

電子商務安全

Secure Electronic Commerce

電子商務概論

(Introduction to E-Commerce)

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Syllabus

- | 週次 | 月／日 | 內容 (Subject/Topics) |
|----|-----------|--|
| 1 | 100/02/18 | 電子商務安全課程簡介
(Course Orientation for Secure Electronic Commerce) |
| 2 | 100/02/25 | 電子商務概論 (Introduction to E-Commerce) |
| 3 | 100/03/04 | 電子市集 (E-Marketplaces) |
| 4 | 100/03/11 | 電子商務環境下之零售：產品與服務
(Retailing in Electronic Commerce: Products and Services) |
| 5 | 100/03/18 | 網路消費者行為、市場研究與廣告
(Online Consumer Behavior, Market Research, and
Advertisement) |
| 6 | 100/03/25 | 電子商務 B2B、B2C、C2C (B2B, B2C, C2C E-Commerce) |
| 7 | 100/04/01 | Web 2.0, Social Network, Social Media |
| 8 | 100/04/08 | 教學行政觀摩日 |
| 9 | 100/04/15 | 行動運算與行動商務 (Mobile Computing and Commerce) |
| 10 | 100/04/22 | 期中考試週 |

Syllabus (cont.)

週次	月／日	內容 (Subject/Topics)
11	100/04/29	電子商務安全 (E-Commerce Security)
12	100/05/06	數位憑證 (Digital Certificate)
13	100/05/13	網路與網站安全 (Network and Website Security)
14	100/05/20	交易安全、系統安全、IC卡安全、電子付款 (Transaction Security, System Security, IC Card Security, Electronic Commerce Payment Systems)
15	100/05/27	行動商務安全 (Mobile Commerce Security)
16	100/06/03	電子金融安全控管機制 (E-Finance Security Control Mechanisms)
17	100/06/10	營運安全管理 (Operation Security Management)
18	100/06/17	期末考試週

Chapter 1

Overview of Electronic Commerce

Source: Turban et al.,
Introduction to Electronic Commerce,
Third Edition, 2010, Pearson

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. Understand the elements of the **digital world**.

LEARNING OBJECTIVES

6. Describe the **drivers of EC** as they relate to **business pressures** and **organizational responses**.
7. Describe some **EC business models**.
8. Describe the benefits and limitations of EC to organizations, consumers, and society.

ELECTRONIC COMMERCE: DEFINITIONS AND CONCEPTS

- **Electronic Commerce (EC)**
 - The process of **buying, selling, or exchanging** products, services, or information via computer.

ELECTRONIC COMMERCE: DEFINITIONS AND CONCEPTS

- **E-Business (EB)**

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

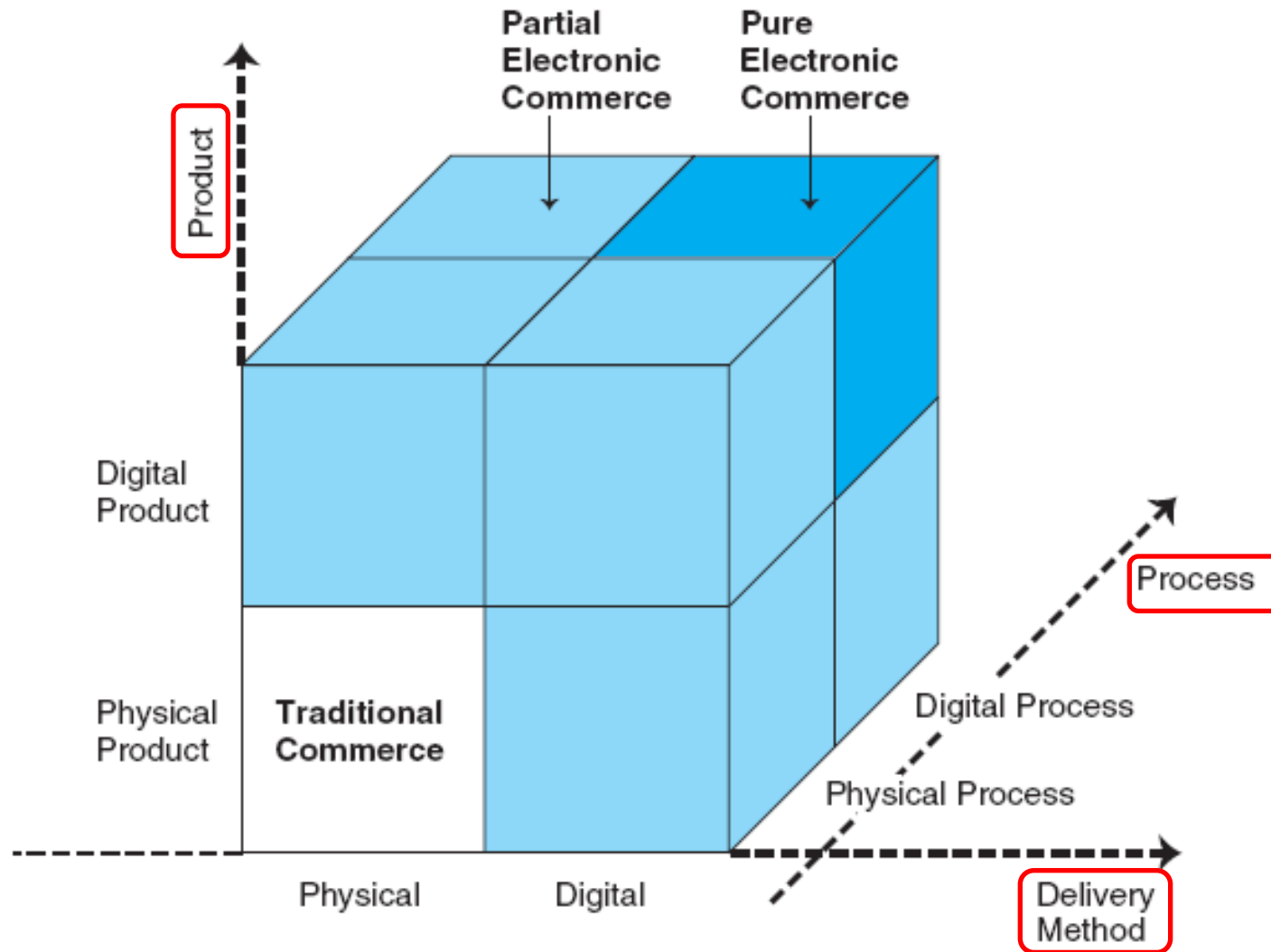
- **MAJOR EC CONCEPTS**
 - **Pure Versus Partial EC**
 - **EC Organizations**
 - brick-and-mortar (old economy) organizations
 - virtual (pure-play) organizations
 - click-and-mortar (click-and-brick) organizations

Pure Versus Partial EC

- EC can take several forms depending on the degree of digitization (the transformation from physical to digital) of:
 1. the **product** (service) sold
 2. the **process** (e.g., ordering, payment, fulfillment)
 3. the **delivery** method

EXHIBIT 1.1

The Dimensions of Electronic Commerce



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.

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.

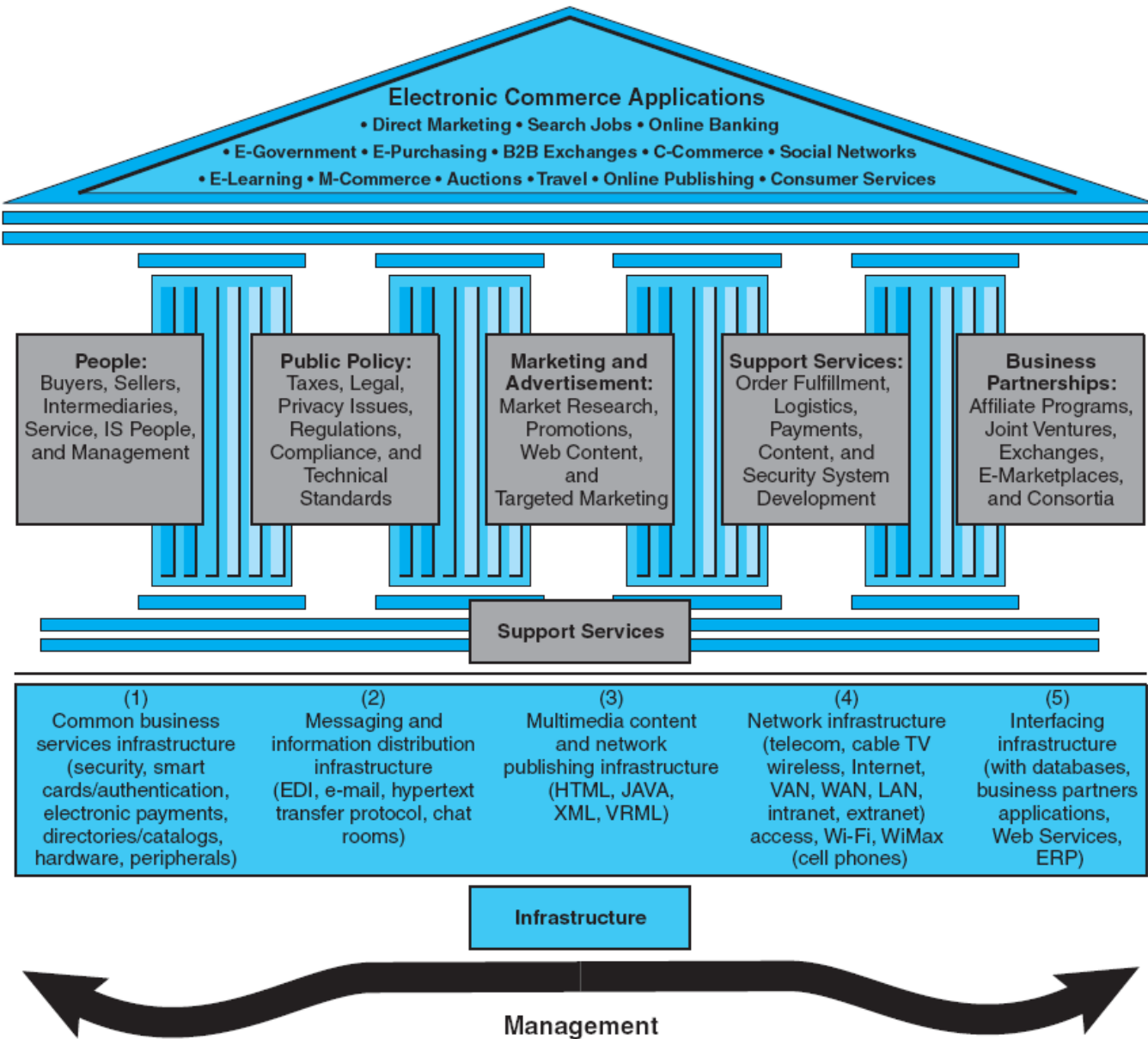
- **intranet**

- 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 A Framework for Electronic Commerce



Classification of EC

**by the nature of the transactions and
the relationships among participants**

1. Business-to-Business (B2B)
2. Business-to-Consumer (B2C) (e-tailing)
3. Business-to-Business-to-Consumer (B2B2C)
4. Consumer-to-Business (C2B)
5. Intrabusiness EC
6. Business-to-Employees (B2E)
7. Consumer-to-Consumer (C2C)
8. Collaborative Commerce (C-Commerce)
9. E-Learning
10. E-Government

Classification of EC

- **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.

Classification of EC

- **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.

Classification of EC

- **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.

Classification of EC

- **Consumer-to-Consumer (C2C)**
 - E-commerce model in which consumers sell directly to other consumers.

THE ELECTRONIC COMMERCE FIELD: **CLASSIFICATION**, CONTENT, AND HISTORY

- **Collaborative Commerce (c-commerce)**
 - E-commerce model in which individuals or groups communicate or collaborate online.
- **E-learning**
 - The online delivery of information for purposes of training or education.
- **E-government**
 - E-commerce model in which a government entity buys or provides goods, services, or information from or to businesses or individual citizens.

THE ELECTRONIC COMMERCE FIELD: CLASSIFICATION, CONTENT, AND HISTORY

- **A BRIEF HISTORY OF EC**
 - **The Interdisciplinary Nature of EC**
 - **The Google Revolution (2001)**
 - **EC Failures**
 - **EC Successes**
- **THE FUTURE OF EC**

E-COMMERCE 2.0:
FROM WEB 2.0 TO
ENTERPRISE SOCIAL NETWORKING
AND
VIRTUAL WORLDS

E-COMMERCE 2.0: FROM WEB 2.0 TO ENTERPRISE SOCIAL NETWORKING AND 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 WEB 2.0 TO ENTERPRISE SOCIAL NETWORKING AND 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 photos presentation, e-mail, blogging, and so on using a variety of tools.

E-COMMERCE 2.0: FROM WEB 2.0 TO ENTERPRISE SOCIAL NETWORKING AND VIRTUAL WORLDS

- **Social Network 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 WEB 2.0 TO ENTERPRISE SOCIAL NETWORKING AND VIRTUAL WORLDS

- **Business-oriented Networks**

Social networks whose primary objective is to facilitate business.

- **Example of a Business-Oriented Social Network:
Xing.com**

- **ENTERPRISE SOCIAL NETWORKS**

- **Example of an Enterprise Social Network:
Carnivalconnections.com**

Business-Oriented Social Network

Business Network - Soci... x

www.xing.com

Register Help & Contact Guided Tour English

Email (or username) Password Log in

Remember login Forgot your password?

Sign up now for free!

First name

Last name

Email

Password

I accept the [Privacy Policy](#) and [Terms and Conditions](#) of XING AG.

Sign up now for free

XING protects your privacy.

Networking

Get in touch with people to generate contacts that stay connected to you for a lifetime. They may well help you in your career by providing contacts, offering jobs, or coming up with ideas.

Go to the video: [What is networking?](#)

Find new contacts, experts, friends, and colleagues now.

Jobs and Careers

Find jobs or get yourself found by recruiters within a professional environment.

More than 10 million people are already there.

What's happening on XING right now

Ansgar Rothkegel posted the job ad "BDM Retail Germany (m/f)" in the Jobs section.
Jobs | Köln

Jens Murlowski wrote the following post: "Safety & Protection ...".
Groups | Business in Romania | Business ...

ENTERPRISE SOCIAL NETWORKS

The screenshot shows the Carnival Funville website in a browser window. The browser's address bar displays "www.carnival.com/funville/". The website features the Carnival logo at the top left, followed by navigation menus for "PORTS & DESTINATIONS", "SHIPS & STATEROOMS", "EXPERIENCES & EXCURSIONS", and "COMMUNITY & BUZZ". Below these are buttons for "Find a Cruise", "Manage My Cruise", and "Special Offers", along with a search bar labeled "Search Carnival.com". A secondary navigation bar includes "Login to FUNVILLE", "Register to Join the Fun!", and "Fun Up My Inbox!". The main content area is titled "WELCOME TO FUNVILLE" and contains icons for "REVIEWS", "FORUMS", "BLOGS", "VIDEOS", "GAMES", and "SHARE". A large image shows a family on a yellow vehicle, with an inset video player showing a person on a beach. On the right, there are social media widgets for Facebook ("VISIT US ON facebook. BECOME A FAN"), Twitter ("CARNIVAL ON twitter. Well, it *was* a 72 hour sale... FOLLOW US"), and Flickr ("CARNIVAL ON flickr").

E-COMMERCE 2.0: FROM WEB 2.0 TO ENTERPRISE SOCIAL NETWORKING AND VIRTUAL WORLDS

- **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**

- **The Essentials of Twitter for Business**

**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*.

EXHIBIT 1.3 Major Characteristics of the Digital Economy

Area	Description
Globalization Digital system	Global communication and collaboration; global electronic marketplaces and competition. From TV to telephones and instrumentation, analog systems are being converted to digital ones.
Speed	A move to real-time transactions, thanks to digitized documents, products, and services. Many business processes are expedited by 90 percent or more.
Information overload and intelligent search	Although the amount of information generated is accelerating, intelligent search tools can help users find what they need.
Markets	Markets are moving online. Physical marketplaces are being replaced by electronic markets; new markets are being created, increasing competition.
Digitization Business models and processes	Music, books, pictures, videos, and more are digitized for fast and inexpensive distribution. New and improved business models and processes provide opportunities to new companies and industries. Cyberintermediation and no intermediation are on the rise.
Innovation	Digital and Internet-based innovations continue at a rapid pace. More patents are being granted than ever before.
Obsolescence	The fast pace of innovation creates a high rate of obsolescence.
Opportunities	Opportunities abound in almost all aspects of life and operations.
Fraud	Criminals employ a slew of innovative schemes on the Internet. Cybercons are everywhere.
Wars	Conventional wars are changing to cyberwars.
Organizations	Organizations are moving to digital enterprises.

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.
It uses converged communication and computing technology in a way that improves business processes.

Digital Enterprise

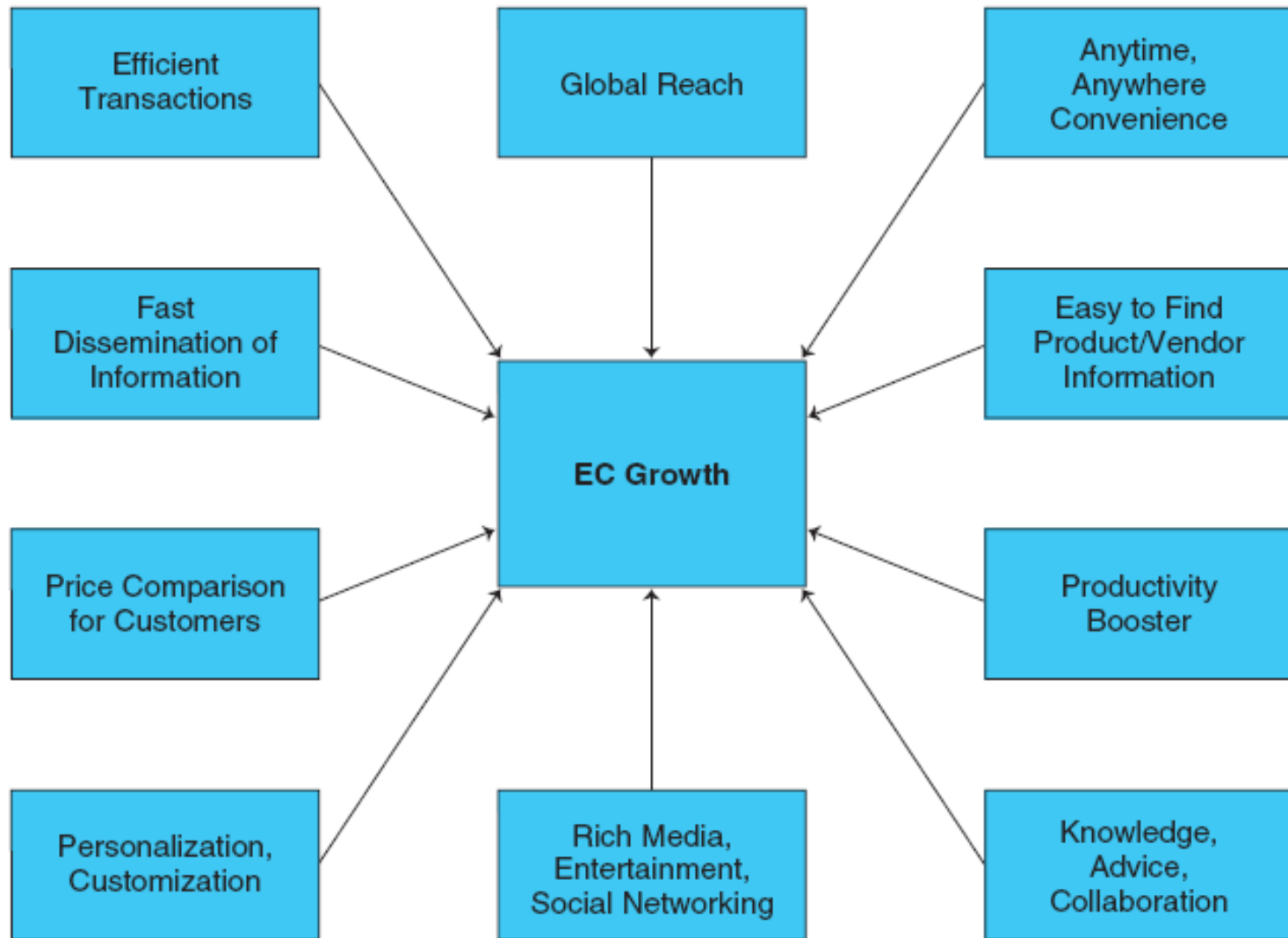
- **corporate portal**
 - A major gateway through which employees, business partners, and the public can enter a corporate Web site.

THE DIGITAL SOCIETY

- The final, and perhaps most important, element of the *digital world* is people and the way they live and interact.

EXHIBIT 1.5

Major Contributions to the Growth of EC

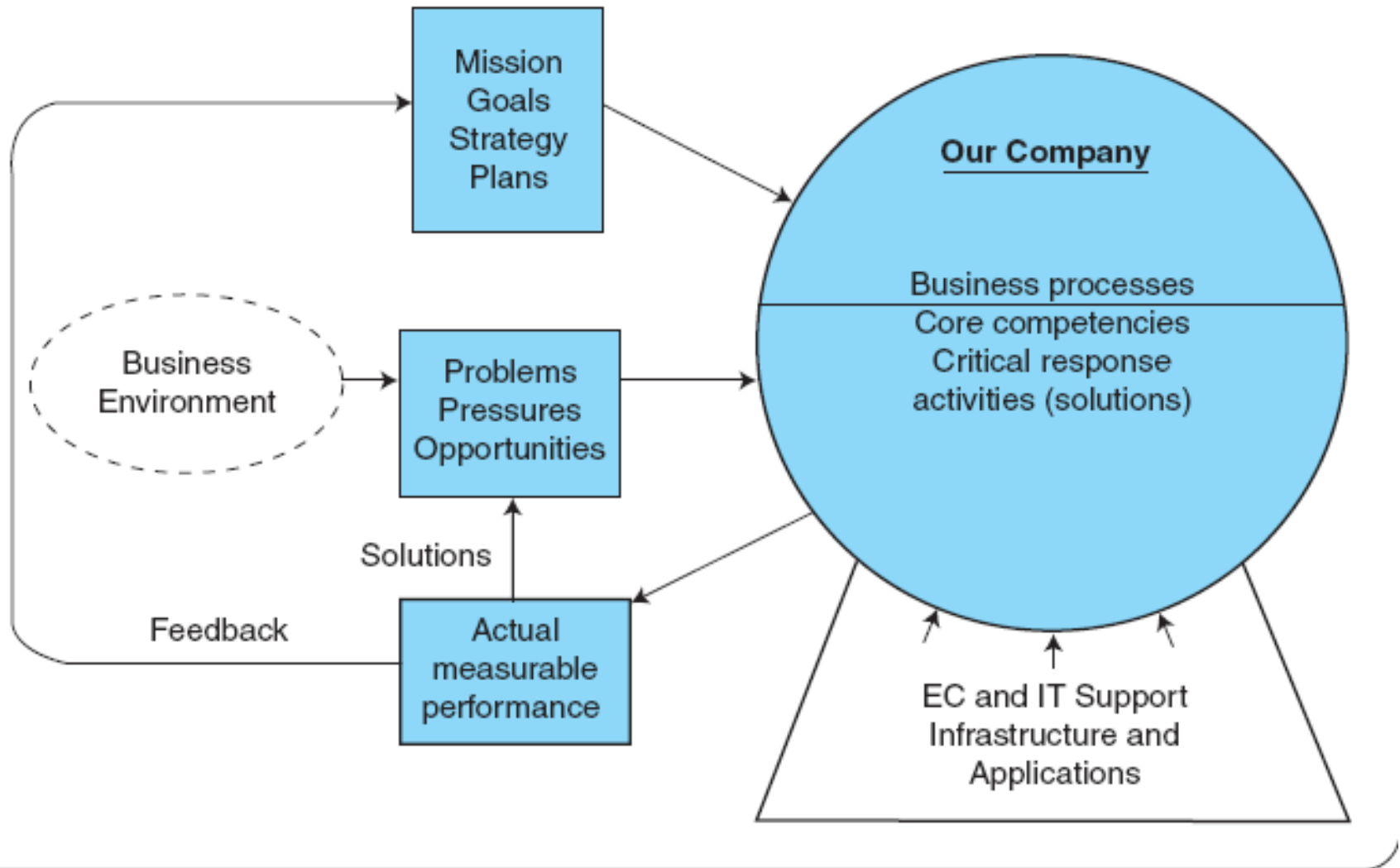


ELECTRONIC COMMERCE DRIVERS AND THE CHANGING BUSINESS ENVIRONMENT

ELECTRONIC COMMERCE DRIVERS AND THE CHANGING BUSINESS ENVIRONMENT

- **PERFORMANCE, BUSINESS PRESSURES, AND ORGANIZATIONAL RESPONSES**
 - **The Business Environment and Performance Impact Model**
 - **Business Pressures**
 - **Organizational Response Strategies**

EXHIBIT 1.6 The Business Environment and Performance Model



ELECTRONIC COMMERCE BUSINESS MODELS

- **Business Model**

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

- **value proposition**

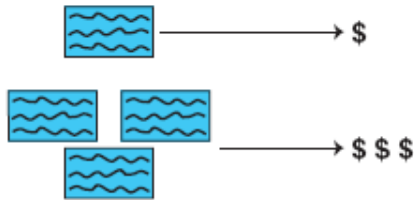
The benefits a company can derive from using EC.

ELECTRONIC COMMERCE BUSINESS MODELS

- **THE STRUCTURE AND PROPERTIES OF BUSINESS MODELS**
 - **Revenue Models**
 - Sales
 - Transaction Fees
 - Subscription Fees
 - Advertising Fees
 - Affiliate Fees

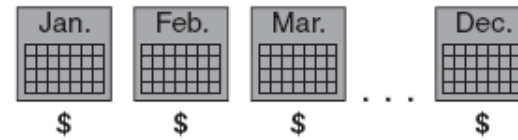
EXHIBIT 1.9 Common Revenue Models

Transaction Fees Model



Commissions paid on volume of transactions

Subscription Model



Fixed amounts are charged, usually monthly

Advertisement Model



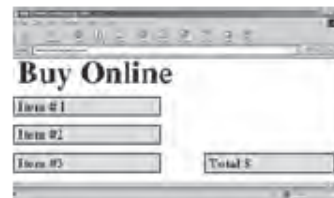
Payments from advertisers

Affiliate Model



Commissions for referring customers

Sales Model



Revenue from sales of goods or services

ELECTRONIC COMMERCE BUSINESS MODELS

- **Functions of a Business Model**

- Describe the major **business processes** of a company
- Describe the business models' positioning within the **value network** linking suppliers and customers
- Formulate the venture's **competitive strategy** and its **long-range plans**
- Articulate a **customer value** proposition
- Identify a **market segment**
- Define the venture's specific **value chain structure**
- Estimate the **cost structure and profit potential**

ELECTRONIC COMMERCE BUSINESS MODELS

- **TYPICAL EC BUSINESS MODELS**

- **Online direct marketing**

- **Electronic tendering systems**

- **tendering (bidding) system**

- Model in which a buyer requests would-be sellers to submit bids; the lowest bidder wins.

- **Electronic marketplaces and exchanges**

- **Viral marketing**

- **Social networking** and **Web 2.0 tools**

EXHIBIT 1.10 Benefits of E-Commerce

Benefit	Description
<i>Benefits to Organizations</i>	
Global reach	Locating customers and/or suppliers worldwide, at reasonable cost and fast.
Cost reduction	Lower cost of information processing, storage, distribution.
Facilitate problem solving	Solve complex problems that have remained unsolved.
Supply chain improvements	Reduce delays, inventories, and cost.
Business always open	Open 24/7/365; no overtime or other costs.
Customization/personalization	Make it to consumers' wish, fast and at reasonable cost (see Online File W1.15).
Seller's specialization (niche market)	Seller can specialize in a narrow field (e.g., dog toys), yet make money.
Ability to innovate, use new business models	Facilitate innovation and enable unique business models.
Rapid time to market and increased speed	Expedite processes; higher speed and productivity.
Lower communication costs	The Internet is cheaper than VAN private lines.
Efficient procurement	Saves time and reduces costs by enabling e-procurement.
Improved customer service and relationship	Direct interaction with customers, better CRM.
Fewer permits and less tax	May need fewer permits and be able to avoid sales tax.
Up-to-date company material	All distributed material is up-to-date.
Help SME to compete	EC may help small companies to compete against large ones by using special business models.
Lower inventories	Using customization inventories can be minimized.
Lower cost of distributing digitizable product	Delivery online can be 90 percent cheaper.
Provide competitive advantage	Innovative business models.



EXHIBIT 1.10 Benefits of E-Commerce

Benefit

Benefits to Consumers

Ubiquity
More products/services
Customized products/services
Cheaper products/services
Instant delivery
Information availability
Convenient auction participation
No sales tax
Enable telecommuting
Electronic socialization
Find unique items

Benefits to Society

Enable telecommuting
More public services

Improved homeland security
Increased standard of living
Close the digital divide

Description

Can shop any time from any place.
Large selection to choose from (vendor, products, styles).
Can customize many products and/or services (see Online File W1.15).
Can compare and shop for lowest prices.
Digitized products can be downloaded immediately upon payment.
Easy finding what you need, with details, demos, etc.
Do auctions any time and from any place.
Sometimes.
Can work or study at home.
Can socialize online in communities yet bet at home.
Using online auctions, collectible items can be found.

Facilitate work at home; less traffic, pollution.
Make education, health, etc., available for more people. Rural area can share benefits; more services for the poor.
Facilitate domestic security.
Can buy more and cheaper goods/services.
Allow people in developing countries and rural areas to accept more services and purchase what they really like.



EXHIBIT 1.11 Limitations of Electronic Commerce

Technological Limitations

Lack of universal standards for quality, security, and reliability.

The telecommunications bandwidth is insufficient, especially for m-commerce, videos, and graphics.

Software development tools are still evolving.

It is difficult to integrate Internet and EC software with some existing (especially legacy) applications and databases.

Special Web servers are needed in addition to the network servers, which add to the cost of EC.

Internet accessibility is still expensive and/or inconvenient.

Order fulfillment of large-scale B2C requires special automated warehouses.

Nontechnological Limitations

Security and privacy concerns deter customers from buying.

Lack of trust in EC and in unknown sellers hinders buying.

People do not yet sufficiently trust paperless, faceless transactions.

Many legal and public policy issues, including taxation, have not yet been resolved or are not clear.

National and international government regulations sometimes get in the way.

It is difficult to measure some of the benefits of EC, such as online advertising. Mature measurement methodologies are not yet available.

Some customers like to feel and touch products. Also, customers are resistant to the change from shopping at a brick-and-mortar store to a virtual store.

People do not yet sufficiently trust paperless, faceless transactions.

In many cases, the number of sellers and buyers that are needed for profitable EC operations is insufficient.

Online fraud is increasing.

It is difficult to obtain venture capital due to the failure of many dot-coms.

BENEFITS, LIMITATIONS, AND IMPACTS OF ELECTRONIC COMMERCE

- **Ethical Issues**

- **ethics**

- The branch of philosophy that deals with what is considered to be right and wrong.

- **WHY STUDY E-COMMERCE?**

MANAGERIAL ISSUES

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

References

- Turban et al., Introduction to Electronic Commerce, Third Edition, 2010, Pearson