



The Role of Information Systems in Business Today

- **How information systems are transforming business**
 - Increase in wireless technology use, Web sites
 - Increased business use of Web 2.0 technologies
 - Cloud computing, mobile digital platform allow more distributed work, decision-making, and collaboration
- **Globalization opportunities**
 - Internet has drastically reduced costs of operating on global scale
 - Presents both challenges and opportunities



The Role of Information Systems in Business Today

- **In the emerging, fully digital firm**
 - Significant business relationships are digitally enabled and mediated
 - Core business processes are accomplished through digital networks
 - Key corporate assets are managed digitally
- **Digital firms offer greater flexibility in organization and management**
 - Time shifting, space shifting



Management Information Systems

CHAPTER 1: INFORMATION IN BUSINESS SYSTEMS TODAY

The Role of Information Systems in Business Today

MIS IN YOUR POCKET

Read the Interactive Session and discuss the following questions

- **What are the advantages of using mobile handheld devices? What are the disadvantages?**
- **What features are needed in a mobile to make it a business solution?**
- **What business functions can be performed by using handhelds alone? How have other companies utilized handhelds?**



Management Information Systems

CHAPTER 1: INFORMATION IN BUSINESS SYSTEMS TODAY

The Role of Information Systems in Business Today

- **Growing interdependence between ability to use information technology and ability to implement corporate strategies and achieve corporate goals**
- **Business firms invest heavily in information systems to achieve six strategic business objectives:**
 1. Operational excellence
 2. New products, services, and business models
 3. Customer and supplier intimacy
 4. Improved decision making
 5. Competitive advantage
 6. Survival



The Role of Information Systems in Business Today

- **Operational excellence:**
 - Improvement of efficiency to attain higher profitability
- **New products, services, and business models:**
 - Enabled by technology
- **Customer and supplier intimacy:**
 - Serving customers raises revenues and profits
 - Better communication with suppliers lowers costs
- **Improved decision making**
 - More accurate data leads to better decisions



The Role of Information Systems in Business Today

- **Competitive advantage**
 - Delivering better performance
 - Charging less for superior products
 - Responding to customers and suppliers in real time
 - Examples: Apple, Walmart, UPS



The Role of Information Systems in Business Today

- **Survival**

- Information technologies as necessity of business

- May be:

- Industry-level changes, e.g. Citibank's introduction of ATMs

- Governmental regulations requiring record-keeping

- Examples: Toxic Substances Control Act, Sarbanes-Oxley Act



Perspectives on Information Systems

- **Information system:**
 - Set of interrelated components
 - Collect, process, store, and distribute information
 - Support decision making, coordination, and control
- **Information vs. data**
 - Data are streams of raw facts
 - Information is data shaped into meaningful form



Perspectives on Information Systems

- **Three activities of information systems produce information organizations need**
 1. **Input:** Captures raw data from organization or external environment
 2. **Processing:** Converts raw data into meaningful form
 3. **Output:** Transfers processed information to people or activities that use it



Perspectives on Information Systems

- **Feedback:**
 - Output returned to appropriate members of organization to help evaluate or correct input stage
- **Computer/Computer program vs. information system**
 - Computers and software are technical foundation and tools, similar to the material and tools used to build a house



Perspectives on Information Systems

- **Organizational dimension of information systems**
 - **Hierarchy of authority, responsibility**
 - Senior management
 - Middle management
 - Operational management
 - Knowledge workers
 - Data workers
 - Production or service workers



Perspectives on Information Systems

- **Organizational dimension of information systems (cont.)**
 - **Separation of business functions**
 - Sales and marketing
 - Human resources
 - Finance and accounting
 - Manufacturing and production
 - **Unique business processes**
 - **Unique business culture**
 - **Organizational politics**



Perspectives on Information Systems

- **Management dimension of information systems**
 - Managers set organizational strategy for responding to business challenges
 - In addition, managers must act creatively:
 - Creation of new products and services
 - Occasionally re-creating the organization



Perspectives on Information Systems

- **Investing in information technology does not guarantee good returns**
- **Considerable variation in the returns firms receive from systems investments**
- **Factors:**
 - **Adopting the right business model**
 - **Investing in complementary assets (organizational and management capital)**



Perspectives on Information Systems

- **Complementary assets include:**
 - **Organizational assets, e.g.**
 - Appropriate business model
 - Efficient business processes
 - **Managerial assets, e.g.**
 - Incentives for management innovation
 - Teamwork and collaborative work environments
 - **Social assets, e.g.**
 - The Internet and telecommunications infrastructure
 - Technology standards



Contemporary Approaches to Information Systems

- **Technical approach**
 - Emphasizes mathematically based models
 - Computer science, management science, operations research
- **Behavioral approach**
 - Behavioral issues (strategic business integration, implementation, etc.)
 - Psychology, economics, sociology



Contemporary Approaches to Information Systems

- **Management Information Systems**
 - Combines computer science, management science, operations research and practical orientation with behavioral issues
- **Four main actors**
 - Suppliers of hardware and software
 - Business firms
 - Managers and employees
 - Firm's environment (legal, social, cultural context)