Chapter 3

Achieving Competitive Advantage with Information Systems
• Demonstrate how Porter’s competitive forces model helps companies develop competitive strategies using information systems.

• Demonstrate how the value chain and value web models help businesses identify opportunities for strategic information systems applications.

• Assess how information systems help businesses use synergies, core competencies, and network-based strategies to achieve competitive advantage.
• Assess how competing on a global scale and promoting quality enhance competitive advantage.

• Evaluate the role of business process reengineering (BPR) in enhancing competitiveness.
Amazon.com: An Internet Giant Fine-Tunes Its Strategy

- **Problem**: Taking advantage of opportunities from new technology, staying ahead of power competitors.
- **Solutions**: Set up warehouse and distribution chain to sell on the Web and reduce costs.
- **Partnerships with other businesses, online storefront, and Web-based digital services** provide e-commerce services to other businesses and increase sales.
- **Demonstrates IT’s role in innovating and refining a business model.**
- **Illustrates digital technology’s role in gaining and maintaining a competitive advantage.**
Interactive Session: Amazon.com

- What other Web sites have you come across that utilize new technology to gain a competitive advantage in their particular industries?
- Compare and contrast the business strategy of one of these sites to Amazon’s strategy.
- How does the site use digital technology to sustain a competitive advantage?
- How innovative would you say Amazon is in comparison to eBay, Yahoo!, and Google?
Types of Competitive Advantage

- Barriers to entry that restrict supply
- Demand control
- Economies of scale
- Process efficiency
Porter’s Competitive Forces Model

- Traditional competitors
- New market entrants
- Substitute products and services
- Customers
- Suppliers
In Porter’s competitive forces model, the strategic position of the firm and its strategies are determined not only by competition with its traditional direct competitors but also by four forces in the industry’s environment: new market entrants, substitute products, customers, and suppliers.

**Figure 3-1**
Information System Strategies for Dealing with Competitive Forces

- Low-cost leadership
- Product differentiation
- Focus on market niche
- Strengthen customer and supplier intimacy
Cemex Turns a Commodity into a Global Brand

• Read the Focus on Technology and then discuss the following questions:
  • What is Cemex’s business strategy?
  • What challenges and problems does the company face?
  • What role do information systems play in Cemex’s strategy and business model?
  • How much do information systems help Cemex deal with its problems and compete in the industry?
Interactive Session: Cemex

• Discuss the role that the competitive forces model played in the transformation of Cemex.

• Discuss the concepts of market niche, customer intimacy, and supplier intimacy as they relate to Cemex’s growth with information systems.

• What business objectives does Cemex’s Web site (www.cemex.com) serve?
Southwest Airlines: New Strategy, New Systems

• Read the Focus on Organizations and then discuss the following questions:
  • What is Southwest Airlines’ business strategy?
  • How is Southwest dealing with the current problems plaguing the airline industry?
  • What role do information systems play in Southwest’s strategy and business model?
  • How much will information systems help Southwest deal with its problems and compete in the industry?
The Internet’s Impact on Competitive Advantage

• Enables new products and services
• Transforms industries
• Increases bargaining power of customers and suppliers
• Intensifies competitive rivalry
• Creates new opportunities for building brands and large customer bases
The Business Value Chain Model

- Highlights specific activities in a business where competitive strategies can best be applied and where information systems are likely to have a strategic impact
  - Primary activities
  - Support activities
  - Benchmarking
  - Best practices
This figure provides examples of systems for both primary and support activities of a firm and of its value partners that would add a margin of value to a firm's products or services.

**Figure 3-2**
Extending the Value Chain: The Value Web

- A firm’s value chain is linked to the value chains of its suppliers, distributors, and customers.

- A value web is a collection of independent firms that use information technology to coordinate their value chains to produce a product collectively.

- Value webs are flexible and adapt to changes in supply and demand.
The value web is a networked system that can synchronize the value chains of business partners within an industry to respond rapidly to changes in supply and demand.

Figure 3-3
Synergies, Core Competencies, and Network-Based Strategies

- Synergies
  - Information systems tie together disparate units so they act as a whole
- Enhancing core competencies
- Network-based strategies
  - Network economics
  - Virtual company
Firms that sell products on a global scale reach a much larger market.

Firms that produce on a global scale achieve extraordinary savings in labor costs:
  - The Internet and globalization
Global Business and System Strategies

- Scale economies and resource cost reduction
- Higher utilization rates, fixed capital costs, and lower cost per unit of production
- Speeding costs to market
- Transnational business organizations
What Is Quality?

- For the producer: conformance to specifications and absence of variation from specs
- For the customer: physical quality, quality of service, psychological quality
- Total quality management (TCM)
- Six sigma
How Information Systems Improve Quality

- Simplify the product and the production process
- Benchmarking
- Use customer demand to improve products and services
- Reduce cycle time
- Improve design quality and precision
- Improve production precision and tighten production tolerances
Business Process Reengineering

• Tasks are streamlined to eliminate repetitive and redundant work

• Mortgage banks have been great beneficiaries of BPR, achieving remarkable leaps forward in efficiency

• Workflow management facilitates streamlining tasks
Steps in Effective Reengineering

- Understanding what business processes need improvement
- Understanding how the improvements will help the firm execute its strategy
- Understanding and measuring the performance of existing processes
- Managing change