Chapter 1
The Information Systems Strategy Triangle

Managing and Using Information Systems: A Strategic Approach

by Keri Pearlson & Carol Saunders

Learning Objectives

- Determine the role general managers must take in decisions about IS.
- Define and explain the Information Systems Strategy Triangle.
- Identify and define the various business strategy frameworks.
- Explain the information system strategy matrix.
- Understand and apply these models to different organizations.

Real World Example

- During an ice storm in 2007 many airlines were cancelling flights.
- Jet Blue waited to cancel flights and paid a heavy price.
- Had to cancel 1,000 flights over 5 days.
- Up to 9 planes full of passengers were stranded for up to 6 hours on the tarmac.
- An inadequate reservation system and shoestring communication system was blamed for the problems by Neelman.
- Changes had to be made.

The Impact of IS

- Companies are out of alignment when their business strategy is not supported by their IS.
- The Information Systems Strategy Triangle is a simple framework for understanding the impact of IS on organizations and proper alignment.
- Successful firms have an overriding business strategy.
- This business strategy drives both Organizational and Information strategy.
- All decisions are driven by the firm’s business objectives.

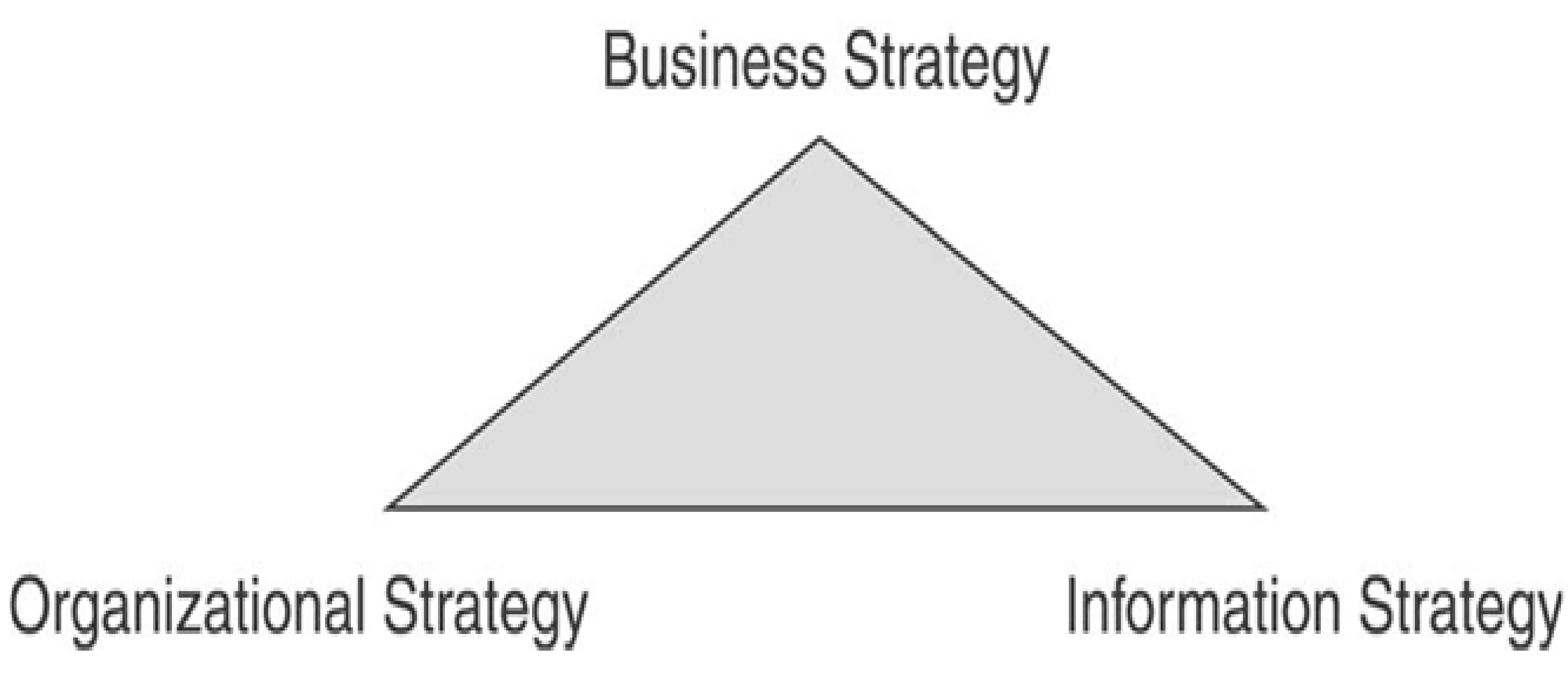

Figure 1.1 The Information Systems Strategy Triangle

IS Strategy Triangle

- Business Strategy drives all other strategies.
- Organizational and Information Strategy are then dependent upon the Business Strategy.
- Changes in any strategy requires changes in the others to maintain balance.
- IS Strategy is affected by the other strategies a firm uses.
- IS strategy always involves consequences.

BRIEF OVERVIEW OF BUSINESS STRATEGY FRAMEWORKS

Think About IT

- What is a business strategy?
- Which factors influences a business strategy?
- How does a business change its strategy without losing balance or becoming out of alignment?
- Are there specific events that induce a business to change its strategies? What are they?

Strategy

- A **strategy** is a coordinated set of actions to fulfill objectives, purposes and goals.
- Strategy starts with a mission.
- Figure 1.2 shows some example mission statements.
- A **business strategy** is a plan articulating where a business seeks to go and how it expects to get there.
- There are several “strategies” worth examining.

Company	Statement
IBM	At IBM, we strive to lead in the creation, development and manufacture of the industry's most advanced information technologies, including computer systems, software, networking systems, storage devices and microelectronics. We translate these advanced technologies into value for our customers through our professional solutions and services businesses worldwide.
Dell	Dell's mission is to be the most successful computer company in the world at delivering the best customer experience in markets we serve.
Apple	Apple ignited the personal computer revolution in the 1970s with the Apple II and reinvented the personal computer in the 1980s with the Macintosh. Apple is committed to bringing the best personal computing experience to students, educators, creative professionals and consumers around the world through its innovative hardware, software and Internet offerings.

Figure 1.2 – Mission statements of computer companies

Generic Strategies Framework

- Michael Porter describes how businesses can build a sustainable competitive advantage.
- He identified three primary strategies for achieving competitive advantage:
  - Cost leadership – lowest-cost producer.
  - Differentiation – product is unique.
  - Focus – limited scope.

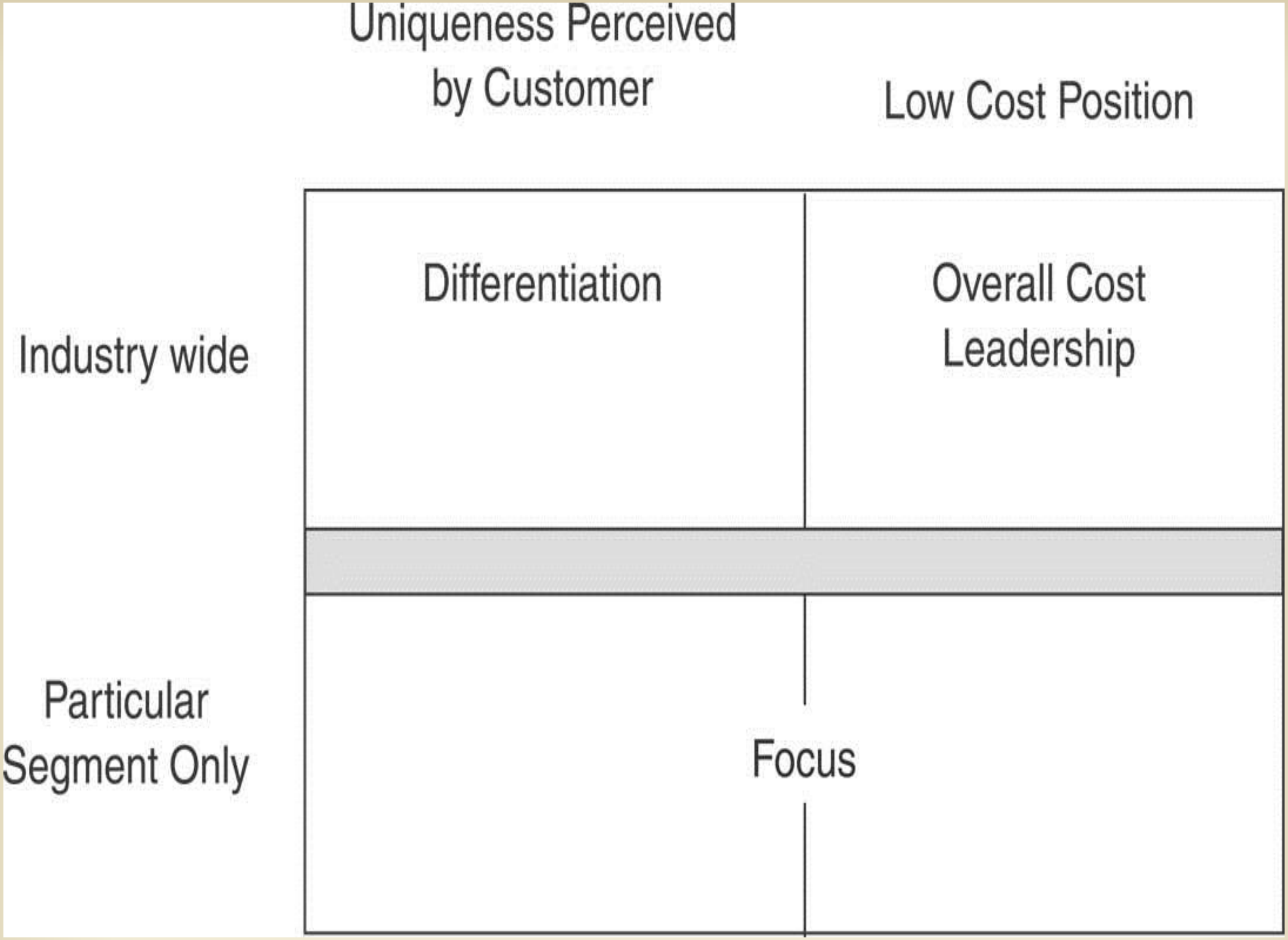

Figure 1.3 Three strategies for achieving competitive advantage.

Porter’s Competitive Advantage

- Remember that a companies overall business strategy will drive all other strategies.
- Porter defined these competitive advantages to represent various business strategies found in the marketplace.
- Cost leadership strategy firms include Walmart, Suzuki, Overstock.com, etc.
- Differentiation strategy firms include Coca Cola, Progressive Insurance, Publix, etc.
- Focus strategy firms include the Ritz Carlton, Marriott, etc.

Differentiation Strategy Variants

- **Shareholder value model**: create advantage through the use of knowledge and timing (Fruhan)
- **Unlimited resources model**: companies with a large resource can sustain losses more easily than ones with fewer resources (Chain Store vs Mom & Pop).
- The problem with Porter and these variants are that the rate of change is no longer easily managed and sustained.

Hypercompetition

- D’Aveni developed a model that stated that sustainable competitive advantage could NOT be sustained.
- Called the “Hypercompetition and the New 7 Ss Framework”.
- Competitive advantage is rapidly erased by competition and the market.

- Assumptions of D’Aveni’s Hypercompetition and the New 7 Ss Framework model:
  - Every advantage is eroded.
  - Sustaining an advantage can be a deadly distraction.
  - Goal of advantage should be disruption, not sustainability
  - Initiatives are achieved through series of small steps.

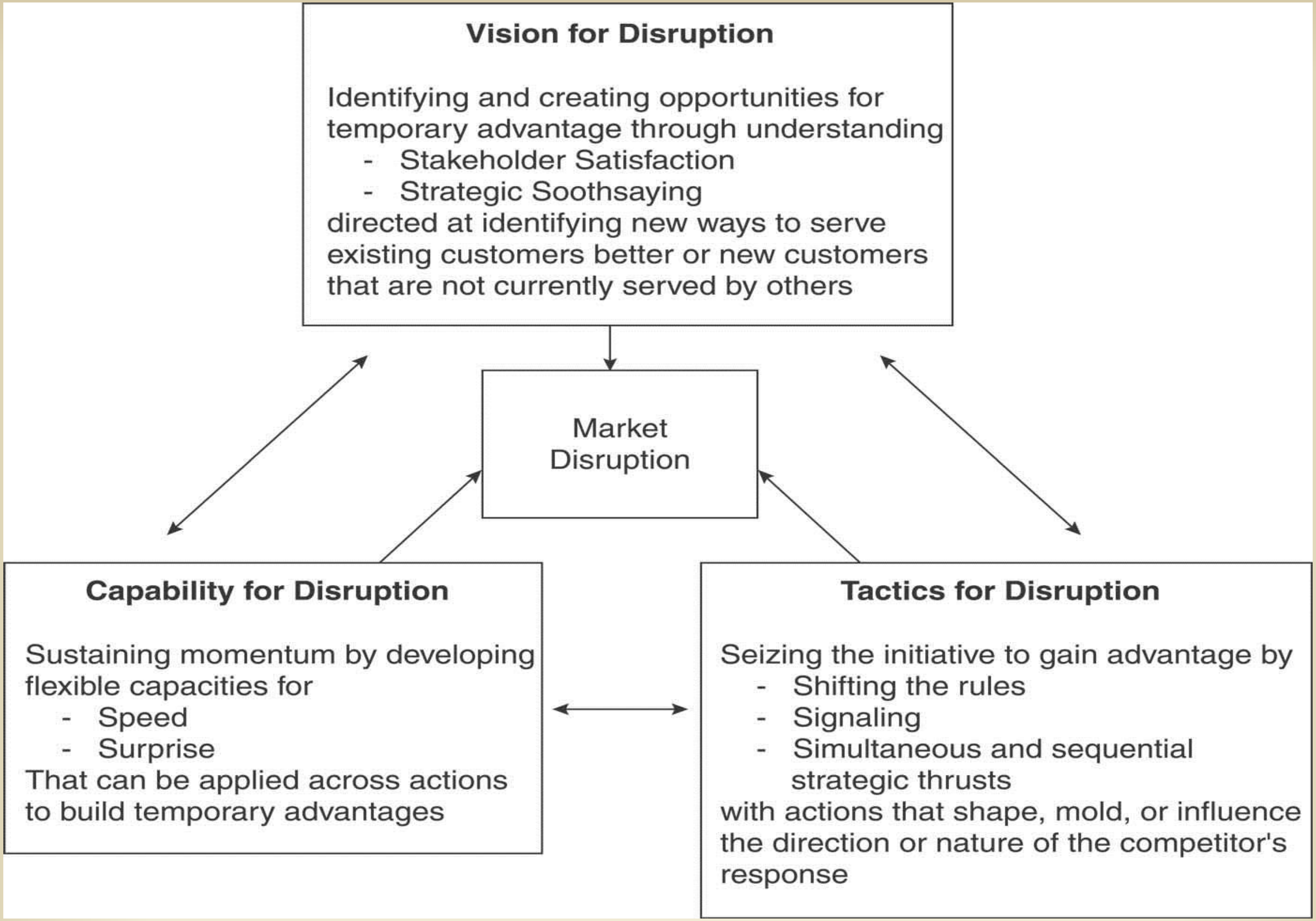

Figure 1.4 Disruption and the new 7 Ss

D’Aveni’s new 7 Ss

- The 7 Ss are useful for determining different aspects of a business strategy and aligning them to make the organization competitive in the hypercompetitive arena.
- The 7 Ss are (see Figure 1.5):

  1. **Superior stakeholder satisfaction**
  2. **Strategic soothsaying**
  3. **Positioning for speed**
  4. **Positioning for surprise**
  5. **Shifting the rules of competition**
  6. **Signaling strategic intent**
  7. **Simultaneous and sequential strategic thrusts**

Approach	Definition
Superior stakeholder satisfaction	Understanding how to maximize customer satisfaction by adding value strategically.
Strategic soothsaying	Seeking out new knowledge that can predict or create new windows of opportunity.
Positioning for speed	Preparing the organization to react as quickly as possible.
Positioning for surprise	Preparing the organization to respond to the marketplace in a manner that will surprise competitors.
Shifting the rules of competition	Finding new ways to serve customers which transform the industry.
Signaling strategic intent	Communicating the intended actions of a company, in order to stall responses by competitors.
Simultaneous and sequential thrusts	Taking a series of steps designed to stun and confuse competitors in order to disrupt or block their efforts.

Figure 1.5 D'Aveni's new 7 Ss.

Application of Hypercompetition

- General Electric applied the Hypercompetition Model to its business units in the Destroy Your Business (DYB) project.
- GE recognized that if they didn’t understand and recognize their own weaknesses they could not remain competitive.
- Employees were tasked to determine ways to “destroy their business unit”. Once they have identified these areas of weakness they apply the Grow Your Business (GYB) strategy to find fresh ways to reach new customers and better serve existing customers.

IS Planning and Strategic Advantage Models

- General Managers cannot afford to rely solely on IS personnel to make IS decisions.
- Business strategy drives IS decision making.
- Changes in IS potential should trigger business reassessments (i.e. the Internet).
- Information Systems Strategy Triangle shows the proper balance of strategies.
- The models are helpful in discussing the role of IS in building and sustaining competitive advantage.

Framework	Key Idea	Application to Information Systems
Porter's generic strategies Framework	Firms achieve competitive advantage through cost leadership, differentiation, or focus	Understanding which strategy is chosen by a firm is critical to choosing IS to complement the strategy
D'Aveni's Hypercompetition Model	Speed and aggressive moves and countermoves by a firm create competitive advantage	IS are critical to achieving the speed needed for moves and countermoves. IS are in a constant state of flux or development.

Figure 1.6 Summary of key strategy frameworks.

BRIEF OVERVIEW OF ORGANIZATIONAL STRATEGIES

Organizational Strategy

- Organizational strategy includes the organization’s design as well as the choices it makes in its work processes.
- How will the company organize in order to achieve its goals and implement its business strategy?
- Managerial Levers – another framework for organizational design, states that successful execution of the firm’s organizational strategy is the best combination of organizational, control, and cultural variables (Figure 1.8).

Business Diamond

- Simple framework for identifying crucial components of an organization’s plan (Figure 1.7):
  - its business processes
  - its values and beliefs
  - its management control systems
  - its tasks and structures.
- Useful for designing new organizations and for diagnosing organizational troubles.

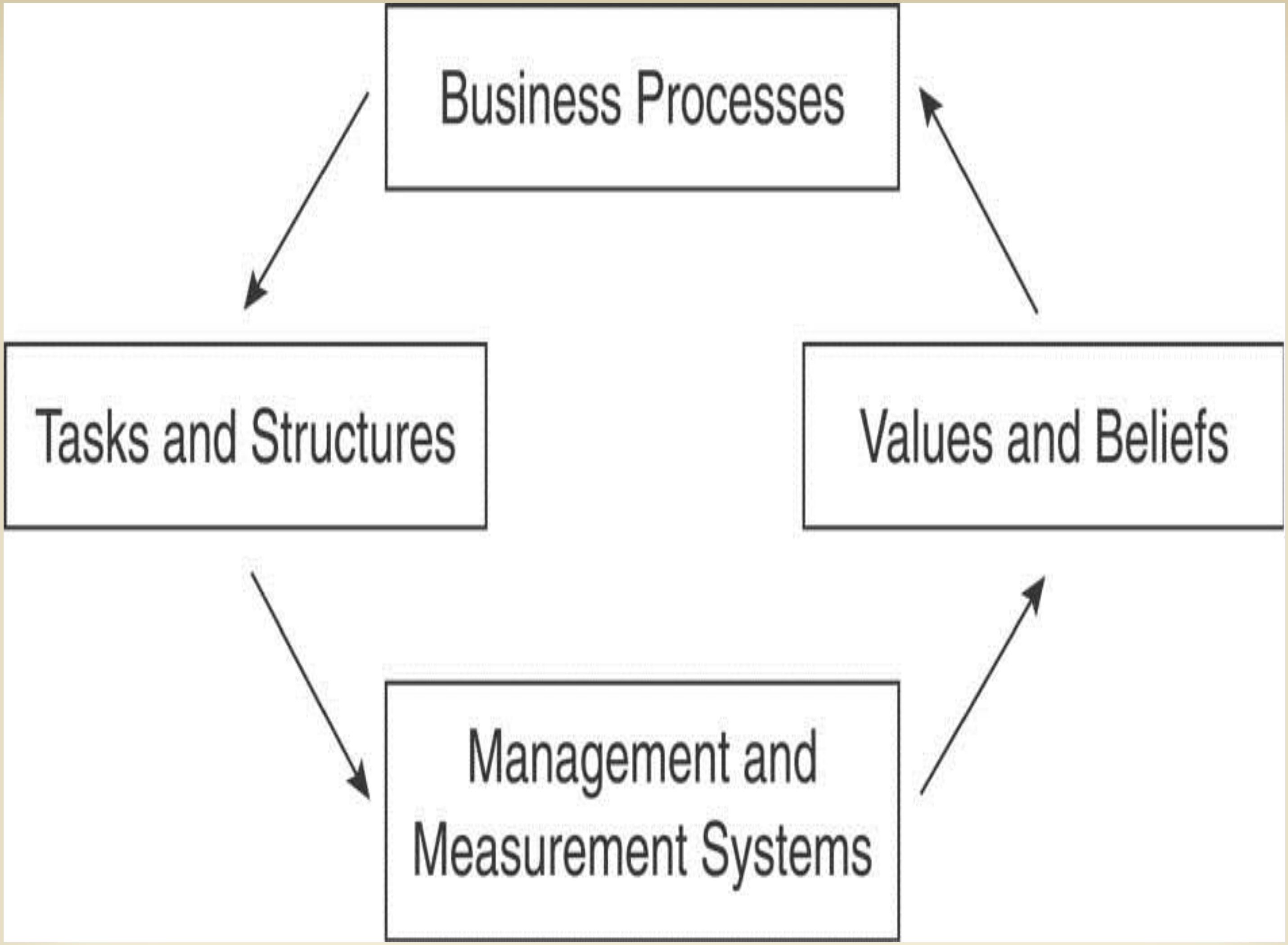

Figure 1.7 The Business Diamond

Managerial Levers

- This framework (Figure 1.8) suggests that the successful execution of a business's organizational strategy comprises the best combination of organizational, control, and cultural variables.
- Organizational variables include:
  - decision rights, business processes, formal reporting relationships, and informal networks.
- Control variables include:
  - availability of data, nature and quality of planning, effectiveness of performance measurement and evaluation systems, and incentives to do good work.
- Cultural variables comprise the values of the organization.

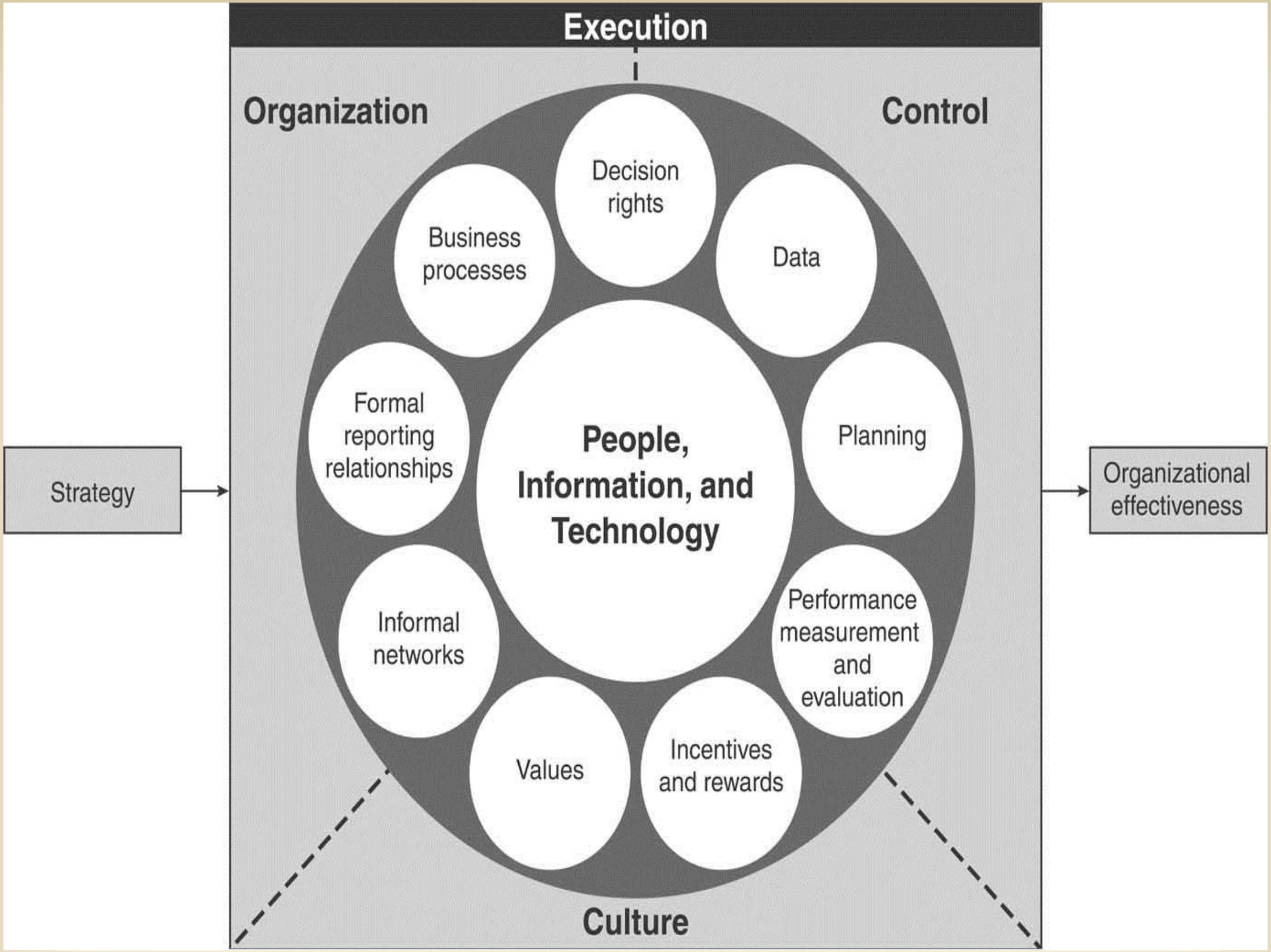

Figure 1.8 Managerial Levers

Understanding Organization Strategy

To understand organizational strategy we must answer the following questions:

1. What are the important structures and reporting relationships within the organization?
2. What are the characteristics, experiences, and skill levels of the people within the organization?
3. What are the key business processes?
4. What control systems are in place?
5. What is the culture of the organization?

Framework	Key Idea	Usefulness in IS Discussions
Business Diamond	There are 4 key components of an organization: business processes, values and beliefs, management control systems, and tasks and structures.	Using IS in an organization will affect each of these components. Use this framework to identify where these impacts are likely to occur
Managerial levers	Organizational variables, control variables, and cultural variables are the levers managers can use to affect change in their organizations	This is a more detailed model than the Business diamond and gives specific areas where IS can be used to manage the organization and to change it

Figure 1.9 Summary of organizational strategy frameworks

BRIEF OVERVIEW OF INFORMATION SYSTEMS STRATEGY

IS Strategy

- The plan an organization uses in providing information services.
- IS allows business to implement its business strategy.
- IS helps determine the company's capabilities.
- Four key IS infrastructure components are key to IS strategy (Figure 1.9)
- These key components are sufficient to allow the general manager to assess critical IS issues.

	What	Who	Where
Hardware	List of physical components of the system	Individuals who use it Individuals who manage it	Physical location
Software	List of programs, applications, and utilities	Individuals who use it Individuals who manage it	What hardware it resides upon and where that hardware is located
Networking	Diagram of how hardware and software components are connected	Individuals who use it/ Individuals who manage it/ Company service obtained from	Where the nodes are located, where the wires and other transport media are located
Data	Bits of information stored in the system	Individuals who use it Individuals who manage it	Where the information resides

Figure 1.10 Information systems strategy matrix.

FOOD FOR THOUGHT: THE HALO EFFECT AND OTHER BUSINESS DELUSIONS

Halo Effect

- In Feb 2005 Dell was ranked #1 as the most admired company.
- But, two years later their performance slumped.
- The halo effect is “the basic human tendency to make specific inferences on the basis of a general impression” (Rosenzweig).
- This effect impacted journalists view of Dell.

- Rosenzweig describes three misconceptions that are created by the halo effect in general
  - *There exists a formula or blueprint that companies can apply and become high performers.*
  - *Firm performance is driven entirely by internal factors.*
  - *Because a decision may turn out badly does not necessarily mean that it was poorly made.*

- Rosenzweig said that “managers should be skeptical of formulas, recognize that performance is relative, think of business decisions in terms of probabilities, and carefully evaluate decision making processes and not just their outcomes”.
- Dell was not stuck in a rut and looked for new avenues of growth.
- HP hired a new CEO during that time period who was very effective and directly impacted Dell.

SUMMARY

Summary

- The Information Systems Strategy Triangle shows that business strategy always drives organizational and information strategies.
- Business strategy drives organizational and IS strategy.
  - Includes models from Porter and D'Aveni.
- Organizational strategy must complement business strategy.
  - Models are the business diamond and managerial levers.

Summary

- IS strategy must complement business strategy.
  - When IS supports business goals the business the business appears to be working well.
- Strategic Relationships.
  - Organizational strategy and information strategy must complement each other.
  - They must support, not hinder each other.
  - If change is made to one area the others must be examined to ensure balance.