



# CHAPTER 2

## Organizational Strategy, Competitive Advantage, & Information Systems

- 
1. Business Pressures, Organizational Responses, and Information Technology Support
  2. Competitive Advantage and Strategic Information Systems

# OPENING



- **GrubHub Seamless**

1. Look ahead in this chapter. Which one of Porter's strategies for competitive advantage is GrubHub Seamless pursuing? Explain your answer.
2. Propose additional applications that GS could develop to gain a competitive advantage in the marketplace.



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# 2.1 Business Pressures, Organizational Responses, and IT Support

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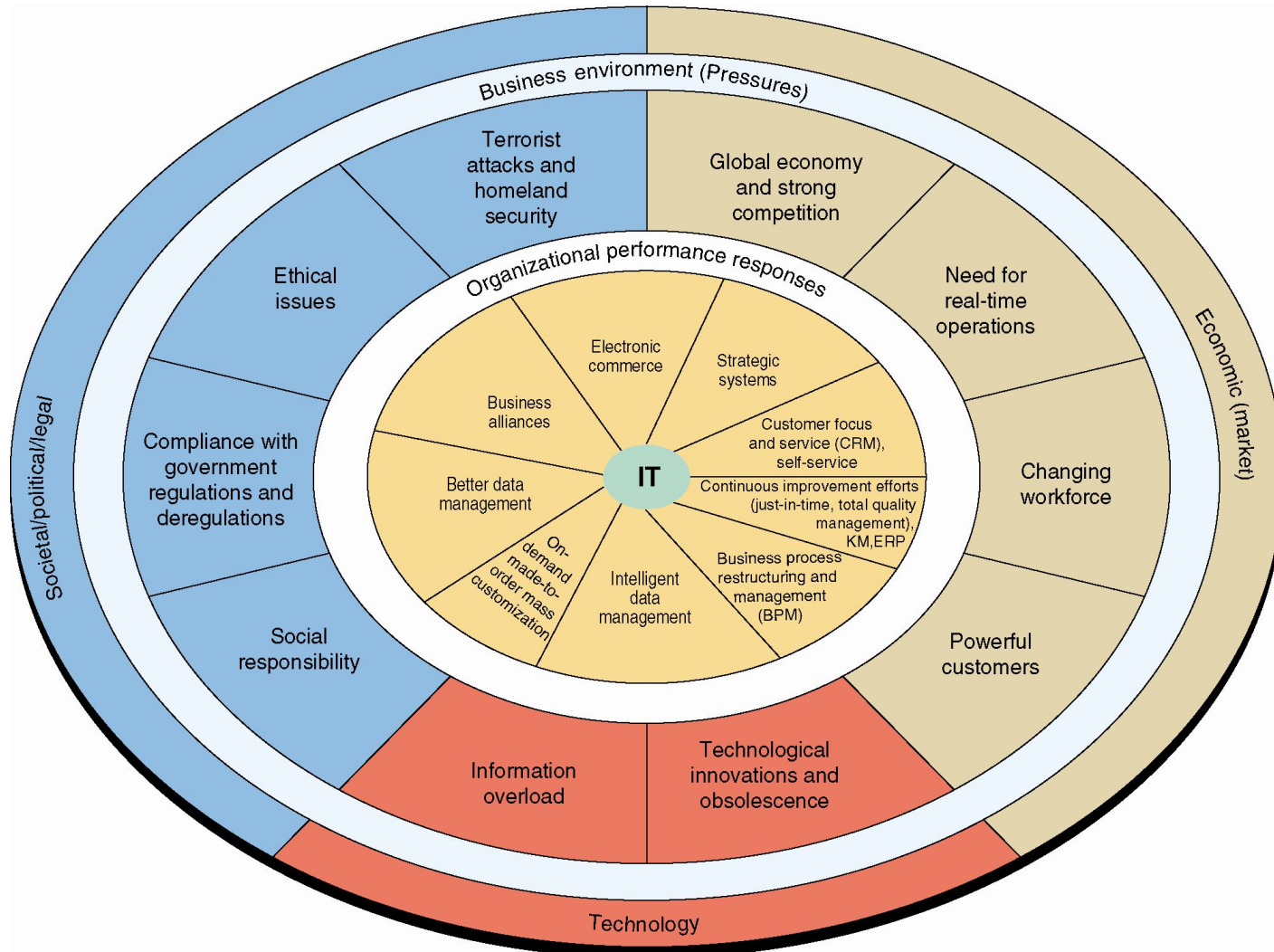
- Competitive Advantage
- Business Environment
- Business Pressures
- Organizational Responses

# Business Pressures, Organizational Responses, and IT Support

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- **Competitive Advantage:** any assets that provide an organization with an edge against its competitors in some measure such as cost, quality, or speed. It also helps an organization to control a market and to accrue larger-than-average profits.
- **Business Environment:** the combination of social, legal, economic, physical, and political factors in which businesses conduct their operations. Significant changes in any of these factors are likely to create **Business Pressures** on organizations.
- **Organizations Responses:** Organizations respond to the various pressures by implementing Information Technology (IT) such as strategic systems, customer focus, make-to-order and mass customization, and e-business.

# Figure 2.1: Business Pressures, Organizational Performance & Responses, and IT Support



# Business Pressures

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- Market Pressures
- Technology Pressures
- Societal/Political/Legal Pressures

# Business Pressures

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**Market Pressures:** business pressures generated by

- The global economy
- Intense competition
- Changing nature of the workforce
- Powerful customers.



# Market Pressures

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- **Globalization:** the integration and interdependence of economic, social, cultural, and ecological facets of life, made possible by rapid advances in information technology.
  - **Changing Nature of the Workforce:** The workforce, particularly in developed countries, is becoming more diversified. Increasing numbers of women, single parents, minorities, and persons with disabilities are now employed in all types of positions.
  - **Powerful Customers:** consumer sophistication and expectations increase as customers become more knowledgeable about the products and services they acquire. Customers can use the Internet to find detailed information about products and services, to compare prices, and to purchase items at electronic auctions.
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# Globalization

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- Thomas Friedman – book “The World is Flat”, explained three eras of globalization.
  - Globalization 1.0 (1492 to 1800)
  - Globalization 2.0 (1800 to 2000)
  - Globalization 3.0 (2000 to present)
- Ten Flatteners

# Globalization

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- **Globalization 1.0 (1492 to 1800)**
- The focus of globalization was on how much muscle, horsepower, wind power or steam power a country can deploy.
- Focus was at country level.

# Globalization

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- **Globalization 2.0 (1800 to 2000)**
  - Distinct Focus: Multinational Companies
  - First half of this period --> Falling Transportation Costs (Steam Engine/Railroads)
  - Second half of this period --> Falling Telecommunication Costs (Telegraph, Telephone, Computer, Satellite, Fiber Optics, Internet)
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# Globalization

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- **Globalization 3.0 (2000 to present)**
- Distinct Focus: Groups and Individuals
- Driver: Convergence of 10 forces (or Flatteners)

# Thomas Freidman: Ten Flatteners

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1. Fall of the Berlin Wall on November 9, 1989
  2. Netscape goes public on August 9, 1995
  3. Development of workflow software
  4. Uploading
  5. Outsourcing
  6. Offshoring
  7. Supply chaining
  8. Insourcing
  9. Informing
  10. The Steroids
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# Thomas Freidman: Ten Flatteners

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## **Fall of the Berlin Wall on November 9, 1989:**

- Shifted the world toward free-market economies and away from centrally planned economies.
- Led to the emergence of the European Union and early thinking about the world as a single, global market.

## **Netscape goes public on August 9, 1995:**

- Popularized the Internet and the World Wide Web.

## **Development of workflow software:**

- Enabled computer applications to work with one another without human intervention.
  - Enabled faster, closer collaboration and coordination among employees, regardless of their location.
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# Thomas Freidman: Ten Flatteners

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## **Uploading:**

- Empowered all Internet users to create content and put it on the Web.
- Led the transition from a passive approach to content to an active, participatory, collaborative approach.

## **Outsourcing:**

- Contracting with an outside company to perform a specific function that your company was doing itself and then integrating their work back into your operation; for example, moving customer call centers to India.

## **Offshoring:**

- Relocating an entire operation, or certain tasks, to another country; for example, moving an entire manufacturing operation to China.
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# Thomas Freidman: Ten Flatteners

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## **Supply chaining:**

- Technological revolution led to the creation of networks composed of companies, their suppliers, and their customers, all of which could collaborate and share information for increased efficiency.

## **Insourcing:**

- Delegating operations or jobs within a business to another company that specializes in those operations; for example, Dell hires FedEx to “take over” Dell’s logistics process.

## **Informing:**

- The ability to search for information, best illustrated by search engines.

## **The Steroids (computing, instant messaging and file sharing, wireless technologies, Voice over Internet Protocol, videoconferencing, and computer graphics):**

- Technologies that amplify the other flatteners.
  - Enable all forms of computing and collaboration to be digital, mobile, and personal.
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# Technology Pressures

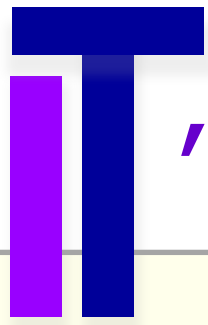
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- Technological Innovation and Obsolescence
- Information Overload

# Technology Pressures

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- **Technological Innovation and Obsolescence:** Few and improved technologies rapidly create or support substitutes for products, alternative service options, and superb quality. As a result, today's state-of-the-art products may be obsolete tomorrow.
- **Information Overload:** Internet and other telecommunications networks are bringing a flood of information to managers. To make decisions effectively and efficiently, managers must be able to access, navigate, and utilize these vast stores of data, information, and knowledge.



# 'S ABOUT BUSINESS 2.1

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- **“Bring Your Own Device” Can Cause Problems**

1. What are the advantages of allowing employees to use any mobile device to connect to the corporate network? The disadvantages?
2. Why is it necessary to be able to erase corporate data when a mobile device is lost or stolen?

# Societal/Political/Legal Pressures

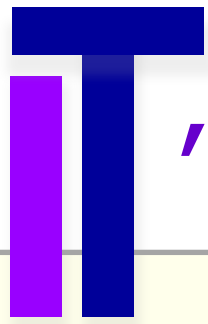
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- Social Responsibility
- Compliance with Government Regulations
- Protection Against Terrorist Attacks
- Ethical Issues

# Social Responsibility

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- IT Assists “Go Green” Efforts in Three Areas:
    1. Facilities design and management
    2. Carbon management
    3. International and U.S. environmental laws
  - Digital Divide
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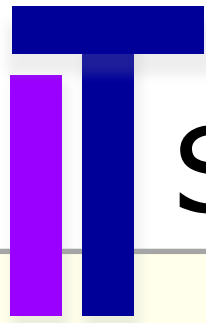
# 'S ABOUT BUSINESS 2.2

- **Solar-Powered Tablets in Ethiopia**



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



# Social responsibility

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- **social responsibility, government regulation/deregulation, spending for social programs to protect against terrorism, and ethics.**
- **Social issues that affect businesses and individuals range from the state of the physical environment, to company and individual philanthropy, to education.**
- **Some corporations and individuals are willing to spend time and/or money to address various social problems. These efforts are known as organizational social responsibility or individual social responsibility**



# Compliance with Government Regulations.

- Another major source of business pressures is government regulations regarding health, safety, environmental protection
- Businesses tend to view government regulations as expensive constraints on their activities.
- In general, government deregulation intensifies competition.
- In the wake of 9/11 and numerous corporate scandals, the U.S. government passed many new laws
- The process of becoming and remaining compliant is expensive and time consuming. In almost all cases, organizations rely on IT support to provide the necessary controls and information for compliance.

# Protection against Terrorist Attacks

- Since September 11, 2001, organizations have been under increased pressure to protect themselves against terrorist attacks.
- In addition, employees who are in the military reserves have been called up for active duty, creating personnel problems.
- Information technology can help protect businesses by providing security systems and possibly identifying patterns of behavior associated with terrorist activities, including cyberattacks

# Ethical Issues

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- Ethics relates to general standards of right and wrong.
- Information ethics relates specifically to standards of right and wrong in information-processing practices.
- Ethical issues are very important because, if handled poorly, they can damage an organization's image and destroy its employees' morale.
- The use of IT raises many ethical issues, ranging from monitoring e-mail to invading the privacy of millions of customers whose data are stored in private and public databases



# Organizational Responses

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- Strategic Systems
- Customer Focus
- Make-to-Order and Mass Customization
- E-Business and E-Commerce

# Organizational Responses

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- **Strategic Systems:** provide organizations with advantages that enable them to increase their market share and/or profits, to better negotiate with suppliers, and to prevent competitors from entering their markets.
  - **Customer Focus:** Organizational attempts to provide superb customer service can make the difference between attracting and retaining customers versus losing them to competitors. Numerous IT tools and business processes have been designed to keep customers happy.
  - **Make-to-Order:** a strategy of producing customized (made to individual specifications) products and services.
  - **Mass Customization:** a company produces a large quantity of items, but it customizes them to match the needs and preferences of individual customers. Mass customization is essentially an attempt to perform make-to-order on a large scale
  - **E-Business and E-Commerce:** Conducting business electronically is an essential strategy for companies that are competing in today's business environment.
  - **Electronic commerce (EC or e-commerce):** describes the process of buying, selling, transferring, or exchanging products, services, or information via computer networks, including the Internet.
  - **E-business:** a somewhat broader concept than EC that includes servicing customers, collaborating with business partners, and performing electronic transactions within an organization.
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# Strategic Systems.

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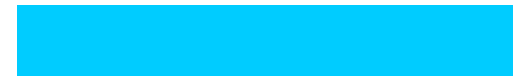
1. Strategic systems provide organizations with advantages that enable them to increase their market share and/or profits, to better negotiate with suppliers, and to prevent competitors from entering their markets.
2. As an example, the IT department at P&G ([www.pg.com](http://www.pg.com)) developed a virtualized environment that the company uses for product design work, product placement research, and consumer feedback studies.
3. P&G utilizes virtual reality models to test design ideas for the next breakthroughs in products such as diapers and cosmetics. Within these “cyberworlds,” P&G can rapidly test product performance as well as consumer responses to various kinds of ingredient and packaging choices



# Customer Focus

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1. Organizational attempts to provide superb customer service can make the difference between attracting and retaining customers versus losing them to competitors.
2. Numerous IT tools and business processes have been designed to keep customers happy.
3. Consider Amazon, for example. When you visit Amazon's Web site anytime after your first visit, the site welcomes you back by name and it presents you with information about items that you might like, based on your previous purchases.
4. In another example, Dell guides you through the process of purchasing a computer by providing information and choices that help you make an informed buying decision.



# Make-to-Order and Mass Customization.

1. Make-to-order is a strategy of producing customized (made to individual specifications) products and services.
2. The business problem is how to manufacture customized goods efficiently and at a reasonably low cost.
3. Part of the solution is to change manufacturing processes from mass production to mass customization.
4. In mass production, a company produces a large quantity of identical items. In mass customization, it also produces a large quantity of items, but it customizes them to fit the needs and preferences of individual customers.
5. Mass customization is simply an attempt to perform make-to-order on a large scale. Bodymetrics ([www.bodymetrics.com](http://www.bodymetrics.com)) is an excellent example of mass customization involving men's and women's jeans.



# E-Business and E-Commerce

1. Conducting business electronically is an essential strategy for companies that are competing in today's business environment.
2. Electronic commerce (EC or e-commerce) describes the process of buying, selling, transferring, or exchanging products, services, or information via computer networks, including the Internet.
3. E-business is a somewhat broader concept. In addition to the buying and selling of goods and services, e-business also refers to servicing customers, collaborating with business partners, and performing electronic transactions within an organization

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# Competitive Advantage and Strategic Information Systems

1. Identifies a business's approach to compete, its goals, and the plans and policies that will be required to carry out those goals
  2. Focuses on achieving a desired outcome when competitors want to prevent you from reaching your goal. Plan your own moves, but you must also anticipate and counter your competitors' moves.
  3. Helps a company function profitably with a market and generate larger-than-average profits
  4. information technologies simply offer tools that can enhance an organization's success through its traditional sources of competitive advantage, such as low cost, excellent customer service, and superior supply chain management
  5. Strategic information systems (SISs) provide a competitive advantage by helping an organization implement its strategic goals and improve its performance and productivity.
  6. Any information system that helps an organization either achieve a competitive advantage or reduce a competitive disadvantage, qualifies as a strategic information system.
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## 2.2 Competitive Advantage and Strategic IS's

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- Porter's Competitive Forces Model
  - Porter's Value Chain Model
  - Strategies for Competitive Advantage
  - Business – Information Technology Alignment
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# Porter's Five Forces Model

1. Companies use Porter's model to develop strategies to increase their competitive edge.
  2. Porter's model also demonstrates how IT can make a company more competitive.
  3. Porter's model identifies five major forces that can endanger or enhance a company's position in a given industry.
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# Porter's Five Forces Model

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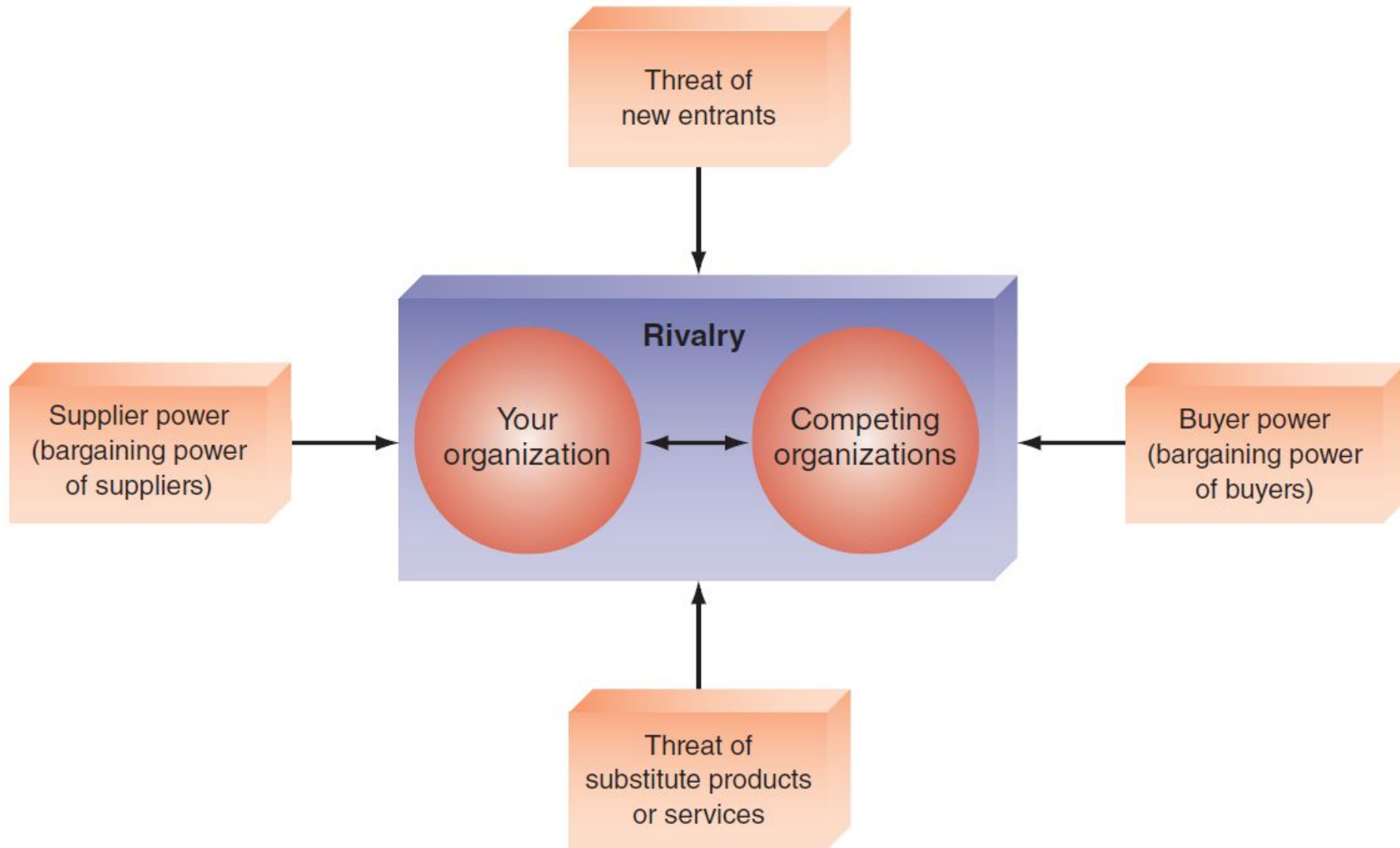
1. The threat of new competitors
  2. The bargaining power of suppliers
  3. The bargaining power of customers (buyers)
  4. The threat of substitute products or services
  5. The rivalry among existing firms in the industry
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# Porter's Five Forces Model

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- **Threat of Entry of New Competitors:** The threat that new competitors will enter your market is high when entry is easy and low when there are significant barriers to entry.
  - **Bargaining Power of Suppliers:** Supplier power is high when buyers have few choices from whom to buy and low when buyers have many choices.
  - **Bargaining Power of Customers (Buyers):** Buyer power is high when buyers have many choices from whom to buy and low when buyers have few choices.
  - **Threat of Substitute Products or Services:** If there are many alternatives to an organization's products or services, then the threat of substitutes is high. If there are few alternatives, then the threat is low.
  - **Rivalry Among Existing Firms:** The threat from rivalry is high when there is intense competition among many firms in an industry. The threat is low when the competition is among fewer firms and is not as intense.
  - -----
  - **Barrier to Entry:** a product or service feature that customers have learned to expect from organizations in a certain industry. A competing organization must offer this feature in order to survive in the marketplace (e.g., legal requirements such as admission to the bar to practice law).
  - **Switching Costs:** the costs, in money and time, imposed by a decision to buy elsewhere (e.g., contracts with smartphone providers).
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# Porter's Competitive Forces Model



# Porter's Five Forces Model

- **Threat of Entry of New Competitors:** The threat that new competitors will enter your market is high when entry is easy and low when there are significant barriers to entry.
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- **Rivalry Among Existing Firms:** The threat from rivalry is high when there is intense competition among many firms in an industry. The threat is low when the competition is among fewer firms and is not as intense.




# The threat of entry of new competitors

1. The threat that new competitors will enter your market is high when entry is easy and low when there are significant barriers to entry.
2. An entry barrier is a product or service feature that customers have learned to expect from organizations in a certain industry.
3. A competing organization must offer this feature in order to survive in the marketplace.
4. There are many types of entry barriers. Consider, for example, legal requirements such as admission to the bar to practice law or a license to serve liquor, where only a certain number of licenses are available.

# The bargaining power of suppliers

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1. Supplier power is high when buyers have few choices from whom to buy and low when buyers have many choices.
2. Therefore, organizations would rather have more potential suppliers so they will be in a stronger position to negotiate price, quality, and delivery terms.
3. The Internet's impact on suppliers is mixed. On the one hand, it enables buyers to find alternative suppliers and to compare prices more easily, thereby reducing the supplier's bargaining power.
4. On the other hand, as companies use the Internet to integrate their supply chains, participating suppliers prosper by locking in customers.

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1. Buyer power is high when buyers have many choices from whom to buy and low when buyers have few choices.
  2. For example, in the past, there were few locations where students could purchase textbooks (typically, one or two campus bookstores). In this situation, students had low buyer power.
  3. Today, the Web provides students with access to a multitude of potential suppliers as well as detailed information about textbooks. As a result, student buyer power has increased dramatically.
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# The threat of substitute products or services

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1. If there are many alternatives to an organization's products or services, then the threat of substitutes is high. If there are few alternatives, then the threat is low. Today, new technologies create substitute products very rapidly. For example, customers today can purchase wireless telephones instead of land-line telephones, Internet music services instead of traditional CDs, and ethanol instead of gasoline in cars
2. Information-based industries experience the greatest threat from substitutes. Any industry in which digitized information can replace material goods (e.g., music, books, and software) must view the Internet as a threat because the Internet can convey this information efficiently and at low cost and high quality.



# The rivalry among existing firms in the industry

1. The threat from rivalry is high when there is intense competition among many firms in an industry. The threat is low when the competition is among fewer firms and is not as intense.

# Porter's Value Chain Model

1. 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.
2. The value chain model identifies points where an organization can use information technology to achieve competitive advantage
3. According to Porter's value chain model, the activities conducted in any organization can be divided into two categories: primary activities and support activities.
4. Primary activities relate to the production and distribution of the firm's products and services. These activities create value for which customers are willing to pay.
5. The primary activities are buttressed by support activities. Unlike primary activities, support activities do not add value directly to the firm's products or services. Rather, as their name suggests, they contribute to the firm's competitive advantage by supporting the primary activities.

# Porter's Value Chain Model

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- Value Chain
- Two Categories of Organization Activities in the Value Chain
  - Primary Activities
  - Support Activities

# Primary Activities

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- Inbound logistics(inputs)
  - Operations(manufacturing and testing)
  - Outbound logistics(storage and distribution)
  - Marketing and sales
  - Services
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# Support Activities

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- The Firm's Infrastructure
- Human Resources Management
- Product and Technology Development
- Procurement

# Figure 2.3: Porter's Value Chain Model



# Strategies for Competitive Advantage

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1. Cost leadership strategy
  2. Differentiation strategy
  3. Innovation strategy
  4. Organizational effectiveness strategy
  5. Customer orientation strategy
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# Business-Information Technology Alignment

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- Business–Information Technology Alignment
- Six Characteristics of Excellent Business-IT Alignment:


# Strategies for Competitive Advantage

1. Cost leadership strategy. Produce products and/or services at the lowest cost in the industry. An example is Walmart's automatic inventory replenishment system, which enables Walmart to reduce inventory storage requirements. As a result, Walmart stores use floor space only to sell products, and not to store them, thereby reducing inventory costs.
2. Differentiation strategy. Offer different products, services, or product features than your competitors. Southwest Airlines, for example, has differentiated itself as a low-cost, shorthaul, express airline. This has proved to be a winning strategy for competing in the highly competitive airline industry. Also, Dell has differentiated itself in the personal computer market through its mass-customization strategy.

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3. Innovation strategy. Introduce new products and services, add new features to existing products and services, or develop new ways to produce them. A classic example is the introduction of automated teller machines (ATMs) by Citibank. The convenience and costcutting features of this innovation gave Citibank a huge advantage over its competitors. Like many innovative products, the ATM changed the nature of competition in the banking industry. Today, an ATM is a competitive necessity for any bank.

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4. Operational effectiveness strategy. Improve the manner in which a firm executes its internal business processes so that it performs these activities more effectively than its rivals. Such improvements increase quality, productivity, and employee and customer satisfaction while decreasing time to market.

5. Customer-orientation strategy. Concentrate on making customers happy. Web-based systems are particularly effective in this area because they can create a personalized, one-to-one relationship with each customer.

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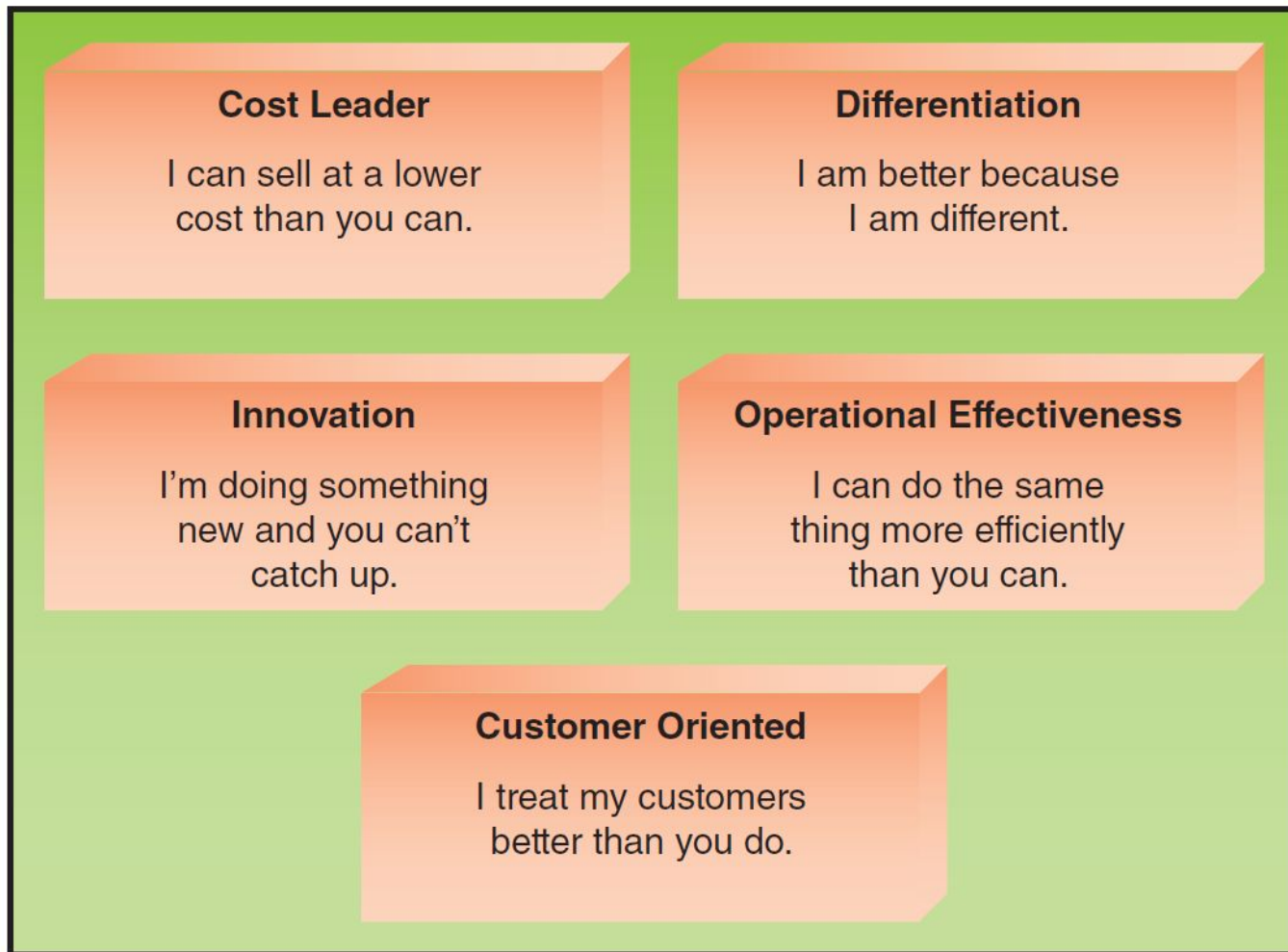


**FIGURE 2.5** Strategies for Competitive Advantage.



# Figure 2.4: Strategies for Competitive Advantage

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# Six Characteristics of Excellent Business-IT Alignment

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1. Organizations view IT as an engine of innovation that continually transforms the business, often creating new revenue streams.
  2. Organizations view their internal & external customers & their customer service function as supremely important.
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# Six Characteristics of Excellent Business-IT Alignment (continued)

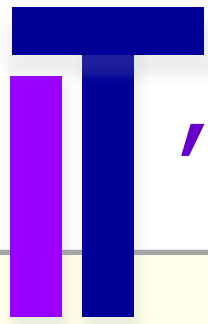
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3. Organizations rotate business & IT professionals across departments and job functions.
4. Organizations provide overarching goals that are completely clear to each IT and business employee.

# Six Characteristics of Excellent Business-IT Alignment (continued)

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5. Organizations ensure that IT employees understand how the company makes (or loses) money.
6. Organizations create a vibrant and inclusive company culture.



# 'S ABOUT BUSINESS 2.4

- **The University of Pittsburgh Medical Center Makes Effective Use of IT**



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1. Describe the strategic advantages that IT provides to UPMC.
2. Which of Porter's competitive strategies is UPMC employing? Support your answer.
3. Describe how UPMC illustrates effective business-IT alignment.