Chapter 5 Electronic Commerce System

Electronic Commerce: Electronic commerce encompasses the entire online process of developing, marketing, selling, delivering, servicing, and paying for products and services. The Internet and related technologies and E-commerce websites on the World Wide Web and corporate intranets and extranets serve as the business and technology platform for E-commerce market places for consumers and businesses in the basic categories of business-to-consumer (B2C), business-to-business (B2B), and consumer-to-consumer (C2C) E-commerce. The essential processes that should be implemented in all E-commerce applications-access control and security, personalizing and profiling, search management, content management, catalog management, payment systems, workflow management, event notification, and collaboration and trading-are summarized in Figure 5.5.

**Figure 5.5** This E-commerce process architecture highlights nine essential categories of E-Commerce processes.

E-Commerce Issues: Many E-business enterprises are moving toward offering full-service B2C and B2B E-commerce portals supported by integrated customer focused processes and internetworked supply chains as illustrated in Figure 5.11.

**Figure 5.11** Trend in B2C B2B E-commerce and the business strategies and value driving these trends
In addition, E-business companies must evaluate a variety of E-commerce integration or separation alternatives and benefit trade-offs when choosing a clicks and bricks strategy, as summarized in Figure 5.22.

Figure 5.22 Companies have a spectrum of alternatives and benefits trade-offs when deciding upon an integrated or separate E-Commerce Business

**B2C E-Commerce:** Business typically sell products and services to consumers at E-commerce websites that provide attractive Web pages, multimedia catalogs, interactive order processing, secure electronic payment systems, and online customer support. However, successful E-tailers build customer satisfaction and loyalty by optimizing factors outlined in Figure 5.13, such as selection and value, performance and service efficiency, the look and feel of the site, advertising and incentives to purchase, personal attention, community relationships, and security and reliability.

### E-Commerce Success Factors

- **Selection and Value.** Attractive product selections, competitive prices, satisfaction guarantees, and customer support after the sale.

- **Performance and Service.** Fast, easy navigation, shopping, and purchasing, and prompt shipping and delivery.

- **Look and Feel.** Attractive Web storefront, website shopping areas, multimedia product catalog pages, and shopping features.

- **Advertising and Incentives.** Targeted Web page advertising and E-mail promotions, discounts and special offers, including advertising at affiliate sites.

- **Personal Attention.** Personal Web pages, personalized product recommendations, Web advertising, and E-mail notices, and interactive support for all customers.

- **Community Relationships.** Virtual communities of customers, suppliers, company representatives, and others via newsgroups, chat rooms, and links to related sites.

- **Security and Reliability.** Security of customer information and website transactions, trustworthy product information, and reliable order fulfillment.

Figure 5.13 Some of the key factors for success in E-commerce
In addition, a Web store has several key business requirements, including building and marketing a Web business, serving and supporting customers, and managing a Web store, as summarized in Figure 5.15.

**Developing a Web Store**

<table>
<thead>
<tr>
<th>Build</th>
<th>Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website design tools</td>
<td>Web page advertising</td>
</tr>
<tr>
<td>Site design templates</td>
<td>E-mail promotions</td>
</tr>
<tr>
<td>Custom design services</td>
<td>Web advertising exchanges with affiliate sites</td>
</tr>
<tr>
<td>Website hosting</td>
<td>Search engine registrations</td>
</tr>
</tbody>
</table>

**Serving Your Customers**

<table>
<thead>
<tr>
<th>Serve</th>
<th>Transact</th>
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</thead>
<tbody>
<tr>
<td>Personalized web pages</td>
<td>Flexible order process</td>
</tr>
<tr>
<td>Dynamic multimedia catalog</td>
<td>Credit card processing</td>
</tr>
<tr>
<td>Catalog search engine</td>
<td>Shipping and tax calculations</td>
</tr>
<tr>
<td>Integrated shopping cart</td>
<td>E-mail order notifications</td>
</tr>
</tbody>
</table>

**Managing a Web Store**

<table>
<thead>
<tr>
<th>Manage</th>
<th>Operate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website usage statistics</td>
<td>24x7 website hosting</td>
</tr>
<tr>
<td>Sales and inventory reports</td>
<td>Online tech support</td>
</tr>
<tr>
<td>Customer account management</td>
<td>Scalable network capacity</td>
</tr>
<tr>
<td>Links to accounting system</td>
<td>Redundant servers and power</td>
</tr>
</tbody>
</table>

**Support**

<table>
<thead>
<tr>
<th>Web site online help</th>
<th>Customer service E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Discussion groups and chat rooms</td>
</tr>
<tr>
<td></td>
<td>Links to related sites</td>
</tr>
</tbody>
</table>

**B2B E-Commerce.** Business-to-business applications of E-commerce involve electronic catalog, exchange, and auction marketplaces that use Internet, intranet, and extranet web sites and portals to unite buyers and sellers, as summarized in Figure 5.17 and illustrated in Figure 5.18. Many B2B E-commerce portals are developed and operated for a variety of industries by third-party market-maker companies called infomediaries, which may represent consortiums of major corporations. B2B E-commerce also includes applications like electronic data interchange, which automates the exchange of business documents on the Internet.

**E-Commerce Marketplaces**

- **One to many:** Sell-side marketplaces. Host one major supplier, who dictates product catalog offerings and prices. Examples: Cisco.com and Dell.com.
- **Many to one:** Buy-side marketplaces. Attract many suppliers that flock to these exchanges to bid on the business of a major buyer like GE or AT&T.
- **Some to many:** Distribution marketplaces. Unite major suppliers who combine their product catalogs to attract a larger audience of buyers. Examples: VerticalNet and Works.com.
- **Many to some:** Procurement marketplaces. Unite major buyers who combine their purchasing catalogs to attract more suppliers and thus more competition and lower prices. Examples: the auto industry’s Covisint and energy industry’s Pantellos.
- **Many to Many:** Auction marketplaces used by many buyers and sellers, which can create a variety of buyers’ or sellers’ auctions to dynamically optimize prices. Examples are eBay and FreeMarkets.

**Figure 5.15** The Web store requirements must be implemented by a company or its website hosting services, in order to develop a successful E-commerce business.

**Figure 17** Type of E-commerce Marketplaces.
Key Terms and Concepts

These are the key terms and concepts of this chapter

1. Clicks and bricks alternatives
2. E-commerce marketplaces
3. E-commerce success factors
4. E-commerce technologies
5. Electronic commerce
6. Electronic data interchange
7. Electronic funds transfer
8. Essential E-commerce processes
   a. Access control and security  b. Catalog management
   c. Collaboration and trading  d. Content management
   e. Electronic payment systems  f. Event notification
   g. Profiling and personalizing  h. Search management
   i. Workflow management
9. Infomediaries
10. Trends in E-commerce
11. Web store requirements
Review Quiz

Match one of the key terms and concepts listed previously with one of the brief examples or definitions that follow. Try to find the best fit for the answers that seem to fit more than one term or concept. Defend your choices.

1. The online process of developing, marketing, selling, delivering, servicing, and paying for products and services.
2. Business selling to consumers at retail Web stores is an example.
3. Using an E-commerce portal for auctions by business customers and their suppliers is an example.
4. Using an E-commerce website for auctions among consumers is an example.
5. E-commerce depends on the Internet and the World Wide Web, and on other networks of browser-equipped client/server systems and hypermedia databases.
6. E-commerce applications must implement several major categories of interrelated processes such as search management and catalog management.
7. Helps to establish mutual trust between you and an E-tailer at an E-commerce site.
8. Tracks your website behavior to provide you with an individualized Web store experience.
9. Develops, generates, delivers, and updates information to you at a website.
10. Ensures that proper E-commerce transactions, decisions, and activities are performed to better serve you.
11. Sends you an E-mail when what you ordered at an E-commerce site has been shipped.
12. Includes matchmaking, negotiation, and mediation processes among buyers and sellers.
13. Companies that serve as intermediaries in E-commerce transactions.
15. An E-commerce marketplace that may provide catalog, exchange, or auction service for businesses or consumers.
16. Buyers bidding for the business of a seller.
17. Marketplace for bid (buy) and ask (sell) transactions.
18. The most widely used type of marketplace in B2C E-commerce.
19. The exchange of business documents between the networked computers of business partners.
20. The processing of money and credit transfers between businesses and financial institutions.
21. Ways to provide efficient, convenient, and secure payments in E-commerce.
22. E-businesses are increasingly developing full service B2C and B2B E-commerce portals.
23. E-businesses can evaluate and choose from several E-commerce integration alternatives.
24. Successful E-tailers build customer satisfaction and loyalty in several key ways.
25. Successful E-commerce ventures must build, market, and manage their Web businesses while serving their customers.
Discussion Questions

1. Most businesses should engage in electronic commerce on the Internet. Do you agree or disagree with this statement? Explain your position.

2. Are you interested in owning, managing, or working for a business that is primarily engaged in electronic commerce on the Internet? Explain your position.

3. Refer to the Real World Case on eBay Inc. in the chapter. How could eBay's community commerce model be used to improve other companies' E-commerce ventures?

4. Why do you think there have been so many business failures among "dotcom" companies that were devoted only to retail E-commerce?

5. Do the E-commerce success factors listed in Figure 5.13 guarantee success for an E-commerce business venture? Give a few examples of what else could go wrong and how you would confront such challenges. 6. If personalizing a customer's website experience is a key success factor, then electronic profiling processes to track visitor website behavior are necessary. Do you agree or disagree with this statement? Explain your position.

7. All corporate procurement should be accomplished in E-commerce auction marketplaces, instead of using B2B websites that feature fixed-price catalogs or negotiated prices. Explain your position on this proposal.

8. Refer to the Real World Case on MathaStewart.com in the chapter. Do you agree that "Close-quarters, top level executive oversight is a key to success in all Web ventures?" Why or why not?

9. If you were starting an E-commerce Web store, which of the business requirements summarized in Figure 5.15 would you primarily do yourself, and which would you outsource to a Web development or hosting company? Why?

10. Which of the E-commerce clicks and bricks alternatives illustrated in Figure 5.22 would you recommend to Barnes & Noble? Amazon.com?, Wal-Mart? Any business? Explain your position.