Chapter 1

Overview of Electronic Commerce

Learning Objectives

1. Define electronic commerce (EC) and describe its various categories.

2. Describe and discuss the content and framework of EC.

3. Describe the major types of EC transactions.

4. Discuss e-commerce 2.0.

5. Describe social commerce and social software.

Learning Objectives

6. Understand the elements of the digital world.
7. Describe the drivers of EC as they relate to business pressures and organizational responses.
8. Describe some EC business models.
9. Describe the benefits of EC to organizations, consumers, and society.
10. List and describe the major limitations of EC.

Electronic Commerce: Definitions and Concepts

- **electronic commerce (EC)**

  The process of buying, selling, or exchanging products, services, or information via computer

- **e-business**

  A broader definition of EC that includes not just the buying and selling of goods and services, but also servicing customers, collaborating with business partners, and conducting electronic transactions within an organization

Electronic Commerce: Definitions and Concepts

- **MAJOR EC CONCEPTS**
  - **Pure Versus Partial EC**
  - **EC Organizations**
    - **brick-and-mortar (old economy) organizations**

      Old-economy organizations (corporations) that perform their primary business offline, selling physical products by means of physical agents
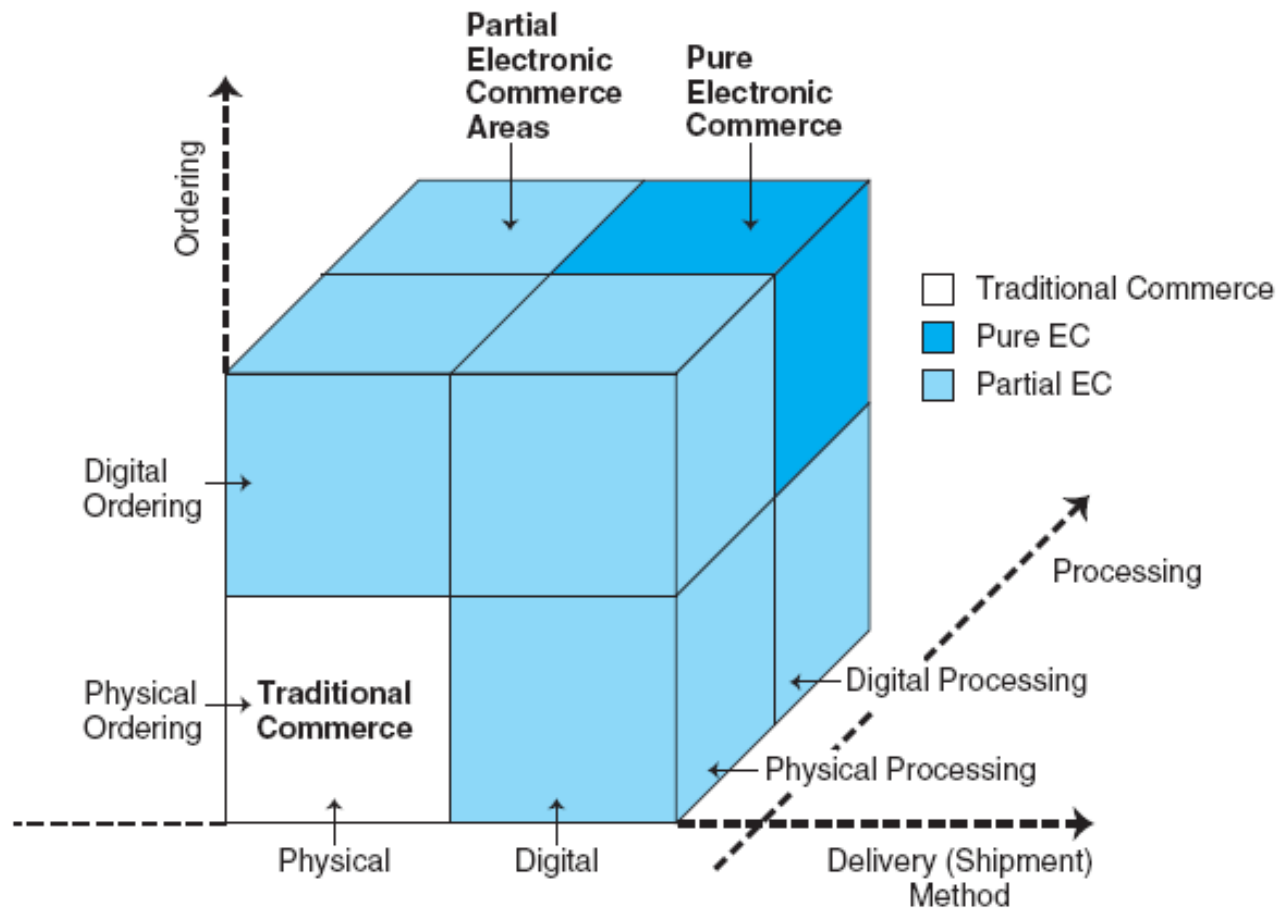
    - **virtual (pure-play) organizations**

      Organizations that conduct their business activities solely online

    - **click-and-mortar (click-and-brick) organizations**

      Organizations that conduct some e-commerce activities, usually as an additional marketing channel

EXHIBIT 1.1 The Dimensions of Electronic Commerce

Electronic Commerce: Definitions and Concepts

- **ELECTRONIC MARKETS AND NETWORKS**
  - **electronic market (e-marketplace)**

    An online marketplace where buyers and sellers meet to exchange goods, services, money, or information

  - **intranet**

    An internal corporate or government network that uses Internet tools, such as Web browsers, and Internet protocols

  - **extranet**

    A network that uses the Internet to link multiple intranets

EXHIBIT 1.2 E-Commerce as Percent of Total Value: 2003–2008

Manufacturing
Merchant Wholesale Trade*
Retail Trade
Selected Services
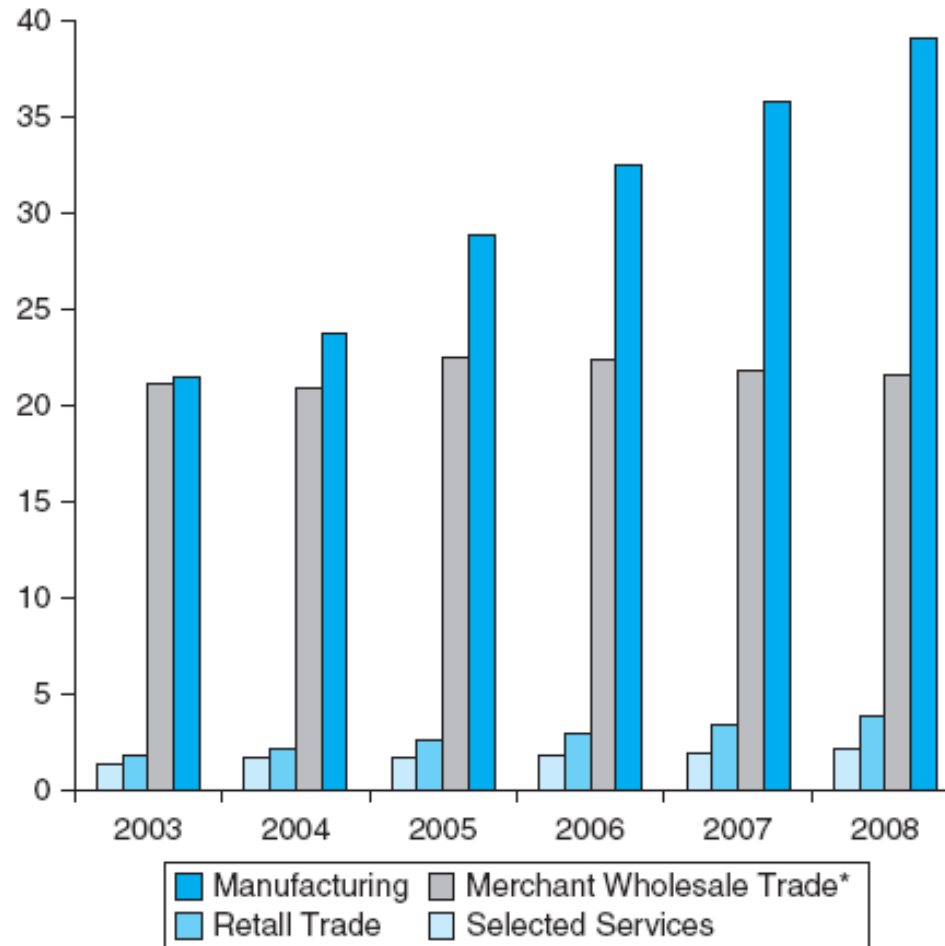
* Merchant Wholesale Trade data include MSBOs in 2003–2008.

The Electronic Commerce Field: Classification, Content, and a Brief History

- **AN EC FRAMEWORK**
  - EC applications are supported by infrastructure and by the following five support areas:
    1. People
    2. Public policy
    3. Marketing and advertising
    4. Support services
    5. Business partnerships

The Electronic Commerce Field: Classification, Content, and a Brief History

- **CLASSIFICATION OF EC BY THE NATURE OF THE TRANSACTIONS AND THE RELATIONSHIPS AMONG PARTICIPANTS**
  - **business-to-business (B2B)**

    E-commerce model in which all of the participants are businesses or other organizations
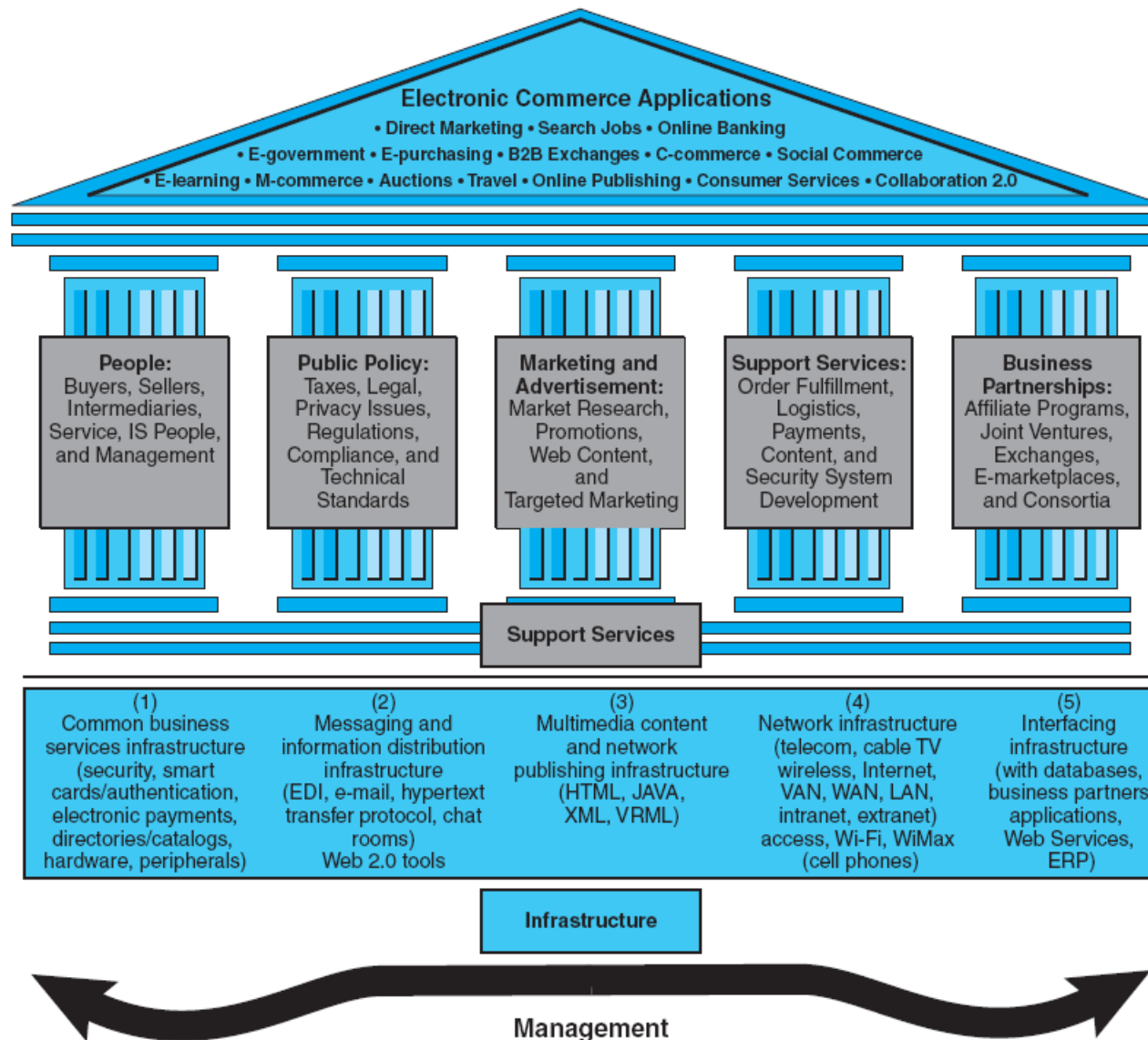 - **business-to-consumer (B2C)**

    E-commerce model in which businesses sell to individual shoppers
  - **e-tailing**

    Online retailing, usually B2C

EXHIBIT 1.3 **A Framework for Electronic Commerce**

Electronic Commerce Applications
- Direct Marketing • Search Jobs • Online Banking
- E-government • E-purchasing • B2B Exchanges • C-commerce • Social Commerce
- E-learning • M-commerce • Auctions • Travel • Online Publishing • Consumer Services • Collaboration 2.0

People:
Buyers, Sellers, Intermediaries, Service, IS People, and Management

Public Policy:
Taxes, Legal, Privacy Issues, Regulations, Compliance, and Technical Standards

Marketing and Advertisement:
Market Research, Promotions, Web Content, and Targeted Marketing

Support Services:
Order Fulfillment, Logistics, Payments, Content, and Security System Development

Business Partnerships:
Affiliate Programs, Joint Ventures, Exchanges, E-marketplaces, and Consortia

Support Services

| (1) Common business services infrastructure (security, smart cards/authentication, electronic payments, directories/catalogs, hardware, peripherals) | (2) Messaging and information distribution infrastructure (EDI, e-mail, hypertext transfer protocol, chat rooms) Web 2.0 tools | (3) Multimedia content and network publishing infrastructure (HTML, JAVA, XML, VRML) | (4) Network infrastructure (telecom, cable TV wireless, Internet, VAN, WAN, LAN, intranet, extranet) access, Wi-Fi, WiMax (cell phones) | (5) Interfacing infrastructure (with databases, business partners applications, Web Services, ERP) |

Infrastructure

Management

The Electronic Commerce Field: Classification, Content, and a Brief History

- **business-to-business-to-consumer (B2B2C)**

  E-commerce model in which a business provides some product or service to a client business that maintains its own customers

- **consumer-to-business (C2B)**

  E-commerce model in which individuals use the Internet to sell products or services to organizations or individuals who seek sellers to bid on products or services they need

The Electronic Commerce Field: Classification, Content, and a Brief History

- **intrabusiness EC**

  E-commerce category that includes all internal organizational activities that involve the exchange of goods, services, or information among various units and individuals in an organization

- **business-to-employees (B2E)**

  E-commerce model in which an organization delivers services, information, or products to its individual employees

The Electronic Commerce Field: Classification, Content, and a Brief History

- **consumer-to-consumer (C2C)**

  E-commerce model in which consumers sell directly to other consumers

- **collaborative commerce (c-commerce)**

  E-commerce model in which individuals or groups communicate or collaborate online

- **e-government**

  E-commerce model in which a government entity buys or provides goods, services, or information from or to businesses or individual citizens

EXHIBIT 1.4 Categories of Transactions in E-Commerce
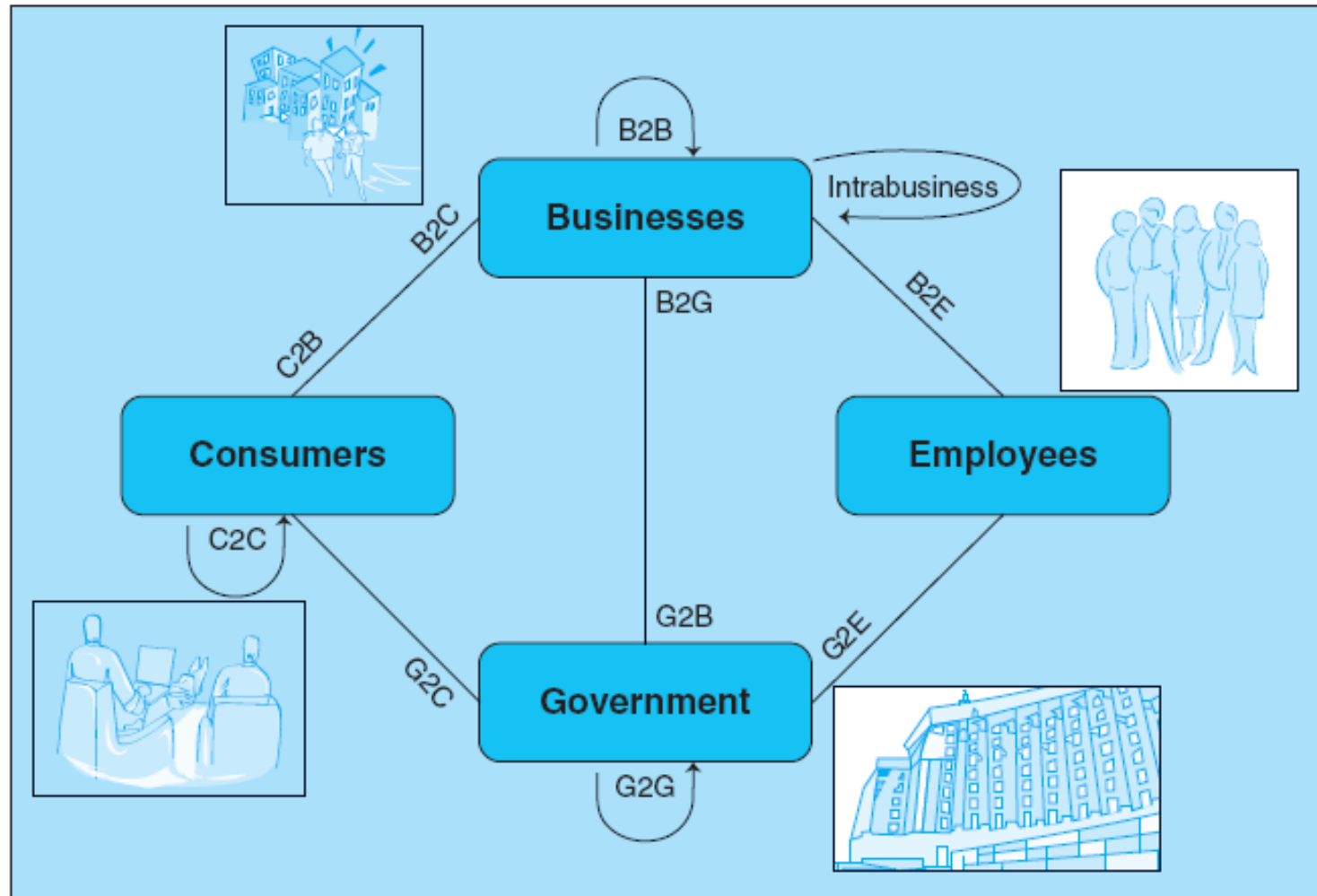
The Electronic Commerce Field: Classification, Content, and a Brief History

- **A BRIEF HISTORY OF EC**
  - **The Interdisciplinary Nature of EC**
  - **The Google Revolution**
  - **f-commerce**

    E-commerce activities conducted on Facebook or influenced by the site
  - **EC Failures**
  - **EC Successes**
- **THE FUTURE OF EC**

E-Commerce 2.0:
From Social Commerce to Virtual Worlds

- **social computing**

  An approach aimed at making the human–computer interface more natural

- **Web 2.0**

  The second generation of Internet-based services that lets people collaborate and share information online in new ways, such as social networking sites, wikis, communication tools, and folksonomies

E-Commerce 2.0:
From Social Commerce to Virtual Worlds

- **social network**

  A category of Internet applications that help connect friends, business partners, or individuals with specific interests by providing free services such as photo presentation, e-mail, blogging, and so on using a variety of tools

E-Commerce 2.0:
From Social Commerce to Virtual Worlds

- **social networking service (SNS)**

    A service that builds online communities by providing an online space for people to build free homepages and that provides basic communication and support tools for conducting different activities in the social network

- **social networking**

    The creation or sponsoring of a social network service and any activity, such as blogging, done in a social network (external or internal)

E-Commerce 2.0:
From Social Commerce to Virtual Worlds

- **ENTERPRISE SOCIAL NETWORKS**

- **social commerce**

  The e-commerce activities conducted in social networks and/or by using social software (i.e., Web 2.0 tools)

E-Commerce 2.0:
From Social Commerce to Virtual Worlds

- **VIRTUAL WORLDS AND SECOND LIFE**
- **virtual world**

  A user-defined world in which people can interact, play, and do business; the most publicized virtual world is Second Life

  - **How Students Make Money in a Virtual World**
- **THE MAJOR TOOLS OF WEB 2.0**
  - Wikis
  - RSS feeds
  - Blogs
  - Microblogs (e.g.,Twitter)

The Digital World: Economy, Enterprises, and Society

- **digital economy**

  An economy that is based on digital technologies, including digital communication networks, computers, software, and other related information technologies; also called the *Internet economy, the new economy, or the Web economy*

The Digital World: Economy, Enterprises, and Society

- **digital enterprise**

  A new business model that uses IT in a fundamental way to accomplish one or more of three basic objectives: reach and engage customers more effectively, boost employee productivity, and improve operating efficiency; uses converged communication and computing technology in a way that improves business processes

  - **corporate portal**

    A major gateway through which employees, business partners, and the public can enter a corporate website.

- **THE DIGITAL SOCIETY**

The Changing Business Environment, Organizations' Response, and EC Support

- **THE CHANGING BUSINESS ENVIRONMENT**
- **PERFORMANCE, BUSINESS PRESSURES, AND ORGANIZATIONAL RESPONSES AND EC SUPPORT**
  - **The Business Environment and Performance Impact Model**
  - **Business Pressures**
  - **Organizational Response Strategies**
    - The support of EC
  - **The Major Capabilities of E-Commerce**
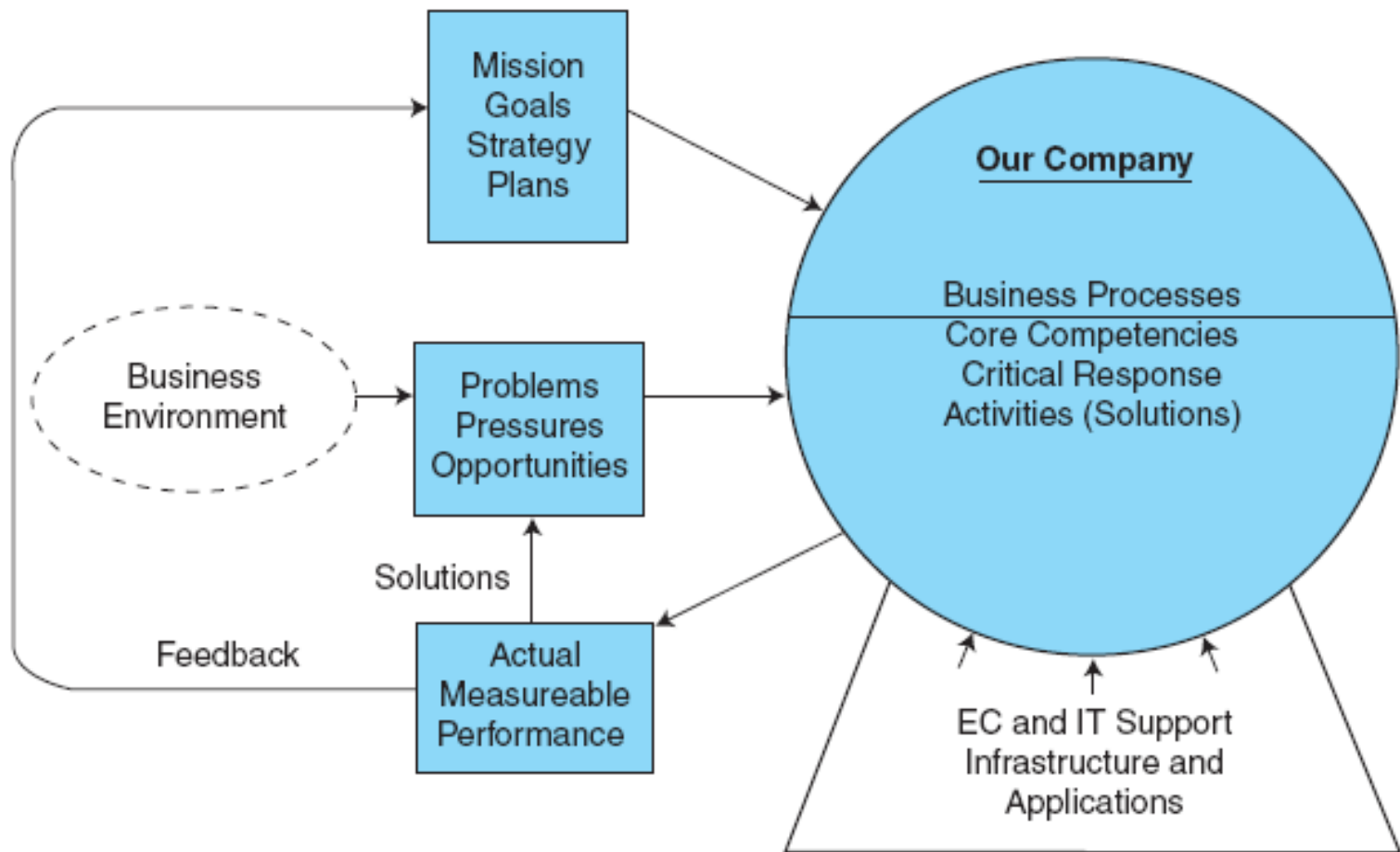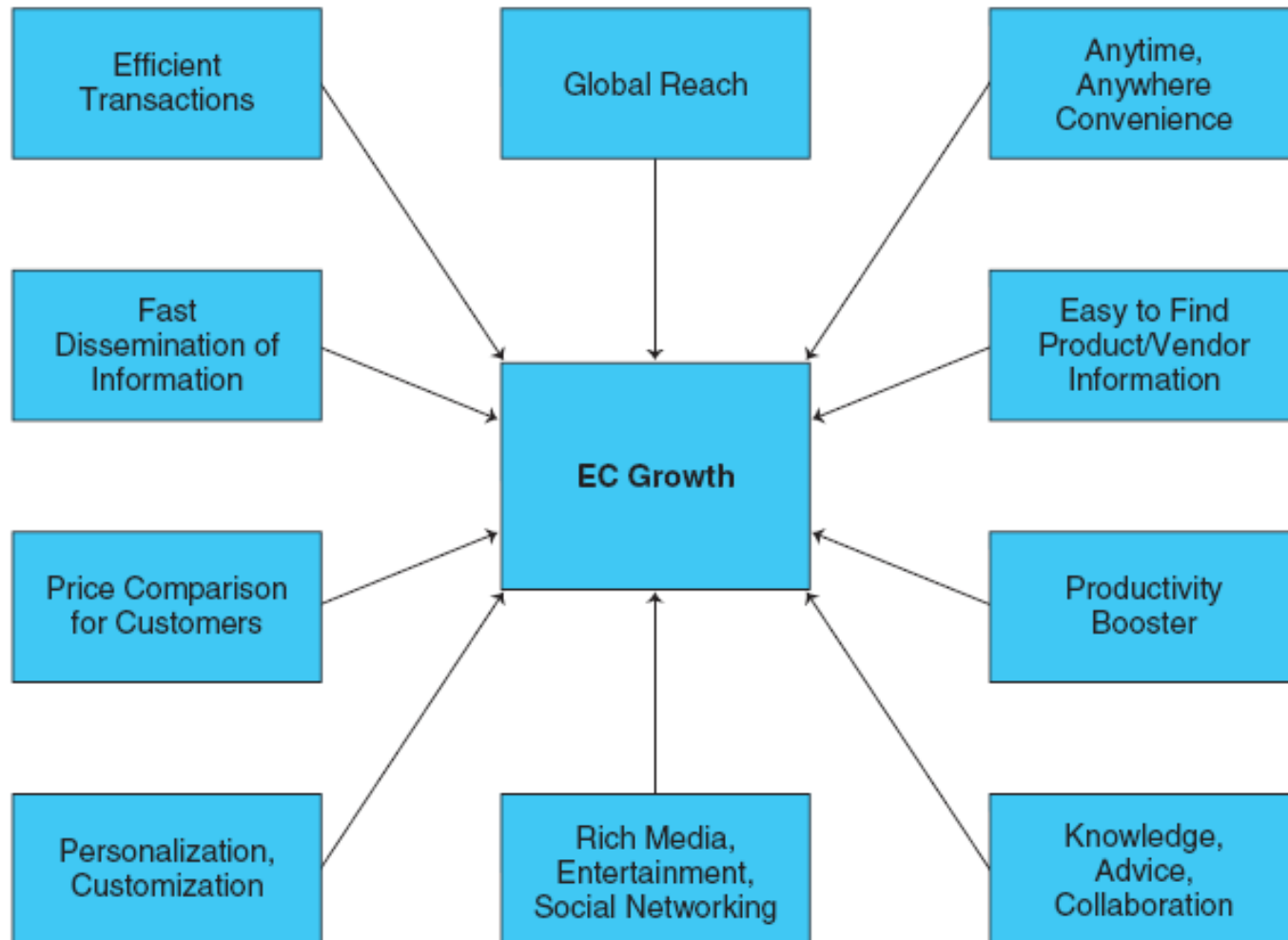
EXHIBIT 1.7 **The Business Environment and Performance Model**

EXHIBIT 1.10   Major Capabilities That Contribute to the Growth of EC

Electronic Commerce Business Models

- **business model**

  A method of doing business by which a company can generate revenue to sustain itself

Electronic Commerce Business Models

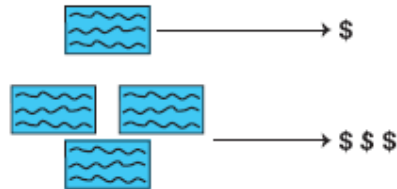- **THE STRUCTURE AND PROPERTIES OF BUSINESS MODELS**
  - **Revenue Models**
  - **value proposition**

    The benefits a company can derive from using EC
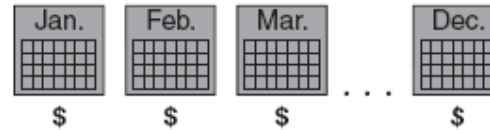 - **Functions of a Business Model**

EXHIBIT 1.11 Common Revenue Models
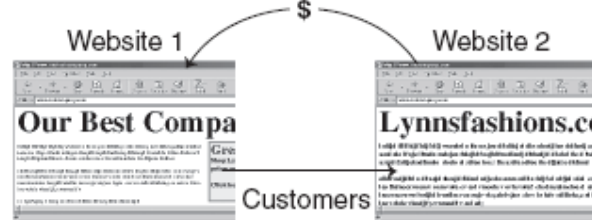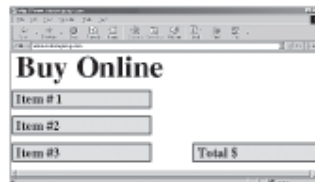
Electronic Commerce Business Models

- **TYPICAL EC BUSINESS MODELS**
    1. **Online direct marketing**
    2. **tendering (bidding) system**

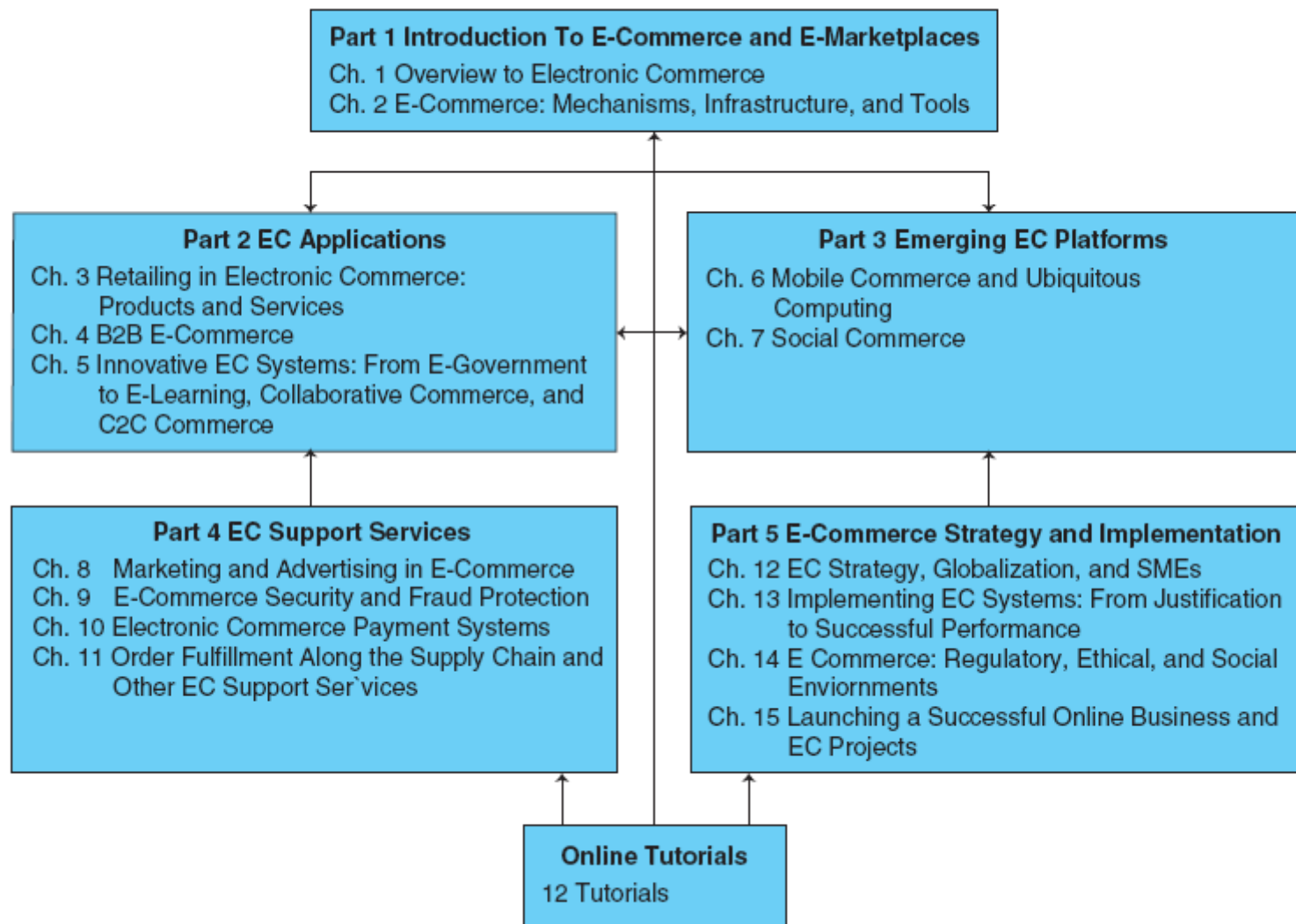   Model in which a buyer requests would-be sellers to submit bids; the lowest bidder wins.
    3. **Electronic marketplaces and exchanges**
    4. **Viral marketing**
    5. **Group purchasing**

Benefits, Limitations, and Impacts of Electronic Commerce

- **THE BENEFITS AND IMPACTS OF EC**
  - **EC as a Provider of Competitive Advantage**
- **THE LIMITATIONS AND BARRIERS OF EC**
  - **ethics**

    The branch of philosophy that deals with what is considered to be right and wrong
- **WHY STUDY E-COMMERCE?**

EXHIBIT 1.14 The Plan of the Book (Names Are Abbreviated)

Part 1 Introduction To E-Commerce and E-Marketplaces

Ch. 1 Overview to Electronic Commerce
Ch. 2 E-Commerce: Mechanisms, Infrastructure, and Tools

Part 2 EC Applications

Ch. 3 Retailing in Electronic Commerce:
      Products and Services
Ch. 4 B2B E-Commerce
Ch. 5 Innovative EC Systems: From E-Government
      to E-Learning, Collaborative Commerce, and
      C2C Commerce

Part 3 Emerging EC Platforms

Ch. 6 Mobile Commerce and Ubiquitous
      Computing
Ch. 7 Social Commerce

Part 4 EC Support Services

Ch. 8   Marketing and Advertising in E-Commerce
Ch. 9   E-Commerce Security and Fraud Protection
Ch. 10 Electronic Commerce Payment Systems
Ch. 11 Order Fulfillment Along the Supply Chain and
      Other EC Support Ser`vices

Part 5 E-Commerce Strategy and Implementation

Ch. 12 EC Strategy, Globalization, and SMEs
Ch. 13 Implementing EC Systems: From Justification
      to Successful Performance
Ch. 14 E Commerce: Regulatory, Ethical, and Social
      Enviorments
Ch. 15 Launching a Successful Online Business and
      EC Projects
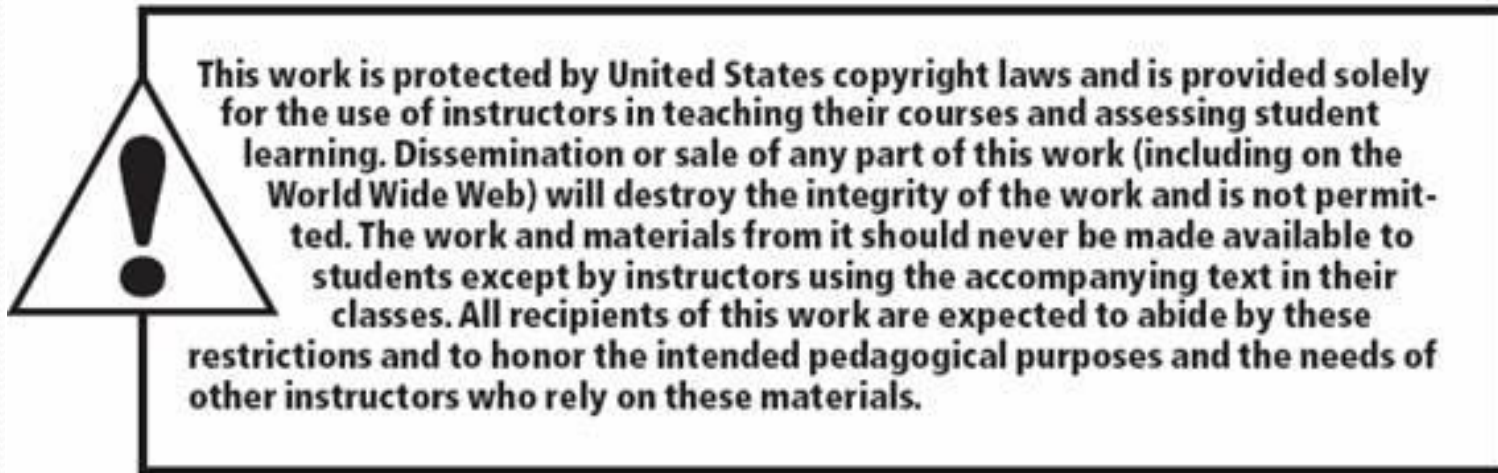
Online Tutorials

12 Tutorials

Managerial Issues

1. Is EC real?
2. Why is B2B e-commerce so essential and successful?
3. Which EC business model should I choose?
4. How can we exploit social commerce?
5. What are the top challenges of EC today?

Summary

1. Definition of EC and description of its various categories
2. The content and framework of EC
3. The major types of EC transactions
4. E-commerce 2.0
5. Description of social commerce and social software

Summary

6. The elements of the digital world
7. The drivers of EC
8. The major EC business models
9. Benefits of EC to organizations, consumers, and society
10. Limitations of e-commerce