

# **Lecture 4**

## **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 various types of auctions and list their characteristics.
6. Discuss the benefits, limitations, and impacts of auctions.

# Learning Objectives



7. Describe bartering and negotiating online.
8. Discuss liquidity, quality, and success factors in e-marketplaces.
9. Describe the economic impact of EC.
10. Discuss competition in the digital economy.
11. Describe the impact of e-marketplaces on organizations.

# e-Marketplaces



- Markets (electronic or otherwise) have three main functions:
  1. **Matching** buyers and sellers;
  2. **Facilitating** the exchange of information, goods, services, and payments associated with market transactions; and
  3. **Providing** an institutional infrastructure, such as a legal and regulatory framework, which enables the efficient functioning of the market.

# e-Marketplaces



- *Electronic marketplaces (e-marketplaces or marketspaces)*, changed several of the processes used in trading and supply chains
  - Greater **information richness**
  - Lower **information search costs** for buyers
  - Diminished **information asymmetry** between sellers and buyers
  - Greater **temporal separation** between time of purchase and time of possession
  - Greater **temporal proximity** between time of purchase and time of possession
  - Ability of buyers and sellers to be in different locations

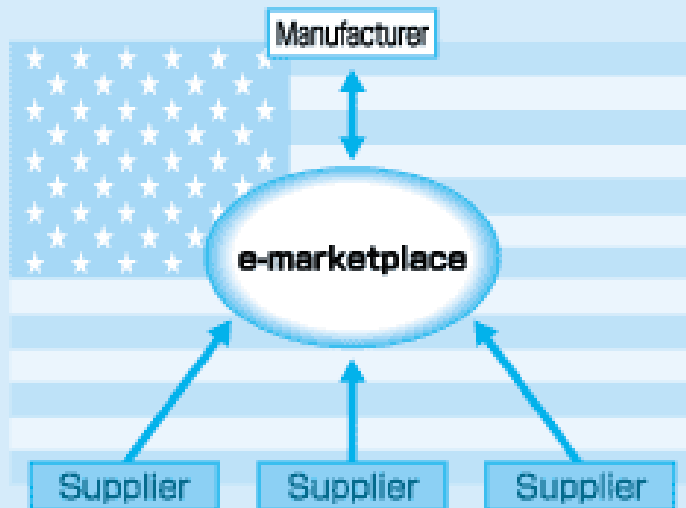
# e-Marketplace Scheme



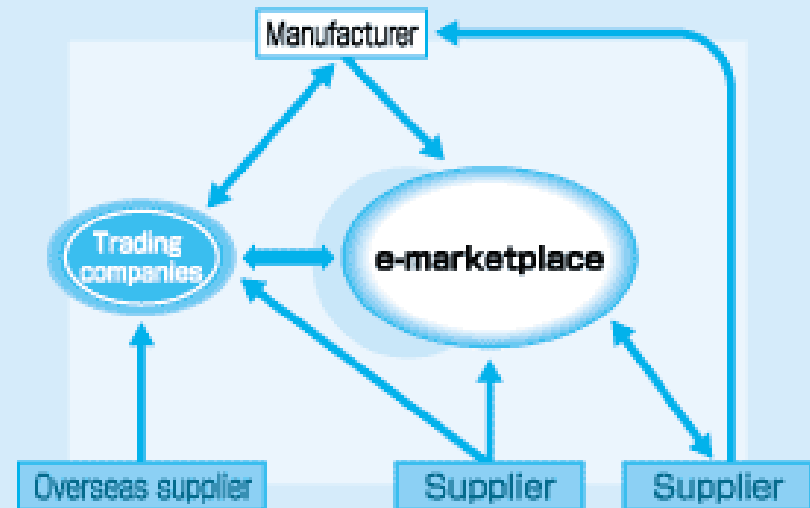
# Differences in Japanese and US e-Marketplaces



Manufacturers target cost reduction and integrate the e-marketplace with supply chain management. Suppliers have power. Internet transactions are essential because of the awareness of standardization and the broad land mass. Transaction risks are borne by the participating companies.



Manufacturers place emphasis on existing trading relationships to respond to quality of goods and customer needs. New procurement parts and trading routes are through trading companies, and transaction risks are avoided. Suppliers are often part of a subordinate subcontractor structure.



Source: Mitsubishi Research Institute

# e-Marketplaces



## **e-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



- Marketspace components

- Customers

- Sellers

- Products and services

- digital products**

- Goods that can be transformed into digital format and delivered over the Internet

- Infrastructure

# e-Marketplaces



- **Marketspace components**

- 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-taking**. It includes fulfillment, inventory management, purchasing from suppliers, payment processing, packaging, and delivery

# e-Marketplaces



- Marketspace components  
**intermediary**

A third party that operates between sellers and buyers.

- Other business partners
- Support services

# Types of e-Marketplaces: From Storefronts to Portals



- Electronic Storefronts

- storefront**

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

- Most common mechanisms are:

- electronic catalog
    - search engine
    - electronic cart
    - e-auction facilities
    - payment gateway

# Types of e-Marketplaces: From Storefronts to Portals



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

An **online shopping center** where many online stores are located

- Types of Stores and Malls
  - General stores/malls
  - Specialized stores/malls
  - Regional versus global stores
  - Pure online organizations versus click-and-mortar stores

# Types of e-Marketplaces: From Storefronts to Portals



- Types of 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](#)

# Types of e-Marketplaces: From Storefronts to Portals



## ➤ **private e-marketplaces**

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

### ✓ **sell-side e-marketplace**

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

### ✓ **buy-side e-marketplace**

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

# Types of e-Marketplaces: From Storefronts to Portals



## ➤ **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*

## **information portal**

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



# Types of e-Marketplaces: From Storefronts to Portals



- Six major types of portals
  - Commercial (public) portals
  - Corporate portals
  - Publishing portals
  - Personal portals
  - Mobile portals
  - Voice portals

# Types of e-Marketplaces: From Storefronts to Portals



## **mobile portal**

A portal accessible via a mobile device

## **voice portal**

A portal accessed by telephone or cell phone

# Intermediation in EC

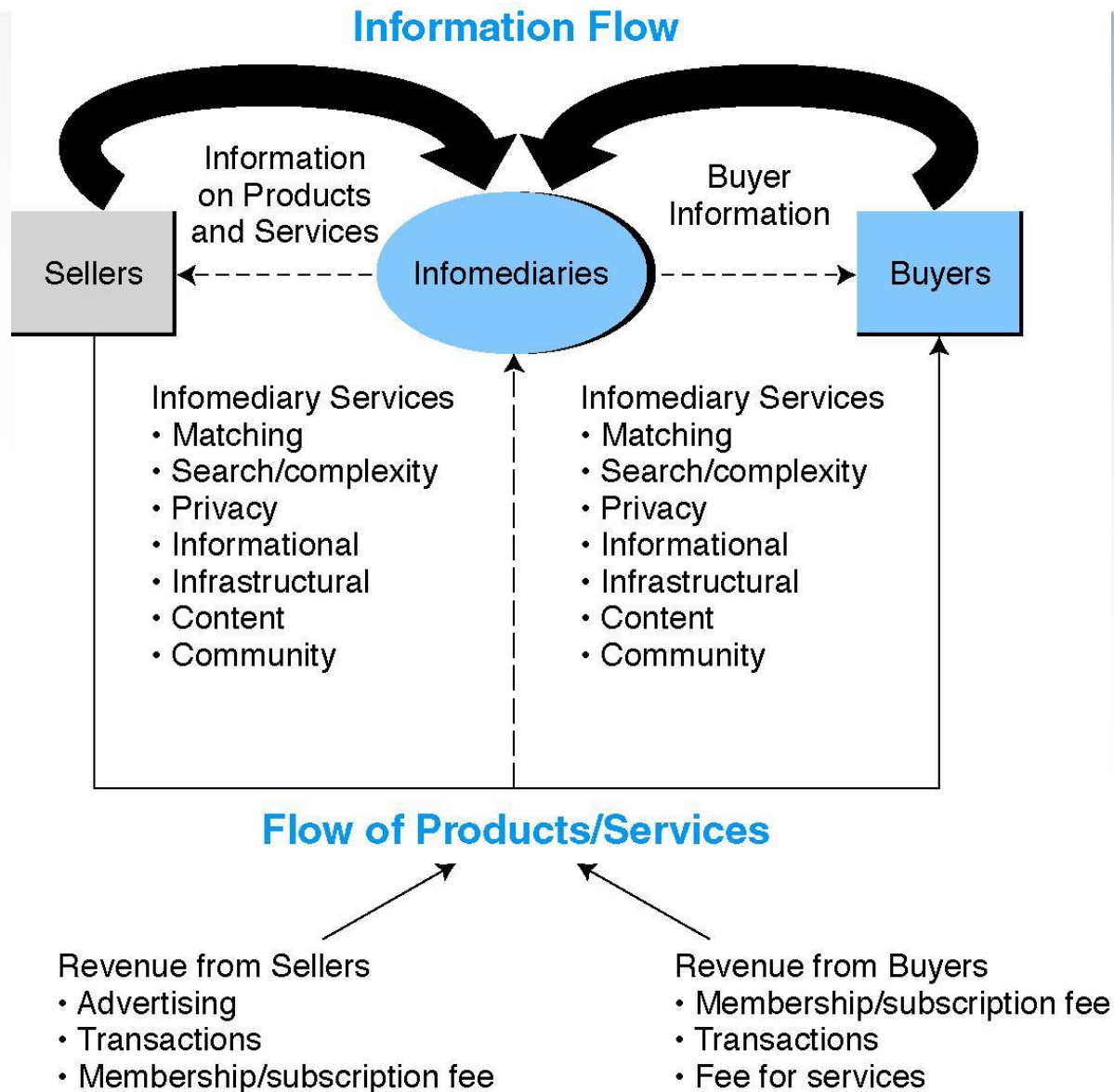


## Infomediaries

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

- Some limitations of direct interaction
  - Search costs
  - Lack of privacy
  - Incomplete information

# Infomediaries and the Information Flow Model



# Intermediation in EC



## **e-Distributor**

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

# Intermediation in EC



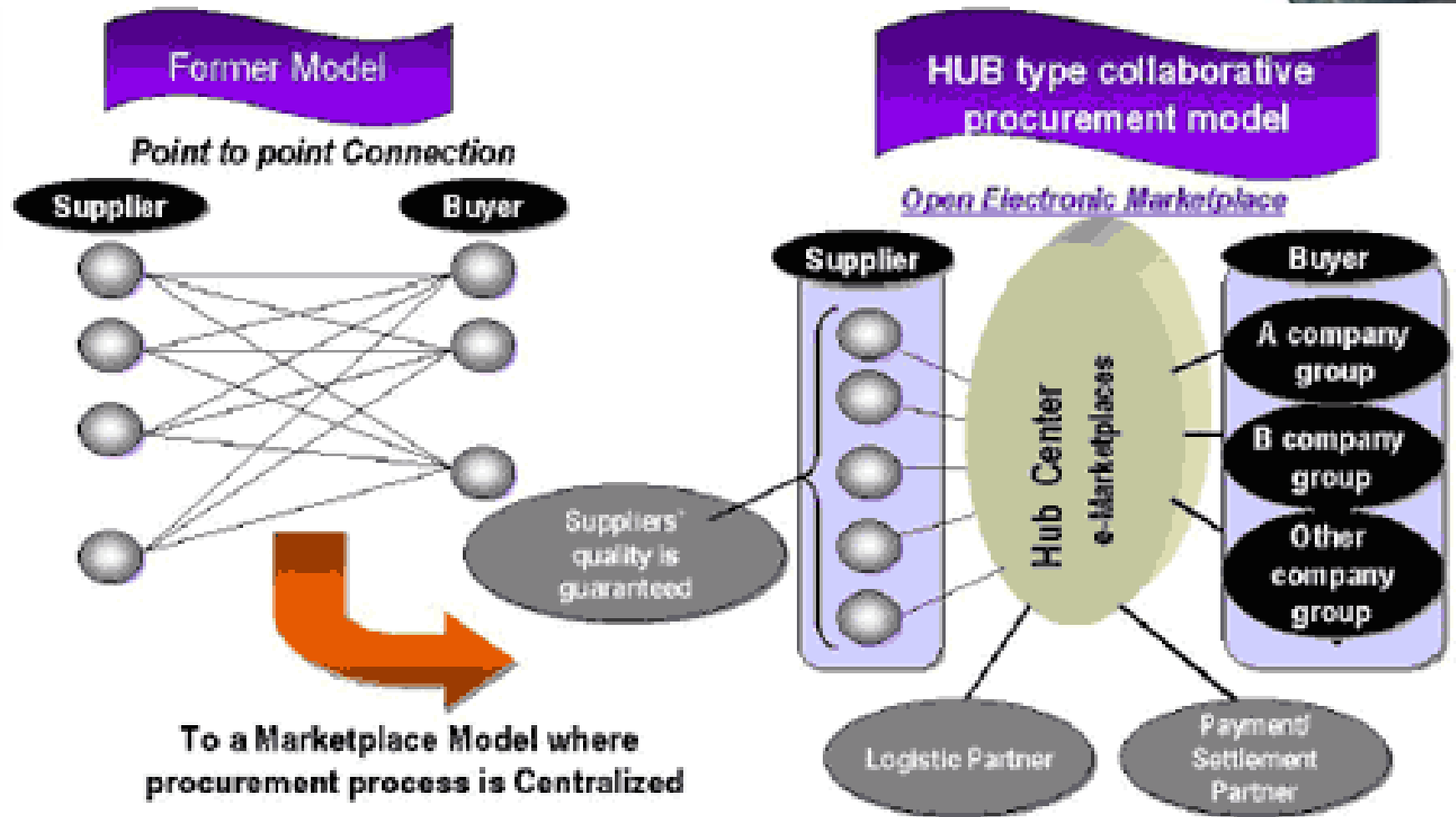
## **Disintermediation**

Elimination of intermediaries between sellers and buyers

## **Reintermediation**

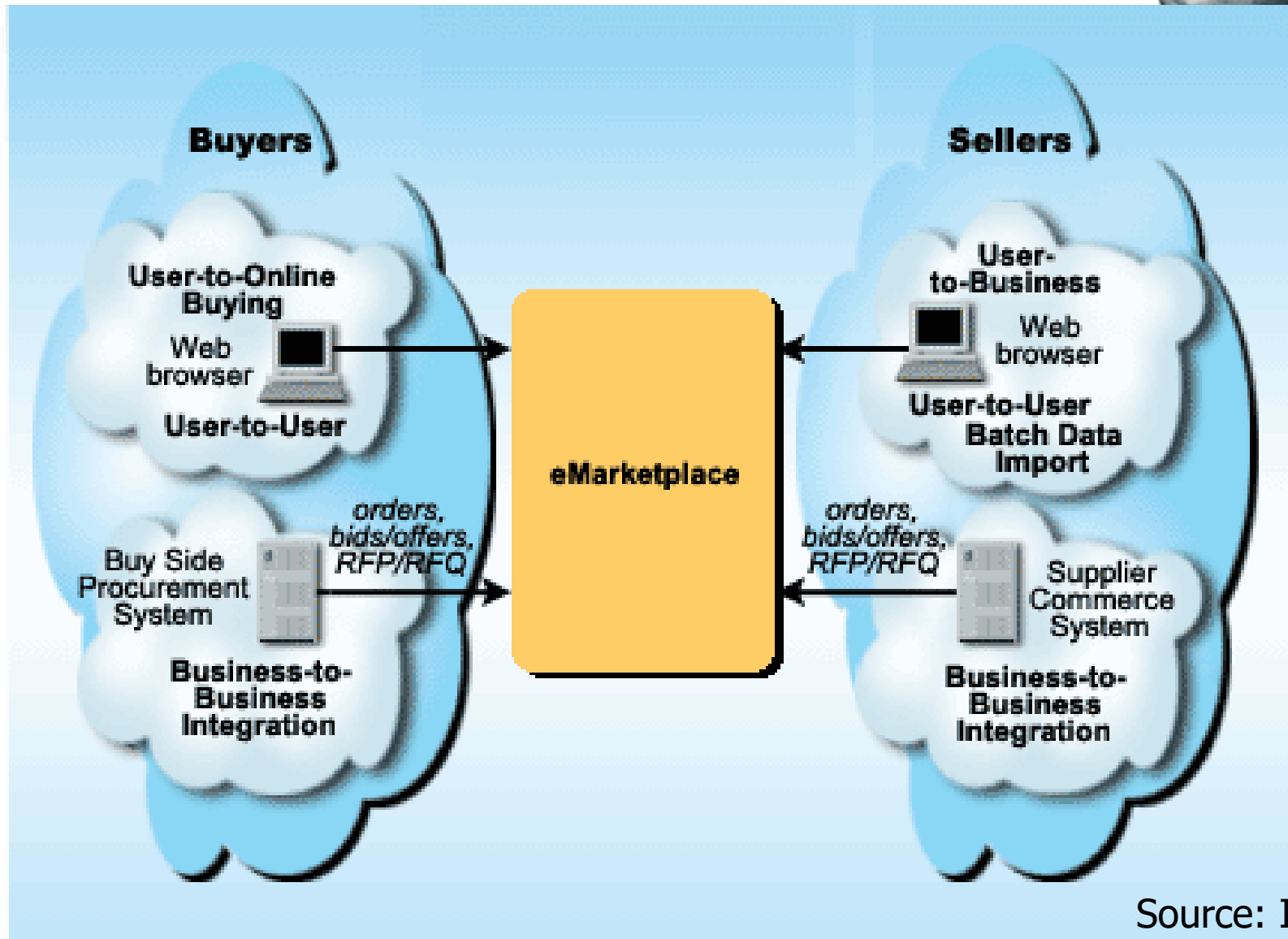
Establishment of new intermediary roles for traditional intermediaries that have been disintermediated

# e-Marketplace Model



Source: Fujitsu

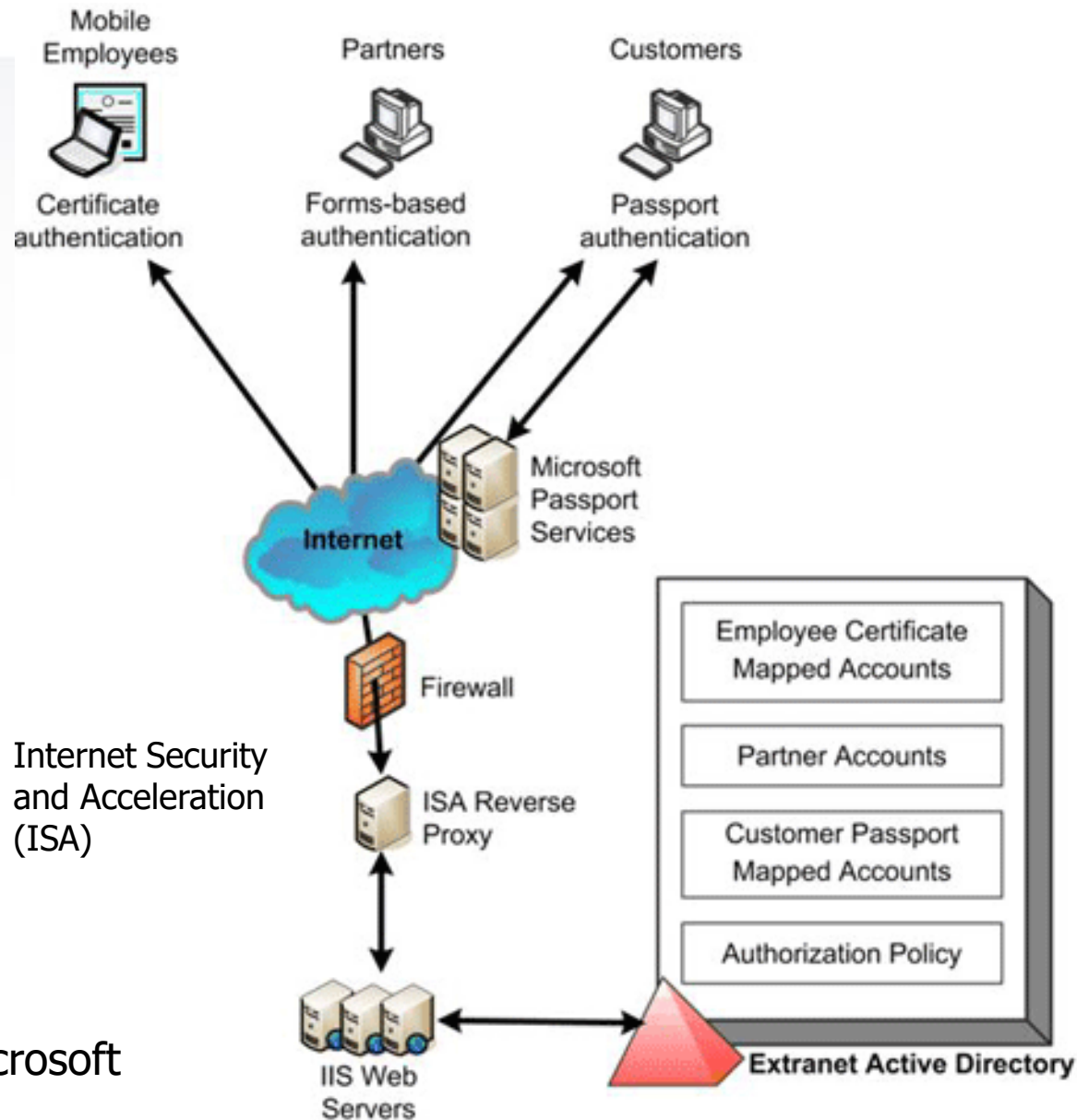
# A snapshot of the full e-Marketplace



Source: IBM



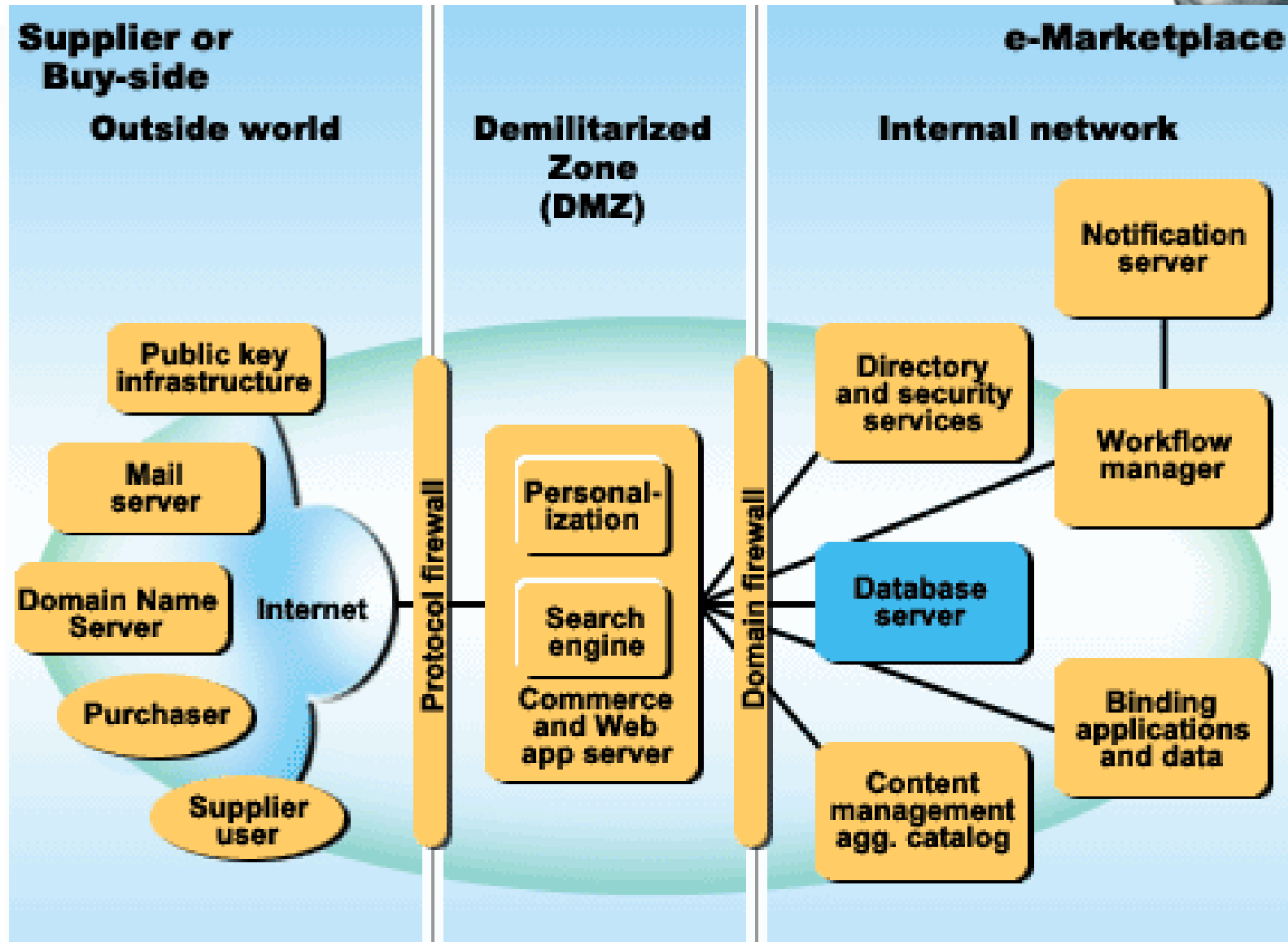
# A Technical View of e-Marketplace



Source: Microsoft

Internet Information Services (IIS)

# A Technical View of e-Marketplace



# 4-dimensions of e-Marketplace

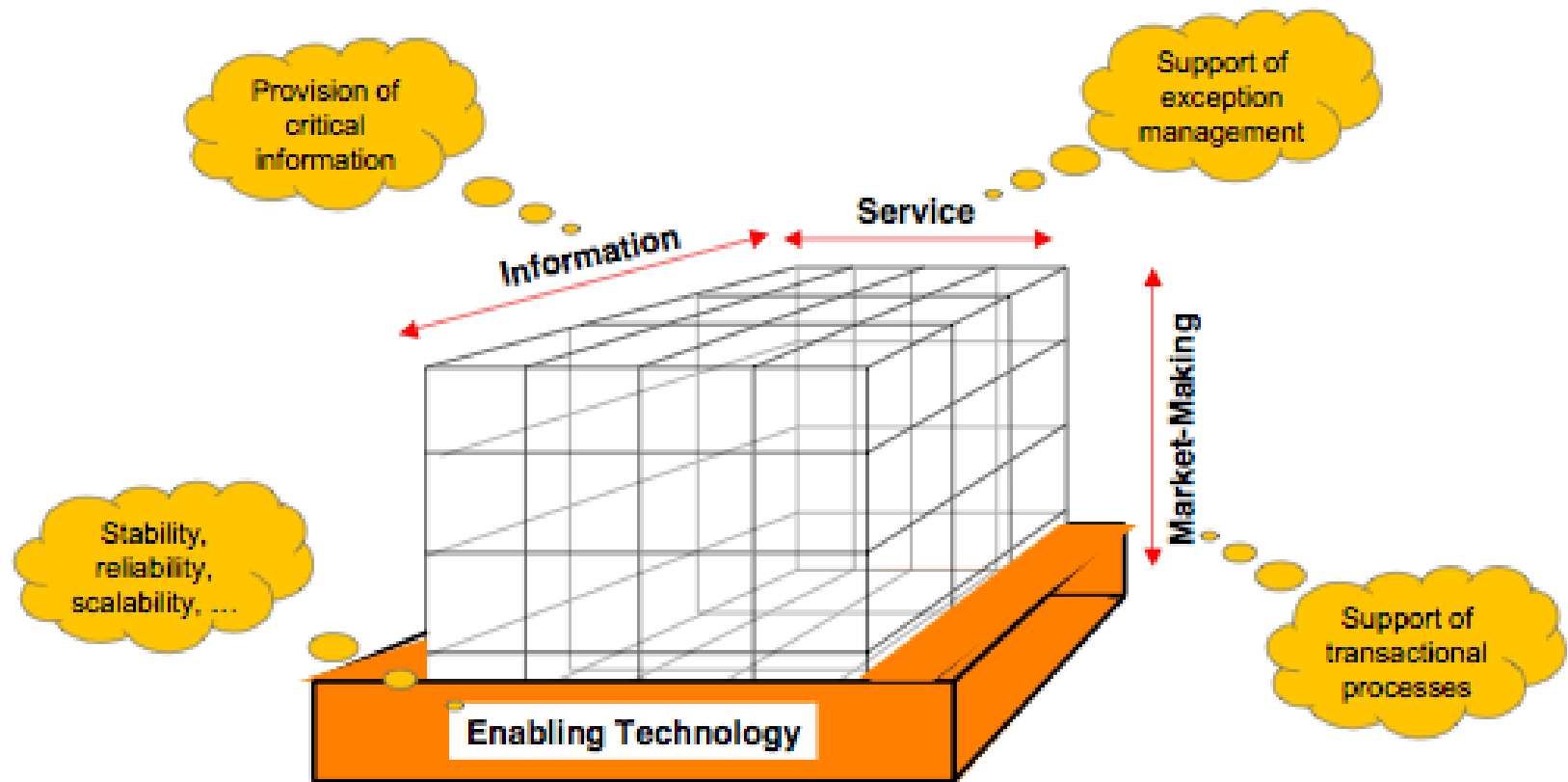


Fig. 2: Four dimensions of E-Marketplaces

# Electronic Catalogs and Other Market Mechanisms



## **Electronic Catalogs**

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

- Classification 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



- Properties of Online catalogs
  - Ease of updating
  - Ability to be integrated with the purchasing process
  - Coverage of a wide spectrum of products
  - Interactivity
  - Customization
  - Strong search capabilities

# Electronic Catalogs and Other Market Mechanisms



- Two approaches to create customized catalogs
  - Let the **customers** identify the **parts of interest** to them from the total catalog
  - Let the **system** automatically identify **customer characteristics** based on the customer's transaction records

# Electronic Catalogs and Other Market Mechanisms



## **Search Engine**

A computer program that can access a database 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



## **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 Seller, Many Potential Buyers
  - One Buyer, Many Sellers
  - Many Sellers, Many Buyers

# Auctions As EC Market Mechanisms



- Types of auctions
  - **One Seller, Many Potential Buyers**

**Forward Auction** (prices go up)

An auction in which a seller entertains bids from buyers

# Auctions As EC Market Mechanisms

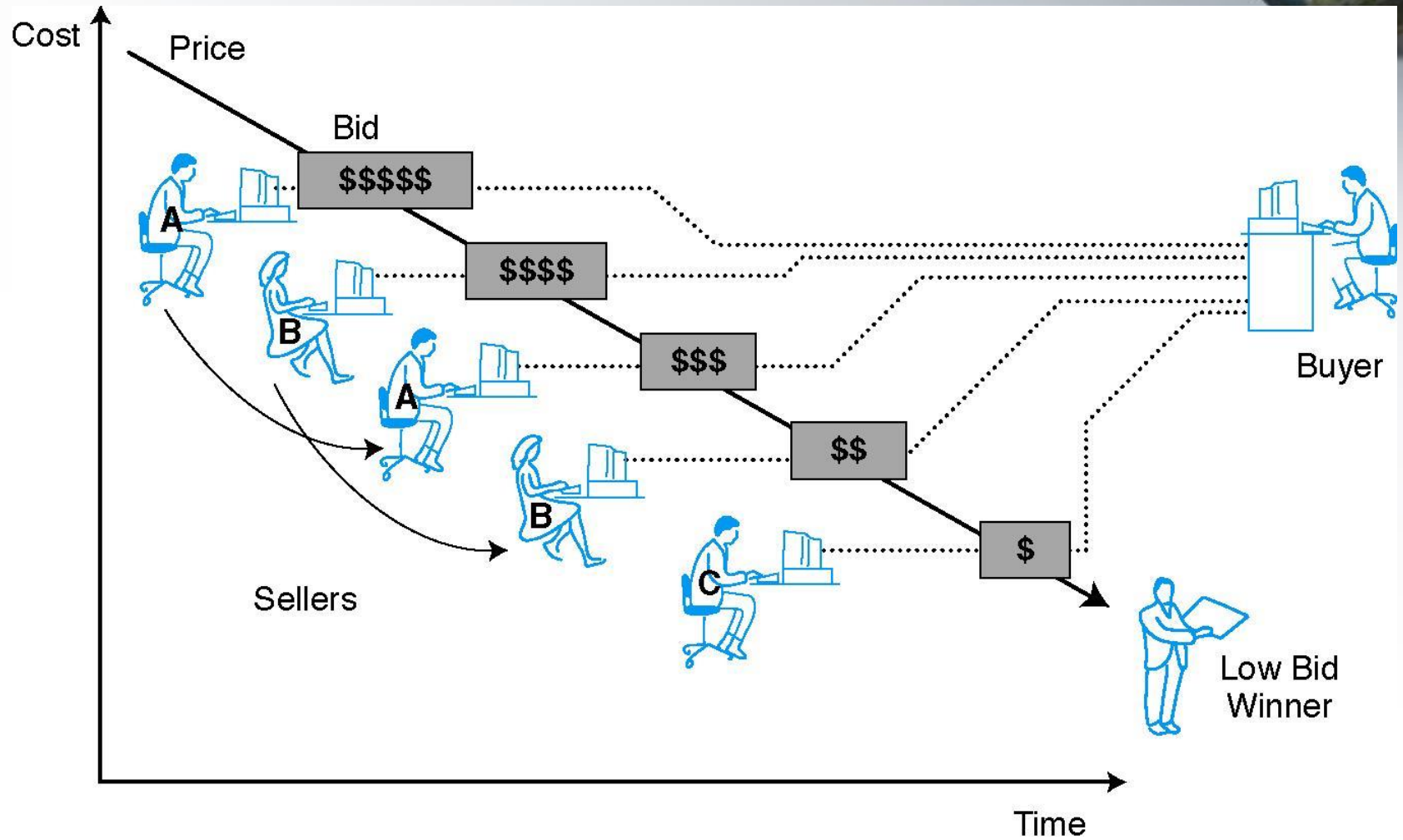


- Types of auctions
  - **One Buyer, Many Potential Sellers**

## **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

# The Reverse Auction Process



# Auctions As EC Market Mechanisms



- Types of auctions
  - **One Buyer, Many Potential Sellers**

## **“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



- Types of auctions
  - **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



- Limitations of E-Auctions

- Minimal security
- Possibility of fraud
- Limited participation

- Impacts of E-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



## **Bartering**

The exchange of goods or services

## **e-Bartering (electronic bartering)**

Bartering conducted online, usually by a bartering exchange

## **Bartering Exchange**

A marketplace in which an intermediary arranges barter transactions

# Bartering and Negotiating Online



- **Online negotiating**—Three factors may facilitate online negotiation:
  1. **The products and services** that are bundled and customized
  2. **The computer technology** that facilitates the negotiation process
  3. **The software (intelligent) agents** that perform searches and comparisons, thereby providing quality customer service and a base from which prices can be negotiated

# Competition in the Digital Economy



## **Internet ecosystem**

The business model of the Internet economy

## **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



- Competitive Factors in the Internet Economy
  - Lower prices
  - Customer service
  - Barriers to entry are reduced
  - Virtual partnerships multiply
  - Market niches abound

# Competition in the Digital Economy



- 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

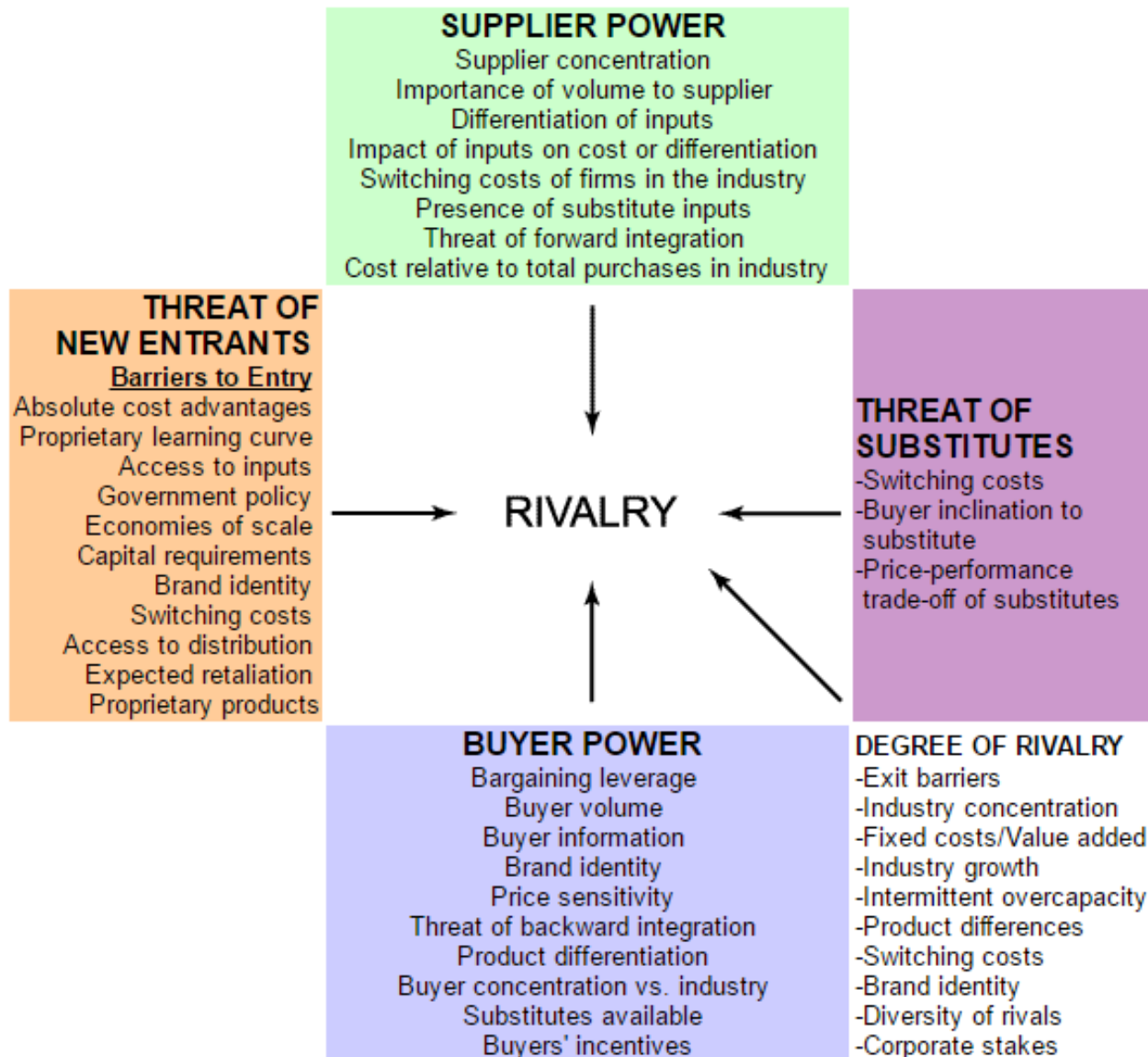
Read: <http://www.quickmba.com/strategy/porter.shtml>

[http://www.12manage.com/methods\\_porter\\_five\\_forces.html](http://www.12manage.com/methods_porter_five_forces.html)

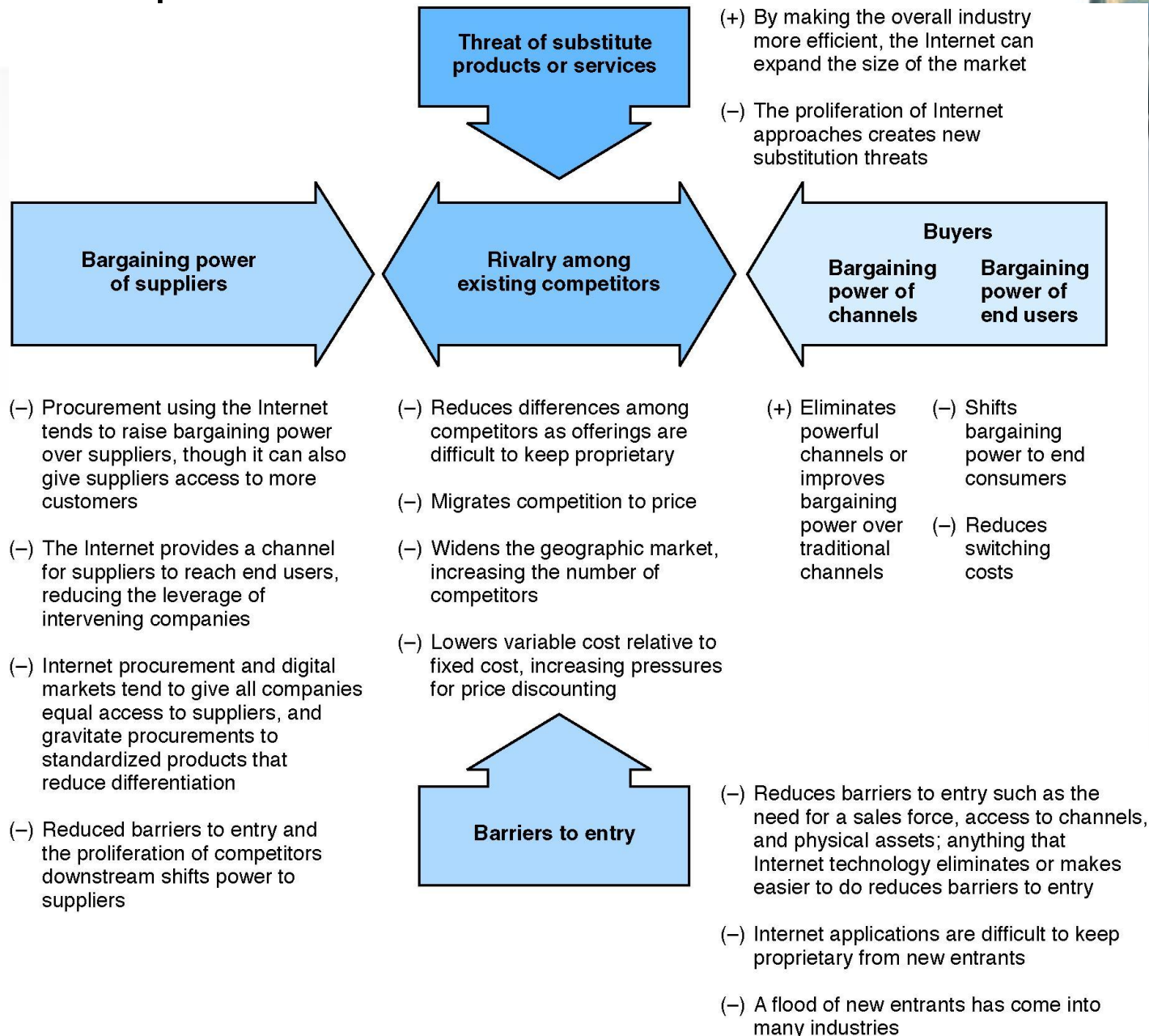
<http://www.businessballs.com/portersfiveforcesofcompetition.htm>



## Diagram of Porter's 5 Forces



# Porter's Competitive Forces Model





# Impacts of EC on Business Processes and Organizations



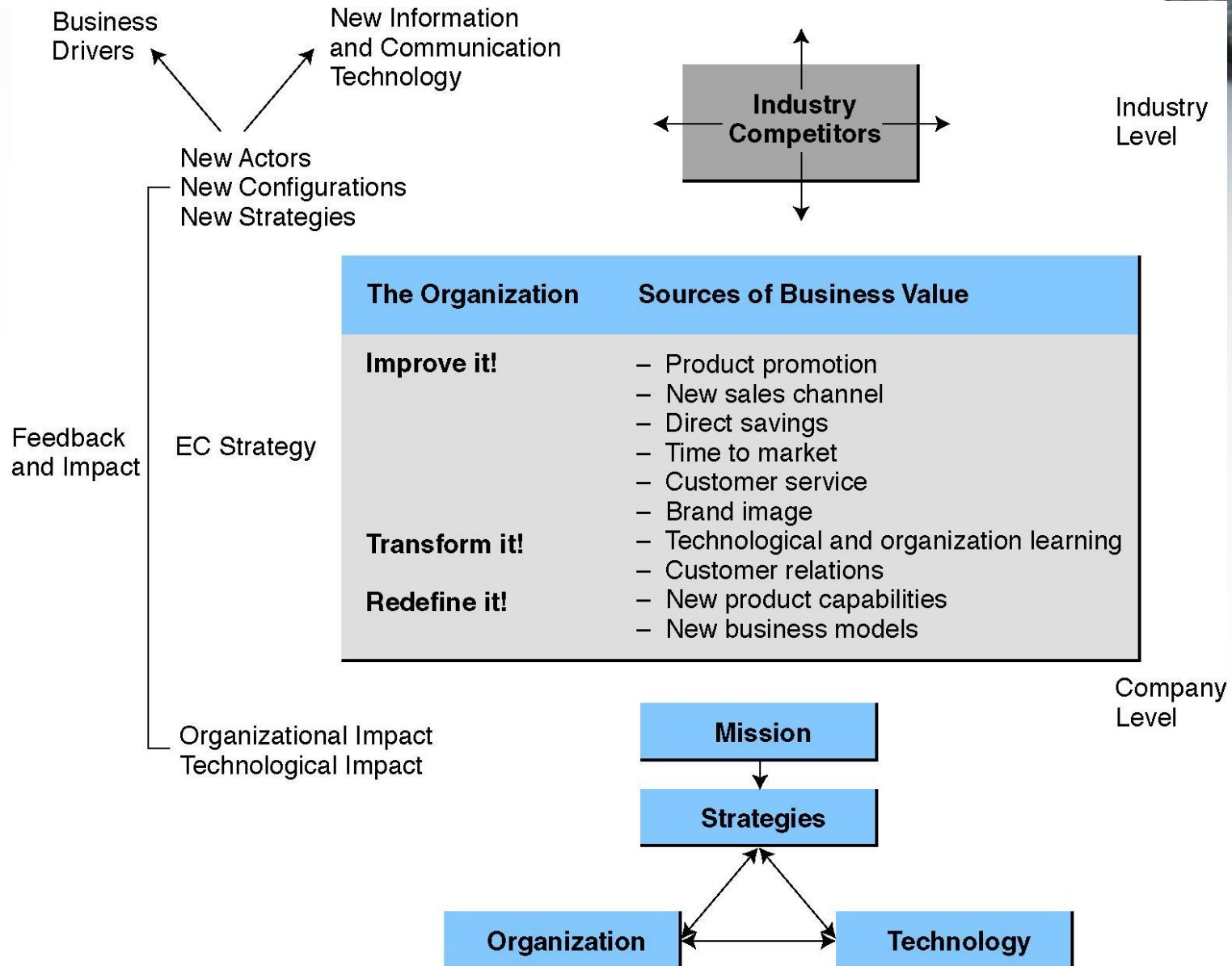
- **Improving Direct Marketing**

- Product promotion
- New sales channel
- Direct savings
- Reduced cycle time
- Improved customer service
- Brand or corporate image

- **Other Impacts on Direct Marketing**

- Customization
- Advertising
- Ordering systems
- Market operations

# The Analysis-of-Impacts Framework

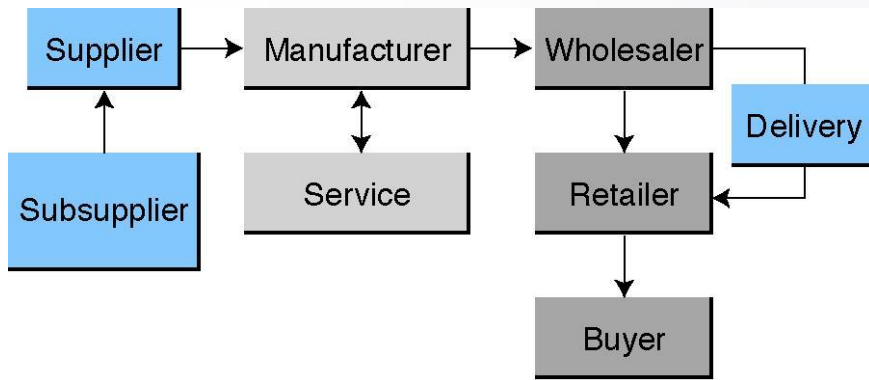


# Impacts of EC on Business Processes and Organizations

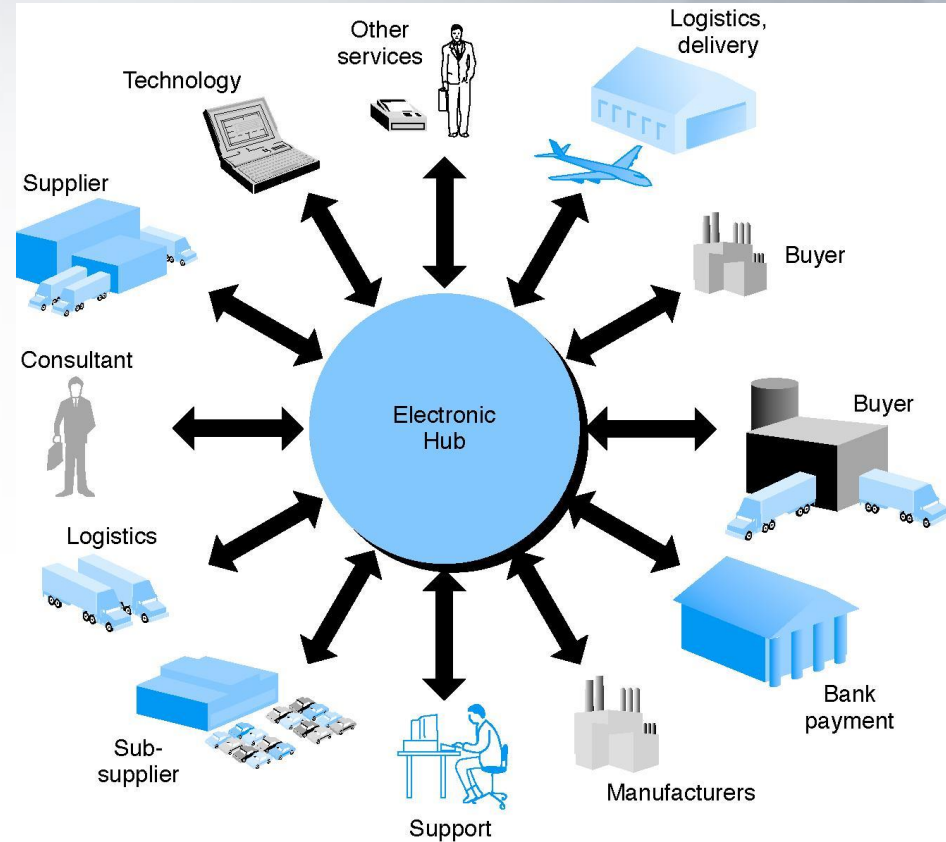


- Transforming Organizations
  - Technology and organizational learning:
    - Corporate change must be planned and managed
    - Organizations may have to struggle with different experiments and learn from their mistakes
  - The changing nature of work
    - Firms are reducing the number of employees down to a core of essential staff and outsourcing whatever work they can to countries where wages are significantly lower

# Changes in the Supply Chain

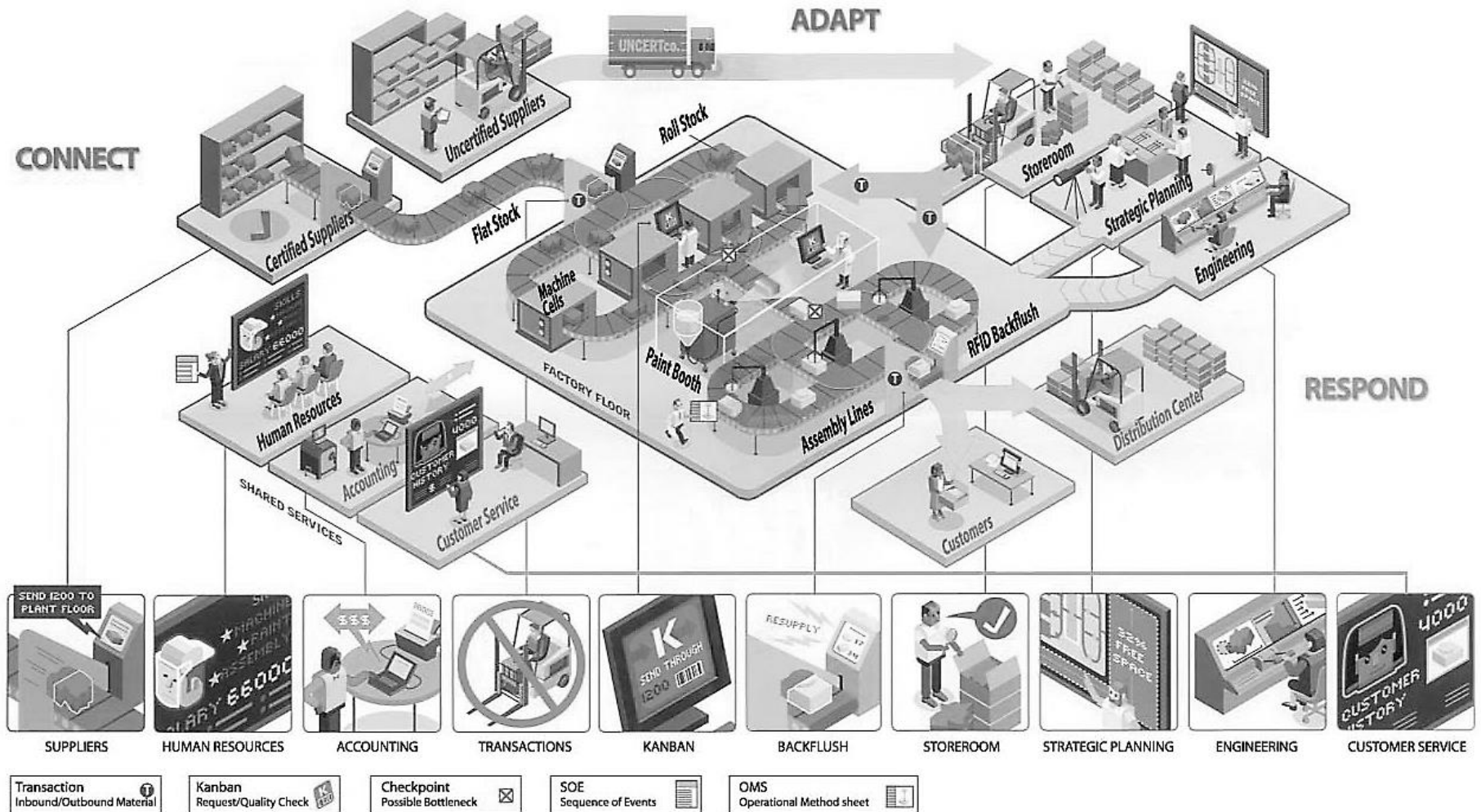


**a. Traditional Intermediaries**



**b. Hub-Based Chain**

# Real-Time Demand-Driven Manufacturing



# Managerial Issues



1. What about intermediaries?
2. Should we auction?
3. Should we barter?
4. How do we compete in the digital economy?
5. What organizational changes will be needed?



# Summary



1. E-marketplaces and their components.
2. The role of intermediaries.
3. The major types of e-marketplaces.
4. Electronic catalogs, search engines, and shopping carts.
5. Types of auctions and their characteristics.

# Summary



6. The benefits and limitations of auctions.
7. Bartering and negotiating.
8. Competition in the digital economy.
9. The impact of e-markets on organizations.