

CHAPTER 2



Organizational Strategy, Competitive Advantage, and Information Systems

CHAPTER OUTLINE

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



LEARNING OBJECTIVES

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.



2 Introduction

- **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.
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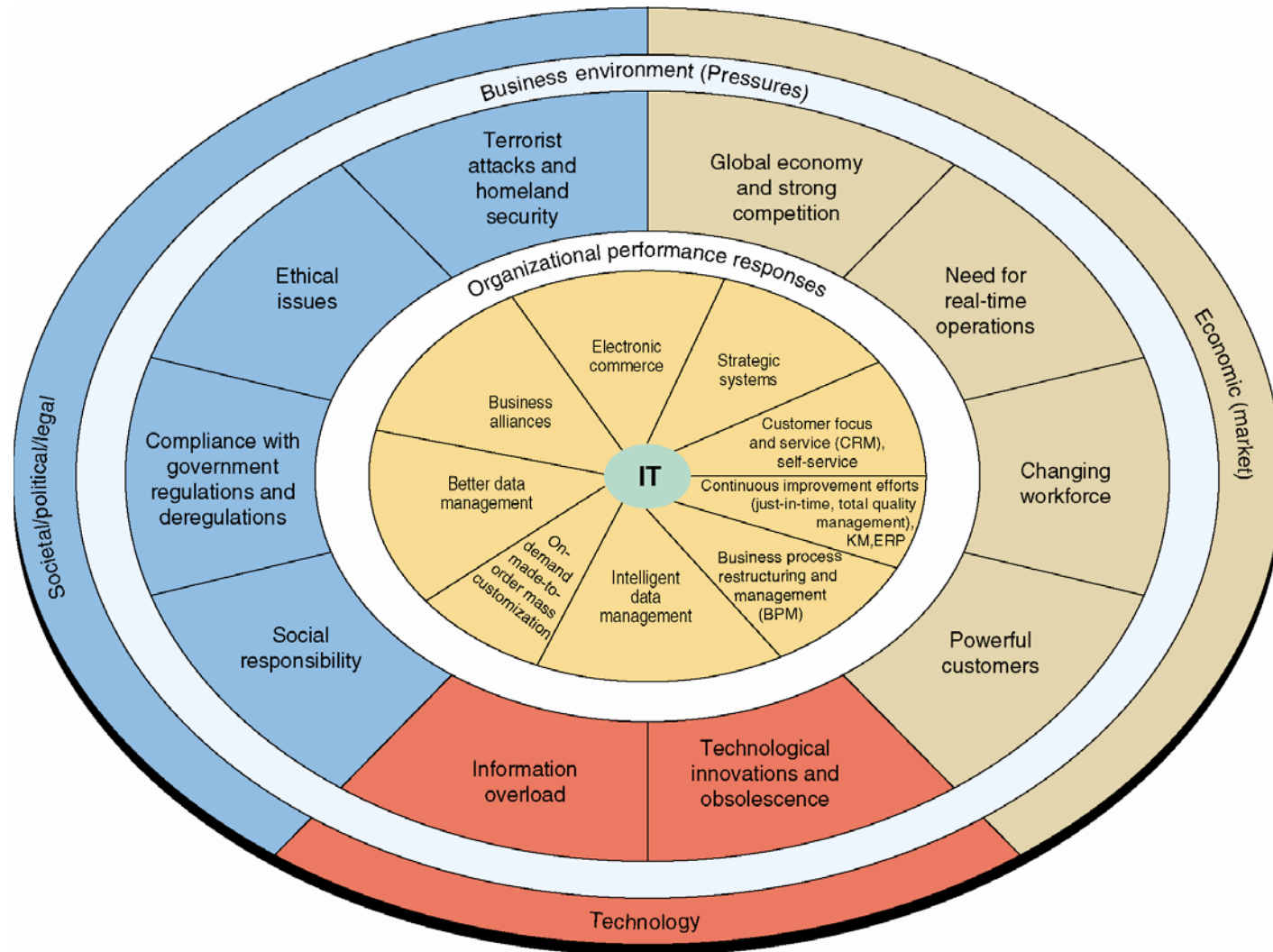
2.1 Business Pressures, Organizational Responses, and IT Support

- Business Pressures
- Organizational Responses

Business 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
 - the integration and interdependence of economic, social, cultural, and ecological facets of life, made possible by rapid advances in information technology.
 - some examples of globalization:
 - Multinational corporations operate on a global scale, with offices and branches located worldwide.
 - Many automobile manufacturers use parts from other countries, such as a car being assembled in the United States with parts coming from Japan, Germany, or Korea.
 - The World Trade Organization (WTO; www.wto.org) supervises international trade.
 - Regional agreements such as the North American Free Trade Agreement (NAFTA), which includes the United States, Canada, and Mexico, have contributed to increased world trade and increased competition.
 - The European Union is an economic and political union of 28 countries that are located primarily in Europe.
 - The rise of India and China as economic powerhouses has increased global competition.
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Market Pressures

- 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.


Technology Pressures

- 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.
 - the rapid technological innovation of the Apple iPad (www.apple.com/ipad):
 - Apple released the first iPad in April 2010 and sold three million devices in just 80 days.
 - Apple released the iPad 2 on March 11, 2011, only 11 months later.
 - Apple released the iPad 3 on March 7, 2012.
 - Apple released its fourth-generation iPad on November 2, 2012, along with the iPad mini.
 - On November 1, 2013, Apple released the fifth generation of its iPad, called the iPad Air.
 - On November 12, 2013, Apple released its iPad Mini 2 with Retina Display.
 - In October 2014, Apple released the iPad Air 2 and the iPad Mini 3.
 - In September 2015, Apple announced the iPad Pro.

Technology Pressures

- 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.
 - Information technologies, such as search engines (discussed in [Chapter 4](#)) and data mining ([Chapter 5](#)), provide valuable support in these efforts.
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Societal/Political/Legal Pressures

- 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.
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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
 - refers to the wide gap between those individuals who have access to information and communications technology and those who do not.
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Social Responsibility

- *PatientsLikeMe* (www.patientslikeme.com)
 - any of the thousands of message boards dedicated to infertility, cancer, and various other ailments. People use these sites and message boards to obtain information about healthcare decisions based on volunteered information, while also receiving much-needed emotional support from strangers.
 - *Collaborative Consumption* (www.collaborativeconsumption.com)
 - an online hub for discussions about the growing business of sharing, resale, reuse, and barter (with many links to Web sites engaged in these practices).
 - *Kiva* (www.kiva.org)
 - a nonprofit enterprise that provides a link between lenders in developed countries and entrepreneurs in developing countries. Users pledge interest-free loans rather than tax-deductible donations. Kiva directs 100 percent of the loans to borrowers.
 - *DonorsChoose* (www.donorschoose.org)
 - an education-oriented Web site that functions entirely within the United States. Users make donations rather than loans. The Web site addresses the huge problem of underfunded public schools.
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Societal/Political/Legal Pressures

- 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.
 - Organizations must be in compliance with the regulations contained in these statutes. 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.
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Societal/Political/Legal Pressures

- 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.
 - An example of protection against terrorism is the Department of Homeland Security's (DHS) Office of Biometric Identity Management (OBIM) program.
 - OBIM is a network of biometric screening systems, such as fingerprint and iris and retina scanners, that ties into government databases and watch lists to check the identities of millions of people entering the United States. The system is now operational in more than 300 locations, including major international ports of entry by air, sea, and land.
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Societal/Political/Legal Pressures

- 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.
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Organizational Responses

- 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.



Organizational Responses

- 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.
- When you visit Amazon's Web site any time 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.
- Dell guides you through the process of purchasing a computer by providing information and choices that help you make an informed buying decision.



Organizational Responses


- Make-to-Order

- a strategy of producing customized (made to individual specifications) products and services.
- The business problem is how to manufacture customized goods efficiently and at a reasonably low cost.

- 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
 - M&M candies: My M&Ms (www.mymms.com) allows customers to add photos, art, and messages to candy.
 - Dell (www.dell.com) and HP (www.hp.com): Allow customers to exactly specify the computer that they want.
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Organizational Responses

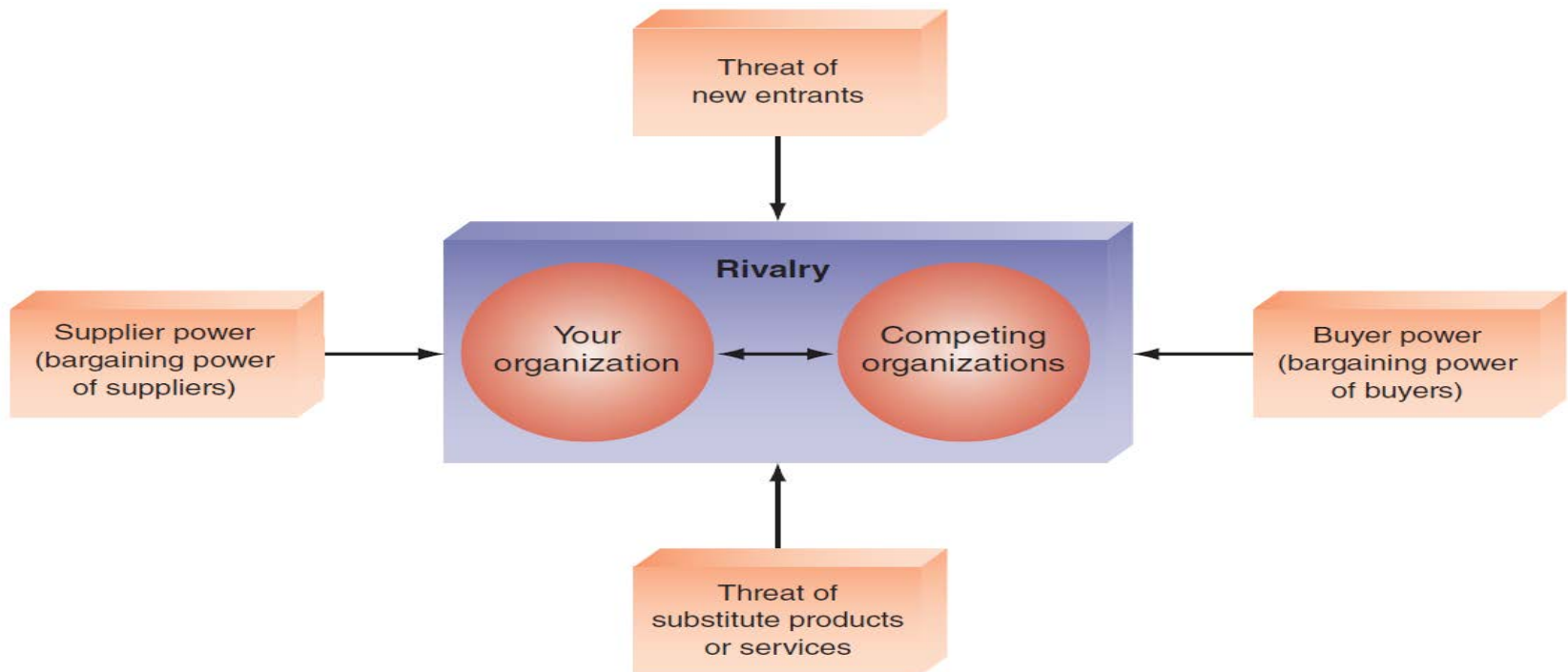
- E-Business and E-Commerce
 - Conducting business electronically is an essential strategy for companies that are competing in today's business environment.
 - **Electronic commerce (EC or e-commerce)**: describes the process of buying, selling, transferring, or exchanging products, services, or information 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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2.2 Competitive Advantage and Strategic IS's

- Porter's Competitive Forces Model
 - Porter's Value Chain Model
 - Strategies for Competitive Advantage
 - Business – Information Technology Alignment
 - **Strategic Information Systems (SISs):** provide a competitive advantage by helping an organization implement its strategic goals and improve its performance and productivity.
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Porter's Competitive Forces Model

- The best-known framework for analyzing competitiveness.
- Companies use Porter's model to develop strategies to increase their competitive edge



Porter's Five Forces Model

1. The threat 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.
- **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).
- Suppose you want to open a gasoline station. In order to compete in that industry, you would have to offer pay-at-the-pump service to your customers. Pay-at-the-pump is an IT-based barrier to entering this market.
- Normally, the Web *increases* the threat that new competitors will enter the market because it sharply reduces traditional barriers to entry.
- In some cases, the Web increases barriers to entry. For example, the first company to offer Web-based package tracking gained a competitive advantage from that service

2. The bargaining power of suppliers

- Supplier power is high when buyers have few choices from whom to buy and low when buyers have many choices.
- 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. On the other hand, as companies use the Internet to integrate their supply chains, participating suppliers prosper by locking in customers.

Porter's Five Forces Model

3. The 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.
- the Web provides customers with access to a multitude of potential suppliers as well as detailed information about products.
- In contrast, *loyalty programs* reduce buyer power. loyalty programs reward customers based on the amount of business they conduct with a particular organization (e.g., airlines, hotels, rental car companies)

4. The 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.
- Information-based industries experience the greatest threat from substitutes. Any industry in which digitized information can replace material goods (e.g., music, books, software) must view the Internet as a threat because the Internet can convey this information efficiently and at low cost and high quality.
- **Switching Costs:** the costs, in money and time, imposed by a decision to buy elsewhere (e.g., contracts with smartphone providers).
- For example, contracts with smartphone providers typically include a substantial penalty for switching to another provider until the term of the contract expires (quite often, two years).
- when you buy products from Amazon, the company develops a profile of your shopping habits and recommends products targeted to your preferences. If you switch to another online vendor, that company will need time to develop a profile of your wants and needs. In this case, the switching cost involves time rather than money.

Porter's Five Forces Model

5. The rivalry among existing firms in the industry

- 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 visibility of Internet applications on the Web makes proprietary systems more difficult to keep secret.
 - Established companies can also gain a competitive advantage by allowing customers to use data from the company's products to improve their own performance. For example, Babolat (www.babolat.com), a manufacturer of sports equipment, has developed its Babolat Play Pure Drive system. The system has sensors embedded into the handle of its tennis rackets. A smartphone app utilizes the data from the sensors to monitor and evaluate ball speed, spin, and impact location to give tennis players valuable feedback.
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Porter's Value Chain Model

- 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 System
 - includes the suppliers that provide the inputs necessary to the firm along with their value chains. After the firm creates products, these products pass through the value chains of distributors (which also have their own value chains), all the way to the customers. All parts of these chains are included in the value system.
- Two Categories of Organization Activities in the Value Chain
 - 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.
 - Support Activities
 - contribute to the firm's competitive advantage by supporting the primary activities, but do not add value directly to the firm's products or services.

Figure 2.3: Porter's Value Chain Model in a manufacturing company



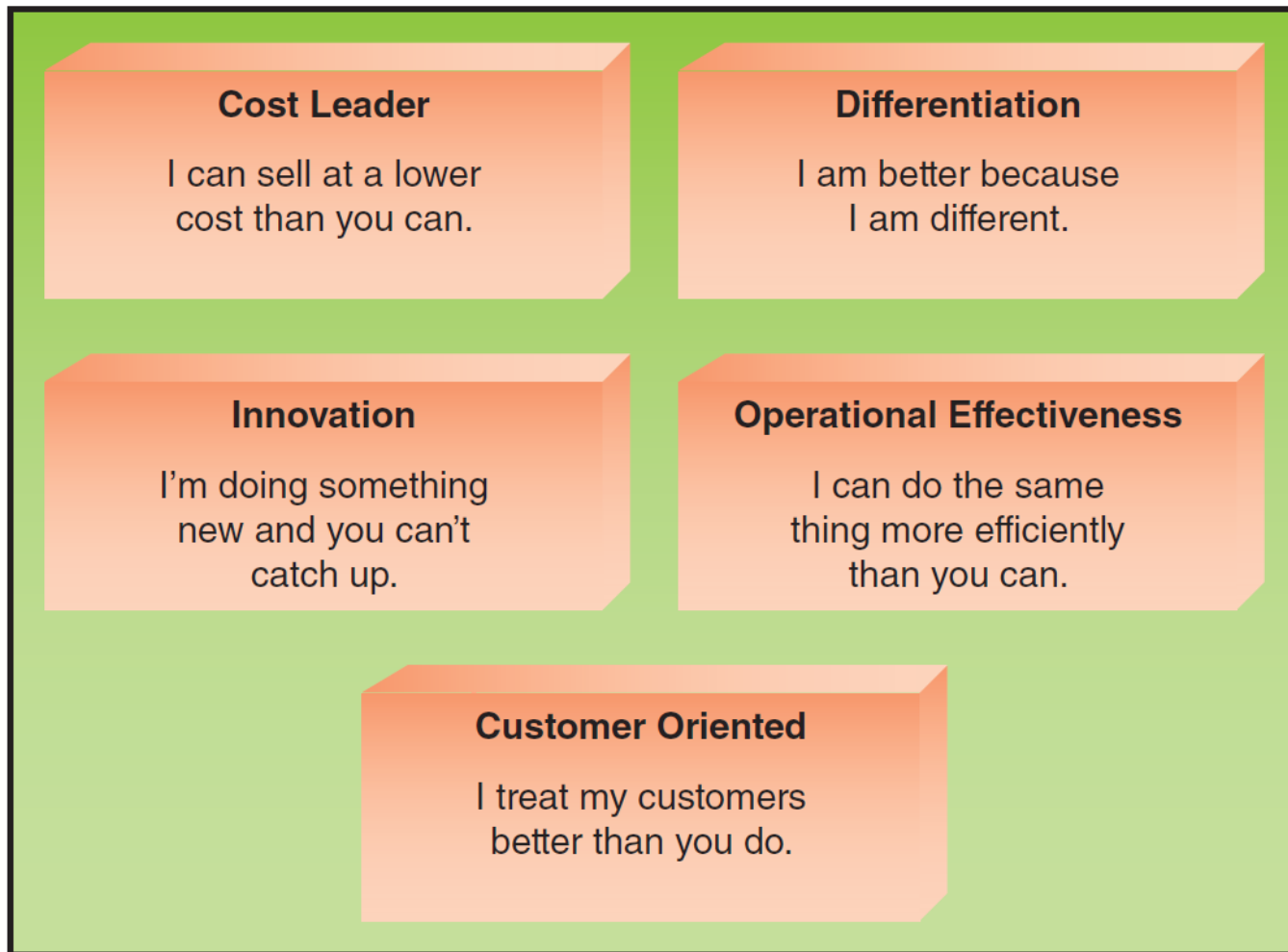
Primary Activities

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

- The Firm's Infrastructure (accounting, finance, management)
 - Human Resources Management
 - Product and Technology Development (R&D)
 - Procurement
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- Keep in mind that other types of firms, such as transportation, healthcare, education, retail, and others, have different value chains. The key point is that *every* organization has a value chain.
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Figure 2.4: Strategies for Competitive Advantage



Strategies for Competitive Advantage

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. Organizational 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

- The best way for organizations to maximize the strategic value of IT is to achieve business–information technology alignment.
- Business–Information Technology Alignment
 - IT function directly supports the business objectives of the organization through the tight integration of the IT function with the organization's strategy, mission, and goals.
- 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.
 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.
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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.
- According to a McKinsey & Company survey on IT strategy and spending, only 16 percent of the IT and business executives who participated agreed that their organization had adequate alignment between IT and the business.
 - Business managers and IT managers have different objectives.
 - The business and IT departments are ignorant of the other group's expertise.
 - A lack of communication.