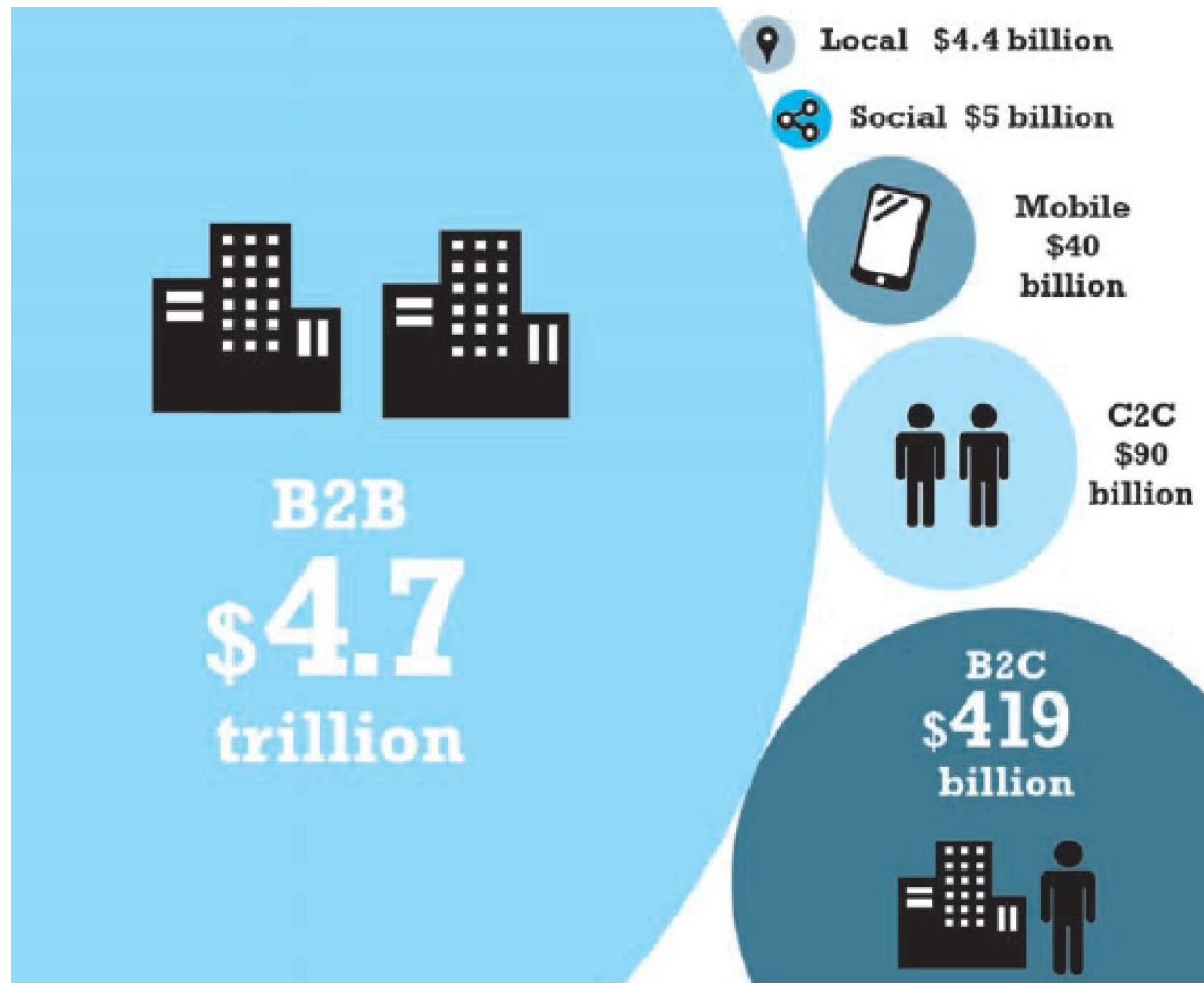
- **Mobile e-commerce, or m-commerce**, refers to the use of mobile devices to enable online transactions.

- M-commerce involves the use of cellular and wireless networks to connect laptops, smartphones such as the iPhone, Android, and BlackBerry, and tablet computers such as the iPad to the Internet.

- Once connected, mobile consumers can conduct transactions, including stock trades, in-store price comparisons, banking, travel reservations, and more.

Local e-commerce

- **Local e-commerce**, as its name suggests, is a form of e-commerce that is focused on engaging the consumer based on his or her current geographic location.

- Local merchants use a variety of online marketing techniques to drive consumers to their stores.

- Local e-commerce is the third prong of the social, mobile, local e-commerce wave.

Types of E-commerce

Local $4.4 billion

Social $5 billion

Mobile $40 billion

C2C $90 billion

B2B $4.7 trillion

B2C $419 billion

The Internet

- **Worldwide network of computer networks built on common standards**

- **Created in late 1960s**

- **Services include the Web, e-mail, file transfers, and so on**

- **Can measure growth by number of Internet hosts with domain names**

The Web

- **Most popular Internet service**
- **Developed in early 1990s**
- **Provides access to Web pages**
  - ❖ HTML documents that may include text, graphics, animations, music, videos
- **Web content has grown exponentially**
  - ❖ Google reports 30 trillion unique URLs; 120 billion Web pages indexed

The Mobile Platform

- **Most recent development in Internet infrastructure**

- **Enables access to the Internet via wireless networks or cell-phone service**

- **Mobile devices include**
  - Tablets
  - Smartphones
  - Ultra-lightweight laptops

Will Apps Make the Web Irrelevant?

- **What are the advantages and disadvantages of apps, compared with Web sites, for mobile users?**

- **What are the benefits of apps for content owners and creators?**

- **Will apps eventually make the Web irrelevant? Why or why not?**

Origins and Growth of E-commerce

- **Precursors:**
  - ❖ Baxter Healthcare
  - ❖ Electronic Data Interchange (EDI)
  - ❖ French Minitel (1980s videotex system)
  - ❖ None had functionality of Internet
- **1995: Beginning of e-commerce**
  - ❖ First sales of banner advertisements
- **E-commerce fastest growing form of commerce in United States**

E-commerce: A Brief History

- **1995–2000: Invention**
  - Key concepts developed
  - Limited bandwidth and media
  - Euphoric visions of
    - Friction-free commerce
      - Lowered search costs, disintermediation, price transparency, elimination of unfair competitive advantage
    - First-mover advantages
      - Network profits
  - Dot-com crash of 2000

E-commerce: A Brief History (cont.)

- ## 2001–2006: Consolidation
  - ❖ Emphasis on business-driven approach
  - ❖ Traditional large firms expand presence
  - ❖ Start-up financing shrinks up
  - ❖ More complex products and services sold
  - ❖ Growth of search engine advertising
  - ❖ Business Web presences expand to include e-mail, display and search advertising, and limited community feedback features

E-commerce: A Brief History (cont.)

- ## 2007–Present: Reinvention

  - Rapid growth of:
    - Online social networks
    - Mobile platform
    - Local commerce

  - Entertainment content develops as source of revenues

  - Transformation of marketing
    - Coordinated marketing on social, mobile, local platforms
    - Analytic technologies

Start-up Boot Camp

- **Why do you think investors today are still interested in investing in start-ups?**

- **What are the benefits of investing in a company that is a graduate of a Y Combinator boot camp?**

- **Is an incubator the best solution for start-ups to find funding? Why or why not?**

Assessing E-commerce

- **Many early visions not fulfilled**
  - ❖ Friction-free commerce
    - Consumers less price sensitive
    - Considerable price dispersion
  - ❖ Perfect competition
    - Information asymmetries persist
  - ❖ Intermediaries have not disappeared
  - ❖ First mover advantages
    - Fast-followers often overtake first movers

Predictions for the Future

- **Technology will propagate through all commercial activity**

- **Large, traditional companies will continue to play dominant role, consolidating audiences**
  - ❖ Start-up ventures can still attract large audiences in non-dominated arenas

- **Integrated online/offline companies will experience more growth than purely online companies**

- **Additional factors:**
  - ❖ Increased regulation and control
  - ❖ Cost of energy

Understanding E-commerce: Organizing Themes

- **Technology:**
  - ❖ Development and mastery of digital computing and communications technology

- **Business:**
  - ❖ New technologies present businesses with new ways of organizing production and transacting business

- **Society:**
  - ❖ Intellectual property, individual privacy, public welfare policy

The Internet and the Evolution of Corporate Computing

Figure 1.11, Page 41

Facebook and the Age of Privacy

- Why are social network sites interested in collecting user information?

- What types of privacy invasion are described in the case? Which is the most privacy-invading, and why?

- Is e-commerce any different than traditional markets with respect to privacy? Don't merchants always want to know their customer?

- How do you protect your privacy on the Web?

Academic Disciplines Concerned with E-commerce

- **Technical approach**
  - ❖ Computer science
  - ❖ Management science
  - ❖ Information systems

- **Behavioral approach**
  - ❖ Information systems
  - ❖ Economics
  - ❖ Marketing
  - ❖ Management
  - ❖ Finance/accounting
  - ❖ Sociology