



CHAPTER 2

Organizational Strategy, Competitive Advantage, & Information Systems

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



1. Identify effective IT responses to different kinds of business pressures.
2. Describe the strategies that organizations typically adopt to counter Porter's five competitive forces.

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

Modern organizations compete in a challenging environment. To remain competitive, organisations must react rapidly to problems and opportunities that arise from extremely dynamic conditions. For eg.

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

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.

Business Pressures

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

They are classified as:

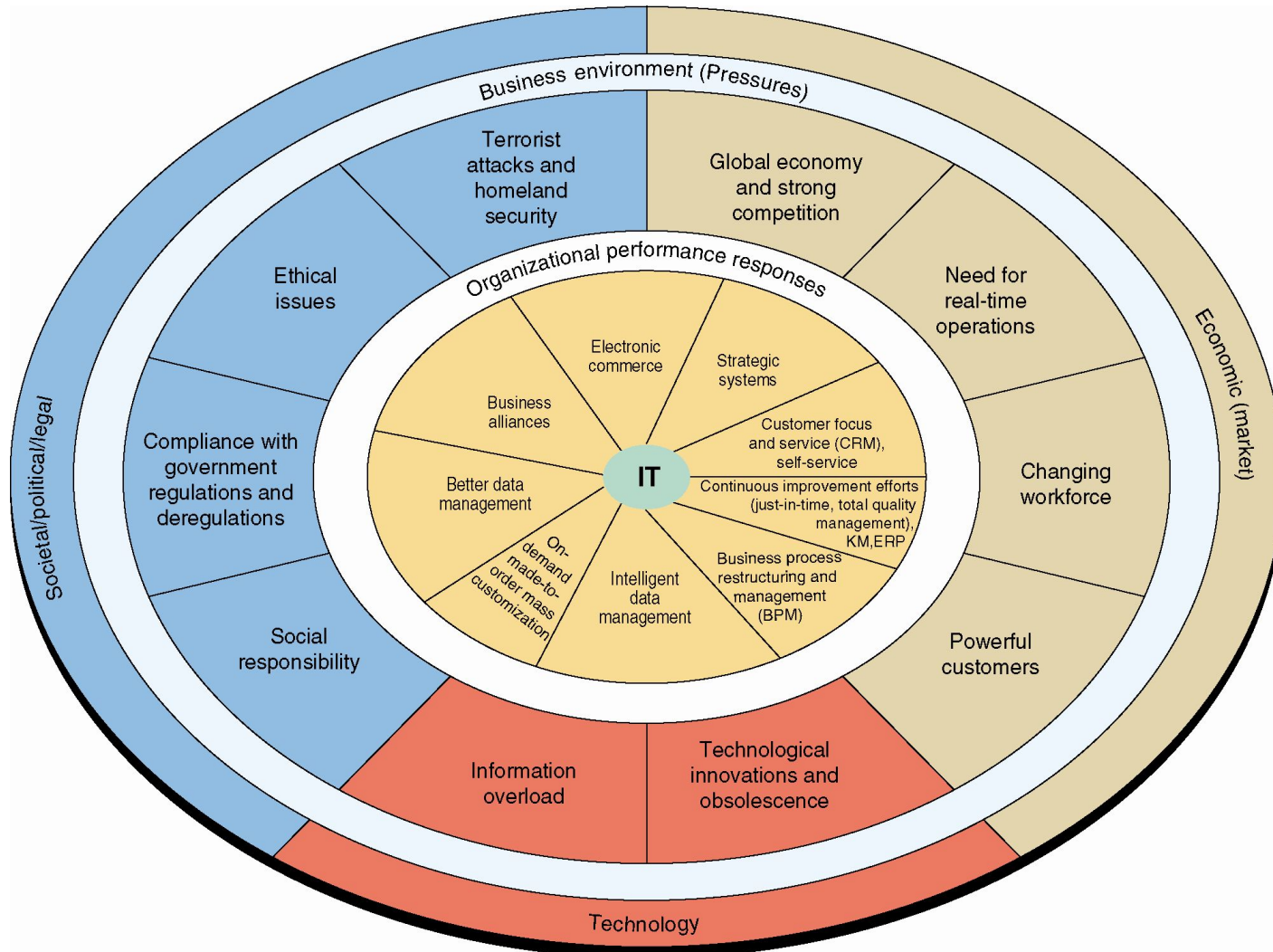
- Market Pressures
 - Technology Pressures
 - Societal/Political/Legal Pressures
-

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

Technology Pressures: business pressures caused by technological innovation and information overload.

Societal/Political/Legal Pressures: business pressures related to social responsibility, government regulation/deregulation, spending for social programs, spending to protect against terrorism, and ethics.

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



Market Pressures

- Globalization
- Changing Nature of the Workforce
- Powerful Customers

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.

Globalization

- Thomas Friedman – The World is Flat
 - Globalization 1.0
 - Globalization 2.0
 - Globalization 3.0
- Ten Flatteners

Thomas Friedman --> Three eras of globalization:

Globalization 1.0:

Timeframe: 1492 to 1800

Distinct Focus: Countries

Driver: Horse power, steam power, wind power, steam power

Globalization 2.0:

Timeframe: 1800 to 2000

Distinct Focus: International Companies

Driver:

-- 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)

Globalization 3.0:

Timeframe: 2000 to Present

Distinct Focus: Groups and Individuals

Driver: Convergence of 10 forces (or Flatteners)

Thomas Freidman:

Ten Flatteners that nine of Friedman's ten flatteners directly relate to information technology (all except the fall of the Berlin Wall). These flatteners enable individuals to connect, compute, communicate, collaborate, and compete everywhere and anywhere,

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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Technology Pressures

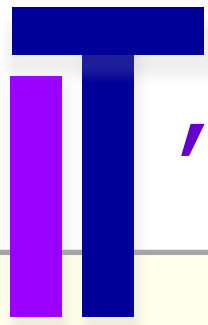
- Technological Innovation and Obsolescence
- Information Overload

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

- **“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

Includes social responsibility, government regulation/deregulation, spending for social programs, spending to protect against terrorism, and ethics.

They are :

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

Social Responsibility

- 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
-

Social Responsibility:

- 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.
- A growing IT initiative, called green IT, is addressing some of the most pressing environmental concerns such as:

Facilities design and management:

- Organizations are creating more sustainable work environments. Many organizations are pursuing Leadership in Energy and Environmental Design (LEED) certification from the U.S.
- Green Building Council, a nonprofit group that promotes the construction of environmentally friendly buildings.

- IT professionals are expected to help create green facilities. IT personnel have to consider how their computing decisions influences sustainable design and, in turn, how the building's design influences the IT infrastructure. Green design influences the type of IT devices a company uses and the locations where IT clusters personal computers, people, and servers.

Carbon mgmt:

IT executives to develop the systems needed to monitor carbon throughout the organization and its supply chain, which can be global in scope. Therefore, IT employees need to become knowledgeable about embedded carbon and how to measure it in the company's products and processes.

International and U.S. state environmental laws:

IT executives must deal with federal and state laws and international regulations that impact everything from the IT products they buy, to how they dispose of them, to their company's carbon footprint.

IT managers must understand environmental compliance issues so they can ask their vendors the right questions regarding specific state,

national, and international environmental standards before they purchase, deploy, and dispose of equipment.

Energy management:

IT executives must understand their entire organization's energy needs for several reasons by offering incentives to commercial customers who take certain energy conservation steps, such as enabling computer power management across their networks and designing energy-efficient data centers.

Still another social problem that affects modern business is the digital divide. The digital divide refers to the wide gap between those individuals who have access to information and communications technology and those who do not. This gap exists both within and among countries.

Compliance with Government Regulations:

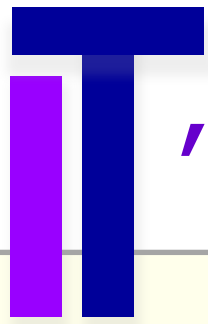
Government regulations regarding health, safety, environmental protection, and equal opportunity. Businesses tend to view government regulations as expensive constraints on their activities. In general, government deregulation intensifies competition.

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:

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.



'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.

Organizational Responses

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

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.

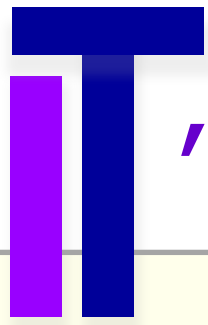
Make-to-Order: a strategy of producing customized (made to individual specifications) products and services.

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 (Example: Bodymetrics <www.bodymetrics.com>).

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.



'S ABOUT BUSINESS 2.3

- **The Weather Channel**

1. Identify several reasons (not discussed in the case) why accurate weather predictions are so important. Can an accurate weather prediction be considered a competitive advantage for an organization that receives this information? Why or why not? Support your answer with specific examples.
2. Will Dark Sky, Sky Motion, and WeatherSphere have a lasting competitive advantage over The Weather Channel? Why or why not? Support your answer.

Competitive Advantage and Strategic IS's

A **competitive strategy** is a statement that identifies a business's approach to compete, its goals, and the plans and policies that will be required to carry out those goals (Porter,1985).

Strategic information systems(SISs)

Provide a competitive advantage by helping an organization implement its strategic goals and improve its performance and productivity. Any information system that helps an organization either achieve a competitive advantage or reduce a competitive disadvantage, qualifies as a strategic information system.

Competitive Advantage and Strategic IS's

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

Porter's Five Forces Model:

Porter's model identifies five major forces that can endanger or enhance a company's position in a given industry. They are:

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
-

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.

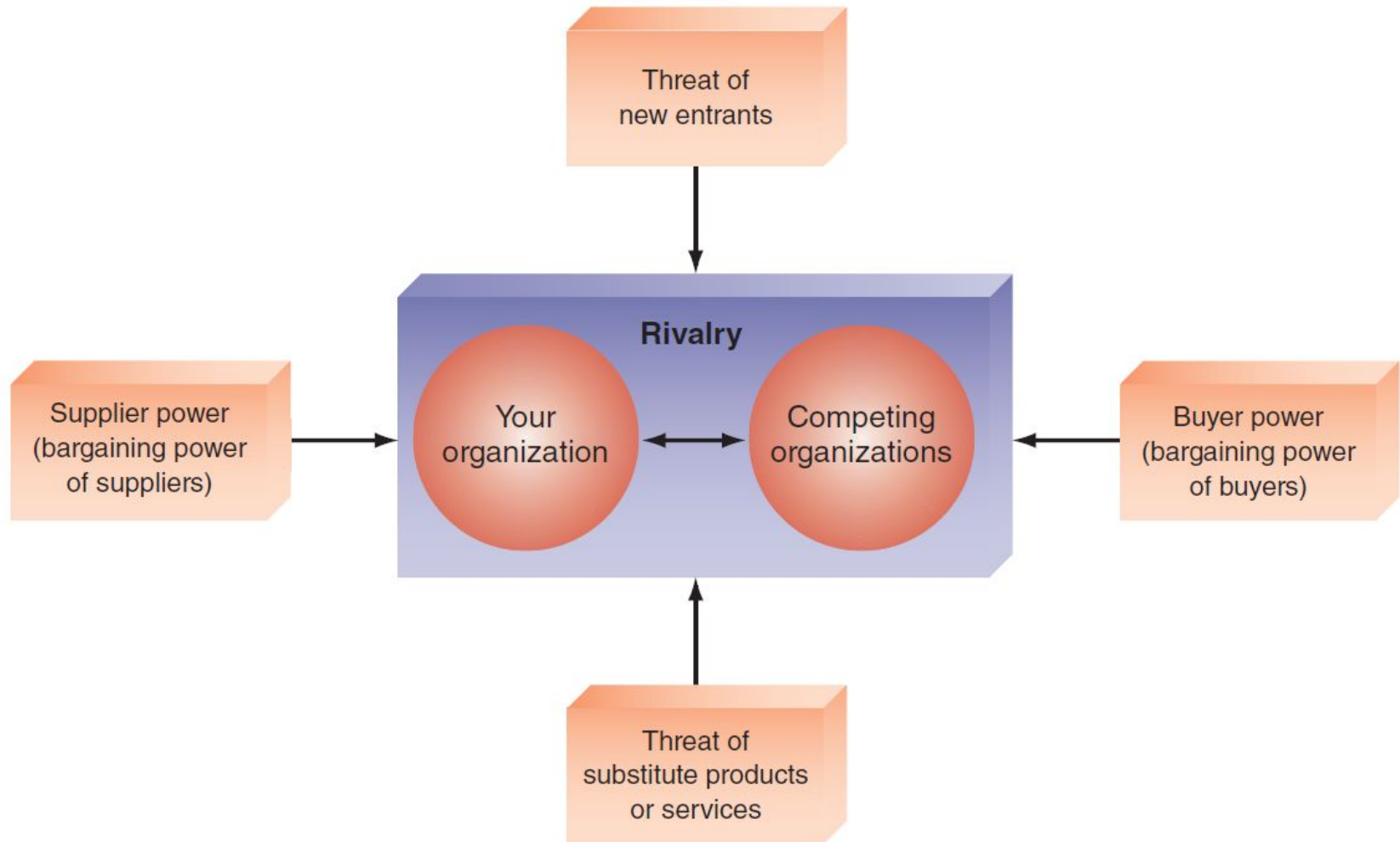
Threat of Substitute Products or Services: If there are many alternatives to an organization's products or services, then the threat of substitutes is high. If there are few alternatives, then the threat is low.

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).

Figure 2.2: Porter's Competitive Forces Model



Porter's Value Chain Model

- Value Chain:

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.

- The value chain model: identifies points where an organization can use information technology to achieve competitive advantage (see above Figure).

According to Porter's value chain model, the activities conducted in any organization can be divided into two categories:

- Primary Activities
 - Support Activities
-

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. Manufacturing companies typically perform five primary activities in the following sequence:

- Inbound logistics
 - Operations
 - Outbound logistics
 - Marketing and sales
 - Services
-

Support Activities


- The Firm's Infrastructure
 - Human Resources Management
 - Product and Technology Development
 - Procurement
-
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Figure 2.3: Porter's Value Chain Model

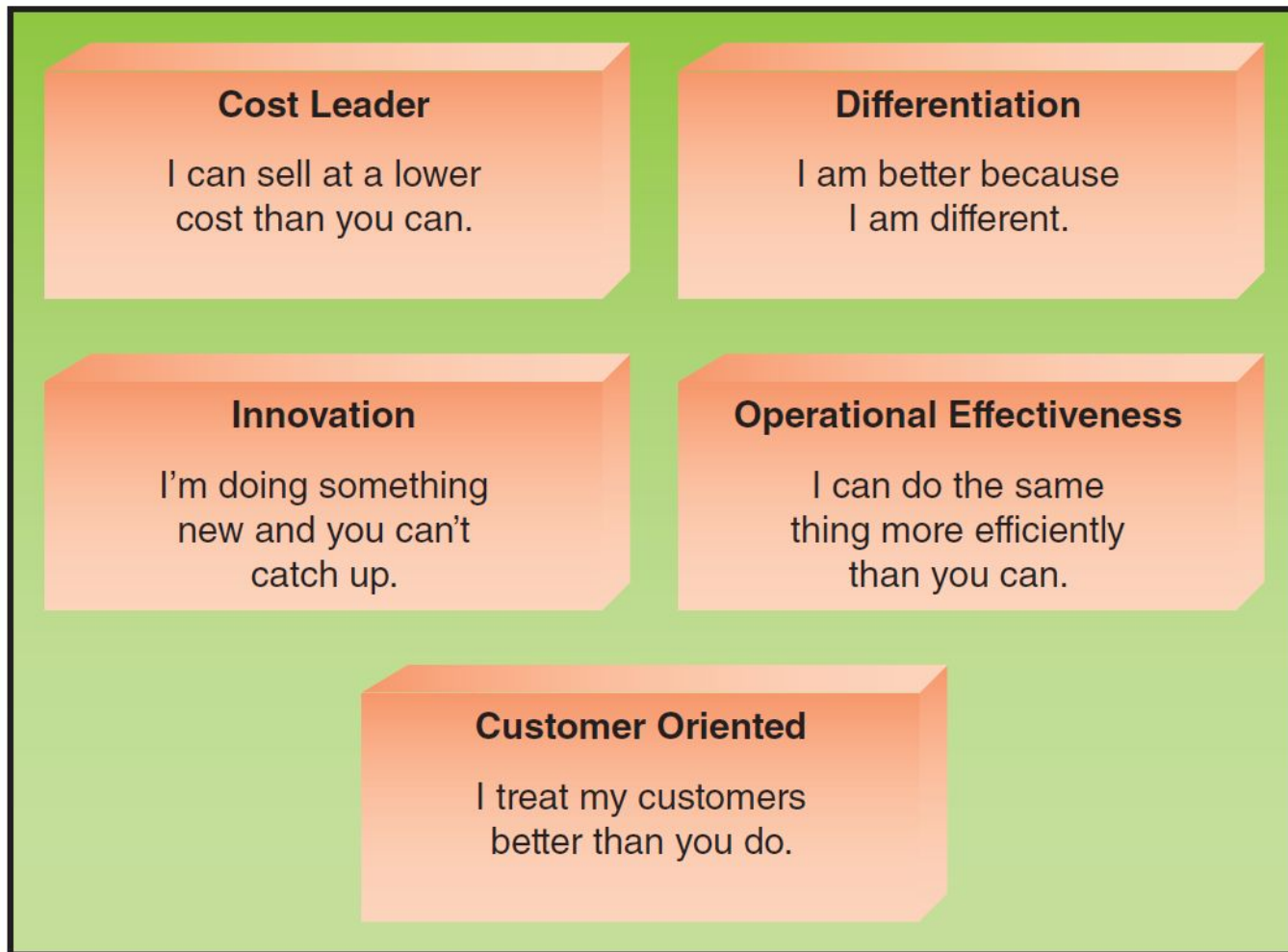


Strategies for Competitive Advantage

1. Cost leadership strategy
 2. Differentiation strategy
 3. Innovation strategy
 4. Organizational effectiveness strategy
 5. Customer orientation strategy
-

Strategies for Competitive Advantage :

Organizations continually try to develop strategies to counter the five competitive forces identified by Porter. The commonly used strategies are :



Competitive Advantage Strategies:

- 1. Cost leadership strategy:** Produce products and/or services at the lowest cost in the industry (e.g., Walmart's automatic inventory replenishment system).
- 2. Differentiation Strategy:** Offering different products, services, or product features than your competitors (e.g., Southwest Airlines has differentiated itself as a low-cost, short-haul, express airline).
- 3. Innovation Strategy:** Introduce new products and services, add new features to existing products and services, or develop new ways to produce them (Classic Example: the first introduction of automated teller machines (ATMs) by Citibank).
- 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.

Business-Information Technology Alignment

- **Business–Information Technology Alignment**

Business–information technology alignment is the tight integration of the IT function with the organization's strategy, mission, and goals. That is, the IT function directly supports the business objectives of the organization.

- **Six Characteristics of Excellent Business-IT Alignment:**

Six Characteristics of Excellent Business-IT Alignment

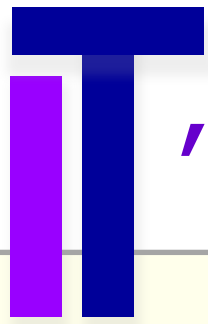
1. Organizations view IT as an engine of innovation that continually transforms the business, often creating new revenue streams.
 2. Organizations view their internal & external customers & their customer service function as supremely important.
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Six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

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)

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.