THE DIGITAL FIRM: ELECTRONIC COMMERCE AND ELECTRONIC BUSINESS
• How has Internet technology changed value propositions and business models?

• What is electronic commerce? How has electronic commerce changed consumer retailing and business-to-business transactions?

• What are the principal payment systems for electronic commerce?
How can Internet technology support electronic business and supply chain management?

What are the major managerial and organizational challenges posed by electronic commerce and electronic business?
MANAGEMENT CHALLENGES

- Emerging digital firm
- Electronic commerce
- Electronic business
- Challenges and opportunities
1. Electronic commerce and electronic business require new mind set

2. Finding a successful Internet business model
Internet Technology and The Digital Firm

- **Information technology infrastructure**: Provides a universal and easy-to-use set of technologies and technology standards that can be adopted by all organizations.

- **Direct communication between trading partners**: Disintermediation removes intermediate layers, streamlines process.
Internet Technology and the Digital Firm

- **Round-the-clock service:** Web sites available to consumers 24 hours a day
- **Extended distribution channels:** Outlets created for attracting customers who otherwise would not patronize
- **Reduced transaction costs:** Costs of searching for buyers, sellers, etc. reduced
Business Model:

- Defines an enterprise
- Describes how the enterprise delivers a product or service
- Shows how the enterprise creates wealth
The Changing Economies of Information

- **Information asymmetry**: One party in a transaction has more information than the other
- **Increases richness**: Depth and detail of information
- **Increases reach**: Number of people contacted
The Changing Economics of Information

New levels of richness and reach attainable

ENABLERs:
- Explosion of connectivity
- Dissemination of standards

Figure 4-1
Internet Business Models

- **Virtual storefront**: Sells goods, services on-line

- **Information broker**: Provide info on products, pricing, etc.

- **Transaction broker**: Buyers view rates, terms from various sources
Internet Business Models

- **Online Marketplace**: Concentrates information from several providers

- **Content provider**: Creates revenue through providing client for a fee, and advertising
Internet Business Models

• **On-line service provider**: Provides service, support for hardware, software products

• **Virtual community**: Chat room, on-line meeting place
Internet Business Models

- **Portal**: Initial point of entry to Web, specialized content, services

- **Syndicator**: Aggregate information from several sources sold to other companies

- **Auction**: Electronic clearinghouse products, prices, change in response to demand
Internet Business Models

- **Dynamic pricing**: real-time interactions between buyers and sellers determine worth of items

- **Banner ad**: Graphic display used for advertising, linked to the advertiser’s Web site
Categories of Electronic Commerce

- **Business-to-customer (B2C):** Retailing of products and services directly to individual customers
- **Business-to-business (B2B):** Sales of goods and services among businesses
- **Consumer-to-consumer (C2C):** Individuals use Web for private sales or exchange
• **Customer-centered retailing**: Closer, yet more cost-effective relationship with customers

• **Web sites**: Provide information on products, services, prices, orders
Business-To-Consumer

• **Disintermediation:** The removal of organizations or business process layers responsible for certain intermediary steps in a value chain

• **Reintermediation:** The shifting of the intermediary role in a value chain to a new source
Benefits of Disintermediation to the Consumer

Figure 4-2

- Manufacturer to Customer: $48.50
- Manufacturer to Retailer to Customer: $40.34
- Manufacturer to Customer: $20.45
Interactive Marketing and Personalization

Web personalization:

- Benefits of using individual sales people
- Dramatically lower costs
Web Site Personalization

Based on your portfolio and recent market trends, here are some recommendations.

Welcome back, Steve P. Munson. Check out these recommended titles: One Minute Manager, Leading Change, Results-Based Leadership.

Sarah,
Here are the items you want to bid on: Iron Scroll Lamp, Sparkle Beach Barbie, Beatles Silk Tie.
Mobile commerce (m-commerce):

- Wireless devices used to conduct both business-to-consumer and business-to-business e-commerce transactions over the Internet.

- Extend personalization by delivering new value-added services directly to customers at any time and place.
## Customer Personalization

<table>
<thead>
<tr>
<th>Target</th>
<th>Platform</th>
<th>When</th>
<th>Content and Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traveler</td>
<td>Computer-equipped car</td>
<td>Whenever car is moving</td>
<td>Provide maps, driving directions, weather reports, ads for nearby restaurants and hotels.</td>
</tr>
<tr>
<td>Parent</td>
<td>Cell phone</td>
<td>During school days</td>
<td>Notify about school-related closings:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hello, Caroline. Your children's school is closing early.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Press 1 for closure reason</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Press 2 for weather reports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Press 3 for traffic reports</td>
</tr>
<tr>
<td>Stock Broker</td>
<td>Pager</td>
<td>During trading days. Notify if unusually high trading volume.</td>
<td>Summary portfolio analysis showing changes in positions for each holding.</td>
</tr>
</tbody>
</table>
Automation of purchase, sale transactions from business to business

- **Private industrial networks**: Coordination between companies for efficient supply chain management and collaborative activities

- **Electronic hubs**: On-line marketplaces, point-to-point connections, integrated information
ELECTRONIC COMMERCE

A Private Industrial Network

Figure 4-5
A Net Marketplace

- Catalogs
- Sourcing
- Automated purchasing
- Processing and fulfillment

Figure 4-6
Exchanges: Third-party net marketplace

- Primarily transaction oriented
- Connects buyers and suppliers for spot purchasing
# Electronic Commerce Payment Systems

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREDIT CARDS</td>
<td>SECURE SITE PRESERVES INFORMATION</td>
</tr>
<tr>
<td>ELECTRONIC CASH</td>
<td>DIGITAL CURRENCY USED FOR MICROPAYMENTS</td>
</tr>
<tr>
<td>PERSON-TO-PERSON</td>
<td>SEND MONEY TO SITES UNABLE TO USE CREDIT CARDS</td>
</tr>
<tr>
<td>DIGITAL WALLET</td>
<td>SOFTWARE STORES CREDIT CARD INFORMATION</td>
</tr>
<tr>
<td>ELECTRONIC CHECK</td>
<td>CHECK WITH ENCRYPTED DIGITAL SIGNATURE</td>
</tr>
<tr>
<td>SMART CARD</td>
<td>MICROCHIP STORES ELECTRONIC CASH</td>
</tr>
<tr>
<td>ELECTRONIC BILL PAYMENT</td>
<td>ELECTRONIC FUNDS TRANSFER</td>
</tr>
</tbody>
</table>
Electronic Commerce Information Flows

- **Business-to-Consumer**
  - Buyer
  - Retailer
    - Information
    - Orders
    - Service and support

- **Business-to-Business**
  - Manufacturers, Suppliers, and Distributors
    - Purchases
    - Bids
  - Banks
    - Credit checks
    - Payment authorization
    - Electronic payments transfer

**Figure 4-7**
How Intranets Support Electronic Business

- **Benefits**
- **Functional applications**
- **Supply chain management**
Benefits of Intranets

- Connectivity: accessible from most computing platforms
- Can be tied to internal corporate systems and core transaction databases
- Can create interactive applications
- Scalable to larger or smaller computing platforms
Benefits of Intranets

- Easy-to-use, universal Web interface
- Low start-up costs
- Richer, more responsive information environment
- Reduced information distribution costs
Functional Applications of Intranet

- Finance and accounting
- Human resources
- Sales and marketing
- Manufacturing and production
**Functional Applications of Intranets**

**Finance and Accounting**
- General ledger reporting
- Project costing
- Annual reports
- Budgeting

**Human Resources**
- Corporate policies
- Employee savings plans
- Benefits enrollment
- On-line training
- Job postings

**Manufacturing and Production**
- Quality measurements
- Maintenance schedules
- Design specifications
- Machine output
- Order tracking

**Sales and Marketing**
- Competitor analysis
- Price updates
- Promotional campaigns
- Sales presentations
- Sales contacts

**Figure 4-8**
Finance and Accounting

- General ledger reporting
- Project costing
- Annual reports
- Budgeting
Human Resources

Company

- On-line publishing of corporate policy
- Job postings and internal job transfers
- Company telephone directories, and training

Employees

- Healthcare
- Employee savings
- Competency tests
Sales and Marketing

- Competitor analysis
- Price updates
- Promotional campaigns
- Sales presentations
- Sales contracts
Manufacturing and Production

- Quality measurements
- Maintenance schedules
- Design specifications
- Machine outputs
- Order tracking
The Future Internet-Driven Supply Chain
• Unproven business models
• Business process change requirements
• Channel conflicts
• Legal issues
• Security and privacy