

# 電子商務安全

## Secure Electronic Commerce

電子商務 B2B、B2C、C2C  
(B2B, B2C, C2C 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)

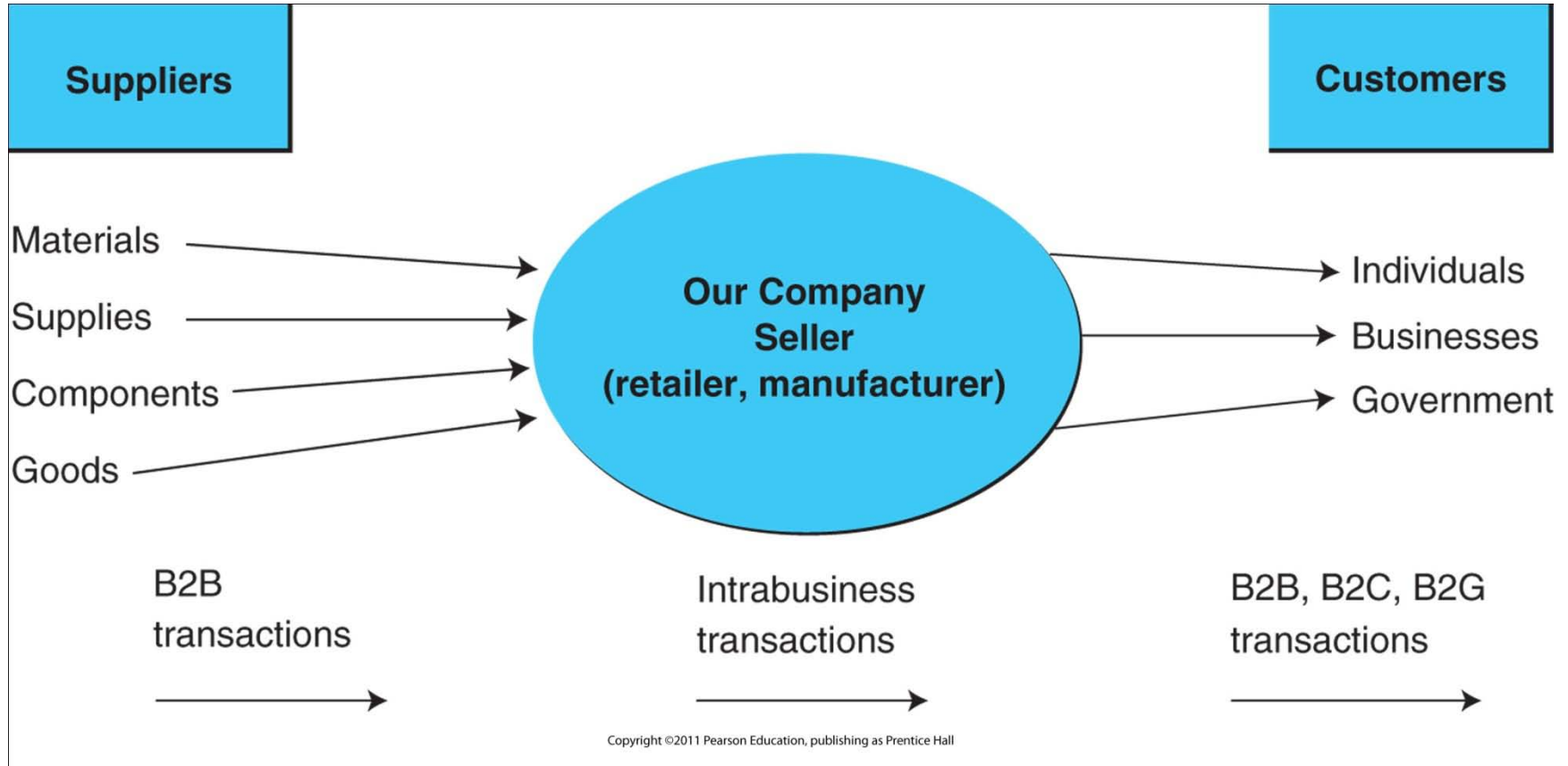
- |    |           |   |
|----|-----------|---|
| 11 | 100/04/29 | 電子商務安全 (E-Commerce Security)  |
| 12 | 100/05/06 | 數位憑證 (Digital Certificate)  |
| 13 | 100/05/13 | 網路與網站安全 (Network and Website Security)  |
| 14 | 100/05/20 | 交易安全、系統安全、IC卡安全、電子付款<br>(Transaction Security, System Security, IC Card Security,<br>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<br>(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   |

# LEARNING OBJECTIVES

- B2B EC
- B2C EC
- C2C EC

# EC Activity

## B2B, B2C, B2G

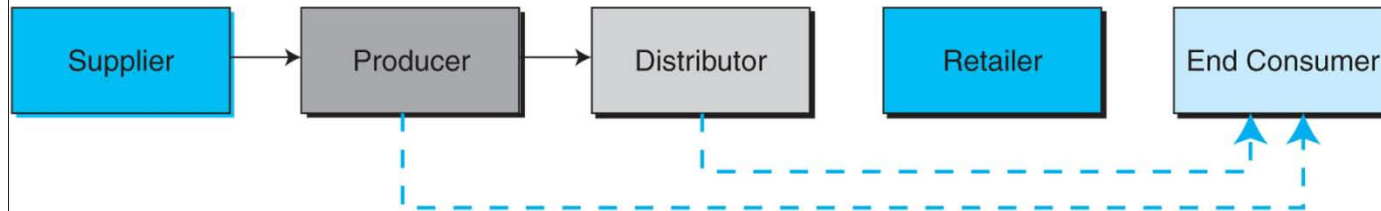


# B2C Supply Chain

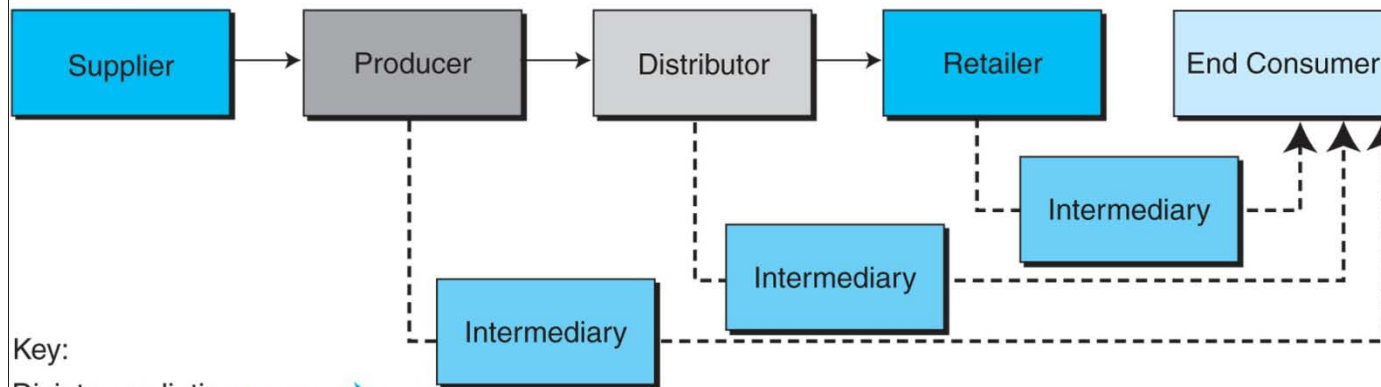
## A. Simple Traditional Supply Chain



## B. Supply Chain, with Examples of Disintermediation



## C. Supply Chain, with Examples of Reintermediation



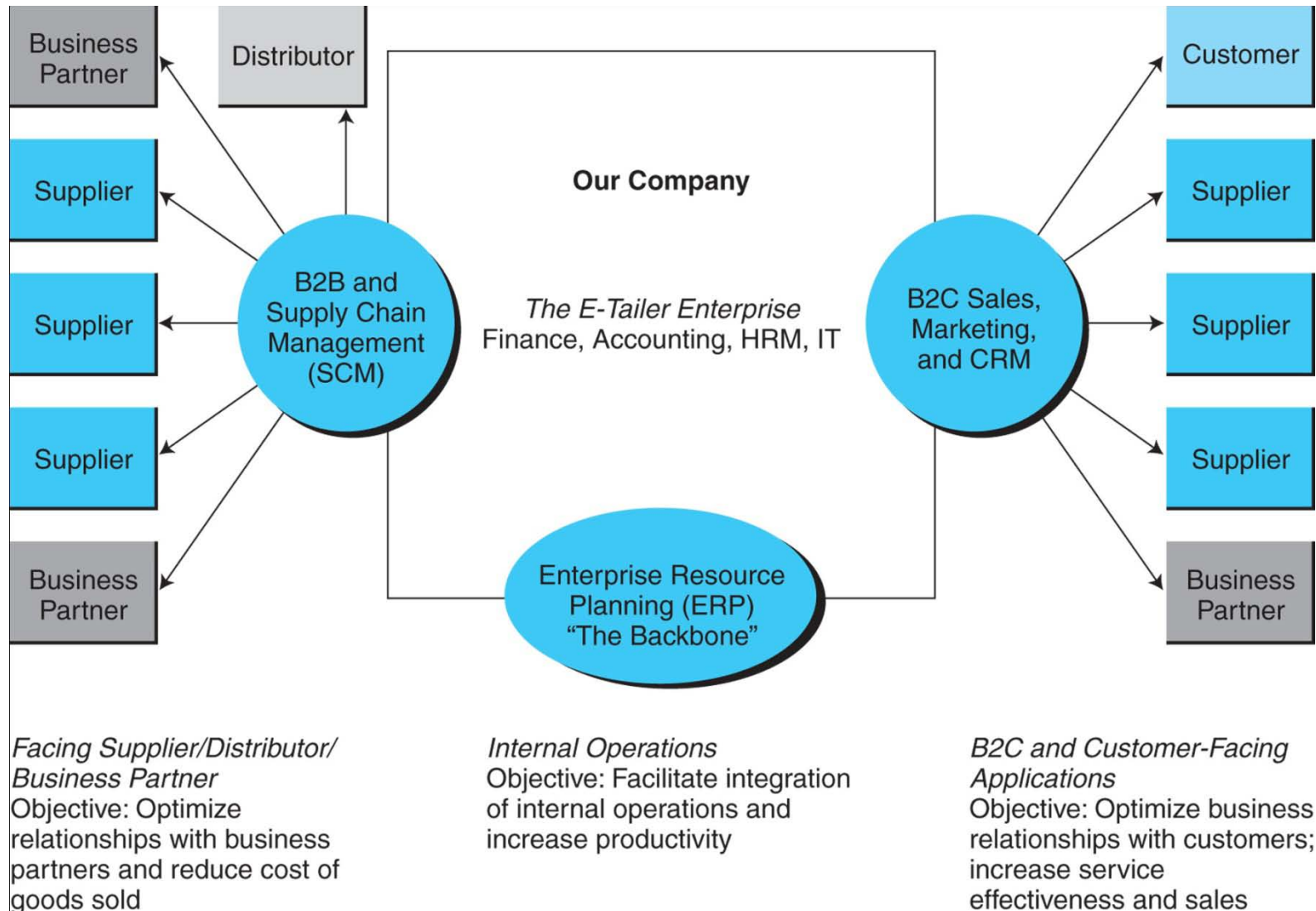
Key:

Disintermediation 

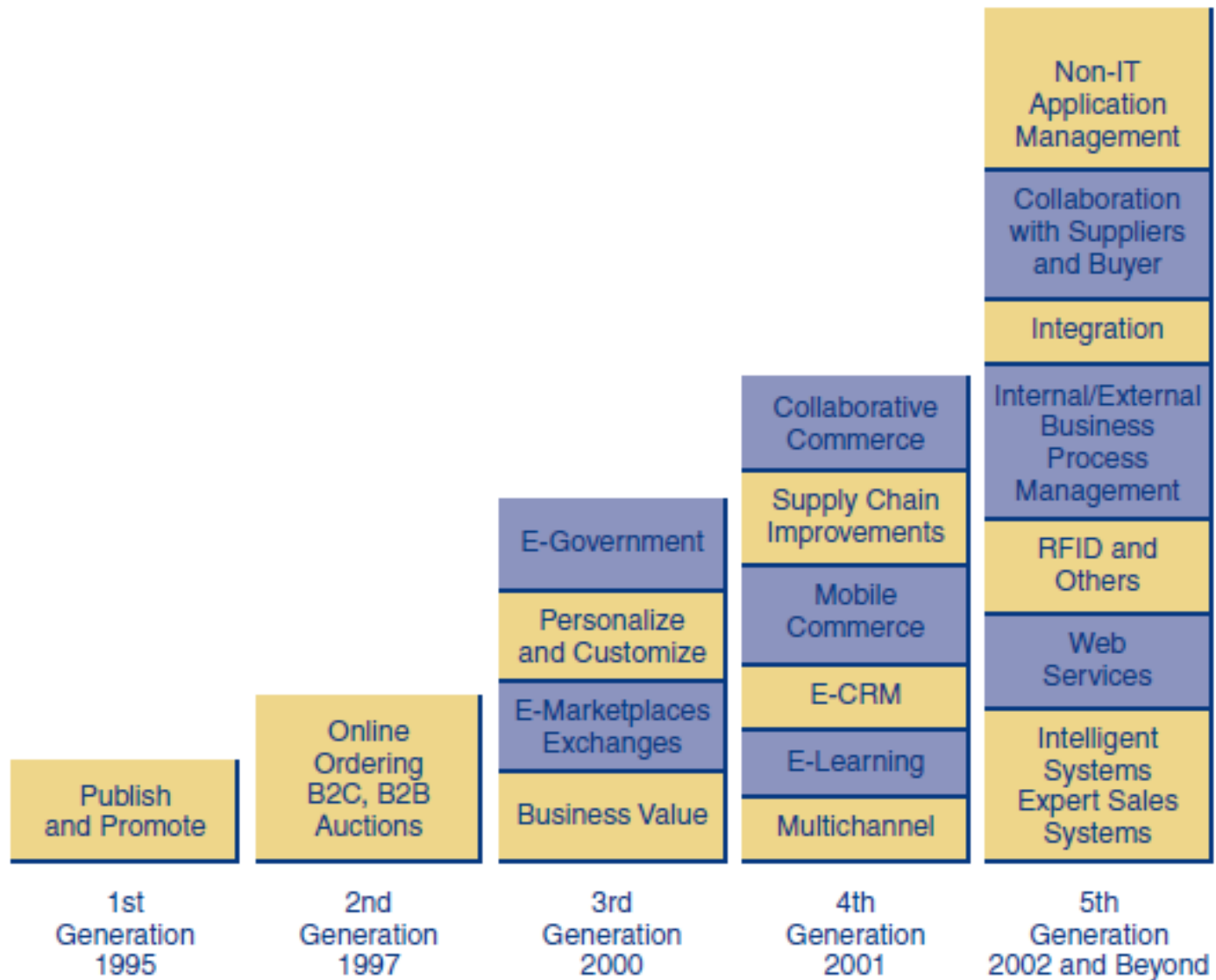
Reintermediation 

# Enterprise EC System

## B2B, B2C



# Generation of B2B EC

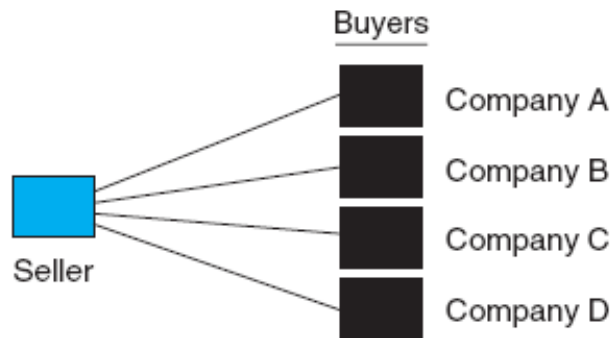




# Business-to-business e-commerce (B2B EC)

- Transactions between businesses conducted electronically over the Internet, extranets, intranets, or private networks; also known as eB2B (electronic B2B) or just B2B.

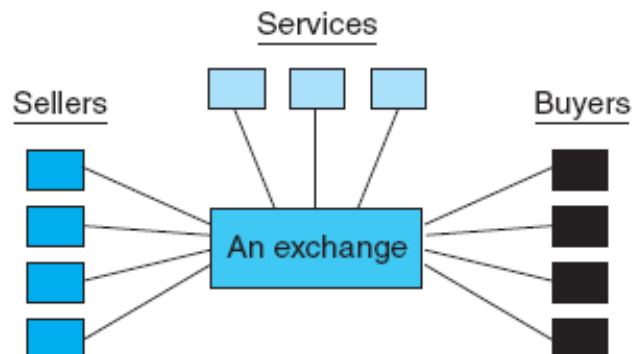
## EXHIBIT 5.1 Types of B2B E-Commerce



(a) Sell-Side B2B



(b) Buy-Side B2B



(c) Electronic Exchange



(d) Supply Chain Improvements and Collaborative Commerce

# **THE BASIC TYPES OF B2B E-MARKETPLACES AND SERVICES**

- One-to-Many and Many-to-One:  
Private E-Marketplaces
- Many-to-Many: Exchanges
- Supply Chain Improvers and Collaborative Commerce

# One-to-Many and Many-to-One: Private E-Marketplaces

- **company-centric EC**

E-commerce that focuses on a single company's buying needs (many-to-one or buy-side) or selling needs (one-to-many or sell-side).

# Many-to-Many: Exchanges

- **exchanges (trading communities or trading exchanges)**

Many-to-many e-marketplaces, usually owned and run by a third party or a consortium, in which many buyers and many sellers meet electronically to trade with each other.

- **public e-marketplaces**

Third-party exchanges open to all interested parties (sellers and buyers).

# **B2B CHARACTERISTICS**

- **Parties to the Transaction:**
  - **Sellers, Buyers, and Intermediaries**
- **Types of Transactions**
  - **spot buying, strategic (systematic) sourcing**
- **Types of Materials Traded**
  - **direct materials**
  - **indirect materials**
  - **maintenance, repair, and operation (MRO)**
- **The Direction of the Trades**
  - **vertical marketplaces**
  - **horizontal marketplaces**

# Types of Transaction

- **spot buying**

The purchase of goods and services as they are needed, usually at prevailing market prices.

- **strategic (systematic) sourcing**

Purchases involving long-term contracts that usually are based on private negotiations between sellers and buyers.

# Types of Materials Traded

- **direct materials**

Materials used in the production of a product (e.g., steel in a car or paper in a book).

- **indirect materials**

Materials used to support production (e.g., office supplies or lightbulbs).

- **maintenance, repair, and operation (MRO)**

Indirect materials used in activities that support production.



# The Direction of the Trades

- **vertical marketplaces**

Markets that deal with one industry or industry segment (e.g., steel, chemicals).

- **horizontal marketplaces**

Markets that concentrate on a service, material, or a product that is used in all types of industries (e.g., office supplies, PCs).

# SERVICE INDUSTRIES ONLINE IN B2B

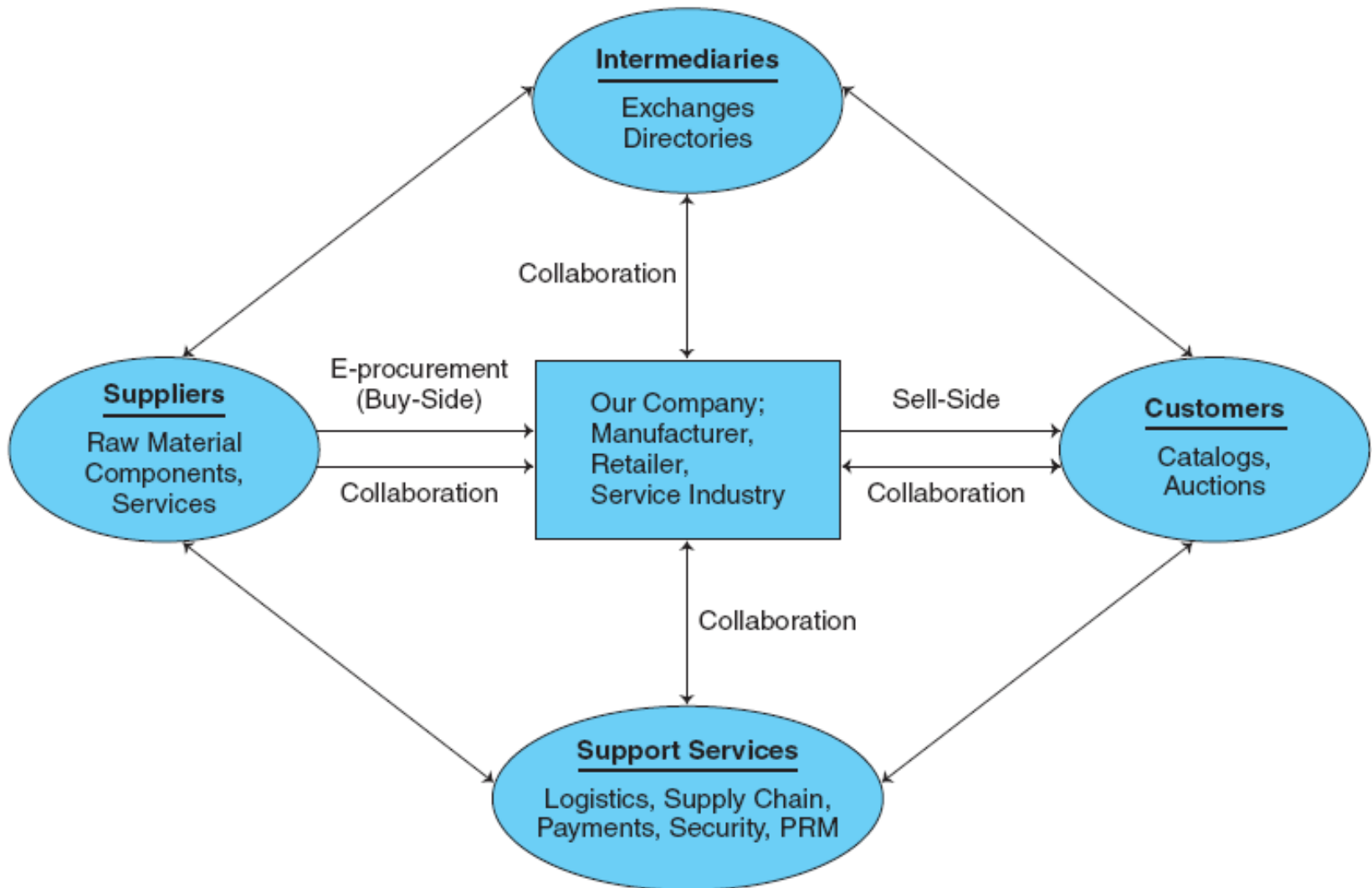
- Travel and hospitality services
- Real estate
- Financial services
- Online financing
- Other online services

# THE BENEFITS OF B2B

- **THE BENEFITS OF B2B to Buyers (B), Sellers (S), or Both (J)**

Creates new sales (purchase) opportunities (J)  
Eliminates paper and reduces administrative costs (J)  
Expedites processing and reduces cycle time (J)  
Lowers search costs and time for buyers to find products and vendors (B)  
Increases productivity of employees dealing with buying and/or selling (J)  
Reduces errors and improves quality of services (J)  
Makes product configuration easier (B)  
Reduces marketing and sales costs (S)  
Reduces inventory levels and costs (J)  
Enables customized online catalogs with different prices for different customers (J)  
Increases production flexibility, permitting JIT delivery (S)  
Reduces procurement costs (B)  
Facilitates customization via configuration (J)  
Provides for efficient customer service (B)  
Increases opportunities for collaboration (J)

## EXHIBIT 5.2 The Components of B2B



# **ONE-TO-MANY: SELL-SIDE E-MARKETPLACES**

- **sell-side e-marketplace**

A Web-based marketplace in which one company sells to many business buyers from e-catalogs or auctions, frequently over an extranet.

- **B2B Sellers**

- **Customer Service**

- **Selling from Catalogs**

- **Configuration and Customization**

- **Benefits and Limitations of Online Sales from Catalogs**

# **SELLING VIA DISTRIBUTORS AND OTHER INTERMEDIARIES**

- Manufacturers use intermediaries to distribute their products to a large number of smaller buyers.
- The intermediaries buy products from many manufacturers and aggregate them into one catalog from which they sell to customers or to retailers.
- Now, many of these distributors also are selling online via Webstores.

# **SELLING VIA E-AUCTIONS**

- **USING AUCTIONS ON THE SELL SIDE**
  - Revenue generation
  - Cost savings
  - Increased “stickiness”
  - Member acquisition and retention
- **AUCTIONING FROM THE COMPANY’S OWN SITE**
- **AUCTION RULES**

# SELLING VIA E-AUCTIONS

- **USING INTERMEDIARIES IN AUCTIONS**
  - Example: Liquidation.com
- **EXAMPLES OF B2B FORWARD AUCTIONS**
  - Sam's Club (samsclub.com) auctions thousands of items
  - ResortQuest (auctionanything.com) auctions rental space for vacation rentals
  - At governmentauctions.org, businesses can bid on foreclosures, seized items, abandoned property, and more



# ONE-FROM-MANY: BUY-SIDE E-MARKETPLACES AND E-PROCUREMENT

- **buy-side e-marketplace**

A corporate-based acquisition site that uses reverse auctions, negotiations, group purchasing, or any other e-procurement method.

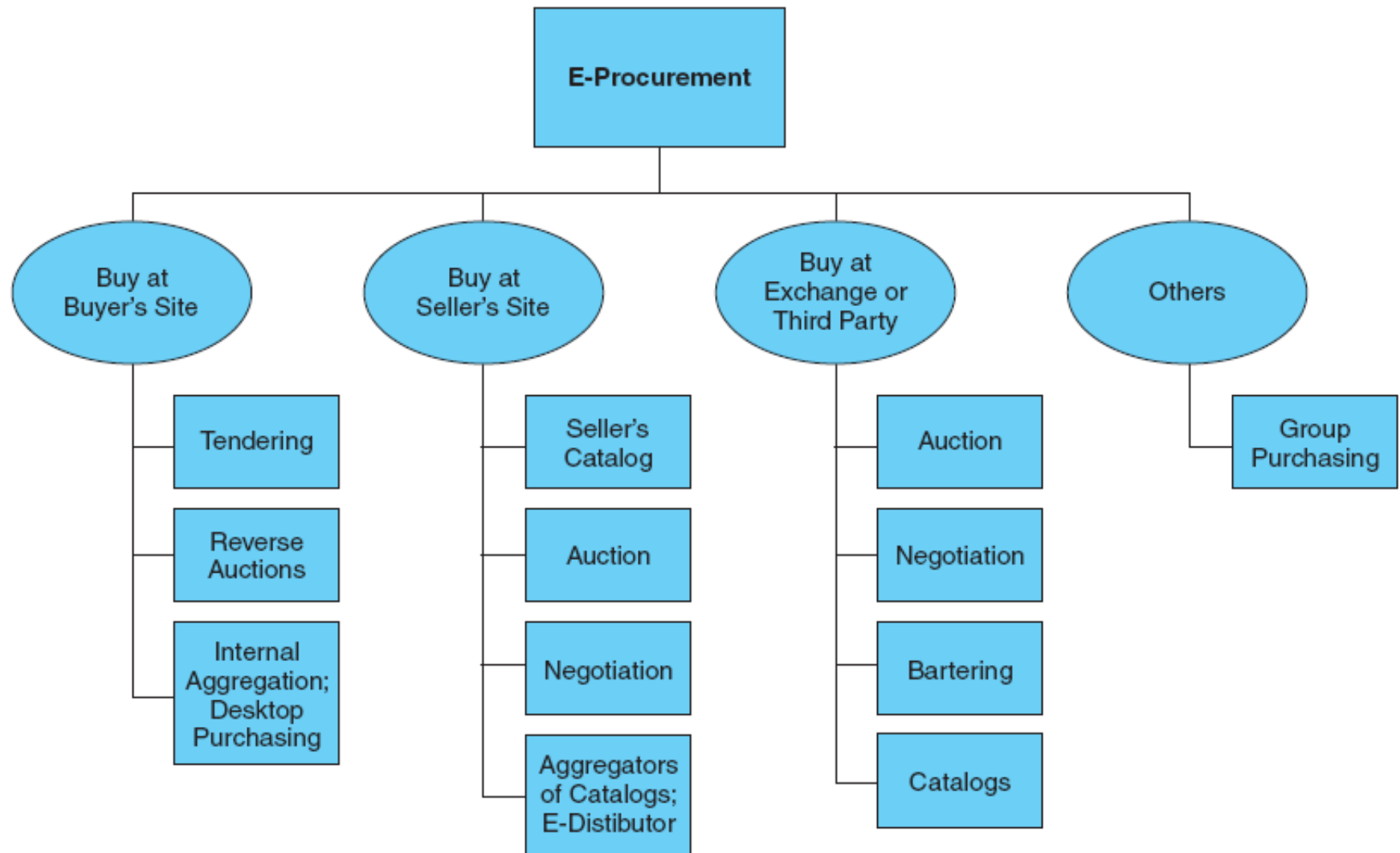
- **e-procurement**

The electronic acquisition of goods and services for organizations.

# E-Procurement Organization and Types

- E-Sourcing
- E-Tendering
- E-Reverse auctioning
- E-Informing
- Web-based ERP (electronic resource planning)
- E-Marketsites
- E-MRO (maintenance, repair, and operating)

## EXHIBIT 5.3 E-Procurement Methods



# INEFFICIENCIES IN TRADITIONAL PROCUREMENT MANAGEMENT

- **procurement management**

The planning, organizing, and coordinating of all the activities related to purchasing goods and services needed to accomplish the organization's mission.

- **maverick buying**

Unplanned purchases of items needed quickly, often at non-prenegotiated higher prices.

# **BUY-SIDE E-MARKETPLACES: REVERSE AUCTIONS**

- **request for quote (RFQ)**

The “invitation” to participate in a tendering (bidding) system.

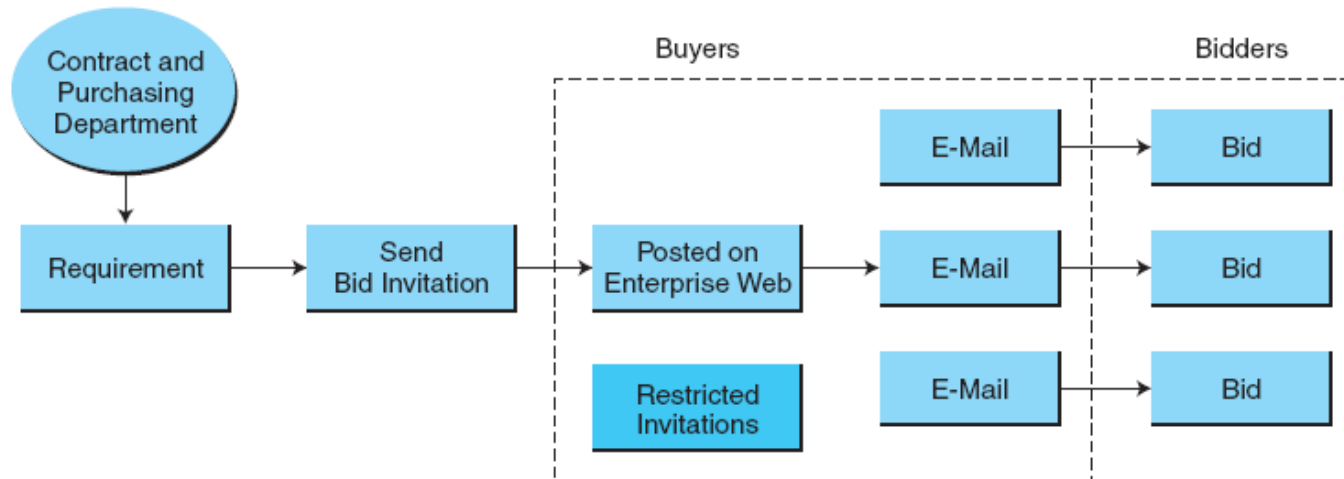
- **CONDUCTING REVERSE AUCTIONS**

- E-Tendering by Governments

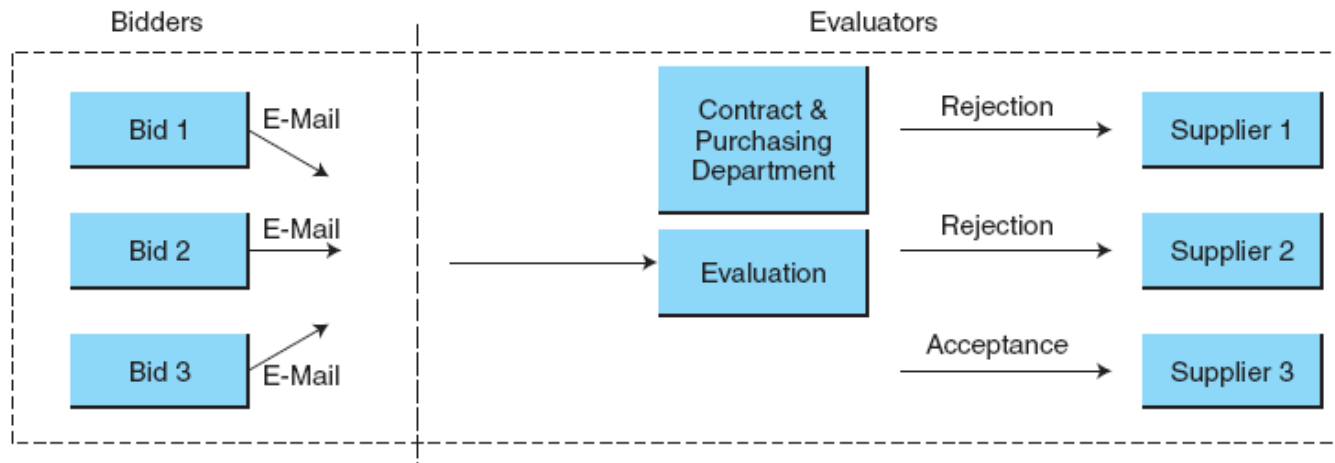
- **GROUP REVERSE AUCTIONS**

## EXHIBIT 5.4 The Reverse Auction Process

### Step I Posting Bid Invitations



### Step II Evaluation of Bids



# **OTHER E-PROCUREMENT METHODS**

- **An Internal Purchasing Marketplace:  
Aggregating Suppliers' Catalogs and Desktop  
Purchasing**
- **Buying at Seller's E-Actions**
- **Group Purchasing**
- **Buying at Sellers' Sites and Collaborative  
Commerce**
- **Acquisition Via Electronic Bartering**

# **An Internal Purchasing Marketplace: Aggregating Suppliers' Catalogs and Desktop Purchasing**

- **internal procurement marketplace**

The aggregated catalogs of all approved suppliers combined into a single internal electronic catalog.

- **desktop purchasing**

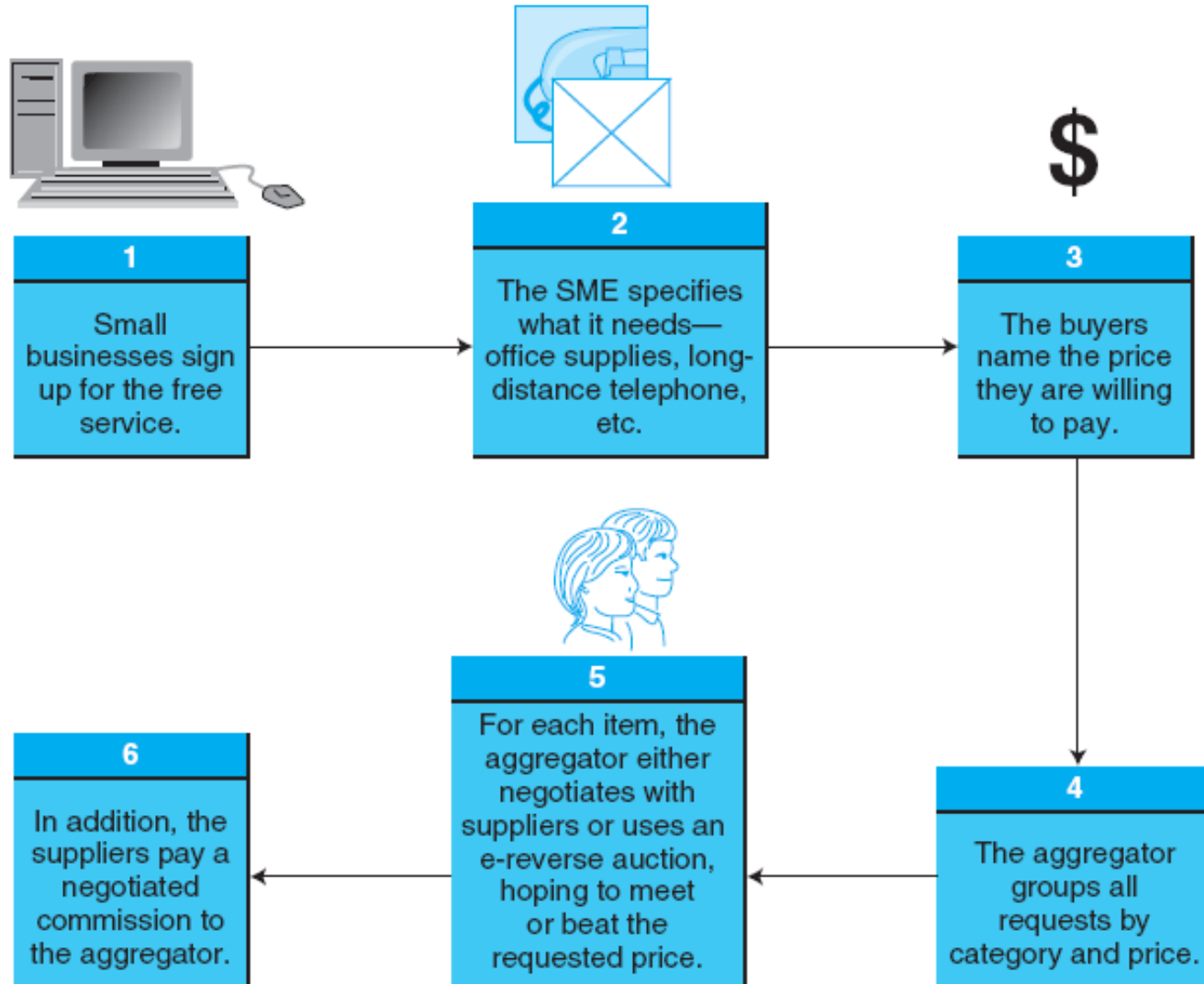
Direct purchasing from internal marketplaces without the approval of supervisors and without the intervention of a procurement department.



# Group Purchasing

- The aggregation of orders from several buyers into volume purchases so that better prices can be negotiated.
  - **Internal Aggregation of Purchasing Orders**
  - **External Aggregation for Group Purchasing**

## EXHIBIT 5.5 The Group Purchasing Process

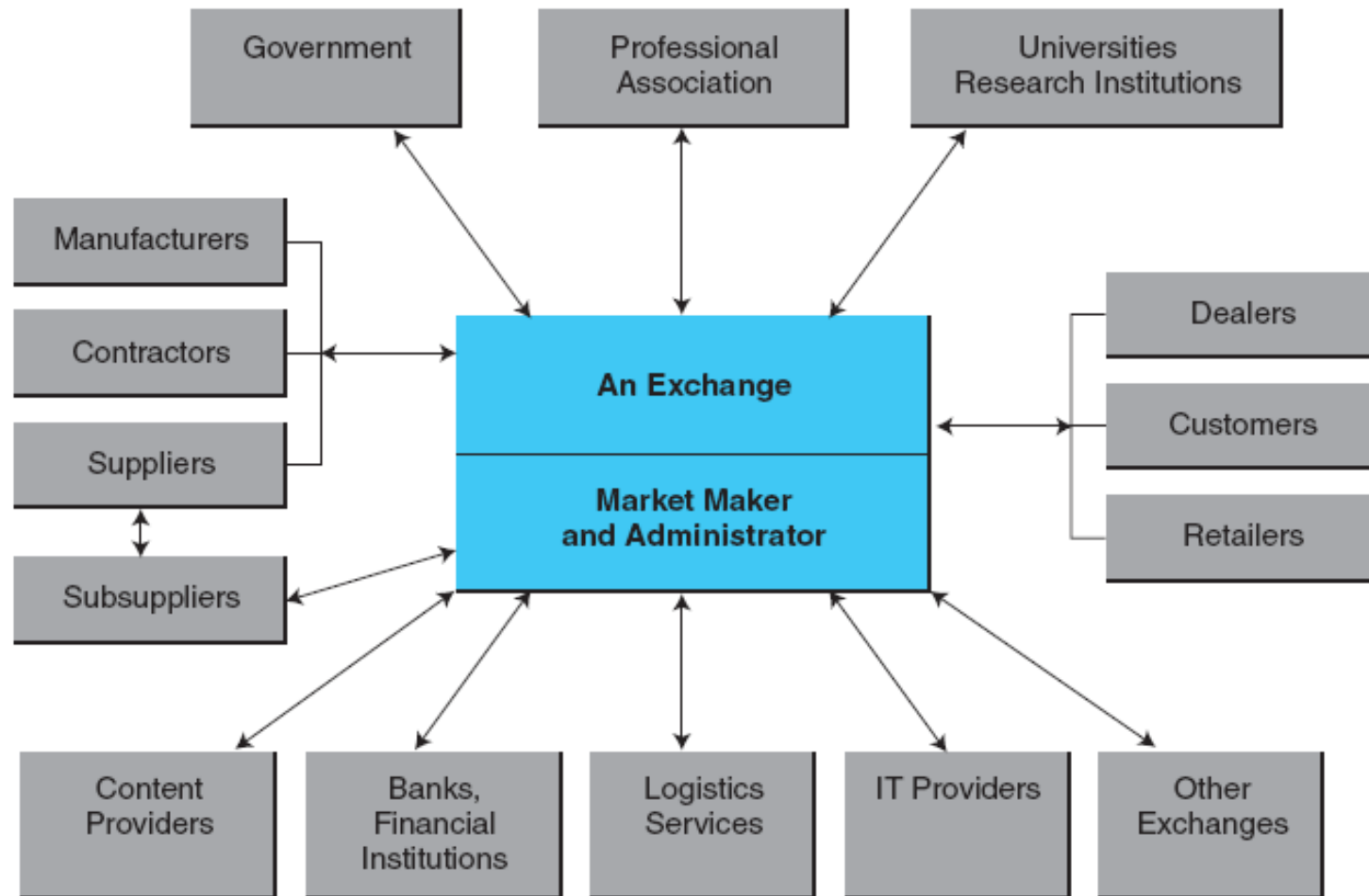


# Acquisition Via Electronic Bartering

- **bartering exchange**

An intermediary that links parties in a barter; a company submits its surplus to the exchange and receives points of credit, which can be used to buy the items that the company needs from other exchange participants.

## EXHIBIT 5.6 The Community of an Exchange: Flow and Access to Information



# **B2B ELECTRONIC EXCHANGES: DEFINITIONS AND CONCEPTS**

- **FUNCTIONS OF EXCHANGES**
  - Matching buyers and sellers
  - Facilitating transactions
  - Maintaining exchange policies and infrastructure

## EXHIBIT 5.7 Services in Exchanges

### The Exchange and Its Services

#### Sellers

A  
B  
C  
D  
•  
•  
•

- Buyer–seller registration, qualification, coordination
- Catalog management (conversion, integration, maintenance)
- Communication/protocol translation (EDI, XML, CORBA)
- Sourcing—RFQ, bid coordination (product configuration, negotiation)
- Security, anonymity
- Software: groupware, workflow
- Integration with members' back-office systems
- Auction management
- News, information, industry analysis
- Support services (financing, payment, insurance, logistics, tax, escrow, order tracking)
- Administration—profiles, statistics, etc.

#### Buyers

X  
Y  
Z  
•  
•  
•

## EXHIBIT 5.8 Potential Gains and Risks in B2B Exchanges

	For Buyers	For Sellers
Potential gains	<ul style="list-style-type: none"><li>• One-stop shopping, huge variety</li><li>• Search and comparison shopping</li><li>• Volume discounts</li><li>• 24/7 ordering from any location</li><li>• Make one order from several suppliers</li><li>• Huge, detailed information</li><li>• Access to new suppliers</li><li>• Status review and easy reordering</li><li>• Community participation</li><li>• Fast delivery</li><li>• Less maverick buying</li><li>• Better partner relationship management</li></ul>	<ul style="list-style-type: none"><li>• New sales channel</li><li>• No physical store is needed</li><li>• Reduced ordering errors</li><li>• Sell 24/7</li><li>• Community participation</li><li>• Reach new customers at little extra cost</li><li>• Promote the business via the exchange</li><li>• An outlet for surplus inventory</li><li>• Can go global more easily</li><li>• Efficient inventory management</li><li>• Better partner relationship management</li></ul>
Potential risks	<ul style="list-style-type: none"><li>• Unknown vendors; may not be reliable</li><li>• Loss of customer service quality (inability to compare all services)</li></ul>	<ul style="list-style-type: none"><li>• Loss of direct CRM and PRM</li><li>• More price wars</li><li>• Competition for value-added services</li><li>• Must pay transaction fees (including on seller's existing customers)</li><li>• Possible loss of customers to competitors</li></ul>

# **B2B PORTALS, DIRECTORIES, AND OWNERSHIP OF B2B MARKETPLACES**

- **B2B portals**

Information portals for businesses.

- **vortals**

B2B portals that focus on a single industry or industry segment; “vertical portals.”

- **Thomas Global**
- **Alibaba.com Corporation**
- **Directory Services and Search Engines**



# OWNERSHIP OF B2B MARKETPLACES

- **Third-Party Exchanges**
- **consortium trading exchange (CTE)**

An exchange formed and operated by a group of major companies in an industry to provide industry-wide transaction services.

## EXHIBIT 5.9 Comparing the Major B2B Many-to-Many Models

Name	Major Characteristics	Types
B2B portals and directories	<ul style="list-style-type: none"><li>• Community services, news, information</li><li>• Communication tools</li><li>• Classified ads</li><li>• Employment markets</li><li>• May support selling (buying)</li><li>• Fixed prices</li><li>• May do auctions</li></ul>	<ul style="list-style-type: none"><li>• Vertical (vortals), horizontal</li><li>• Shopping directory, usually with hyperlinks</li></ul>
B2B trading exchanges	<ul style="list-style-type: none"><li>• Matches buyer/seller orders at dynamic prices, auctions</li><li>• Provides trading-related information and services (payment, logistics)</li><li>• Highly regulated</li><li>• May provide general information, news, etc.</li><li>• May provide for negotiations</li></ul>	<ul style="list-style-type: none"><li>• Vertical, horizontal</li><li>• Forward auctions</li><li>• Reverse auctions</li><li>• Bid/ask exchanges</li></ul>

# **B2B IN THE WEB 2.0 ENVIRONMENT AND SOCIAL NETWORKING**

- **The Opportunities**
  - **Discover new business partners.**
  - **Enhance their ability to learn about new technologies, competitors, and the business environment.**
  - **Find sales prospects.**
  - **Create brand awareness.**
  - **Improve recruitment.**
  - **Use social networks, such as Facebook and LinkedIn, to recruit new talent.**

# THE USE OF WEB 2.0 TOOLS IN B2B

- Communicate and collaborate with suppliers and distributors
  - Blogs
  - Wikis
  - RSS

# **SOCIAL NETWORKS IN THE B2B MARKETPLACE**

- How much will marketers spend on social network advertising aimed at a business audience?
- What types of B2B advertising can business do on social network sites?
- Why are companies creating social networks to market to business customers, vendors, distributors, and channel partners?
- What are the challenges of developing such networks?

# EXAMPLES OF OTHER ACTIVITIES OF B2B SOCIAL NETWORKS

- American Express-sponsored Business Travel Social Network
  - Business Travel Connection (BTX)
- Corporate profiles on social networks
  - IBM
  - Microsoft

# **INTERNET MARKETING IN B2B EC**

- **ORGANIZATIONAL BUYER BEHAVIOR**
- **THE MARKETING AND ADVERTISING PROCESSES IN B2B**
- **METHODS FOR B2B ONLINE MARKETING**
  - Targeting Customers
  - Electronic Wholesalers
- **AFFILIATE PROGRAMS, INFOMEDIARIES, AND DATA MINING**

# CONSUMER-TO-CONSUMER ELECTRONIC COMMERCE

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

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



# **CONSUMER-TO-CONSUMER ELECTRONIC COMMERCE**

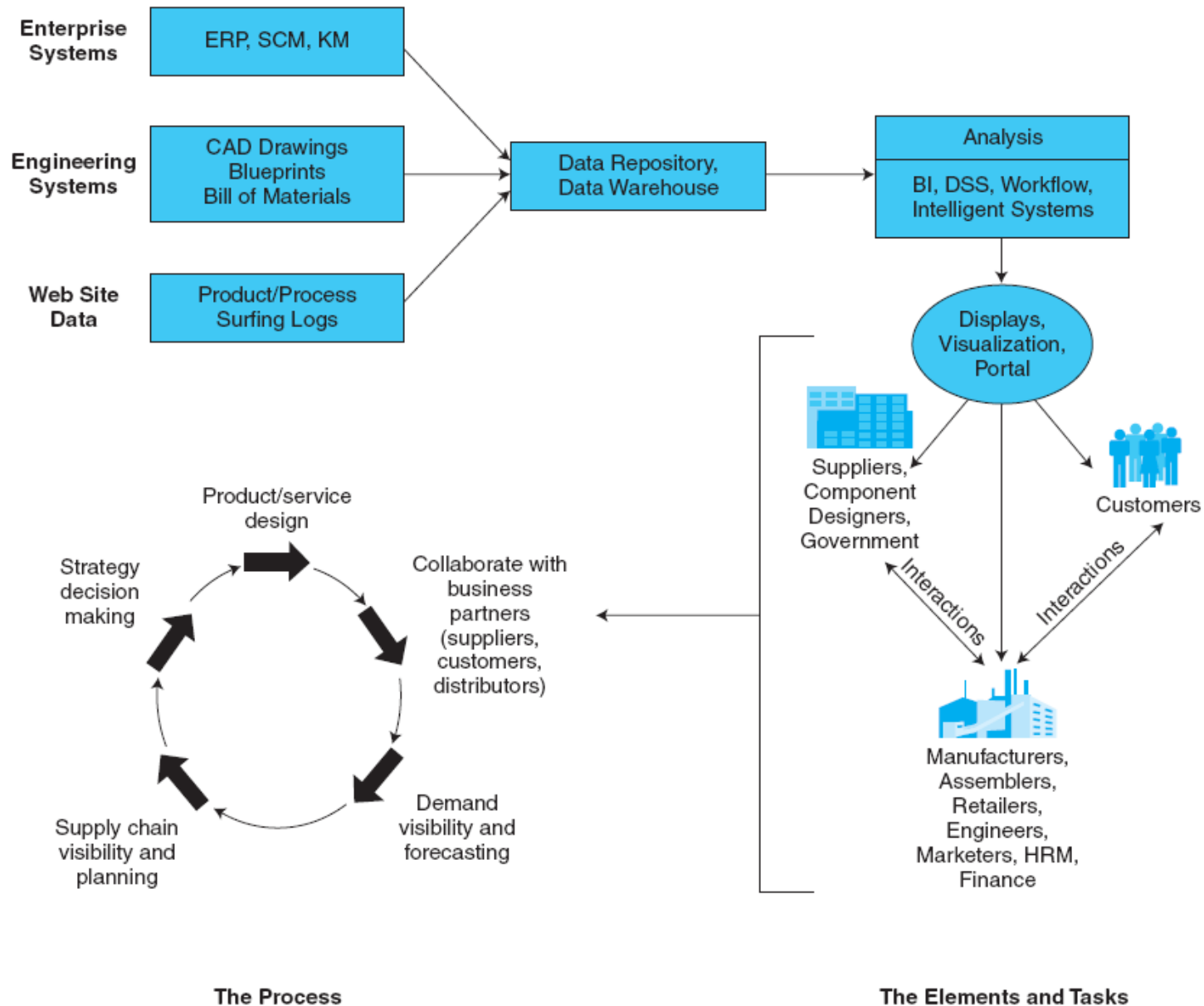
- **E-COMMERCE: C2C APPLICATIONS**
  - **C2C Auctions**
  - **Classified Ads**
  - **Personal Services**
  - **Napster and Others—File-Sharing Utilities**
  - **C2C Activities in Social Networks and Trading Virtual Properties**

# COLLABORATIVE COMMERCE

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

The use of digital technologies that enable companies to collaboratively plan, design, develop, manage, and research products, services, and innovative EC applications.

## EXHIBIT 6.8 Elements and Process of C-Commerce Systems



# COLLABORATIVE COMMERCE

- **collaboration hub**

The central point of control for an e-market. A single c-hub, representing one e-market owner, can host multiple collaboration spaces (c-spaces) in which trading partners use c-enablers to exchange data with the c-hub.

# COLLABORATIVE COMMERCE

- **IMPLEMENTING C-COMMERCE**
  - Example: Design with C-Commerce
- **BARRIERS TO C-COMMERCE**
  - Technical factors involving a lack of internal integration, standards, and networks
  - Security and privacy concerns, and some distrust over who has access to and control of information stored in a partner's database
  - Internal resistance to information sharing and to new approaches
  - Lack of internal skills to conduct c-commerce

# Summary

- B2B EC
- B2C EC
- C2C EC

# References

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