Chapter 1

Business Information Systems in Your Career
OBJECTIVES

• Explain why information systems are so essential in business today.

• Define an information system from both a technical and a business perspective, and distinguish between computer literacy and information systems literacy.

• Apply a four-step method for business problem solving to solve information system-related problems.
• Assess how information systems will affect business careers in accounting, finance, management, marketing, operations management, and information systems and identify the information systems skills and knowledge essential for all business careers.
• **Problem**: Declining revenue from traditional sales channels, declining customer base, increasing costs.

• **Solutions**: MLB Web sites and cell phone ticketing enable electronic ticketing and delivery of online information and games, which increase sales.

• **SAS customer analysis software and Web site tracking tools** help identify good sales prospects.

• Demonstrates IT’s role in reducing cost, opening new sales channels, and building community with customers.

• Illustrates the emerging digital firm landscape where businesses can use tools to analyze critical data.
Interactive Session: Major League Baseball

- Visit the Major League Baseball Web site at www.mlb.com
- Watch a video on the home page
- Subscribe to a free newsletter from the Fan Forum
- Find a jersey from your favorite team in the Shop
- Visit the Web site of your favorite MLB team
- How does having a central Web site run all team sites help MLB? How does it hurt?
- What business objectives does this Web site serve?
In 2005, more wireless phone accounts were opened than telephone land lines installed.

More than 35 million people receive their news online; 32 million Americans read blogs.

Internet advertising continues to grow at more than 30 percent per year.

New laws require businesses to store more data for longer periods.

Changes in business result in changes in jobs and careers.
Business Objectives of Information Systems

- Operational excellence
- New products, services, and business models
- Customer and supplier intimacy
- Improved decision making
- Competitive advantage
- Survival
Operational Excellence:

• Improved efficiency results in higher profitability

• Information systems and technologies help to improve higher levels of efficiency and productivity

• Wal-Mart is the champion of combining information systems and best business practices to achieve operational efficiency—and $285 billion in sales in 2005

• Wal-Mart is the most efficient store in the world as a result of digital links between its suppliers and stores
New products, services, and business models:

- Information systems and technologies enable firms to create new products, services, and business models
- A business model includes how a company produces, delivers, and sells its products and services
- The music industry has seen drastic changes in business models in recent years
- Apple has been very successful at introducing new products and adopting a new business model
Customer and supplier intimacy:

- Customers who are served well become repeat customers who purchase more.
- Close relationships with suppliers result in lower costs.
- The Mandarin Oriental in Manhattan uses information systems and technologies to foster an intimate relationship with its customers including keeping track of their preferences.
- JCPenney uses information systems to enhance its relationship with its supplier in Hong Kong.
Improved decision making:

- A company’s bottom line can be hurt by managers being swamped with data that are neither timely nor helpful, forcing them to use guesswork.
- Real-time data have improved the ability of managers to make decisions.
- Verizon uses a Web-based digital dashboard to update managers with real-time data on customer complaints, network performance, and line outages.
Competitive advantage:

• Achieving the previously mentioned business objectives often leads to competitive advantage

• Advantages over competitors include charging less for superior products, better performance, and better response to suppliers and customers

• Dell Computer is one of the best examples of establishing competitive advantage as the company has continued to be profitable during a time when PC prices have been falling steadily
Survival:

• Businesses may need to invest in information systems out of necessity

• Necessity arises from keeping up with competitors, such as when Citibank introduced ATMs

• Necessity also arises from federal and state regulations, such as the Toxic Substances Control Act and the Sarbanes-Oxley Act
Interactive Session: Business Objectives

In your experience, what firms have achieved:

- Operational excellence
- New products, services, and business models
- Customer and supplier intimacy
- Improved decision making
- Competitive advantage
- Survival

Did information systems and technologies play a role in these achievements?
What Is an Information System?

• Information technology is the hardware and software a business uses to achieve its objectives.

• An information system consists of components that support decision making and control, and help with analysis, visualization, and product creation.

• Information refers to data shaped into a meaningful and useful form.

• Data are streams of raw facts representing events and occurrences.
What Is an Information System?

Activities in an information system that produce information:

• Input
• Processing
• Output
• Feedback

Think of an information system you have experienced recently. Describe the inputs, processing, outputs, and feedback in the system.
Dimensions of Information Systems

- Information systems literacy vs. computer literacy
- Organizations
- People
- Technology
Using information systems effectively requires an understanding of the organization, people, and information technology shaping the systems. An information system provides a solution to important business problems or challenges facing the firm.

Figure 1-3
UPS Competes Globally with Information Technology

• Read the Focus on Technology and then discuss the following questions:
  • What are the inputs, processing, and outputs of UPS’s package tracking system?
  • What technologies are used?
  • How are these technologies related to UPS’s business strategy?
  • What problems do these technologies solve?
  • What would happen if these technologies were not available?
The Problem-Solving Approach

- Few business problems are simple or straightforward
- Most business problems involve a number of major factors that can be categorized as organization, technology, and people
A Model of the Problem-Solving Process

- Problem identification
- Solution design
- Choice
- Implementation
- Problem solving is a process, not an event
Problem Solving Is a Continuous Four-Step Process

During implementation and thereafter, the outcome must be continually measured and the information about how well the solution is working is fed back to the problem solvers. In this way, the identification of the problem can change over time, solutions can be changed, and new choices made, all based on experience.

Figure 1-4
The Role of Critical Thinking in Problem Solving

Four elements of critical thinking:

- Maintaining doubt and suspending judgment
- Being aware of different perspectives
- Testing alternatives and letting experience guide
- Being aware of organizational and personal limitations
The Connection Between Business Objectives, Problems, and Solutions

• When firms cannot achieve their business objectives, these objectives become challenges.

• Information systems often present solutions to these challenges.
• Success in today’s job market requires a broad set of skills

• Job candidates must have problem-solving skills as well as technical skills so that they can carry specific tasks

• The service sector will account for 95 percent of the new jobs that are created or open up by 2012
How Information Systems Will Affect Business Careers

- Accounting
- Finance
- Marketing
- Operations Management in Services and Manufacturing
- Information Systems
  - Outsourcing
A Top Information Manager Puts Business Before Technology

- Read the Focus on People and then discuss the following questions:
  - What problems and challenges does Sonic face?
  - How is it trying to solve these problems?
  - What alternative solutions are available?
  - Is CIO Mitchell Gregory a good problem solver for this company?
  - Why or why not?
Interactive Session: Sonic Corporation

• Visit Sonic’s Web site at www.sonicdrivein.com
• How does Sonic’s Web site enhance its business?
• Who is the target audience of the Web site? Is there more than one target audience?
• What would make the Web site better?
• How does Sonic’s Web site compare to the sites of its competitors, such as McDonald’s, Burger King, Wendy’s, Checkers, and Jack in the Box?