Chapter 2: Organizational Strategy, Competitive Advantage, and Information Systems

Chapter Outline

2.1 Business Processes
2.2 Business Process Reengineering, Business Process Improvement, and Business Process Management
2.3 Business Pressures, Organizational Responses, and Information Technology Support
2.4 Competitive Advantage and Strategic Information Systems

Learning Objectives

1. Discuss ways in which information systems enable cross-functional business processes and business processes for a single functional area.
2. Differentiate among business process reengineering, business process improvement, and business process management.
3. Identify effective IT responses to different kinds of business pressures.
4. Describe the strategies that organizations typically adopt to counter Porter's five competitive forces.

Teaching Tips and Strategies

In this chapter, the student is introduced to the basic concepts of information systems in the organization and we explore how businesses use information systems in every facet of their operations.

The role of information systems in helping a company to obtain and maintain a competitive edge is explained.Examples of failed IS efforts are given.It is very important for students to make the connection between information systems and a company's success.Mentioning that companies have failed when they do not keep state of the art information systems is a point that helps to get the student's attention.

One way to exemplify this is to illustrate how universal Information Technology is in companies today.Students will work with companies that utilize a variety of technologies at various levels of the organization. Instructors might want to open the lecture with a class discussion about the universal use of information technologies in many aspects of American life. Some examples are:

- ATM machines and banks in general
- Grocery store checkout line cash registers with bar code scanners and the ability to use bank cards and credit cards for purchases

- Educational institutions rely on IT. The registrar's office, financial aid office and the library are just a few examples

You might want to explain to students that your University/College uses information technology in different ways.Use examples of how the office that handles registration/grades is on a different network, because this helps limit the number of users that can modify grades or view students' records.A discussion could be introduced regarding computer labs and how and when they are used.

By utilizing a network, the school saves money and has the ability to control what information or programs students and faculty members can access.One method companies have used to manage information through the use of IT is to limit access.For example in most organizations, each user has a pass code and linked to that pass code is a level of security clearance which limits what information the employee can access.That access is based on a user's need which ensures that they can accomplish the work that they need to complete, yet cannot access other parts of the system.

Many tasks performed by an employee are the same every week (such as payroll) and that process can be automated including time sheets etc.Mentioning payroll often gets students interested in information systems since it has a universal interest for all employees, whether they are an MIS major or not.

In today's interconnected world, we have access to so much data that it is often overwhelmingfor managers to know where the best data resides, and how to access it.

With the advent of sophisticated computer systems, managers can now view a worker's Internet use by the click of a button.Managers can see what products are selling and what products are not.This information can be used to better help management run the day-to-day operations of a business.For example:A hotel manager finds that he is almost sold out of rooms for the month of May.It might behoove him/her to raise the prices of the vacant rooms left to increase revenue for the hotel.This strategy can also be implemented when the manager notices vacancies are running at a higher rate than normal.

This chapter is important in that it sets the foundation for the importance of information systems. Students should begin to realize that this is important for them to understand and use in their careers.Once students start to understand that information technologies not only change the way business is done in organizations, but also help organizations to share information and make better-educated decisions that help their companies thrive in a competitive environment, they can apply this knowledge to their specific major.

The phrase "information technology systems in an organization" is composed of three distinct parts: (1) an organization and its structure, (2) the data and information in an organization, and (3) information technology hardware software and connectivity in an organization.What is less clear about information technology is how business executives can ensure that their organizations benefit from new opportunities afforded by information technology and avoid its

well-known, often-repeated pitfalls.Some of the pitfalls or some of the problems companies have had as a result of utilizing IT are:

- botched development projects
- escalating costs with no apparent benefits
- organization disruption
- support problems
- technical glitches

Managing information technology is not an easy task. The information systems function has implementation problems in many organizations. In many documented cases, the promised benefits of information technology have not occurred.

It is important for students to understand that there is a great need for management to understand what is involved with IT because of the interdependence that exists between business and technology.IT is now being used in all aspects of business.There are very few transactions in business that are not in one way or another directly affected by IT.

It is also important to emphasize that technology has slowly evolved into open systems.This means that industries now expect information technology solutions to be seamlessly interconnected and upgradeable.

This chapter helps students to realize that when looking at adapting or changing technology in an organization it is not as easy as just installing new hardware or a software program.They must consider and analyze future needs and make sure that the programs/technologies they are implementing will not only work today, but be able to integrate with new technologies in the future.

Case 2.1:Blackberry Meets Android

1. How has the smart phone environment changed in the last six months? How could these changes affect BlackBerry?

Answer:Students will need to do some research to identify key trends and recent changes in the industry, then provide a summary, as well as an assessment of their impact on Blackberry.It will require their recognition of the similarities and differences in technologies being used by Blackberry and other smartphone manufacturers.

For example, In August 2016, the answer might include:
In 2016, changes in the smart phone environment include consumers who want phones “that willlast” and that provide efficiency and convenience to meet the needs of their lifestyle and their need for connectedness to the internet.Recent trends in design include thinner design, curved screens, more powerful efficient batteries, and improved faster charging methods.In terms of functionality, innovative apps are being developed to help meet user needs.There is even a trend toward smarter “invisible” apps that run in the background and surface information when we need it. For example, a new Google app re-routes us dynamically as driving conditions change.

These changes create even more challenges for Blackberry to stay competitive. They also indicate that Blackberry's phones with android operating system are likely to be the models that can mosteffectively be upgraded with apps to compete, because there are many third party developers of apps for the more popular android platform.It would be a much greater burden for Blackberry if it were necessary for them to develop competing apps for theirproprietary operating system, BB10.

Level:Hard
Section/Learning Objective: Section 2.3 / Learning Objective 3
Bloom's Category:Evaluation
AACSB Category:Reflective Thinking

2. Compare BlackBerry's most recent Android smart phone with your smart phone. Which phone is better? Why? Do you think that BlackBerry is being responsive to consumers with its current design?

Answer:Answers will vary based on what phone the student owns as well as what characteristics are most valued and/or most encountered by the student.For example, if a student enjoys touchscreen and the current trend away from buttons, he/she will not appreciate Blackberry's retractable QWERTY keyboard.

Blackberry's current design attempts to be responsive to a broad range of consumers (from those who follow the current trends, to existing users of the older BB10 models (e.g., with QWERTY keyboards).However, this approach may backfire on them by adding unnecessary and unwanted features for many potential users.

Level:Medium
Section/Learning Objective: Section 2.3 / Learning Objective 3
Bloom's Category:Analysis
AACSB Category:Technology

Case 2.2: IBM's Watson

1. What applications can you think of for Watson in a university setting?

Answer:
- Class scheduling based on projected course needs and demands by students.
- Class time scheduling to avoid scheduling conflicts.
- Classroom scheduling based on needs of the class and instructor.

You and your students will be able to come up with many more.

Level: Easy
Section/Learning Objective: Section 2.1 / Learning Objective 1

Bloom's Category: Application
AACSB Category: Technology

2. What are potential disadvantages of using Watson in healthcare settings?

Answer:Much depends on patients fully recording symptoms and medical professionals recording all diagnostic test that has been done on the patient. Keep in mind that some medical symptoms may mask multiple issues.

However, as a Watson-type system collects more data from multiple patients over time Watson's reliability will increase.

Level: Medium
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Application
AACSB Category: Technology

3. Would you consider being diagnosed only by Watson? Why or why not?

Answer:Your students will have different opinions on this.

Level: Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Analysis
AACSB Category: Technology

4. Would you consider being diagnosed by your personal physician, if he or she consulted Watson? Why or why not?

Answer:Your students will have different opinions on this.

Level: Medium
Section/Learning Objective: Section 2.4 / Learning Objective 2.4
Bloom's Category: Analysis
AACSB Category: Technology

IT's About Business 2.1 NASCAR Uses IT in Its Pre-Race Inspection

1. Describe why pre-race inspection is a business process for NASCAR.

Answer:It is a process that begins two days prior to the race. Each car that is entered in the race must go through and pass the inspection to compete. If the car does not pass NASCAR's inspection on the first try, the team is permitted to fix the problem and go through a second inspection, which also requires the team to go to the back of the line. NASCAR also conducts post-qualifying and race-day inspections.

NASCAR's pre-race inspection process is considered a business process because racing is NASCAR's business. So tracking everything in detail involved in the inspection process is important to a NASCAR race's outcome.

Level: Easy
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Comprehension
AACSB Category: Reflective Thinking

2. Describe the various benefits that the app provides NASCAR.

Answer:The benefits of NASCAR's app include:

- the app has simplified the pre-race inspection process
- elimination of the paper-based forms previously required
- The app uses a "default good" approach, requiring race officials to now note only those areas where violations are found.
- Provides a method for the collection of data real-time.
- The app provides a method to accumulate data that can be used to identify trends and patterns to maintain a level playing field.

Level: Easy
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Knowledge
AACSB Category: Reflective Thinking

3. Look ahead to Section 2.4. Is the app a strategic information system (SIS) for NASCAR? Why or why not? Support your answer.

Answer:This could be considered a strategic information system for NASCAR. The system automates the previous paper-based system. This enables for the consistent tracking and long-term tracking of the data collected. This enables NASCAR to implement their strategic goals and improve the performance and productivity of those involved in the pre-race inspection process.

Level: Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Application
AACSB Category: Reflective Thinking

IT's About Business 2.2 BPR, BPI, and BPM at Chevron

1. Describe the main advantages of BPR at Chevron.

Answer:Chevron used a holistic approach to examine the interdependencies between processes executed in different business units. This ultimately improved the company's overall

performance. In a 1996 report, Chevron claimed that the BPR project saved the company $50 million.

Level: Easy
Section/Learning Objective: Section 2.2 / Learning Objective 2
Bloom's Category: Comprehension
AACSB Category: Reflective Thinking

2. Why did Chevron adopt BPI?

Answer:In 1995, Chevron was less than half of its current size today, producing roughly 1 million barrels of oil per day across six plants. The company was divided into three major departments: Refining, Marketing, and Supply and Distribution (S&D). Management decided that they needed to improve their supply chain to better integrate their multiple internal processes.

The company leadership decided the best strategy to dramatically improve performance of the company was to reengineer its end-to-end core processes, from the acquisition of crude oil crude through distribution of final products to Chevron customers.

Level: Medium
Section/Learning Objective: Section 2.2 / Learning Objective 2
Bloom's Category: Application
AACSB Category: Technology

3. How does Chevron apply BPM in its operations today?

Answer:Chevron's current BPM strategy is part of a larger companywide management system that focuses on operational excellence. The program requires all Chevron operating companies and business units to adopt a continuous improvement perspective, directed by guidelines, metrics, and targets that are reviewed and adapted every year. Apart from process efficiency, Chevron focuses on metrics related to safety, risk, and the environment. All employees participate in operational excellence activities, and managers receive specific operational excellence training to support the continuous improvement culture.

Level: Medium
Section/Learning Objective: Section 2.2 / Learning Objective 2
Bloom's Category: Application
AACSB Category: Reflective Thinking

IT's About Business 2.3 Solar-Powered Tablets in Ethiopia

1. What advantages could result from increasing the literacy of 100 million children around the world? Be specific.

Answer:The advantage of increasing the literacy of children around the world provides the means for those children to teach their parents what they have learned, providing a means for moving those adults towards literacy with their children.

Level: Easy
Section/Learning Objective: Section 2.2 / Learning Objective 2
Bloom's Category: Knowledge
AACSB Category: Reflective Thinking

2. In this experiment, the tablets were not connected to the Internet. Discuss the advantages and disadvantages to the children if the tablets were connected.

Answer:Where the experiment was conducted, the availability of the Internet connectivity was either limited or non-existent. So to provide connectivity, that infrastructure would have to be built at some cost.

Connectivity would open the world up to the children in the experiment. While this might give them some incentives to learn, it may also slow the process because it might reduce the incentive in some to explore the capabilities of table itself.

Level: Medium
Section/Learning Objective: Section 2.2 / Learning Objective 2
Bloom's Category: Application
AACSB Category: Reflective Thinking

IT's About Business 2.4 Reviving and Thriving Using Retail Machines

1. Do you prefer to handle a physical DVD or to use a streaming service for your movie viewing? Discuss the advantages and disadvantages of each option.

Answer:Preferences may vary based on convenience with respect to when,where (one place or many, or on the move) and on what device/screen, (TV, PC, tablet, etc), the student wants to watch a movie.Other factors that will influence preference might include the quality/speed of available internet service, or television service provider's downloadservice, where the studentusually watches movies, as well as availability of and the student's familiarity and comfort level with each of these two types (and eras) of technology, and perhaps whether the student may want to interrupt screening the movie or keep a copy of the movie. Characteristics of each method will be presented as Advantages or Disadvantages to support (and will likely be based on) the student's preference.

Level:Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category:Analysis
AACSB Category:Analytic
AACSB Category: Technology

2. Use Porter's Competitive Forces Model (see Section 2.4) to discuss the threat of new entrants for each of the organizations discussed.

Answer:

- Redbox DVD Rentals:Redbox has created effective barriers to entry with its connection of rental kiosks to its online systems for tracking movie rentals to enable quick replenishment of favourites, to its website to enable customers to book ahead.

- Toronto Public Library at Toronto's Union Station:While the public library is not in direct competition with book sellers, it could be said that it competes indirectly with any booksellers who wish to open retailoperations in and around Union Station and possibly the transit points where riders may begin/end their journeys.The library also competes with other providers of reading and entertainment for a transit journey.While it would be possible for booksellers to open small kiosks, manned or automated, to sell books that compete with the library's offerings, perhaps the greatest barrier to entry that the library has for the kiosk book service is accessibility only to library cardholders to borrow books at no cost.

- A & W Self-Serve:The threat of RIVALRY is large fromall the other major fast food chains, which possess the capability and capital to implement similar and even more innovative (reference McDonald's) self-serve options.However, for a new entrant, the additional costs of implementing and operating fast food operations with automated self-serve order entry options could be a prohibitive barrier, unless the new entrant is already using online order entry.

Level:Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category:Application
AACSB Category:Technology

IT's About Business 2.5 Off-Target Target

1. Discuss how IT can help retail businesses such as Target and Walmart keep inventory on the shelves.

Answer:As you will read in Chapter 11, Supply Chain Management systems (SCM) can be used to improve the operational effectiveness, as well as reducing the associated costs, of maintaining optimal inventory levels to increase both customer satisfaction and productivity at each store.Realtime inventory management systems that update inventory quantity records directly from POS transactions can supply needed data to short inventory replenishment cycle methods (e.g., just-in-time, vendor-managed) that utilize technologies such as electronic data interchange (EDI) or extranets to facilitate fast, secure communication of transactions with suppliers.RFID technology can be used in-store to efficiently check on-shelf inventory levels and order replenishment from stock rooms when necessary.

Level:Hard
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category:Synthesis
AACSB Category:Technology
AACSB Category: Reflective Thinking

2. Which of Porter's competitive strategies is Walmart employing? Support your answer.

Answer:Based only on information provided in the case, Walmart is responding to the following of **Porter's Competitive Forces**:

- Reducing the bargaining power of its customers by: selling at lower prices than its competitor, and by adding new designs and tailoring food offerings to attract and maintain the loyalty of its customers
- Reducing rivalry among existing firms (namely Target) OR Reducing threat of new entrants (in the Canadian market, as the case differentiates it from the US market): undercutting Target's prices, differentiating itself fromTarget with innovative new products, online shopping, efficient and effective inventory management/replenishment

Based only on information provided in the case, Walmart is employing the following **Strategies for Competitive Advantage**:

- Customer-orientation strategy -- adding new designs and tailoring food offerings to attract and maintain the loyalty of its customers
- Differentiation and Innovation strategies -- adding new designs and tailoring food offerings to the local Canadian market(s)
- Operational effectiveness and Cost leadership strategies–in contrast to Target, we can surmise from the case that Walmart was/is able to effectively manage inventory to ensure store shelves are efficiently and effectively restocked, (and this example is provided in Chapter 2's description of Cost leadership strategy).Also, Walmart offers "buy online andpickup in-store"

Level:Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category:Analysis
AACSB Category: Analytic

3. Discuss how an online shopping presence can provide effective business–IT alignment.

Answer:Providing an online shopping presence would involve using IT to cost effectively support business objectives of providing customer satisfaction not only with products but with optional shopping methods.Furthermore, online shopping can create a new revenue stream and increase traffic to a store if "buy online and pickup in-store" is implemented as the delivery strategy.

Level:Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4

Bloom's Category:Application
AACSB Category:Analytic
AACSB Category: Technology

before you go on...

Section 2.1

1. What is a business process?

Answer:A business process is an ongoing collection of related activities that create a product or a service of value to the organization, its business partners, and/or its customers.A process has inputs and outputs, and its activities can be measured.Many processes cross functional areas in an organization.For example, product development involves research, design, engineering, manufacturing, marketing, and distribution.

Level: Easy
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Knowledge
AACSB Category: Technology

2. Describe several business processes carried out at your college or university.

Answer:These include Accounts receivable (tuition), registration, payroll, human resources, etc.

Level: Medium
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Knowledge
AACSB Category: Technology

3. Define a cross-functional business process, and provide several examples of such processes.

Answer:This is a process in which no single functional area is responsible for its completion; multiple functional areas collaborate to perform the function.

Level: Application
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Knowledge
AACSB Category: Technology

4. Choose one of the processes described in question 2 or 3 above, and identify its inputs, outputs, customer(s), and resources. How does the process create value for its customer(s)?

Answer:Students will contribute responses depending on the process they choose.

Level: Medium
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Application
AACSB Category: Reflective Thinking

Section 2.2

1. What is business process reengineering?

Answer:A strategy for improving the efficiency and effectiveness of an organization's business processes.The key to BPR is for enterprises to examine their business processes from a "clean sheet" perspective and then determine how they can best reconstruct those processes to improve their business functions.

Level: Easy
Section/Learning Objective: Section 2.2 / Learning Objective 2
Bloom's Category: Knowledge
AACSB Category: Technology

2. What is business process improvement?

Answer:Business process improvement is a less radical, less disruptive, and more incremental approach to business process reengineering.

Level: Easy
Section/Learning Objective: Section 2.2 / Learning Objective 2
Bloom's Category: Knowledge
AACSB Category: Technology

3. What is business process management?

Answer:BPM is a management technique that includes methods and tools to support the design, analysis, implementation, management, and optimization of business processes.

Level: Easy
Section/Learning Objective: Section 2.2 / Learning Objective 2
Bloom's Category: Knowledge
AACSB Category: Technology

Section 2.3

1. What are the characteristics of the modern business environment?

Answer:It is a combination of social, legal, economic, physical, and political factors in which businesses conduct their operations

Level: Easy
Section/Learning Objective: Section 2.3 / Learning Objective 3
Bloom's Category: Knowledge
AACSB Category: Technology

2. Discuss some of the pressures that characterize the modern global business environment.

Answer:Market pressures are generated by the global economy, intense competition, the changing nature of the workforce, and powerful customers.

Level: Medium
Section/Learning Objective: Section 2.3 / Learning Objective 3
Bloom's Category: Comprehension
AACSB Category: Technology

3. Identify some of the organizational responses to these pressures. Are any of these responses specific to a particular pressure? If so, which ones?

Answer:Organizations are responding to the various pressures by implementing IT such as strategic systems, customer focus, make-to-order and mass customization, and e-business.

Level: Medium
Section/Learning Objective: Section 2.3 / Learning Objective 3
Bloom's Category: Comprehension
AACSB Category: Technology

Section 2.4

1. What are strategic information systems?

Answer:Any information system which helps an organization gain a competitive advantage or reduce a competitive disadvantage is a strategic information system.

Level: Easy
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Knowledge
AACSB Category: Technology

2. According to Porter, what are the five forces that could endanger a firm's position in its industry or marketplaces?

Answer:
- The threat of entry of new competitors.
- The bargaining power of suppliers
- The bargaining power of customers
- The threat of substitute products or services

- The rivalry among existing firms in the industry

Level: Easy
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Knowledge
AACSB Category: Technology

3. Describe Porter's value chain model.Differentiate between Porter's competitive forces model and his value chain model.

Answer:Porter's competitive forces model is focused on analyzing the company's external environment and how competitive the industry is.The value chain model is focused on the internal operations of the company and is a model to allow the firm to analyze its own processes.

Level: Easy
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Comprehension
AACSB Category: Technology

4. What strategies can companies use to gain competitive advantage?

Answer:
- Cost leadership
- Differentiation
- Innovation
- Operational effectiveness

Level: Easy
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Knowledge
AACSB Category: Technology

5. What is business–IT alignment?

Answer:Business–IT alignment is the tight integration of the IT function with the strategy, mission, and goals of the organization.That is, the IT function directly supports the business objectives of the organization.

Level: Easy
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Knowledge
AACSB Category: Technology

6. Give examples of business–IT alignment at your college or university, regarding student systems. (Hint: What are the "business" goals of your institution with regard to student registration, fee payment, grade posting, etc.?)

Answer:Responses will depend on the amount of IT support provided at your school.Hopefully that support is high and link to the overall business strategy of the institution.

Level: Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Analysis
AACSB Category: Technology

Discussion Questions

1. Consider the student registration business process at your college or university:
   - Describe the steps necessary for you to register for your classes each semester.Who ar the customers of the process? What inputs and outputs does the process have? What organizational resources are used in the process?
   - Describe how information technology is used in each step of the process (or is not used). Evaluate the process performance. Is it efficient? Is it effective? Why or why not?

Answer:The responses to this question will be different depending on your school's processes.

Level: Easy
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Knowledge
AACSB Category: Technology

2. Why is it so difficult for an organization to actually implement business process reengineering?

Answer:There are various internal and external factors that make it difficult to do BPR.These include technical limitations, cost factors, management support, legal and political issues, etc.

Level: Medium
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Comprehension
AACSB Category: Technology

3. Explain why IT is both a business pressure and an enabler of response activities that counter business pressures.

Answer:Rapid changes in information technology and capabilities force business to adapt or go out of business.On the other hand, IT assists companies in their efforts to stay up on the latest strategies to provide the best customer service, to provide better quality products, new and different delivery methods.

Level: Medium

Section/Learning Objective: Section 2.3 / Learning Objective 3
Bloom's Category: Comprehension
AACSB Category: Technology

4. What does a flat world mean to you in your choice of a major?In your choice of a career?Will you have to be a "lifelong learner"?Why or why not?

Answer:It means that you need to think about who across the world you might be competing against.You not only will have to think about those in your immediate vicinity, but due to the far reaching impact of the new global, web-based platform which will continue to grow, you will be competing with anyone who has access to a cell phone or a computer.

You clearly will be a lifelong learner since there will be new devices, new applications and new ways in which they are used.Anyone who stops learning will be left behind very quickly.

Level: Medium
Section/Learning Objective: Section 2.3 / Learning Objective 3
Bloom's Category: Comprehension
AACSB Category: Technology

5. What might the impact of a flat world be on your standard of living?

Answer:Resources that were previously very expensive or unattainable will become increasingly more available.Your ability to find inexpensive travel options are a good example.

Level: Easy
Section/Learning Objective: Section 2.3 / Learning Objective 3
Bloom's Category: Comprehension
AACSB Category: Technology

6. Is IT a strategic weapon or a survival tool? Discuss.

Answer:It is both.Used to establish a competitive advantage in an industry, IT helps an organization implement its strategic goals and increase its performance and productivity.As a survival tool, it is used to fend off various threats such as new entrants, suppliers and customers bargaining power, substitute products or services, and rivalries among existing firms in the industry.

Level: Hard
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Analysis
AACSB Category: Technology

7. Why might it be difficult to justify a strategic information system?

Answer:SISs are often very complex and very expensive to develop and outcomes may take

years to observe and measure.

Level: Medium
Section/Learning Objective: Section 2.3 / Learning Objective 3
Bloom's Category: Comprehension
AACSB Category: Technology

8. Describe the five forces in Porter's competitive forces model, and explain how increased access to high-speed Internet has affected each one.

Answer:
- The threat of entry of new competitors.
- In the CarMax case we saw how the use of communications and the Internet allow
- a company to gain an advantage by providing access to its inventory.
- The bargaining power of suppliers
- Companies can find potential suppliers and compare prices giving buyers a better chance to negotiate terms.
- The bargaining power of customers
- Customers' power has increased tremendously with the availability of information on the Internet.Much the same as suppliers above, they have a much more information about sources of goods and services and pricing to help them when they are making purchasing decisions.(The demon customer case drives this point home)
- The threat of substitute products or services
- Any industry which is primarily based on digitized information is at risk, and must take the threat of Internet delivered products and services seriously.
- The rivalry among existing firms in the industry
- The Internet makes competition more intense.
- Keeping anything secret is impossible once it is available on the Internet.Competitors can see the systems and match their features to remain competitive.

Level: Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Comprehension
AACSB Category: Technology

9. Describe Porter's value chain model.What is the relationship between the competitive forces model and the value chain model?

Answer:The competitive forces model is useful for identifying general strategies, organizations us the value chain model to identify specific activities where they can use competitive strategies for greatest impact.

Level: Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Application
AACSB Category: Technology

10. Describe how IT can be used to support different value chains for different companies.

Answer:A value chain is a sequence of activities through which the organization's inputs, whatever they are, are transformed into more valuable outputs, whatever they are. So, based on this definition, IT can support the HR/Payroll, Accounting, Purchasing, etc. for different value chains.

Nearly every company has to have an IT operation that performs these functions (HR/Payroll. Accounting, etc.) even though they have different value chains.

Level: Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Comprehension
AACSB Category: Technology

11. Discuss the idea that an information system by itself can rarely provide a sustainable competitive advantage.

Answer:Information Technology is a tool.It is management's responsibility to use it to the best advantage that will help to sustain a competitive advantage.

Level: Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Comprehension
AACSB Category: Technology

12. Explain why large organizations need IT governance.

Answer:
For large organizations, IT Governance is a critical component of effective **Business–information technology alignment,** the tight integration of the IT function with the organization's strategy, mission, and goals. As an extension of corporate governance, IT Governance helps the organization's IT function directly support the business objectives of the organization.In a large organization, this requires a formal structure of relationships and processes to direct and control the enterprise in achieving the enterprise's goals and adding value, while balancing risk versus return over IT and its processes.

IT governance helps organizations effectively manage their IT operations so that it aligns with their business strategies.IT governance is about managing IT throughout the organization. This includes planning, acquisition, implementation, and ongoing support, as well as monitoring and evaluation so that decisions can be made about potential changes.

Without effective IT governance, there are many things that could go wrong. Information systems might not meet organizational business objectives, or systems could be error prone, over budget, or hard to use. If there was poor security, data and programs could be damaged or copied

by unauthorized individuals.

Level:Easy
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category:Comprehension
AACSB Category:Communication

13. Should all organizations have IT governance? Why or why not?

Answer:
Yes, all organizations should have IT governance.Smaller businesses implement IT governance by having an aware and knowledgeable owner-manager who actively selects business practices and software.Large businesses follow a more structured formal process.

Portions of the previous answer could also apply here:
IT governance helps organizations effectively manage their IT operations so that it aligns with their business strategies.IT governance is about managing IT throughout the organization. This includes planning, acquisition, implementation, and ongoing support, as well as monitoring and evaluation so that decisions can be made about potential changes.
Without effective IT governance, there are many things that could go wrong. Information systems might not meet organizational business objectives, or systems could be error prone, over budget, or hard to use. If there was poor security, data and programs could be damaged or copied by unauthorized individuals

Level:Easy
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category:Comprehension
AACSB Category:Communication

Problem Solving Activities

1. Surf the Internet for information about the Canadian federal government's information management policies. Examine the available information, and comment on the depth of policies that respond to the public's need for federal services that use information technology.

Answer:Have the students report what they found.

Level: Easy
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Knowledge
AACSB Category: Technology

2. Experience mass customization by designing your own shoes at *www.nike.com/ca/en_gb/*, your car at *www.jaguar.com*, your CD at *www.easternrecording.com*, your business card at

www.iprint.com, and your diamond ring at *www.bluenile.com*. Summarize your experiences.

Answer:Before starting this activity, you might consider asking the students if any have already used any of these sites and discuss their experiences.

Level: Easy
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Knowledge
AACSB Category: Technology

3. Access *www.go4customer.com*.What does this company do and where is it located?Who are its customers? Provide examples of how a Canadian company would use its services.

Answer:The company operates call centers located in India.They do everything from market surveys and debt collections, to inbound call center operations.Using Friedman's model, this would be a global company handling outsourced services.A Canadian company could use them for a number of things, including operating their customer call center, telephone marketing, and market surveys.

Level: Easy
Section/Learning Objective: Section 2.1 / Learning Objective 1
Bloom's Category: Knowledge
AACSB Category: Technology

4. Enter Walmart China (*www.wal-martchina.com/english/index.htm*). How does Walmart China differ from your local Walmart (consider products, prices, services, etc.)?Describe these differences.

Answer:This site is more of a corporate information site than a marketing site.No products listed for sale, however there is some information about a few product lines.

Level: Easy
Section/Learning Objective: Section 2.2 / Learning Objective 2
Bloom's Category: Comprehension
AACSB Category: Technology

5. Apply Porter's value chain model to Costco (*www.costco.ca*).What is Costco's competitive strategy?Who are Costco's major competitors?Describe Costco's business model.Describe the tasks that Costco must accomplish for each primary value chain activity.How would Costco's information systems contribute to Costco's competitive strategy, given the nature of its business?

Answer:Costco's business model is to sell premium merchandise at a lower price to members (captive group of shoppers).Sam's club is their biggest competitor.They need to procure the right merchandise mix, targeting their members by building a strong understanding of their base of members.They need to have an efficient supply chain and then be able to track the success of

their promotions and marketing efforts.

Level: Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Application
AACSB Category: Technology

6. Apply Porter's value chain model to Dell (*www.dell.com*).What is Dell's competitive strategy?Who are Dell's major competitors?Describe Dell's business model.Describe the tasks that Dell must accomplish for each primary value chain activity.How would Dell's information systems contribute to Dell's competitive strategy, given the nature of its business?

Answer:Dells strategy is to offer high-end computers with premium features and components at a lower price and allow for customers to customize their systems using a web-based interface.Dell must support a highly efficient supply chain system and reduce their inventory costs.They need to track new components and offer them to their customers and then track the quality of their components as they are introduced into their systems.

Level: Medium
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Application
AACSB Category: Technology

7. The market for optical copiers is shrinking rapidly.It is estimated that in the coming years, 90 percent of all duplicated documents will be generated by computer printers.Can a company such as Xerox Corporation survive?
   a. Read about the problems and solutions of Xerox from 2000 to 2010 at *www.fortune.com*, *www.findarticles.com*, and *https://scholar.google.com*.
   b. Identify all the business pressures on Xerox.
   c. Find some of Xerox's response strategies (see *www.xerox.com*, *www.yahoo.com*, and *www.google.com*).
   d. Identify the role of IT as a contributor to the business technology pressures (e.g., obsolescence).
   e. Identify the role of IT as a facilitator of Xerox's critical response activities.

Answer:Xerox needs to identify new business models and new ways to introduce their technology into products that can support their customers.

Level: Hard
Section/Learning Objective: Section 2.4 / Learning Objective 4
Bloom's Category: Analysis
AACSB Category: Technology

Team Assignments

1. (a) Create an online group for studying IT or a part of it you are interested in.Each member of the group must have a Yahoo email account (free).Go to Yahoo: Groups (*http://ca.groups.yahoo.com*) and at the bottom see a section titled "Find a Yahoo! Group."
   Step 1: Click on "Start your group today."
   Step 2: Select a category that best describes your group (use the Search Group Categories, or use Browse Group Categories tool).You must find a category.
   Step 3: Describe the purposes of the group and give it a name.
   Step 4: Set up an email address for sending messages to all group members.
   Step 5: Each member must join the group (select a "profile"); click on "Join this Group."
   Step 6: Go to Word Verification Section; follow the instructions.
   Step 7: Finish by clicking "Continue."
   Step 8: Select a group moderator.Conduct a discussion online of at least two topics of interest to the group.
   Step 9: Arrange for messages from the members to reach the moderator at least once a week.
   Step 10: Find a similar group (use Yahoo's "find a group" and make a connection).Write a report for your instructor.
   (b) Now follow the same steps for Google Groups.
   (c) Compare Yahoo Groups and Google Groups.

Answer:The report that the students produce may be brief, only including their connection with a similar group, since that is the step in which the report instruction is included.However, with more guidance from the teacher, student groups may also report on what they have learned in their two chosen IT topic areas, as well as on their perceived benefits and pitfalls of participating in a study group, an online study group, as well as their reasons for preference of one of the two services.
(Note: Student groups will experience varying amounts of participation and cooperation from members, which will influence the success of the assignment.)

2. Divide the class into teams. Each team will select a country government and visit its official website (for example, try the United States, Australia, New Zealand, Singapore, Norway, Canada, the United Kingdom, the Netherlands, Denmark, Germany, and France). For example, the official Web portal for the U.S. government is *www.firstgov.gov*. Review and compare the services offered by each country. How does the United States stack up? Are you surprised at the number of services offered by countries through websites? Which country offers the most services? The least?

Answer: The comparison of countries' online services could be conducted as an in-class activity, perhaps with prior selection of countries and research.The teacher or a student (group) could be responsible for creating a table and using itin class torecord the data for comparison.

Chapter Glossary

business environment The combination of social, legal, economic, physical, and political factors in which businesses conduct their operations.

business–information technology

alignment The tight integration of the IT function with the strategy, mission, and goals of the organization.

business process A collection of related activities that create a product or a service of value to the organization, its business partners, and/or its customers.

business process improvement An incremental approach to improving business processes. It looks for root causes to problems in process inputs, the process itself, or in process outputs, resulting in less radical and less disruptive business changes.

business process management A management technique that includes methods and tools to support the design, analysis, implementation, management, and optimization of business processes.

business process reengineering A radical redesign of a business process that improves its efficiency and effectiveness, often by beginning with a "clean sheet" (i.e., from scratch).

competitive advantage An advantage over competitors in some measure such as cost, quality, or speed; leads to control of a market and to larger-than-average profits.

competitive forces model A business framework devised by Michael Porter that analyzes competitiveness by recognizing five major forces that could endanger a company's position.

cross-functionalbusiness process A process in which no single functional area is responsible for a process's completion; multiple functional areas collaborate to perform the function.

digital divide The gap between those who have access to information and communications technology and those who do not.

entry barrier Product or service feature that customers expect from organizations in a certain industry; an organization trying to enter this market must provide this product or service at a minimum to be able to compete.

globalization The integration and interdependence of economic, social, cultural, and ecological facets of life, enabled by rapid advances in information technology.

individual social responsibility (see **organizational social responsibility**)

IT governanceA structure of relationships and processes to direct and control the enterprise in order to achieve the enterprise's goals by adding value while balancing risk versus return over IT and its processes.

make-to-order The strategy of producing customized products and services.

mass customization A production process in which items are produced in large quantities but are customized to fit the desires of each customer.

organizational social responsibility (or **individual social responsibility**)Efforts by organizations or individuals to solve various social problems.

primary activities Those business activities related to the production and distribution of the firm's products and services, thus creating value.

strategic information systems Systems that

help an organization gain a competitive advantage by supporting its strategic goals and/or increasing performance and productivity.

support activities Business activities that do not add value directly to a firm's product or service under consideration but support the primary activities that do add value.

value chain A sequence of activities through which the organization's inputs, whatever they are, are transformed into more valuable outputs, whatever they are.

value chain model A business framework devised by Michael Porter that shows the primary activities that sequentially add value to the profit margin; also shows the support activities.

value systemA business system that includes the producers, suppliers, distributors, and buyers, all with their value chains.