

Chapter 2

E-Marketplaces: Structures, Mechanisms, Economics, and Impacts

Learning Objectives

1. Define e-marketplaces and list their components.
2. List the major types of e-marketplaces and describe their features.
3. Describe the various types of EC intermediaries and their roles.
4. Describe electronic catalogs, shopping carts, and search engines.
5. Describe the major types of auctions and list their characteristics.

Learning Objectives

6. Discuss the benefits, limitations, and impacts of auctions.
7. Describe bartering and negotiating online.
8. Define m-commerce and explain its role as a market mechanism.
9. Discuss competition in the digital economy.
10. Describe the impact of e-marketplaces on organizations and industries.

E-Marketplaces

- **e-marketplace**

An online market, usually B2B, in which buyers and sellers exchange goods or services; the three types of e-marketplaces are private, public, and consortia

E-Marketplaces

EXHIBIT 2.1 Functions of a Market

Matching of Buyers and Sellers	Facilitation of Transactions	Institutional Infrastructure
<ul style="list-style-type: none">• Determination of product offerings<ul style="list-style-type: none">Product features offered by sellersAggregation of different products• Search (of buyers for sellers and of sellers for buyers)<ul style="list-style-type: none">Price and product informationOrganizing bids and barteringMatching seller offerings with buyer preferences• Price discovery<ul style="list-style-type: none">Process and outcome in determination of pricesEnabling price comparisons• Others<ul style="list-style-type: none">Providing sales leads	<ul style="list-style-type: none">• Logistics<ul style="list-style-type: none">Delivery of information, goods, or services to buyers• Settlement<ul style="list-style-type: none">Transfer of payments to sellers• Trust<ul style="list-style-type: none">Credit system, reputations, rating agencies such as <i>Consumer Reports</i> and the BBB, special escrow and online trust agencies• Communication<ul style="list-style-type: none">Posting buyers' requests	<ul style="list-style-type: none">• Legal<ul style="list-style-type: none">Commercial code, contract law, dispute resolution, intellectual property protectionExport and import law• Regulatory<ul style="list-style-type: none">Rules and regulations, monitoring, enforcement• Discovery<ul style="list-style-type: none">Provides market information (e.g., about competition, government regulations)

E-Marketplaces

- **marketspace**

A marketplace in which sellers and buyers exchange goods and services for money (or for other goods and services) but do so electronically

E-Marketplaces

E-Marketplace Components and Participants

- Customers
- Sellers
- Products and services
 - **digital products**
Goods that can be transformed to digital format and delivered over the Internet
- Infrastructure
- Front end
- Back end
- **Intermediaries**
Third parties that operates between sellers and buyers
- Other business partners
- Support services

E-Marketplaces

- **front end**

The portion of an e-seller's business processes through which customers interact, including the seller's portal, electronic catalogs, a shopping cart, a search engine, and a payment gateway

- **back end**

The activities that support online order fulfillment, inventory management, purchasing from suppliers, payment processing, packaging, and delivery

Types of E-Marketplaces: From Storefronts to Portals

- **Electronic Storefronts**

- **storefront**

- A single company's Web site where products or services are sold

- **e-mall (online mall)**

- An online shopping center where many online stores are located

- **Visualization and virtual reality in shopping malls**

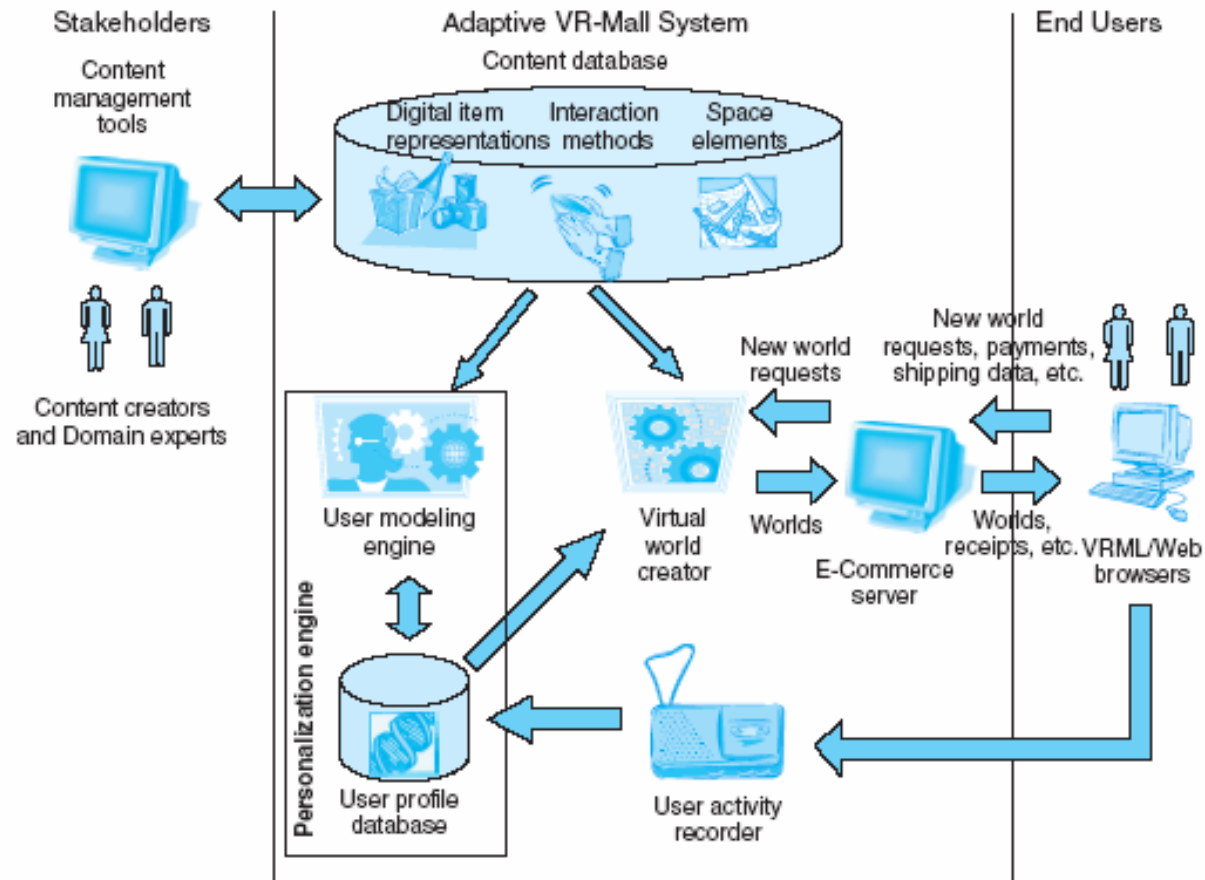
Types of E-Marketplaces: From Storefronts to Portals

- **Types of Stores and Malls**

- General stores/malls
- Specialized stores/malls
- Regional versus global stores
- Pure-play online organizations versus click-and-mortar stores

Types of E-Marketplaces: From Storefronts to Portals

EXHIBIT 2.2 Virtual Reality Shopping



Types of E-Marketplaces: From Storefronts to Portals

- **Types of E-Marketplaces**

- **private e-marketplaces**

- Online markets owned by a single company; may be either sell-side and/or buy-side e-marketplaces

- **sell-side e-marketplace**

- A private e-marketplace in which one company sells either standard and/or customized products to qualified companies

- **buy-side e-marketplace**

- A private e-marketplace in which one company makes purchases from invited suppliers

Types of E-Marketplaces: From Storefronts to Portals

- **Types of E-Marketplaces**

- **public e-marketplaces**

- B2B marketplaces, usually owned and/or managed by an independent third party, that include many sellers and many buyers; also known as *exchanges*

Types of E-Marketplaces: From Storefronts to Portals

- **information portal**

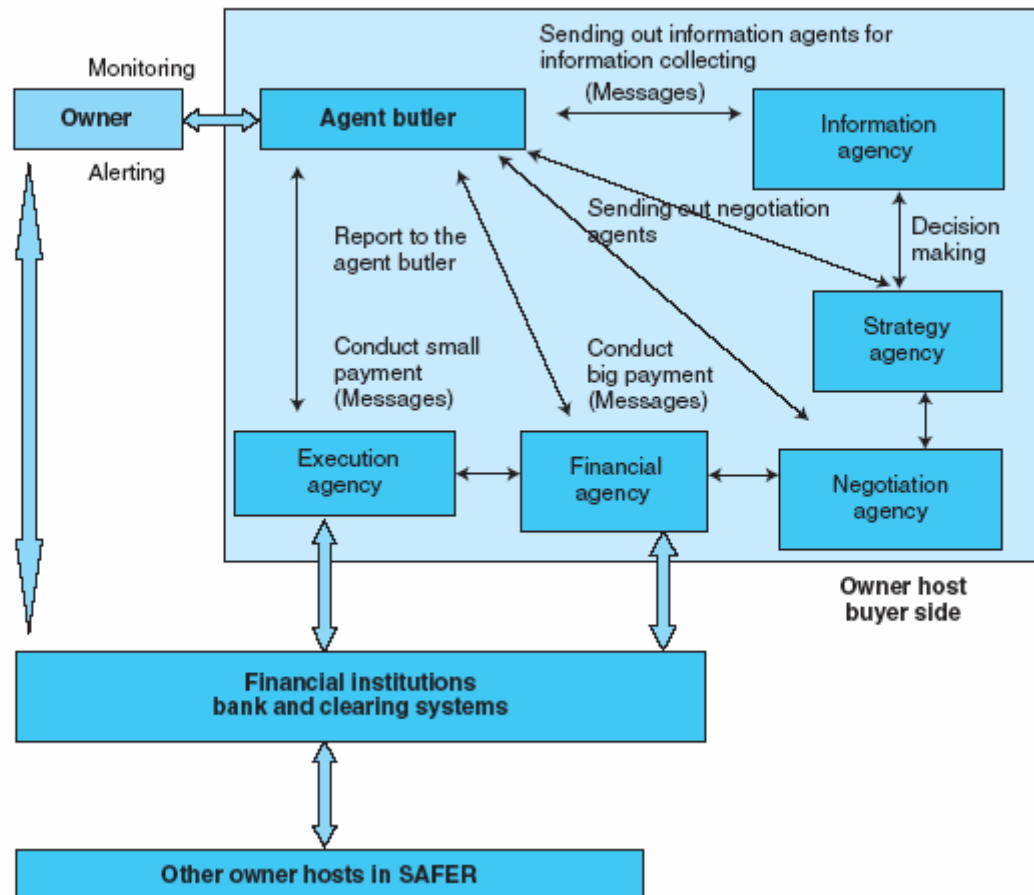
A single point of access through a Web browser to business information inside and/or outside an organization

- **Types of Portals**

- Commercial (public)
- Corporate
- Publishing
- Personal
- Mobile
- Voice
- Knowledge

Types of E-Marketplaces: From Storefronts to Portals

EXHIBIT 2.3 Agent-Based E-Marketplace

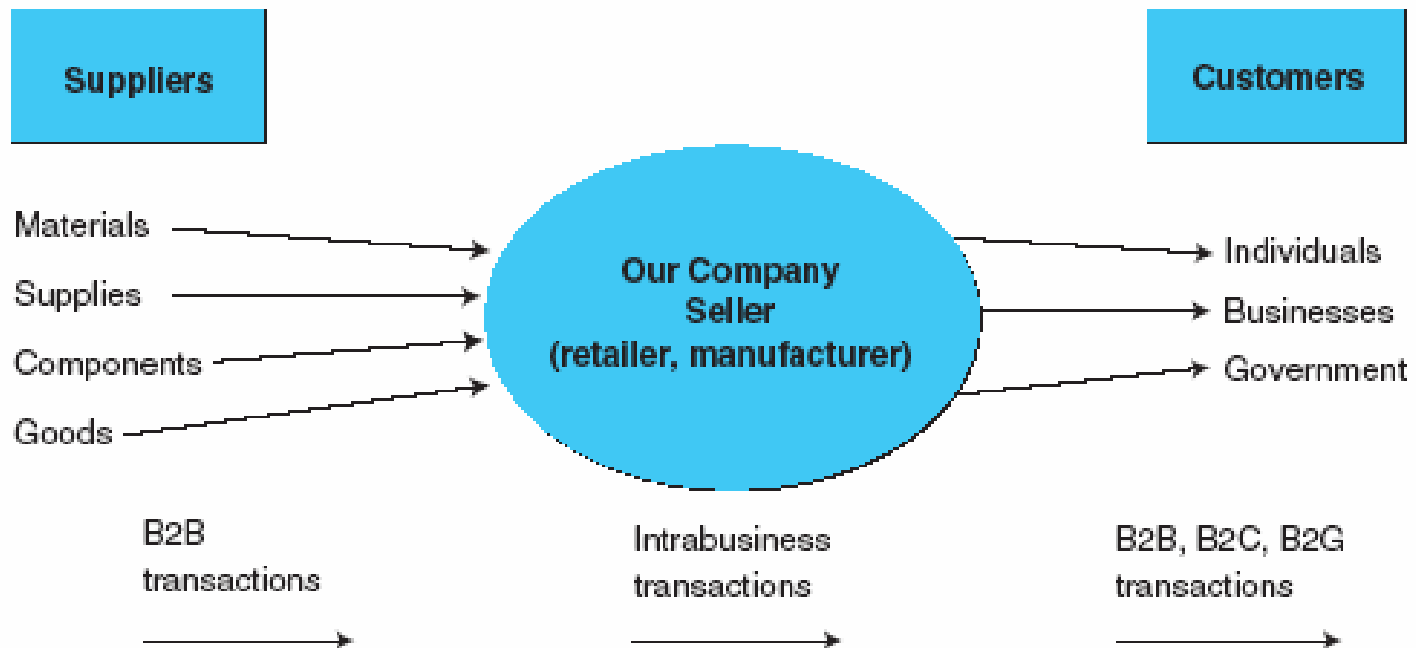


Transactions, Intermediation, and Process in E-Commerce

- Sellers, Buyers, and Transactions
 - A seller (retailer, wholesaler, or manufacturer) sells to customers
 - The seller buys from suppliers: either raw material (as a manufacturer) or finished goods (as a retailer)

Transactions, Intermediation, and Process in E-Commerce

EXHIBIT 2.4 EC Activities



Transactions, Intermediation, and Process in E-Commerce

- **The Roles and Value of Intermediaries in E-marketplaces**

- **infomediaries**

Electronic intermediaries that provide and/or control information flow in cyberspace, often aggregating information and selling it to others

Transactions, Intermediation, and Process in E-Commerce

- A *broker* is a company that facilitates transactions between buyers and sellers
- Types of brokers
 - Buy/sell fulfillment
 - Virtual mall
 - Metamediary
 - Bounty
 - Search agent
 - Shopping facilitator

Transactions, Intermediation, and Process in E-Commerce

- Intermediaries can address the following five important limitations of *direct interaction*:
 1. Search costs
 2. Lack of privacy
 3. Incomplete information
 4. Contract risk
 5. Pricing inefficiencies

Transactions, Intermediation, and Process in E-Commerce

- **e-distributor**

An e-commerce intermediary that connects manufacturers with business buyers (customers) by aggregating the catalogs of many manufacturers in one place—the intermediary's Web site

Transactions, Intermediation, and Process in E-Commerce

- **disintermediation**

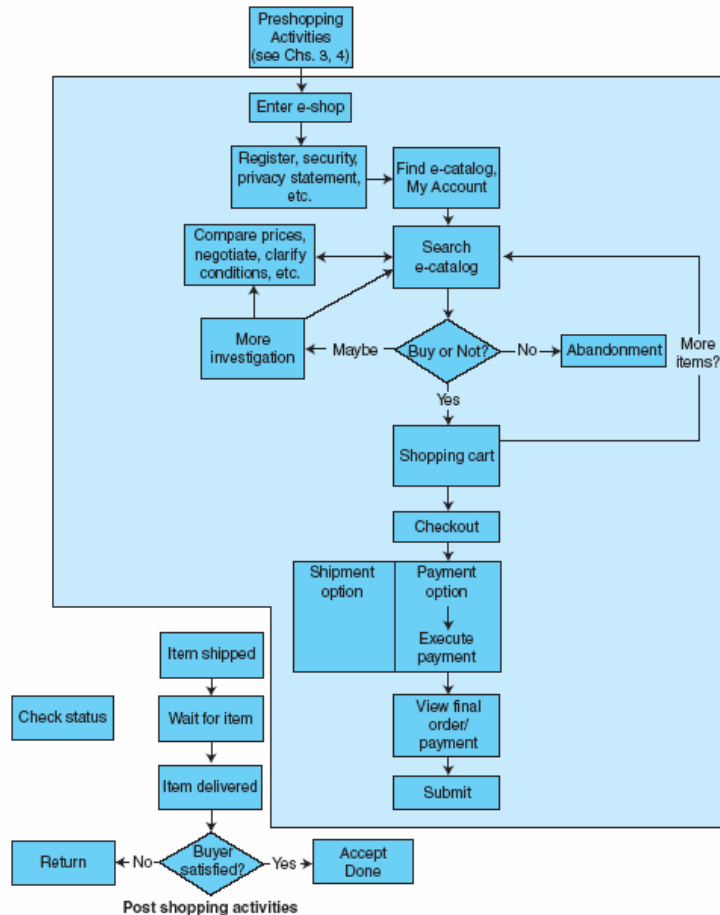
Elimination of intermediaries between sellers and buyers

- **reintermediation**

Establishment of new intermediary roles for traditional intermediaries that have been disintermediated, or for newcomers

Transactions, Intermediation, and Process in E-Commerce

EXHIBIT 2.5 Buying Process in E-Market



Electronic Catalogs and Other Market Mechanisms

- **electronic catalogs**

The presentation of product information in an electronic form; the backbone of most e-selling sites

- Three dimensions of electronic catalogs:

1. The dynamics of the information presentation
2. The degree of customization
3. Integration with business processes

Electronic Catalogs and Other Market Mechanisms

EXHIBIT 2.6 Comparison of Online Catalogs with Paper Catalogs

Type	Advantages	Disadvantages
Paper catalogs	<ul style="list-style-type: none"> • Easy to create without high technology • Reader is able to look at the catalog without computer system • More portable than electronic 	<ul style="list-style-type: none"> • Difficult to update changed product information promptly • Only a limited number of products can be catalog displayed • Limited information through photographs and textual description is available • No possibility for advanced multimedia such as animation and voice
Online catalogs	<ul style="list-style-type: none"> • Easy to update product information • Able to integrate with the purchasing process • Good search and comparison capabilities • Able to provide timely, up-to-date product information • Provision for globally broad range of product information • Possibility of adding on voice and animated pictures • Long-term cost savings • Easy to customize • More comparative shopping • Ease of connecting order processing, inventory processing, and payment processing to the system 	<ul style="list-style-type: none"> • Difficult to develop catalogs, large fixed cost • There is a need for customer skill to deal with computers and browsers

Electronic Catalogs and Other Market Mechanisms

- **search engine**

A computer program that can access databases of Internet resources, search for specific information or keywords, and report the results

- **software (intelligent) agent**

Software that can perform routine tasks that require intelligence

Electronic Catalogs and Other Market Mechanisms

- **electronic shopping cart**

An order-processing technology that allows customers to accumulate items they wish to buy while they continue to shop

Auctions as EC Market Mechanisms

- **auction**

A competitive process in which a seller solicits consecutive bids from buyers (forward auctions) or a buyer solicits bids from sellers (backward auctions). Prices are determined dynamically by the bids

Auctions as EC Market Mechanisms

- **Traditional Auctions versus E-Auctions**

- Limitations of traditional offline auctions

- rapid process gives potential buyers little time to make a decision

- **electronic auction (e-auction)**

Auctions conducted online

- **dynamic pricing**

Prices that change based on supply and demand relationships at any given time

Auctions as EC Market Mechanisms

- **Types of Auctions**

- One buyer, one seller
- One seller, many potential buyers
- **forward auction**

An auction in which a seller entertains bids from buyers. Bidders increase price sequentially

Auctions as EC Market Mechanisms

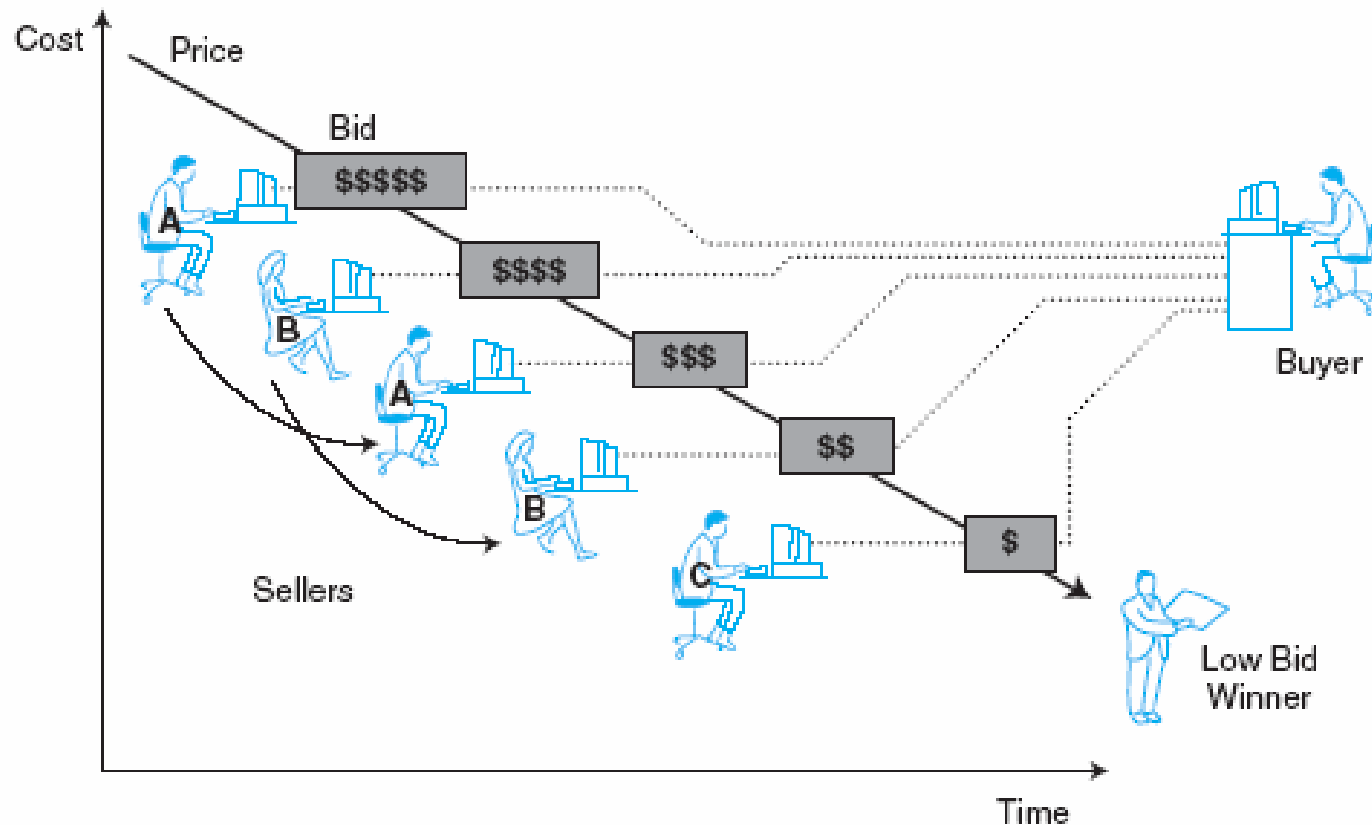
- **One buyer, many potential sellers**
 - **reverse auction (bidding or tendering system)**

Auction in which the buyer places an item for bid (*tender*) on a request for quote (RFQ) system, potential suppliers bid on the job, with the price reducing sequentially, and the lowest bid wins; primarily a B2B or G2B mechanism
 - **“name-your-own-price” model**

Auction model in which a would-be buyer specifies the price (and other terms) he or she is willing to pay to any willing and able seller. It is a C2B model that was pioneered by Priceline.com

Auctions as EC Market Mechanisms

EXHIBIT 2.7 The Reverse Auction Process



Auctions as EC Market Mechanisms

- **Many sellers, many buyers**

- **double auction**

Auctions in which multiple buyers and their bidding prices are matched with multiple sellers and their asking prices, considering the quantities on both sides

Auctions as EC Market Mechanisms

- **Benefits of E-Auctions**
 - Benefits to Sellers
 - Benefits to Buyers
 - Benefits to E-Auctioneers
- **Limitations of E-Auctions**
 - Minimal security
 - Possibility of fraud
 - Limited participation

Auctions as EC Market Mechanisms

- **Impacts of Auctions**
 - Auctions as a coordination mechanism
 - Auctions as a social mechanism to determine a price
 - Auctions as a highly visible distribution mechanism
 - Auctions as an EC component

Bartering and Negotiating Online

- **Online Bartering**

- **bartering**

- The exchange of goods or services

- **e-bartering (electronic bartering)**

- Bartering conducted online, usually in a bartering exchange

- **bartering exchange**

- A marketplace in which an intermediary arranges barter transactions

Bartering and Negotiating Online

- **Online Negotiating**

- Negotiated pricing commonly is used for expensive or specialized products
- Negotiated prices also are popular when large quantities are purchased
- Much like auctions, negotiated prices result from interactions and bargaining among sellers and buyers

E-Commerce in the Wireless Environment

- **mobile computing**

Use of portable devices, including smart cell phones, usually in a wireless environment. It permits real-time access to information, applications, and tools that, until recently, were accessible only from a desktop computer

E-Commerce in the Wireless Environment

- **mobile commerce (m-commerce)**

E-commerce conducted via wireless devices

- **m-business**

The broadest definition of m-commerce, in which e-business is conducted in a wireless environment

● **The Mobility Revolution**

- Organizations are embracing mobilized computing technologies for several reasons:
- Improved productivity of workers in the field
- Wireless telecom support for mobility is growing quickly
- More applications can run both online and offline
- The prices of notebook computers, wireless handhelds, and smart phones continue to fall as their capabilities increase

- **The Promise of M-Commerce**

- **location-based commerce (LBC)**

An m-commerce application targeted to a customer whose location, preferences, and needs are known in real time

- **M-Commerce Adoption**

- Although there are currently many hurdles to the widespread adoption of m-commerce, many companies are already shifting their strategy to the mobile world

Competition in the Digital Economy and Its Impact on Industries

- **Internet ecosystem**

The business model of the Internet economy

Competition in the Digital Economy and Its Impact on Industries

Competitive Factors—Online Transactions Allow:

- Lower search costs for buyers
- Speedy comparisons
- Lower prices
- Customer service
- Barriers to entry are reduced
- Virtual partnerships multiply
- Market niches abound
- Differentiation and personalization

Competition in the Digital Economy and Its Impact on Industries

- **differentiation**

Providing a product or service that is unique

- **personalization**

The ability to tailor a product, service, or Web content to specific user preferences

Competition in the Digital Economy and Its Impact on Industries

- **Porter's Competitive Analysis in an Industry**

- **competitive forces model**

Model devised by Porter that says that five major forces of competition determine industry structure and how economic value is divided among the industry players in an industry; analysis of these forces helps companies develop their competitive strategy

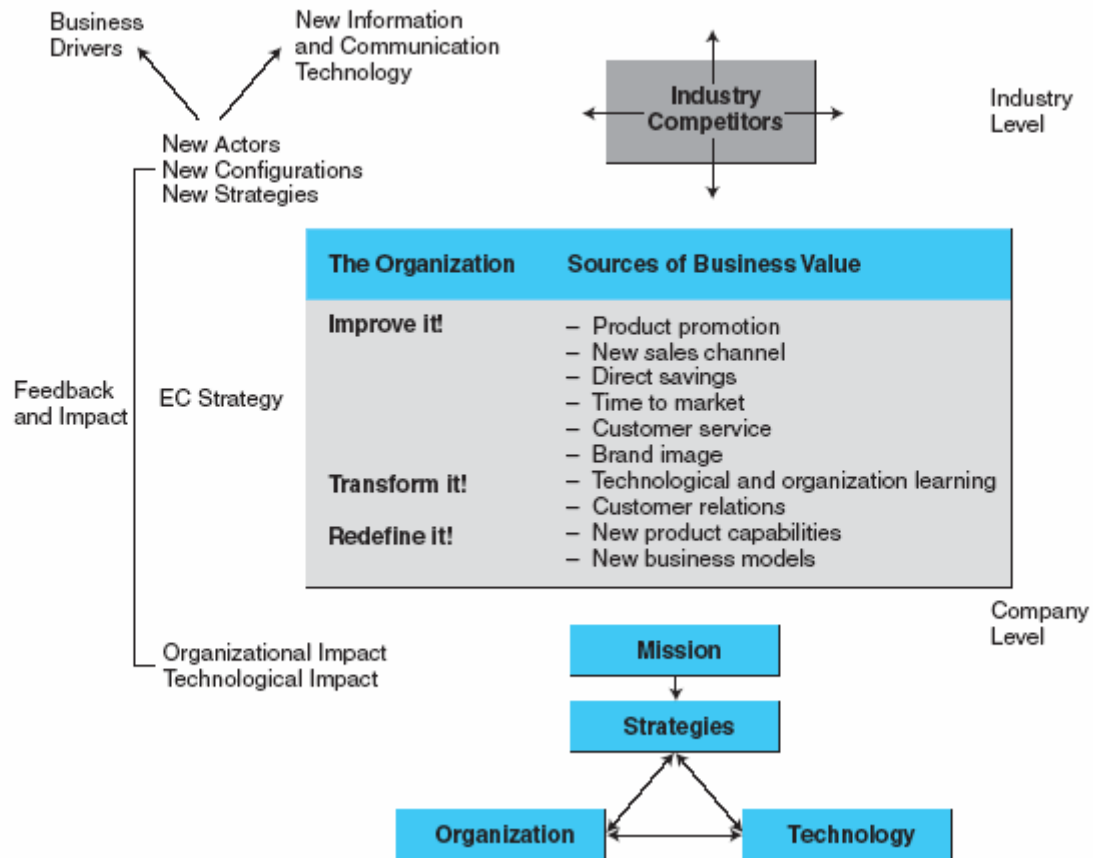
Competition in the Digital Economy and Its Impact on Industries

● Impact on Whole Industries

- Patient self-care is growing rapidly
- The amount of free medical information is exploding
- Patient empowerment is gaining importance
- Increasing electronic interaction among patients, hospitals, pharmacies, etc.
- Increasing digital hospital and other health-care facilities
- Data collected about patients is growing in amount and quality
- Easy and shared access to patient data
- Elder care and special types of care are improving significantly due to wireless systems
- Increasing need to protect patient privacy and contain cost

Impacts of EC on Business Processes and Organizations

EXHIBIT 2.9 The Analysis-of-Impacts Framework



Impacts of EC on Business Processes and Organizations

- Impacts of e-marketplaces on B2C direct marketing:
 - Product promotion
 - New sales channel
 - Direct savings
 - Reduced cycle time
 - Improved customer service
 - Brand or corporate image
 - Customization
 - Advertising
 - Ordering systems
 - Market operations
 - Accessibility

Impacts of EC on Business Processes and Organizations

- **Transforming Organizations**

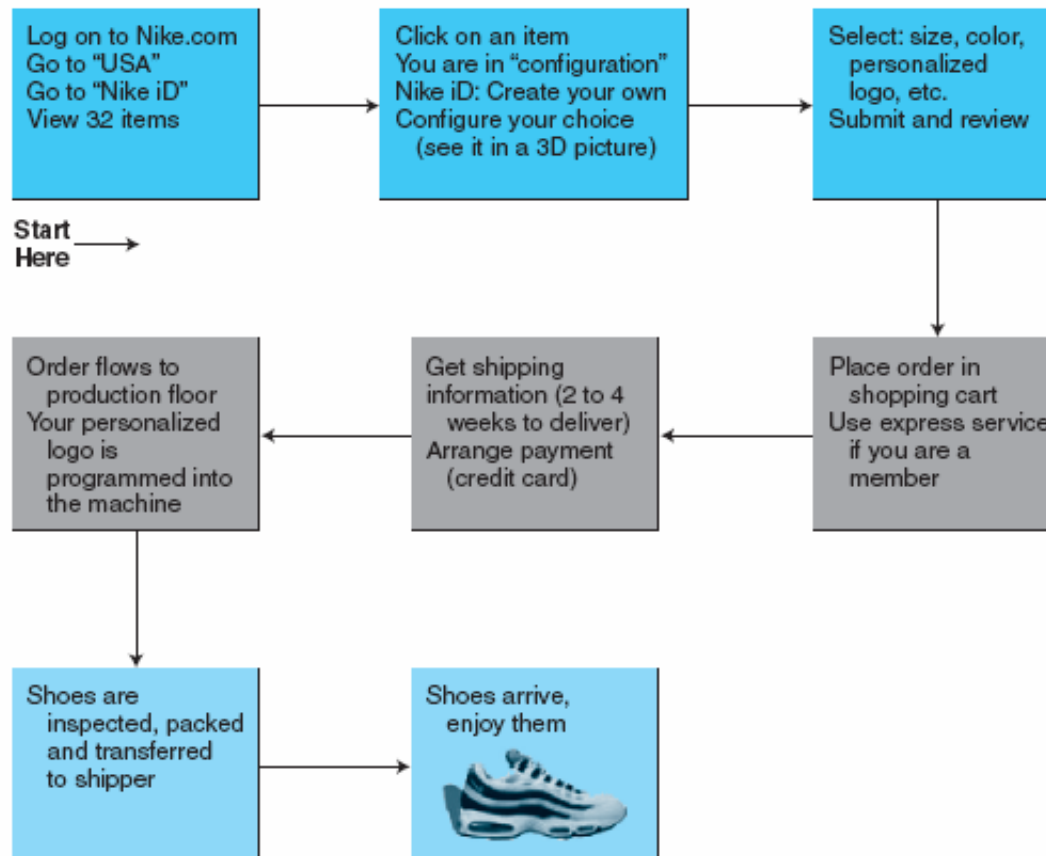
- Technology and organizational learning
- The changing nature of work

- **Redefining Organizations**

- New and improved product capabilities
- New industry order and business models
- Improving the supply chain

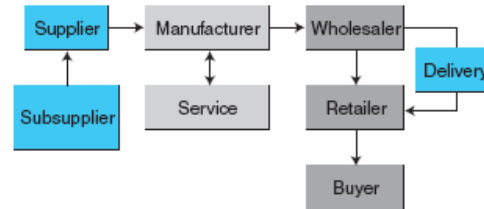
Impacts of EC on Business Processes and Organizations

EXHIBIT 2.11 How Customization Is Done Online: The Case of Nike Shoes

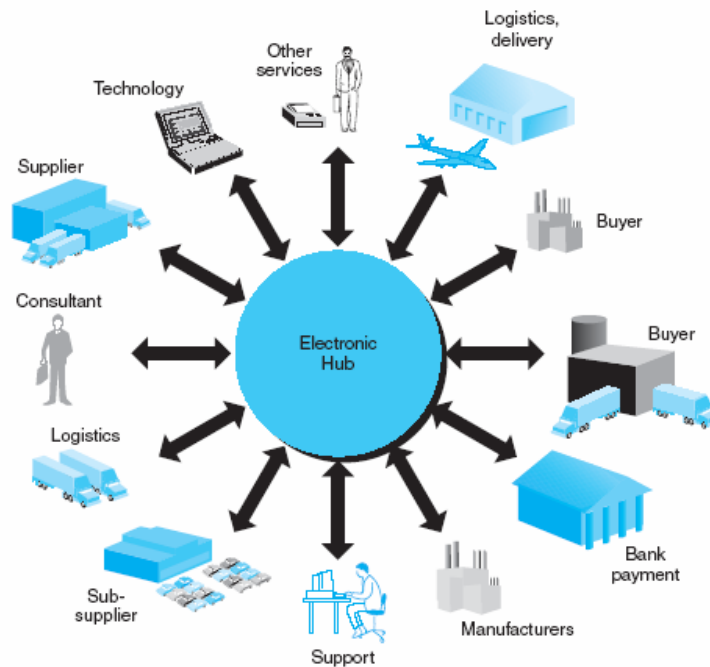


Impacts of EC on Business Processes and Organizations

EXHIBIT 2.12 Changes in the Supply Chain



a. Traditional Intermediaries



b. Hub-Based Chain

Impacts of EC on Business Processes and Organizations

- Impacts on manufacturing
 - Build-to-Order Manufacturing
 - **build-to-order (pull system)**

A manufacturing process that starts with an order (usually customized). Once the order is paid for, the vendor starts to fulfill it
 - Real-Time Demand-Driven Manufacturing
 - Virtual Manufacturing
 - Assembly Lines
- Impacts on Finance and Accounting
- Impact on Human Resources Management and Training

Managerial Issues

1. What about intermediaries?
2. Should we auction?
3. Should we barter?
4. What m-commerce opportunities are available?
5. How do we compete in the digital economy?
6. What organizational changes will be needed?