

APPLIED IT FOR BUSINESS

Chapter

9

Electronic Commerce Systems

Irawan Afrianto, M.T

Program Magister Manajemen

Univesitas Komputer Indonesia (UNIKOM)

Learning Objectives

- Identify the major categories and trends of e-commerce applications
- Identify the essential processes of an e-commerce system, and give examples of how they are implemented in e-commerce applications
- Identify and give examples of several key factors and Web store requirements need to succeed in e-commerce

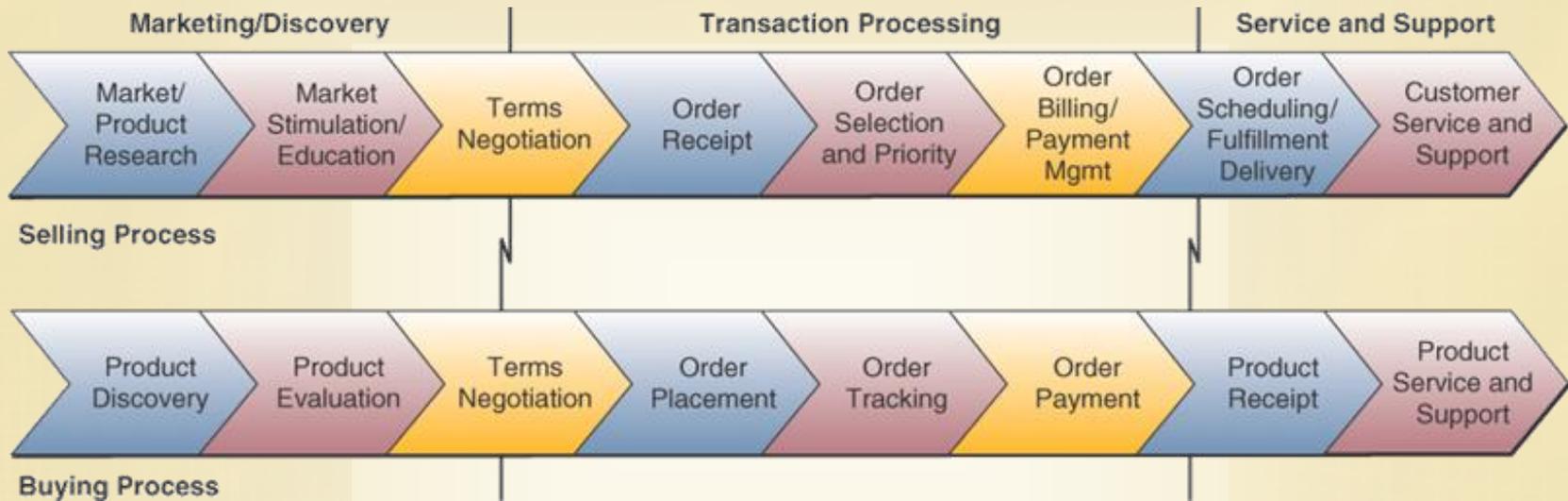
Learning Objectives

- Identify and explain the business value of several types of e-commerce marketplaces
- Discuss the benefits and trade-offs of several e-commerce clicks and bricks alternatives

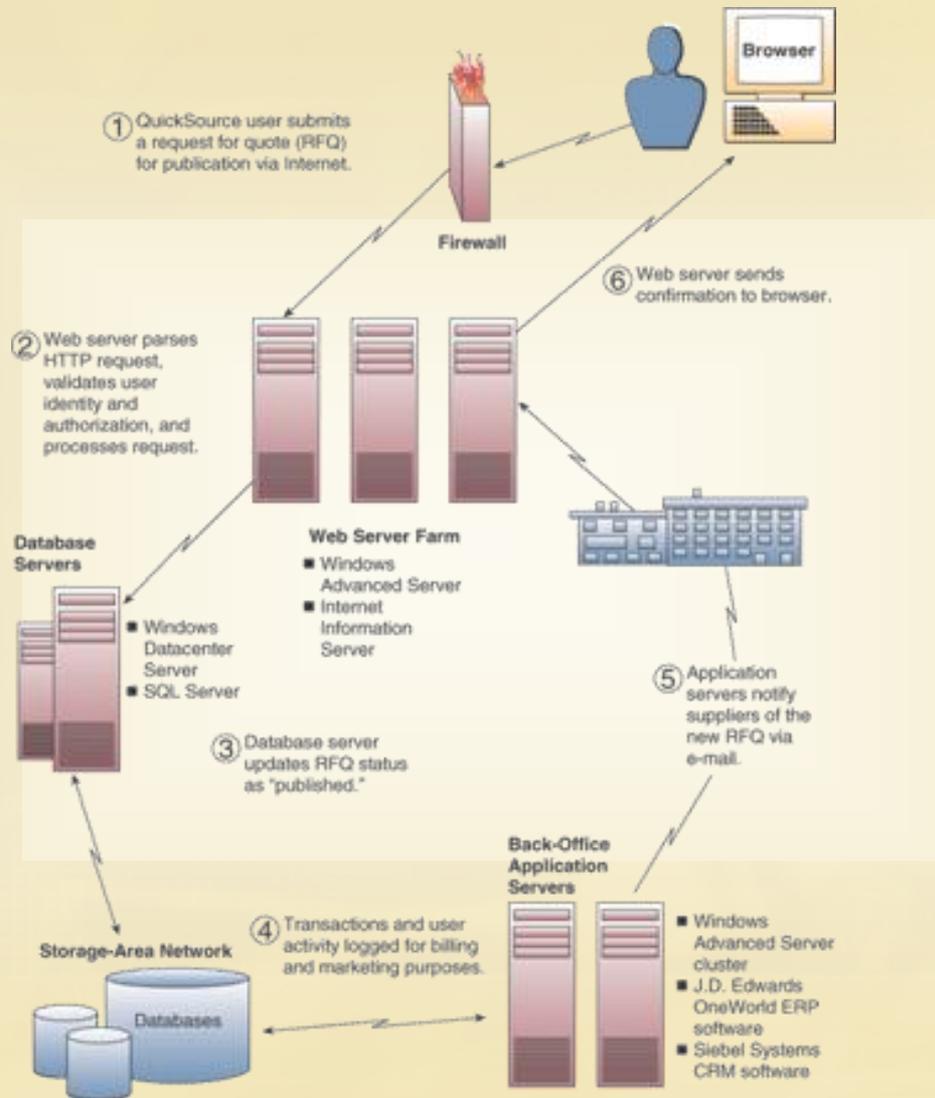
Introduction to e-Commerce

- Electronic commerce encompasses the entire online process of
 - Developing
 - Marketing
 - Selling
 - Delivering
 - Servicing
 - Paying for products and services
- It relies on the Internet and other information technologies to support every step of the process

The Scope of e-Commerce



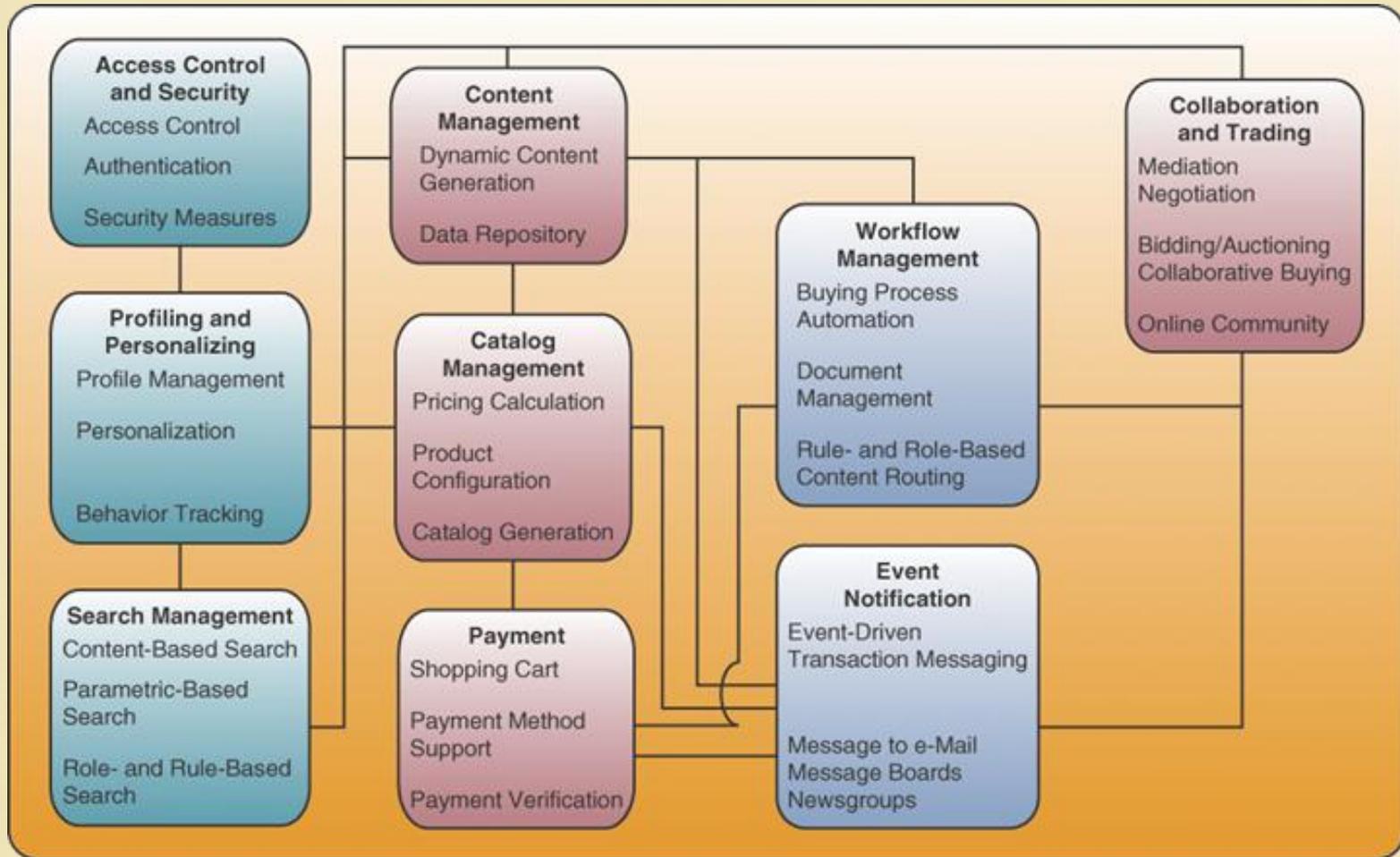
E-Commerce Technologies



Categories of e-Commerce

- **Business-to-Consumer**
 - Virtual storefronts, multimedia catalogs, interactive order processing, electronic payment, online customer support
- **Business-to-Business**
 - Electronic business marketplaces, direct links between businesses, auctions and exchanges
- **Consumer-to-Consumer**
 - Online auctions, posting to newspaper sites, personal websites, e-commerce portals

Essential e-Commerce Architecture



Access Control and Security

- E-commerce processes must establish mutual trust and secure access between parties
 - User names and passwords
 - Encryption key
 - Digital certificates and signatures
- Restricted access areas
 - Other people's accounts
 - Restricted company data
 - Webmaster administration areas

Profiling and Personalizing

- Profiling gathers data on you and your website behavior and choices
 - User registration
 - Cookie files and tracking software
 - User feedback
- Profiling is used for
 - Personalized (one-to-one) marketing
 - Authenticating identity
 - Customer relationship management
 - Marketing planning
 - Website management

Search Management

- Search processes help customers find the specific product or service they want
 - E-commerce software packages often include a website search engine
 - A customized search engine may be acquired from companies like Google or Requisite Technology
 - Searches are often on content or by parameters

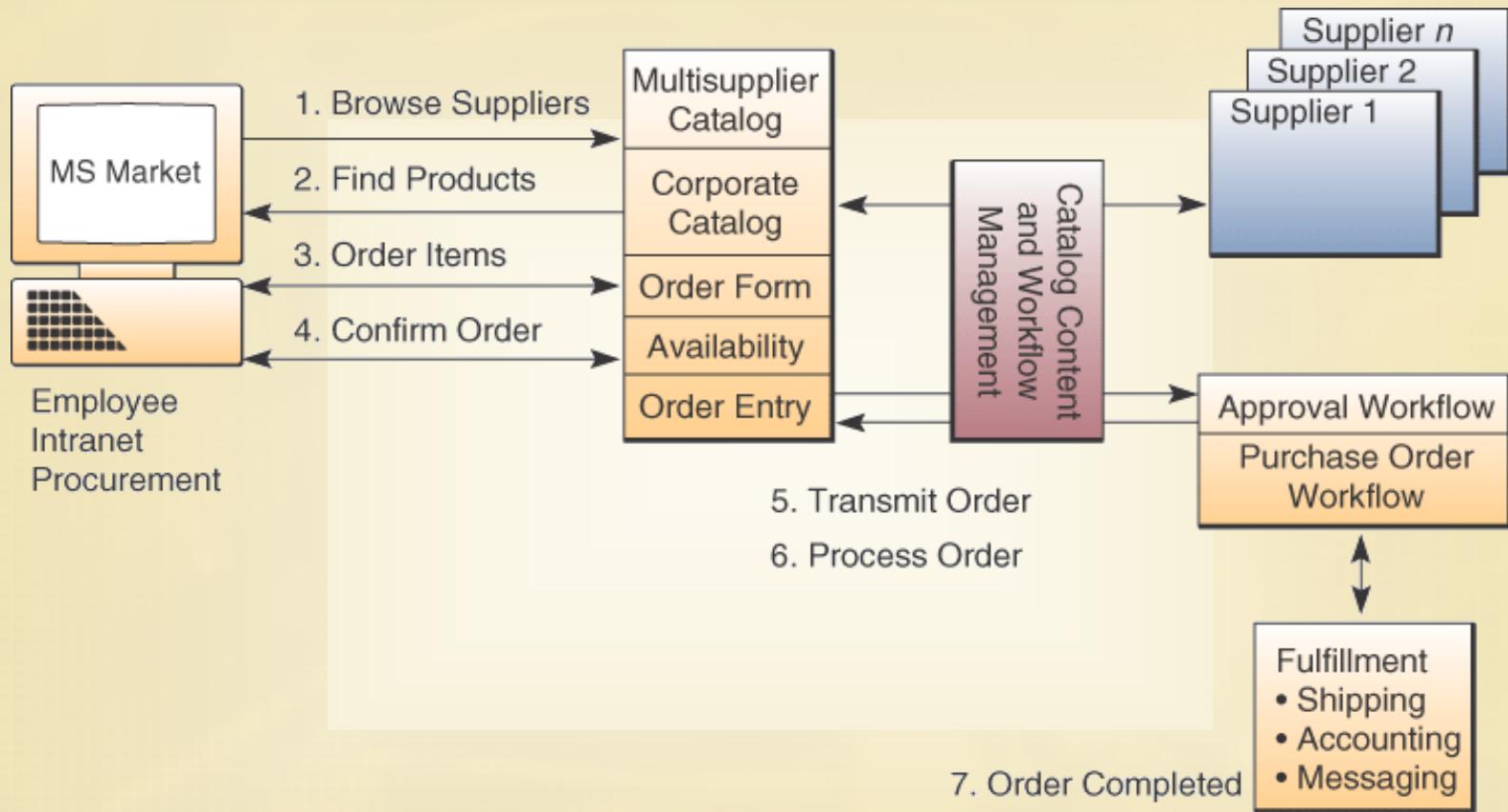
Content and Catalog Management

- Content Management Software
 - Helps develop, generate, deliver, update, and archive text and multimedia information at e-commerce websites
- Catalog Management Software
 - Helps generate and manage catalog content
- Catalog and content management software works with profiling tools to personalize content
 - Includes product configuration and mass customization

Workflow Management

- E-business and e-commerce workflow management depends on a workflow software engine
 - Contains software model of business processes
- Workflow models express predefined
 - Sets of business rules
 - Roles of stakeholders
 - Authorization requirements
 - Routing alternative
 - Databases used
 - Task sequences

Example of Workflow Management



Event Notification

- Most e-commerce applications are event driven
 - Responds to such things as customer's first website visit and payments
 - Monitors all e-commerce processes
 - Records all relevant events, including problem situations
 - Notifies all involved stakeholders
 - Works in conjunction with user-profiling software

Collaboration and Trading

- Processes that support vital collaboration arrangements and trading services
 - Needed by customers, suppliers, and other stakeholders
- Online communities of interest
 - E-mail, chat, discussion groups
 - Enhances customer service
 - Builds loyalty

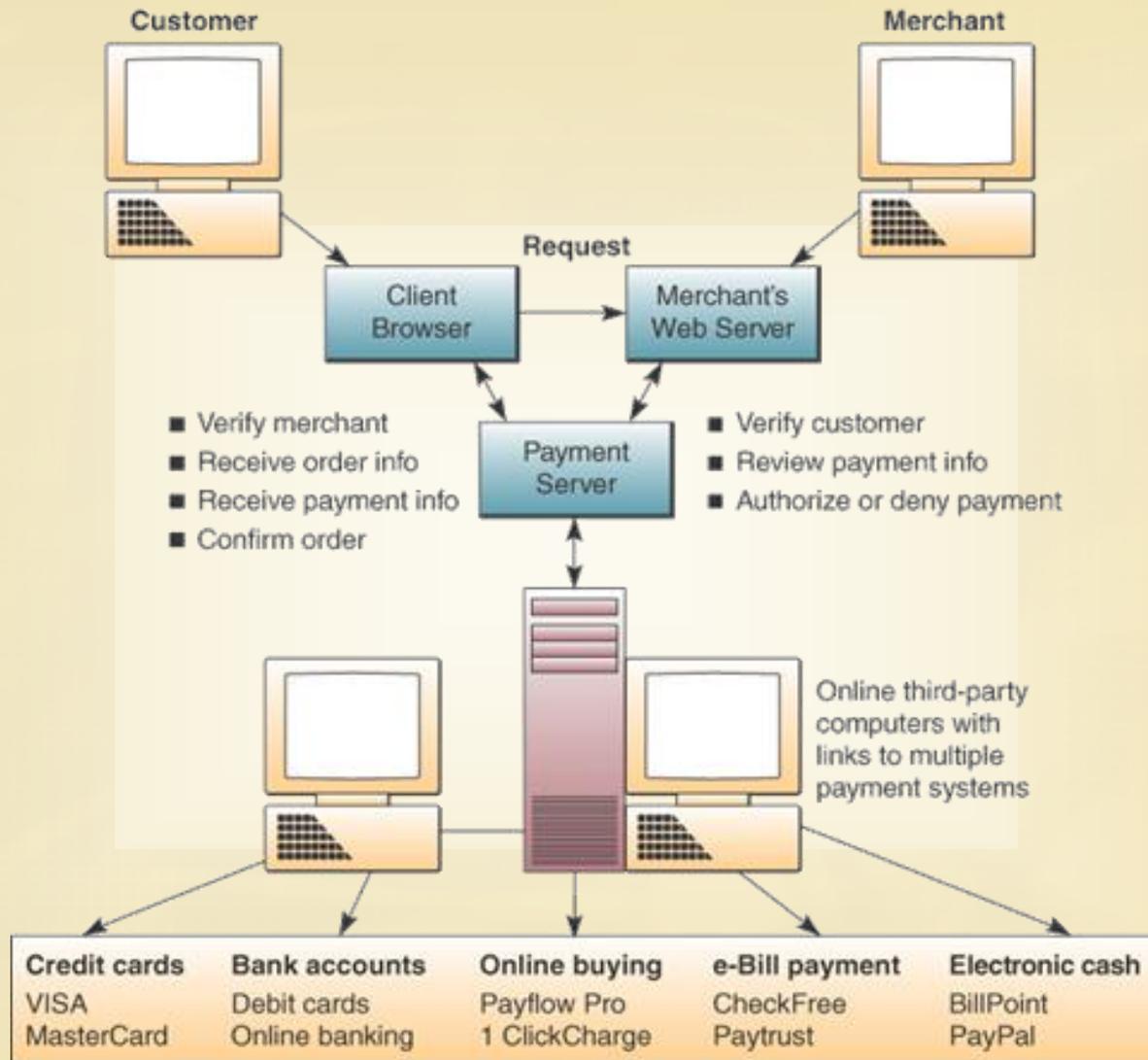
Electronic Payment Processes

- Complex processes
 - Near-anonymous and electronic nature of transactions
 - Many security issues
 - Wide variety of debit and credit alternatives
 - Financial institutions may be part of the process

Electronic Payment Processes

- Web Payment Processes
 - Shopping cart process
 - Credit card payment process
 - Debit and other more complex processes
- Electronic Funds Transfer (EFT)
 - Major payment system in banking, retail
 - Variety of information technologies capture and process money and credit card transfers
 - Most point-of-sale terminals in retail stores are networked to bank EFT systems

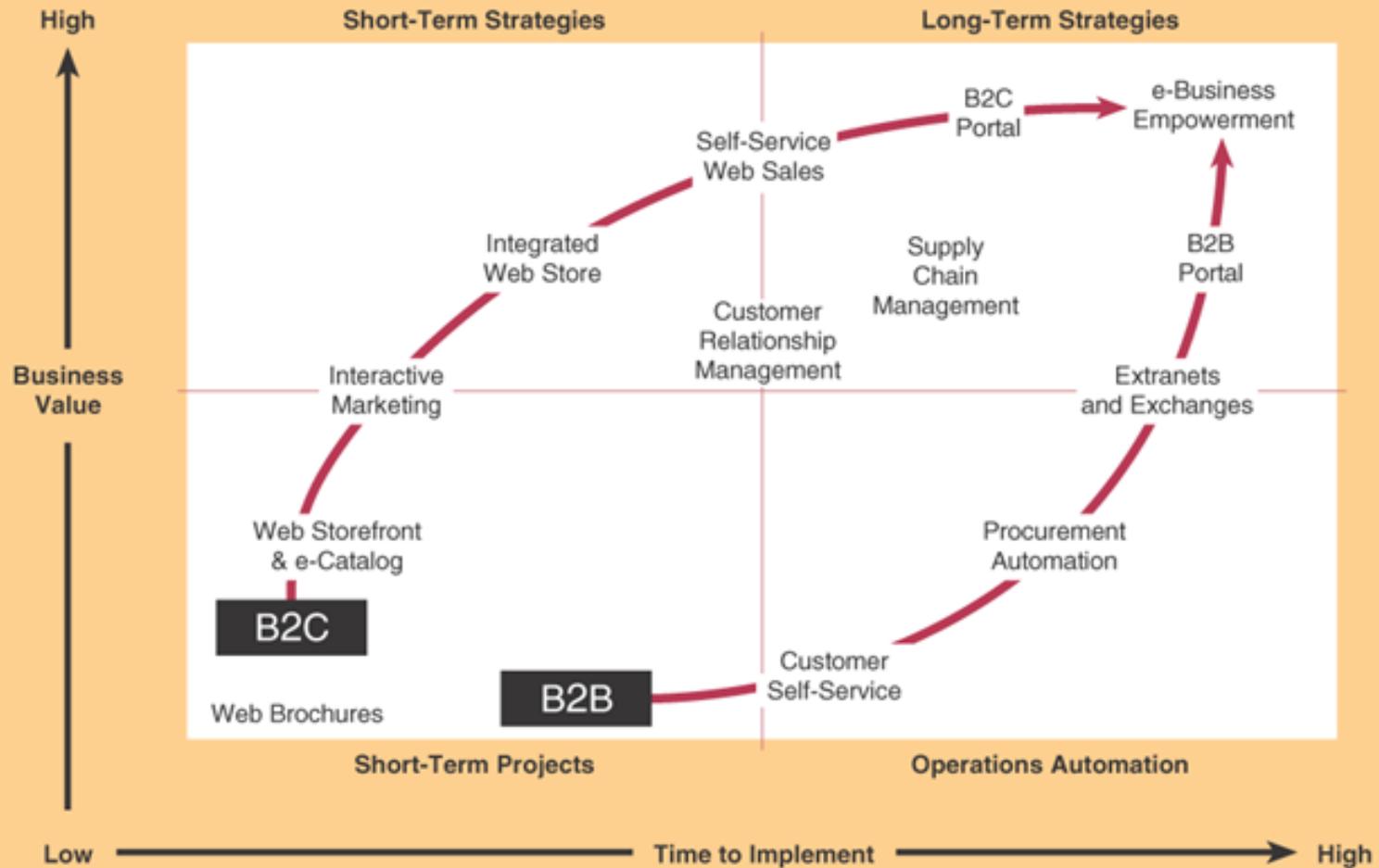
Electronic Payment Example



Securing Electronic Payments

- Network sniffers easily recognize credit card formats
 - Encrypt data between customer and merchant
 - Encrypt data between customer and financial institution
 - Take sensitive information off-line

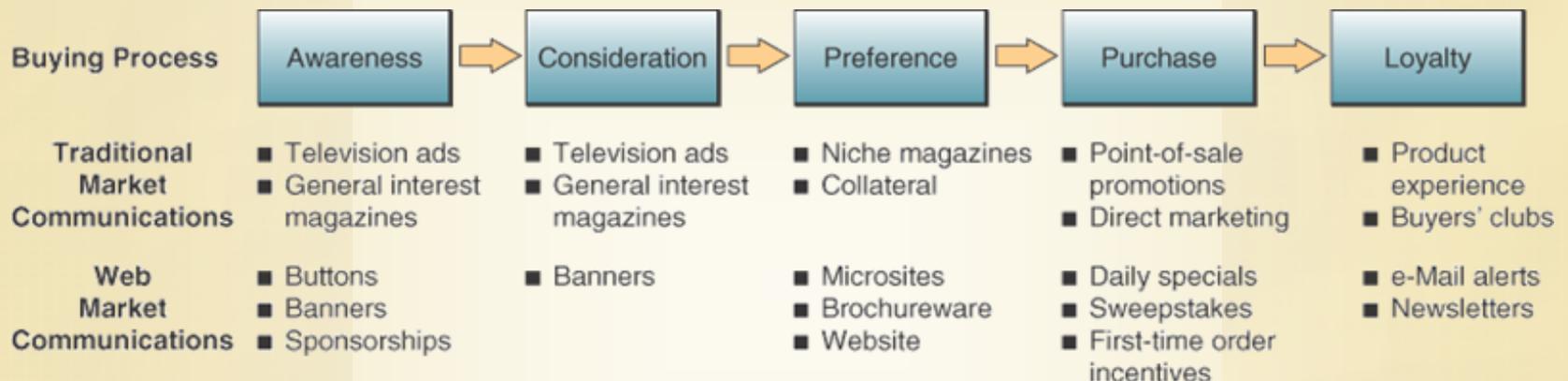
E-Commerce Application Trends



E-Commerce Success Factors

- Some of the success factors in e-commerce
 - Selection and value
 - Performance and service
 - Look and feel
 - Advertising and incentives
 - Personal attention (one-to-one marketing)
 - Community relationships
 - Security and reliability

Differences in Marketing



Web Store Requirements

Developing a Web Store

- **Build**
 - Website design tools
 - Site design templates
 - Custom design services
 - Website hosting
- **Market**
 - Web page advertising
 - E-mail promotions
 - Web advertising exchanges with affiliate sites
 - Search engine registrations

Serving Your Customers

- **Serve**
 - Personalized Web pages
 - Dynamic multimedia catalog
 - Catalog search engine
 - Integrated shopping cart
- **Transact**
 - Flexible order process
 - Credit card processing
 - Shipping and tax calculations
 - E-mail order notifications
- **Support**
 - Website online help
 - Customer service e-mail
 - Discussion groups and chat rooms
 - Links to related sites

Managing a Web Store

- **Manage**
 - Website usage statistics
 - Sales and inventory reports
 - Customer account management
 - Links to accounting system
- **Operate**
 - 24x7 website hosting
 - Online tech support
 - Scalable network capacity
 - Redundant servers and power
- **Protect**
 - User password protection
 - Encrypted order processing
 - Encrypted website administration
 - Network firewalls and security monitors

Developing a Web Store

- Build a website
 - Choose or set up web hosting
 - Use simple design tools and templates
 - Include a shopping cart and payment support
- Market the website
 - Include Web page and e-mail advertising and promotions
 - Exchange advertising with other Web stores
 - Register with search engines and directories
 - Sign up for affiliate programs

Serving Your Customers

- Convert visitors into loyal customers
 - Develop one-to-one relationship with customers
 - Create incentives to encourage registration
 - Use Web cookies to identify visitors
 - Use tracking services to record and analyze website behavior and customer preferences
 - Create an attractive, friendly, efficient store
 - Offer fast order processing and payment
 - Notify when orders are processed and shipped
 - Provide links to related websites

Managing a Web Store

- **Manage** both the business and the website
 - Record and analyze traffic, inventory, sales
 - Use CRM features to help retain customers
 - Link sales, inventory data to accounting systems
- **Operate** 24 hours a day, seven day a week
- **Protect** transactions and customer records
 - Use security monitors and firewalls
 - Use redundant systems and power sources
 - Employ passwords and encryption
 - Offer 24-hour tech support

B2B E-Commerce

- B2B is the wholesale and supply side of the commercial process
 - Businesses buy, sell, or trade with other businesses
- Relies on multiple electronic information technologies
 - Catalog systems
 - Trading systems
 - Data interchange
 - Electronic funds transfers

E-Commerce Marketplaces

- One to Many
 - Sell-side marketplaces
 - One supplier dictates product offerings and prices
- Many to One
 - Buy-side marketplaces
 - Many suppliers bid for the business of a buyer
- Some to Many
 - Distribution marketplaces
 - Unites suppliers who combine their product catalogs to attract a larger audience

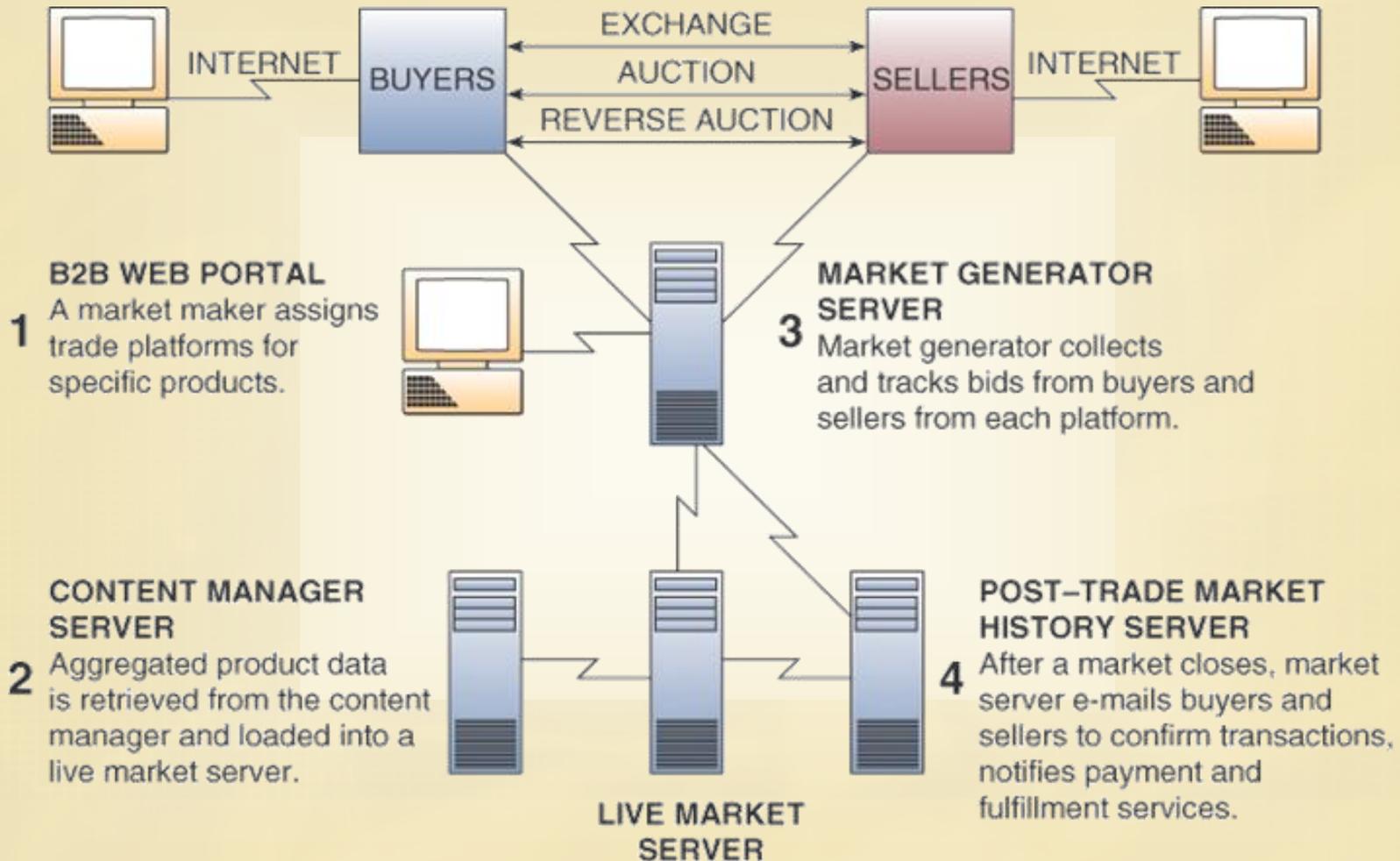
E-Commerce Marketplaces

- **Many to Some**
 - Procurement marketplaces
 - Unites major buyers who combine purchasing catalogs
 - Attracts more competition and thus lower prices
- **Many to Many**
 - Auction marketplaces
 - Dynamically optimizes prices

E-Commerce Portals

- B2B e-commerce portals offer multiple marketplaces
 - Catalogs
 - Exchanges
 - Auctions
- Often developed and hosted by third-party market-maker companies
 - Infomediaries serve as intermediaries in e-business and e-commerce transactions

B2B E-Commerce Web Portal



Clicks and Bricks

- Success will go to those who can integrate Internet initiatives with traditional operations
 - Merging operations has trade-offs



E-Commerce Integration

- The business case for merging e-commerce with traditional business operations
 - **Move** strategic capabilities in traditional operations to the e-commerce business
 - **Integrate** e-commerce into the traditional business
 - Sharing of established brands
 - Sharing of key business information
 - Joint buying power and distribution efficiencies

E-Commerce Channel Choices

- An e-commerce channel is the marketing or sales channel created by a company for its e-commerce activities
 - There is no universal strategy or e-commerce channel choice
 - Both e-commerce integration and separation have major business benefits and shortcoming
 - Most businesses are implementing some measure of clicks and bricks integration

Thank U

