Chapter 1
Information Systems in Global Business Today

Student Learning Objectives

1. How are information systems transforming business and why are they so essential for running and managing a business today?
2. What is an information system? How does it work? What are its management, organization, and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations?
3. What academic disciplines are used to study information systems and how does each contribute to an understanding of information systems?

Learning Catalytics is a "bring your own device" student engagement, assessment, and classroom intelligence system. It allows instructors to engage students in class with real-time diagnostics. Students can use any modern, Web-enabled device (smartphone, tablet, or laptop) to access it. For more information on using Learning Catalytics in your course, contact your Pearson Representative.

Key Terms

The following alphabetical list identifies the key terms discussed in this chapter. The page number for each key term is provided.

Business functions, 19
Business model, 14
Business processes, 19
Complementary assets, 27
Computer hardware, 21
Computer literacy, 18
Computer software, 21
Culture, 20
Data, 16
Data management technology, 21
Data workers, 19
Digital firm, 12
Extranets, 22
Feedback, 18
Information, 16
Information technology (IT) infrastructure, 22
Input, 16
Internet, 21
Intranets, 22
Knowledge workers, 21
Management information systems (MIS), 18
Middle management, 19
Network, 21
Networking and telecommunications technology, 21
Operational management, 19
Organizational and management capital, 28
Output, 17
Processing, 17
Production or service workers, 21
Senior management, 21

Teaching Suggestions

You are probably meeting in the first class session to introduce yourself, the course, and to meet the students. It is good to get to the classroom early and meet the students as they come in. Learn a few names as the students enter.

After going over any requirements you may have for the course, try to give an overview of the course stressing that this is not a technical course. Usually, you can't do enough to put nontechnical types at ease.

The opening case, "Rugby Football Union Tries Big Data," shows students that even the sports industry has embraced technology as a way to increase fan engagement. Students will become familiar with the idea that many different kinds of businesses have had to change the way they operate, even sports clubs.

The IBM TryTracker uses predictive analytics to track three categories of data: keys to the game, momentum, and key players. Traditional rugby statistics on team and individual performance as well as live text commentary complement the TryTracker data. The keys to the game are determined ahead of a specific contest by analyzing a historical database of past matchups between a pair. Fans can use their mobile devices to keep track of how their favorite team is faring, concentrating on game elements that will increase its winning chances. Key players for each team are selected after the game by comparing a single score compiled using different criteria for each position.

The RFU hopes that as their understanding of game mechanics and emotional investment in what their team needs to do in order to prevail grows, casual fans will become dedicated fans who return again and again. Beyond marketing strategy, the long-term potential of predictive analysis is that it may provide tactical insights to players and coaches.

Section 1.1, "How are information systems transforming business and why are they so essential for running and managing a business today?" gives students a feel for the importance of information systems in business today and how they have transformed businesses on the world stage. A good discussion of the six important business objectives outlined in this section allows the instructor and students to discuss why businesses have become so dependent on information systems today and the importance of these systems for the survival of a firm. Stress to students that information systems are not a luxury. In most businesses they are the core to survival. This would be a good time to ask students to discuss how their own schools are using information systems to enhance their product offering.

Table 1.1 is a great way to introduce students to much of the new IT jargon that has developed over the last several years. Most of the technologies will be discussed in future chapters. Ask students how much hands-on experience they've had with some of the new business tools as either an employee or a customer.

Globalization is affecting virtually every country in the world. The most striking evidence of this trend is the increasing presence of cell phones in the very small villages of Africa. As technology becomes more pervasive and, in some cases easier to use, globalization will continue its steady march. China, Singapore, and Russia are good examples of how globalization has flattened the world. They have become major exporters to other countries, especially industrialized and advanced countries such as the United States and many European countries. Emerging countries, such as Poland, the Ukraine, and Ireland, are excellent examples of increasing globalization.

Ask students to provide examples of truly digital firms (Cisco Systems and Dell Computers) as opposed to those businesses (local mom-and-pop stores or a local doctor's office) that still perform many business processes outside of integrated information systems.

Review the six strategic business objectives: operational excellence; new products, services, and business models; customer and supplier intimacy; improved decision making; competitive advantage; and survival. The rest of the text will continually refer back to these six objectives as reasons why firms should incorporate and integrate business processes with information systems.

Interactive Session: Management: Meet the New Mobile Workers

Case Study Questions

1. **What kinds of applications are described here? What business functions do they support? How do they improve operational efficiency and decision making?**

E-mail, messaging, social networking, and salesforce management are described in this case study. The applications support business functions including collaboration, location-based services, and communications with colleagues. These applications improve operational efficiency and decision making by allowing people to communicate from wherever they are. They are no longer tethered to one place or one machine. They can receive information and data instantaneously which allows them to make better, faster decisions.

PepsiCo uses handheld computing devices to move its products from manufacturing and warehouse facilities onto trucks and then into stores. Merchandisers are immediately notified when a driver has arrived at a store thanks to custom in-house apps created for iPhones. PepsiCo managers use iPads with custom applications to monitor their teams' performance, pull up pricing, planograms, and contracts. Territory sales managers now have electronic versions of all the paperwork and resources they need to manage their

teams. Managers also have instant access to their Web-based SharePoint content, including pricing, display planograms, customer development agreements, or new contracts.

2. Identify the problems that businesses in this case study solved by using mobile digital devices.

McClendon's Select organic family-run farm uses iPads to monitor and record all of its operations. A wireless camera is mounted on tractors to ensure crop rows are as straight as possible. The farm's planting manager no longer needs to leave the field to handle the careful record-keeping required to maintain an organic certification. A Web-based management system helps the manager update records of seed types and where and when they're planted.

Before all the technology was incorporated into the farm's operations, orders were handwritten on a white board, a process that was too time-consuming, error-prone, and costly. Orders are now wirelessly printed for the produce pickers. The inventory is added to the information system via iPads. When orders are loaded on trucks for deliveries, entries on an iPad replace a manual process that used to take 30 to 45 minutes.

PepsiCo drivers and merchandisers picked up printed schedules order quantities and tasks to be performed at each outlet at the beginning of the day. That made it very difficult to accommodate last-minute changes in orders because communicating with the delivery drivers was difficult when they were on the road. Merchandisers did not have access to timecards, schedules, store details, account profiles, and everything needed to service a store. Now, because all that information is available through iPhone apps, the merchandiser has everything he needs at the touch of a finger.

At PepsiCo's rival Coca-Cola Enterprises, much of the data and information needed was also in written form. After a technician visited a customer, he would transfer information from paper notes into a database on his laptop and transmit it to Coca-Cola's aging centralized software system. That caused many technicians to spend an extra half-hour a day on the job. A new system cut the administrative time by a third, freeing up employees to service other companies' equipment in addition to their own.

3. What kinds of businesses are most likely to benefit from equipping their employees with mobile digital devices such as iPhones and iPads?

Any business with a need to communicate with customers, suppliers, and business colleagues can benefit from equipping employees with mobile digital devices.

Student answers will vary as they relate their own experiences and knowledge of using mobile digital devices. Try to encourage the students' creativity and imagination with this question. Here are a couple examples:

Insurance companies: claims adjusters or agents writing new policies or updating old ones can take pictures of property as-is or that's been damaged, update data on the condition of a property, and document property damage for claims processing.

Real estate agents: can take pictures of homes for sale and send to prospective buyers, send information to other agents or prospective buyers and sellers, answer questions and complete documents related to buying and selling property.

Winemakers: can receive up-to-date weather forecasts, track crop information via GPS coordinates, store and access data on crop varieties for later analysis, track employee productivity during harvest time, take pictures of crops to include in a database, and communicate with suppliers and customers.

4. **One company deploying iPhones has said, "The iPhone is not a game changer, it's an industry changer. It changes the way that you can interact with your customers and with your suppliers." Discuss the implications of this statement.**

First and foremost, those that effectively and efficiently deploy mobile digital device technology gain a huge competitive advantage over those who do not use the technology to stay in constant touch with customers and suppliers. Sales and marketing can take a hit by not having access to information that can close business deals faster and more efficiently. Costs can increase without the ability to contact suppliers and track product shipments, especially for those companies who use just-in-time supply chains.

Section 1.2, "What is an information system? How does it work? What are its management, organization, and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations?" gives students the facts and definitions that underpin information systems and allow students to knowledgeably discuss information systems. Students do not need the knowledge of a technical person, but they do need to understand the role of information technology and how it must support the organization's business strategy. They must also understand how information technology can be used to help transform a business. Note that the chapter's definitions and terms help prepare students to discuss information systems as an intricate part of business systems. Encourage students to see that technology is subordinate to the organization and its purposes.

This is also a good place to reinforce the differences between information systems literacy and computer literacy. When asked to describe company information systems, students often depict information systems in terms of technology. It is important to stress that information systems are more than just technology, and that they have management, organization, and technology dimensions. Figure 1.5 and the diagram at the beginning of the chapter (page 5) can be used to illustrate this point.

Ask students why some companies can achieve much better results using information systems whereas others cannot. That will help them understand the concept of complementary assets and show that there is much more to building a digital firm than

simply buying the latest, greatest hardware and software. It will also help them understand the delicate relationship between technology, management, and organizations assets.

Interactive Session: Technology: UPS Competes Globally with Information Technology

Case Study Questions

1. **What are the inputs, processing, and outputs of UPS's package tracking system?**

   Inputs: The inputs include package information, customer signature, pickup, delivery, time-card data, current location (while en route), and billing and customer clearance documentation.

   Processing: The data are transmitted to a central computer and stored for retrieval. Data are also reorganized so that they can be tracked by customer account, date, driver, and other criteria.

   Outputs: The outputs include pickup and delivery times, location while en route, and package recipient. The outputs also include various reports, such as all packages for a specific account or a specific driver or route, as well as summary reports for management.

2. **What technologies are used by UPS? How are these technologies related to UPS's business strategy?**

   Technologies include handheld computers (DIADs), barcode scanning systems, wired and wireless communications networks, desktop computers, UPS's central computer (large mainframe computers), and storage technology for the package delivery data. UPS also uses telecommunication technologies for transmitting data through pagers and cellular phone networks. The company uses in-house software for tracking packages, calculating fees, maintaining customer accounts, and managing logistics, as well as software to access the World Wide Web.

   UPS has used the same strategy for more than 90 years. Its strategy is to provide the "best service and lowest rates." One of the most visible aspects of technology is the customer's ability to track his/her package via the UPS Web site. However, technology also enables data to seamlessly flow throughout UPS and helps streamline the workflow at UPS. Thus, the technology described in the scenario enables UPS to be more competitive, efficient, and profitable. The result is an information system solution to the business challenge of providing a high level of service with low prices in the face of mounting competition.

3. **What strategic business objectives do UPS's information systems address?**

- **Operational excellence:** UPS has maintained leadership in small-package delivery services despite stiff competition from FedEx and the U.S. Postal System by investing heavily in advanced information technology.

- **New products, services, and business models:** In June 2009 UPS launched a new Web-based Post Sales Order Management System (OMS) that manages global service orders and inventory for critical parts fulfillment. The system enables high-tech electronics, aerospace, medical equipment, and other companies anywhere in the world that ship critical parts to quickly assess their critical parts inventory, determine the most optimal routing strategy to meet customer needs, place orders online, and track parts from the warehouse to the end user.

- **Customer and supplier intimacy:** Customers can download and print their own labels using special software provided by UPS or by accessing the UPS Web site. UPS spends more than $1 billion each year to maintain a high level of customer service while keeping costs low and streamlining its overall operations.

- **Improved decision making:** Special software creates the most efficient delivery route for each driver that considers traffic, weather conditions, and the location of each stop. UPS estimates its delivery trucks save 28 million miles and burn 3 million fewer gallons of fuel each year as a result of using this technology. To further increase cost savings and safety, drivers are trained to use "340 Methods" developed by industrial engineers to optimize the performance of every task from lifting and loading boxes to selecting a package from a shelf in the truck.

- **Competitive advantage:** UPS is leveraging its decades of expertise managing its own global delivery network to manage logistics and supply chain activities for other companies. Its Supply Chain Solutions division provides a complete bundle of standardized services to subscribing companies at a fraction of what it would cost to build their won systems and infrastructure.

4. What would happen if UPS's information systems were not available?

Arguably, UPS might not be able to compete effectively without technology. If the technology were not available, then UPS would, as it has through most of its history, attempt to provide that information to its customers, but at higher prices. From the customers' perspective, these technologies provide value because they help customers complete their tasks more efficiently. Customers view UPS's technology as value-added services as opposed to increasing the cost of sending packages.

Section 1.3, "What academic disciplines are used to study information systems and how does each contribute to an understanding of information systems?"

Too often, information systems are thought to be all about hardware and software. Issues that focus on human behavioral aspects of information systems are overlooked or

minimized. That can lead to disaster. Figure 1.9 (page 29) may help you explain contemporary approaches to information systems.

After contrasting the technical and behavioral approaches, you should stress to your students that the sociotechnical approach does not ignore the technical, but considers it as a part of the organization.

Review Questions

1-1 How are information systems transforming business and why are they so essential for running and managing a business today?

Describe how information systems have changed the way businesses operate and their products and services.

Wireless communications, including computers and mobile handheld computing devices, are keeping managers, employees, customers, suppliers, and business partners connected in every way possible. E-mail, online conferencing, the Web, and the Internet, are providing new and diverse lines of communication for all businesses, large and small. Through increased communication channels and decreased costs of the communications, customers are demanding more of businesses in terms of service and product, at lower costs. E-commerce is changing the way businesses must attract and respond to customers. (Learning Objective 1.1: How are information systems transforming business and why are they so essential for running and managing a business today? AACSB: Application of knowledge.)

Describe the business impact of cloud computing, Big Data, and the mobile platform.

The cloud computing platform has emerged as a major business area of innovation and has begun to be used for tasks traditionally performed on corporate computers, with many business applications now being delivered online as an Internet service (Software as a Service, or Saas). Big Data has enabled businesses to derive insights from the huge volumes of data generated by Web traffic, e-mail messages, social media content and machines (sensors). The mobile platform has enabled a growing number of people to work away from the traditional office and provides access to hundreds of thousands of applications that support collaboration, location-based services, and communication with colleagues on various mobile devices, such as wireless laptops, smartphones, and tablet computers. (Learning Objective 1.1: How are information systems transforming business and why are they so essential for running and managing a business today? AACSB: Application of knowledge.)

Describe the characteristics of a digital firm.

- Significant business relationships with customers, suppliers, and employees are digitally enabled and mediated.

- Core business processes are accomplished through digital networks spanning the entire organization or linking multiple organizations.
- Key corporate assets—intellectual property, core competencies, and financial and human assets—are managed through digital means.
- They sense and respond to their environments far more rapidly than traditional firms.
- They offer extraordinary opportunities for more flexible global organization and management, practicing time-shifting and space-shifting. (Learning Objective 1.1: How are information systems transforming business and why are they so essential for running and managing a business today? AACSB: Application of knowledge.)

Explain what globalization has to do with management information systems.

Globalization has had a significant impact on management information systems. For instance, the emergence of the Internet has drastically reduced the costs of operating and transaction on a global scale. Customers can now shop in a worldwide marketplace, obtaining price and quality information reliably 24 hours a day. Firms producing goods and services on a global scale achieve extraordinary cost reductions by finding low-cost suppliers and managing production facilities in other countries. Internet service firms such as Google and eBay are able to replicate their business models and services in multiple countries without having to redesign their expensive fixed-cost information systems infrastructure. (Learning Objective 1.1: How are information systems transforming business and why are they so essential for running and managing a business today? AACSB: Application of knowledge.)

List and describe six reasons why information systems are so important for business today.

Six reasons why information systems are so important for business today include:

(1) Operational excellence
(2) New products, services, and business models
(3) Customer and supplier intimacy
(4) Improved decision making
(5) Competitive advantage
(6) Survival

Information systems are the foundation for conducting business today. In many industries, survival and even existence without extensive use of IT is inconceivable, and IT plays a critical role in increasing productivity. Although information technology has become more of a commodity, when coupled with complementary changes in organization and management, it can provide the foundation for new products, services, and ways of conducting business that provide firms with a strategic advantage. (Learning Objective 1.1: How are information systems

transforming business and why are they so essential for running and managing a business today? AACSB: Application of knowledge.)

1-2 What is an information system? How does it work? What are its management, organization and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations?

Define an information system and describe the activities it performs.

An information system is a set of interrelated components that work together to collect, process, store, and disseminate information to support decision making, coordination, control, analysis, and visualization in an organization. In addition to supporting decision making, information systems may also help managers and workers analyze problems, visualize complex subjects, and create new products. (Learning Objective 1.2: What is an information system? How does it work? What are its management, organization and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations? AACSB: Application of knowledge.)

List and describe the organizational, management, and technology dimensions of information systems.

- **Organization:** The organization dimension of information systems involves issues such as the organization's hierarchy, functional specialties, business processes, culture, and political interest groups.
- **Management:** The management dimension of information systems involves setting organizational strategies, allocating human and financial resources, creating new products and services, and re-creating the organization if necessary.
- **Technology:** The technology dimension consists of computer hardware, software, data management technology, and networking/telecommunications technology. (Learning Objective 1.2: What is an information system? How does it work? What are its management, organization and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations? AACSB: Application of knowledge.)

Distinguish between information technology and an information system.

- Information technology (IT) consists of all the hardware and software that a firm needs to use in order to achieve its business objectives.
- An information system can be defined technically as a set of interrelated components that collect (or retrieve), process, store, and distribute information to support decision making and control in an organization.. (Learning Objective 1.2: What is an information system? How does it work? What are

its management, organization and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations? AACSB: Analytical thinking.)

Explain how the Internet and the World Wide Web are related to the other technology components of information systems.

The Internet and World Wide Web have had a tremendous impact on the role that information systems play in organizations. These two tools are responsible for the increased connectivity and collaboration within and outside the organization. The Internet, World Wide Web, and other technologies have led to the redesign and reshaping of organizations. They have helped transform the organization's structure, scope of operations, reporting and control mechanisms, work practices, work flows, and products and services. (Learning Objective 1.2: What is an information system? How does it work? What are its management, organization and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations? AACSB: Analytical thinking.)

Define complementary assets and describe their relationship to information technology.

Complementary assets are those assets required to derive value from a primary investment. Firms must rely on supportive values, structures, and behavior patterns to obtain a greater value from their IT investments. Value must be added through complementary assets such as new business processes, management behavior, organizational culture, and training. (Learning Objective 1.2: What is an information system? How does it work? What are its management, organization and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations? AACSB: Application of knowledge.)

Describe the complementary social, managerial, and organizational assets required to optimize returns from information technology investments.

Table 1.3 lists the complementary social, managerial, and organization assets required to optimize returns from information technology investments. Here are a few of them:

Organizational assets:

- Supportive culture that values efficiency and effectiveness
- Appropriate business model
- Efficient business processes
- Decentralized authority

Managerial assets:

- Strong senior management support for technology investment and change

- Incentives for management innovation
- Teamwork and collaborative work environments

Social assets:

- The Internet and telecommunications infrastructure
- IT-enriched educational programs raising labor force computer literacy
- Standards (both government and private sector) (Learning Objective 1.2: What is an information system? How does it work? What are its management, organization and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations? AACSB: Application of knowledge.)

1-3 What academic disciplines are used to study information systems and how does each contribute to an understanding of information systems?

List and describe each discipline that contributes to a technical approach to information systems.

A technical approach to information systems emphasizes mathematically-based models to study information systems and the physical technology and formal capabilities of information systems. Students should know the differences between computer science (theories of computability, computation methods, and data storage and access methods), management science (development of models for decision making and managerial practice), and operations research (mathematical techniques for optimizing organizational parameters such as transportation, inventory control, and transaction costs). (Learning Objective 1.3: What academic disciplines are used to study information systems and how does each contribute to an understanding of information systems? AACSB: Application of knowledge.)

List and describe each discipline that contributes to a behavioral approach to information systems.

A behavioral approach to information systems focuses on questions such as strategic business integration, behavioral problems of systems utilization, system design and implementation, social and organizational impacts of information systems, political impacts of information systems, and individual responses to information systems. Solutions to problems created by information technology are primarily changes in attitudes, management, organizational policy, and behavior. (Learning Objective 1.3: What academic disciplines are used to study information systems and how does each contribute to an understanding of information systems? AACSB: Application of knowledge.)

Describe the sociotechnical perspective on information systems.

A sociotechnical perspective combines the technical approach and behavioral approach to achieve optimal organizational performance. Technology must be

changed and designed to fit organizational and individual needs and not the other way around. Organizations and individuals must also change through training, learning, and allowing technology to operate and prosper. (Learning Objective 1.3: What academic disciplines are used to study information systems and how does each contribute to an understanding of information systems? AACSB: Application of knowledge.)

Discussion Questions

1-4 Information systems are too important to be left to computer specialists. Do you agree? Why or why not?

Student answers to this question will vary.

1-5 If you were setting up the Web site for a rugby team, what management, organization, and technology issues might you encounter?

Student answers to this question will vary.

1-6 How have federal and state statutes and regulations impacted the use of information systems?

Student answers to this question will vary.

Hands-On MIS Projects

This section gives students an opportunity to analyze real world information systems needs and requirements. It provides several exercises you can use to determine if students are grasping the material in the chapter.

Management Decision Problems

1-7 Warbenton Snack Foods: The financial department uses spreadsheets and manual processes for much of its data gathering and reporting. Assess the impact of this situation on business performance and management decision making.

- Data entry errors from repetitive entry
- No information available on-demand
- Late reporting of critical decision-making information
- Time consuming

(Learning Objective 1.2: What is an information system? How does it work? What are its management, organization and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations? AACSB: Analytical thinking.)

1-8 Rabatt: Wants to keep costs as low as possible so it does not use an automated method for keeping track of inventory at each store. What decisions have to be made before investing in an information system solution?

- Determine business problems—mismanagement of inventory, too little or too much inventory, no ability to track inventory.
- Lack of an information system to manage inventory is actually increasing costs rather than decreasing them.
- What is the exact problem the company wants to solve—reduce costs.

(Learning Objective 1.1: How are information systems transforming business and why are they so essential for running and managing a business today? AACSB: Analytical thinking, Application of knowledge.)

Improving Decision Making: Using Databases to Analyze Sales Trends:

Software skills: Database querying and reporting
Business skills: Sales Trend Analysis

1-9 This exercise helps students understand how they can use database software to produce valuable information from raw data. The solutions provided here were created using the query wizard and report wizard capabilities of Microsoft Access. Students can, of course, create more sophisticated reports if they wish, but most information can be obtained from simple query and reporting functions. The main challenge is to get students to ask the right questions about the information.

- **Which products should be restocked?**
- **Which stores and sales regions would benefit from a promotional campaign and additional marketing?**
- **Which times of the year should products be offered at full price?**
- **Which times of the year should products be discounted?**

The answers to these questions can be found in the Microsoft Access File named: MIS14ch01_solutionfile.mdb

(Learning Objective 1.2: What is an information system? How does it work? What are its management, organization and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations? AACSB: Analytical thinking.)

Improving Decision Making: Using the Internet to Locate Jobs Requiring Information Systems Knowledge

Software skills: Internet-based software
Business skills: Job searching

1-10 In addition to having students research jobs in their chosen career field, it may be quite interesting to have them research jobs in other career fields so they can see that virtually every job and/or career requires information systems skills.

(Learning Objective 1.3: What academic disciplines are used to study information systems and how does each contribute to an understanding of information systems? AACSB: Written and oral communication, Analytical thinking, Reflective thinking, Application of knowledge.)

Collaboration and Teamwork Project

1-11 In MyMISLab, you will find a Collaboration and Teamwork Project dealing with the concepts in this chapter. You will be able to use Google Drive, Google Docs, Google Sites, Google +, or other open source collaboration tools to complete the assignment.

Case Study: *Mashaweer: Online Personal Services in the Gulf*

1-12 What kinds of information systems are described in this case? What business functions do they support?

There are a number of information systems in this case—Mashaweer server, Mashaweer API, Mashaweer PDA. They support the ordering, operations, sales, and control functions. (Students can explain the details of each information system in different ways.) (Learning Objective 1.1: How are information systems transforming business and why are they so essential for running and managing a business today? AACSB: Analytical thinking, reflective thinking.)

1-13 What are the benefits from equipping Mashaweer riders with PDAs?

PDAs play a crucial role in helping the rider to reach the customer destination, and to follow instructions one by one. This results in offering high-quality and reliable service. PDAs also play an important role in controlling the riders and helping them to overcome any problem that may occur. PDAs help Mashaweer to sustain its competitive advantage and accomplish its strategic objective of offering a personal assistant at anytime, anywhere. (Learning Objective 1.2: What is an information system? How does it work? What are its management, organization, and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations? AACSB: Analytical thinking, reflective thinking, Application of knowledge.)

1-14 Was it a good decision to expand the business to Cairo? What are the implications of information systems?

(Student answers may vary. This sample answer supports the decision.) Mashaweer chose the right time to enter Cairo during the recession period after the January Revolution. Because business all over the country had come to a standstill, several large purchases were made for fractions of the standard price. Second, the founders increased the original investment so that the company could grow large enough to capture the market in Cairo. Third, Mashaweer did not rely on outsourcing, such as in the creation of Innov8 in order to build its system and take over its technical work. As a result, Mashaweer could reduce cost and ensure quality. (Learning Objective 1.2: What is an information system? How does it work? What are its management, organization, and technology components and why are complementary assets essential for ensuring that information systems provide genuine value for organizations? AACSB: Analytical thinking, reflective thinking, Application of knowledge.)

1-15 Do you think that Mashaweer will be able to accomplish its future strategy and sustain its market share?

Mashaweer's market share was 100% at the beginning because it was the first personal service company in Egypt to offer personal assistant services 24 hours a day. But after its success in Alexandria, copycat competitor Wassaly sprang up in Cairo. And perhaps other competitors will enter the market if they see an opportunity. This will lead to change the market share in Egypt. For its future strategy of expansion outside Egypt, the franchising system in the Gulf area offers opportunities for further success. Mashaweer has the capabilities (hardware, software, and human resources), and it is a leader and a first mover in this industry. Another of its competencies is its CEO, a successful and innovative entrepreneur. (Learning Objective 1.1: How are information systems transforming business and why are they so essential for running and managing a business today? AACSB: Analytical thinking, reflective thinking, Application of knowledge.)

1-16 Do you think in near future, the competition between Mashaweer and Wassaly will be aggressive? Why?

Although both companies are in the same industry, targeting the same-day delivery objective, Mashaweer has several advantages. First, it invested heavily in information systems, financed by raising the investment capital from US$15,000 to US$1.67 million. It created its own IT company, Innov8, which in turn created a customized ERP system in which customized PDAs are connected through the cloud for all aspects of order management. Its API is a method of integrating the Mashaweer ordering system with third parties. As a result, the company is able to cover the greater Cairo area with high-service quality offered at a low price.

1-17 What are the strategic objectives that firms try to achieve by investing in information systems and technologies? For each strategic objective, give an example of how a firm could use information systems to achieve the objective.

Visit MyMISLab for suggested answers.

1-18 Describe the complementary assets that firms need in order to optimize returns from their information system investments. For each type of complementary asset, give an example of a specific asset a firm should have.

Visit MyMISLab for suggested answers.

For an example illustrating the concepts found in this chapter, view the videos in mymislab.com.