

# Operations Strategy in a Global Environment

2

**PowerPoint presentation to accompany  
Heizer, Render, Munson / Global Edition  
Operations Management, Twelfth Edition  
Principles of Operations Management, Tenth Edition**

**PowerPoint slides by Jeff Heyl**

# Outline

- ▶ **Global Company Profile: Boeing**
- ▶ Developing Missions and Strategies
- ▶ Achieving Competitive Advantage Through Operations
- ▶ Issues in Operations Strategy

# Outline – Continued

- ▶ Strategy Development and Implementation
- ▶ Strategic Planning, Core Competencies, and Outsourcing
- ▶ A Global View of Operations and Supply Chains
- ▶ Global Operations Strategy Options

# Boeing's Global Supply-Chain Strategy

Some of the International Suppliers of Boeing 787 Components

<b>SUPPLIER</b>	<b>HEADQUARTERS COUNTRY</b>	<b>COMPONENT</b>
Latecoere	France	Passenger doors
Labinel	France	Wiring
Dassault	France	Design and PLM software
Messier-Bugatti	France	Electric brakes
Thales	France	Electrical power conversion system
Messier-Dowty	France	Landing gear structure
Diehl	Germany	Interior lighting

# Boeing's Global Supply-Chain Strategy

Some of the International Suppliers of Boeing 787 Components

<b>SUPPLIER</b>	<b>HEADQUARTERS COUNTRY</b>	<b>COMPONENT</b>
<b>Cobham</b>	<b>UK</b>	<b>Fuel pumps and valves</b>
<b>Rolls-Royce</b>	<b>UK</b>	<b>Engines</b>
<b>Smiths Aerospace</b>	<b>UK</b>	<b>Central computer systems</b>
<b>BAE Systems</b>	<b>UK</b>	<b>Electronics</b>
<b>Alenia Aeronautica</b>	<b>Italy</b>	<b>Upper center fuselage</b>
<b>Toray Industries</b>	<b>Japan</b>	<b>Carbon fiber for wing and tail units</b>
<b>Fuji Heavy Industries</b>	<b>Japan</b>	<b>Center wing box</b>

# Boeing's Global Supply-Chain Strategy

Some of the International Suppliers of Boeing 787 Components

<b>SUPPLIER</b>	<b>HEADQUARTERS COUNTRY</b>	<b>COMPONENT</b>
<b>Kawasaki Heavy Industries</b>	<b>Japan</b>	<b>Forward fuselage, fixed sections of wing</b>
<b>Teijin Seiki</b>	<b>Japan</b>	<b>Hydraulic actuators</b>
<b>Mitsubishi Heavy Industries</b>	<b>Japan</b>	<b>Wing box</b>
<b>Chengdu Aircraft</b>	<b>China</b>	<b>Rudder</b>
<b>Hafei Aviation</b>	<b>China</b>	<b>Parts</b>
<b>Korean Airlines</b>	<b>South Korea</b>	<b>Wingtips</b>
<b>Saab</b>	<b>Sweden</b>	<b>Cargo and access doors</b>

# Learning Objectives

**When you complete this chapter you should be able to:**

**2.1 *Define*** mission and strategy

**2.2 *Identify*** and explain three strategic approaches to competitive advantage

**2.3 *Understand*** the significant key success factors and core competencies

# Learning Objectives

**When you complete this chapter you should be able to:**

**2.4 Use** factor rating to evaluate both country and provider outsources

**2.5 Identify** and explain four global operations strategy options

# Developing Missions and Strategies

**Mission** statements tell an organization where it is going

The **Strategy** tells the organization how to get there

# Mission

- ▶ **Mission** - where is the organization going?
  - ▶ Organization's purpose for being
  - ▶ Answers "What do we contribute to society?"
  - ▶ Provides boundaries and focus

# Merck

The mission of Merck is to provide society with superior products and services—innovations and solutions that improve the quality of life and satisfy customer needs—to provide employees with meaningful work and advancement opportunities and investors with a superior rate of return.

Figure 2.2

# PepsiCo

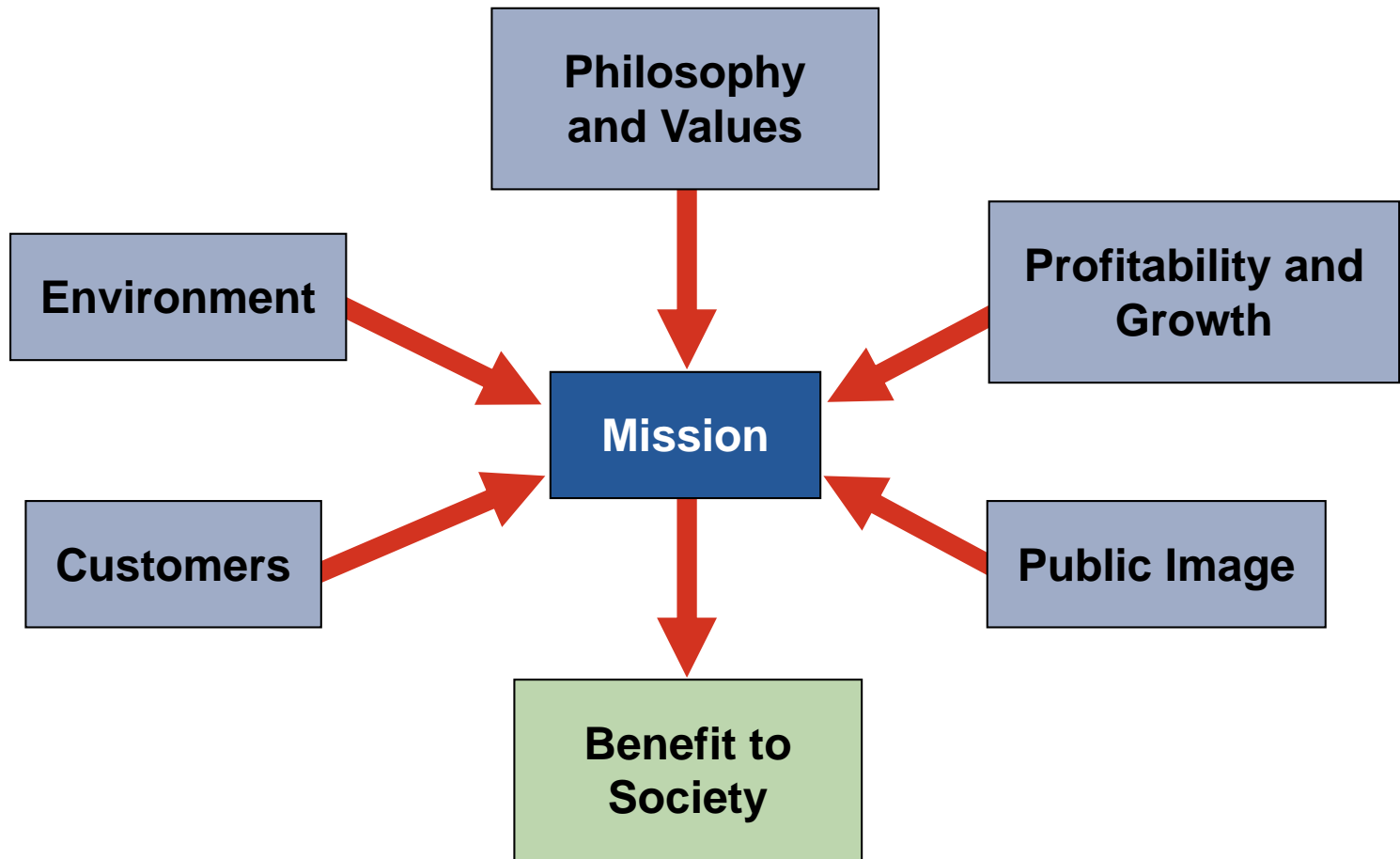
Our mission is to be the world's premier consumer products company focused on convenient foods and beverages. We seek to produce financial rewards to investors as we provide opportunities for growth and enrichment to our employees, our business partners and the communities in which we operate. And in everything we do, we strive for honesty, fairness and integrity.

# Arnold Palmer Hospital

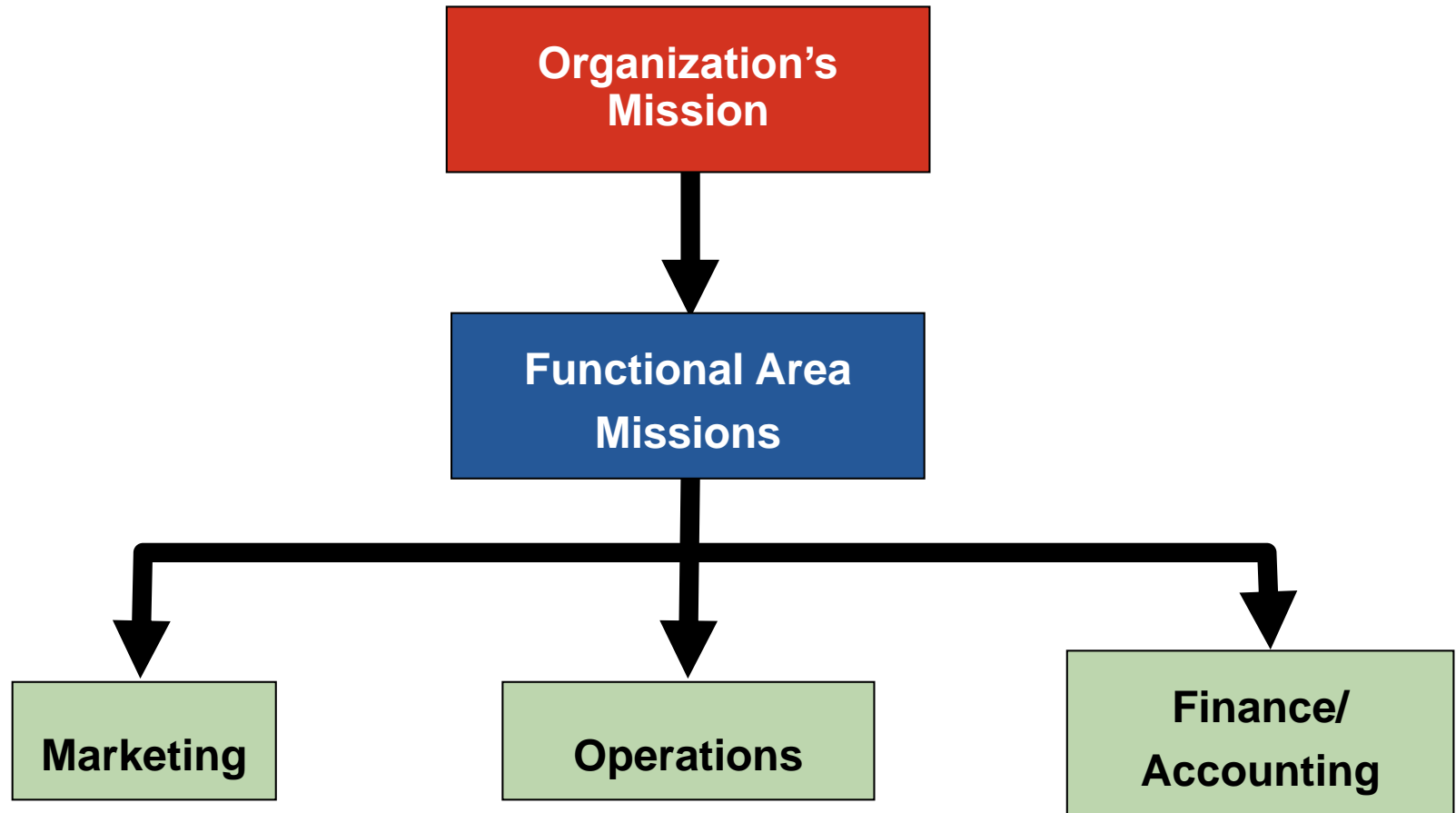
Arnold Palmer Hospital for Children provides state of the art, family-centered healthcare focused on restoring the joy of childhood in an environment of compassion, healing, and hope.

Figure 2.2

# Factors Affecting Mission



# Strategic Process



# Sample Missions

## Sample Company Mission

To manufacture and service an innovative, growing, and profitable worldwide microwave communications business that exceeds our customers' expectations.

## Sample Operations Management Mission

To produce products consistent with the company's mission as the worldwide low-cost manufacturer.

Figure 2.3

# Sample Missions

<b>Sample OM Department Missions</b>	
<b>Product design</b>	<b>To design and produce products and services with outstanding quality and inherent customer value.</b>
<b>Quality management</b>	<b>To attain the exceptional value that is consistent with our company mission and marketing objectives by close attention to design, procurement, production, and field service operations</b>
<b>Process design</b>	<b>To determine, design, and produce the production process and equipment that will be compatible with low-cost product, high quality, and good quality of work life at economical cost.</b>

Figure 2.3

# Sample Missions

<b>Sample OM Department Missions</b>	
<b>Location</b>	To locate, design, and build efficient and economical facilities that will yield high value to the company, its employees, and the community.
<b>Layout design</b>	To achieve, through skill, imagination, and resourcefulness in layout and work methods, production effectiveness and efficiency while supporting a high quality of work life.
<b>Human resources</b>	To provide a good quality of work life, with well-designed, safe, rewarding jobs, stable employment, and equitable pay, in exchange for outstanding individual contribution from employees at all levels.

Figure 2.3

# Sample Missions

<b>Sample OM Department Missions</b>	
<b>Supply-chain management</b>	<b>To collaborate with suppliers to develop innovative products from stable, effective, and efficient sources of supply.</b>
<b>Inventory</b>	<b>To achieve low investment in inventory consistent with high customer service levels and high facility utilization.</b>
<b>Scheduling</b>	<b>To achieve high levels of throughput and timely customer delivery through effective scheduling.</b>
<b>Maintenance</b>	<b>To achieve high utilization of facilities and equipment by effective preventive maintenance and prompt repair of facilities and equipment.</b>

Figure 2.3

# Strategy

- ▶ Action plan to achieve mission
- ▶ Functional areas have strategies
- ▶ Strategies exploit opportunities and strengths, neutralize threats, and avoid weaknesses

# Strategies for Competitive Advantage

1. Differentiation – *better*, or at least different
2. Cost leadership – *cheaper*
3. Response – more *responsive*

# Competing on Differentiation

Uniqueness can go beyond both the physical characteristics and service attributes to encompass everything that impacts customer's perception of value

- ▶ Safeskin gloves – leading edge products
- ▶ Walt Disney Magic Kingdom – experience differentiation
- ▶ Hard Rock Cafe – dining experience

# Experience Differentiation

Engaging a customer with a product through imaginative use of the five senses, so the customer “experiences” the product

- ▶ Theme parks use sight, sound, smell, and participation
- ▶ Movie theatres use sight, sound, moving seats, smells, and mists of rain
- ▶ Restaurants use music, smell, and open kitchens

# Competing on Cost

Provide the maximum value as perceived by customer. Does not imply low quality.

- ▶ Southwest Airlines – secondary airports, no frills service, efficient utilization of equipment
- ▶ Walmart – small overhead, shrinkage, and distribution costs
- ▶ Franz Colruyt – no bags, no bright lights, no music, and doors on freezers

# Competing on Response

- ▶ Flexibility is matching market changes in design innovation and volumes
  - ▶ A way of life at Hewlett-Packard
- ▶ Reliability is meeting schedules
  - ▶ German machine industry
- ▶ Quickness in design, production, and delivery
  - ▶ Johnson Electric, Pizza Hut



# OM's Contribution to Strategy

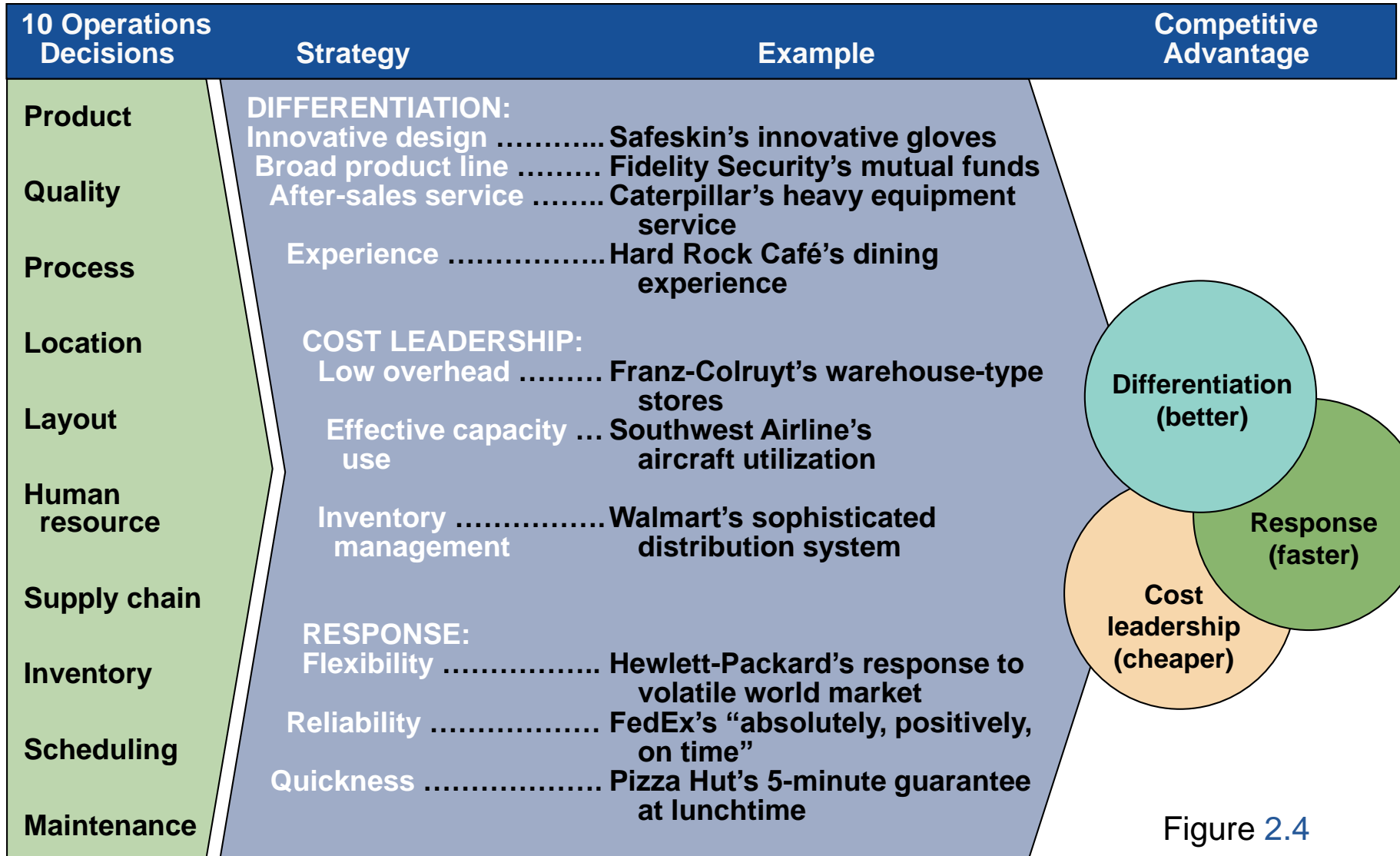
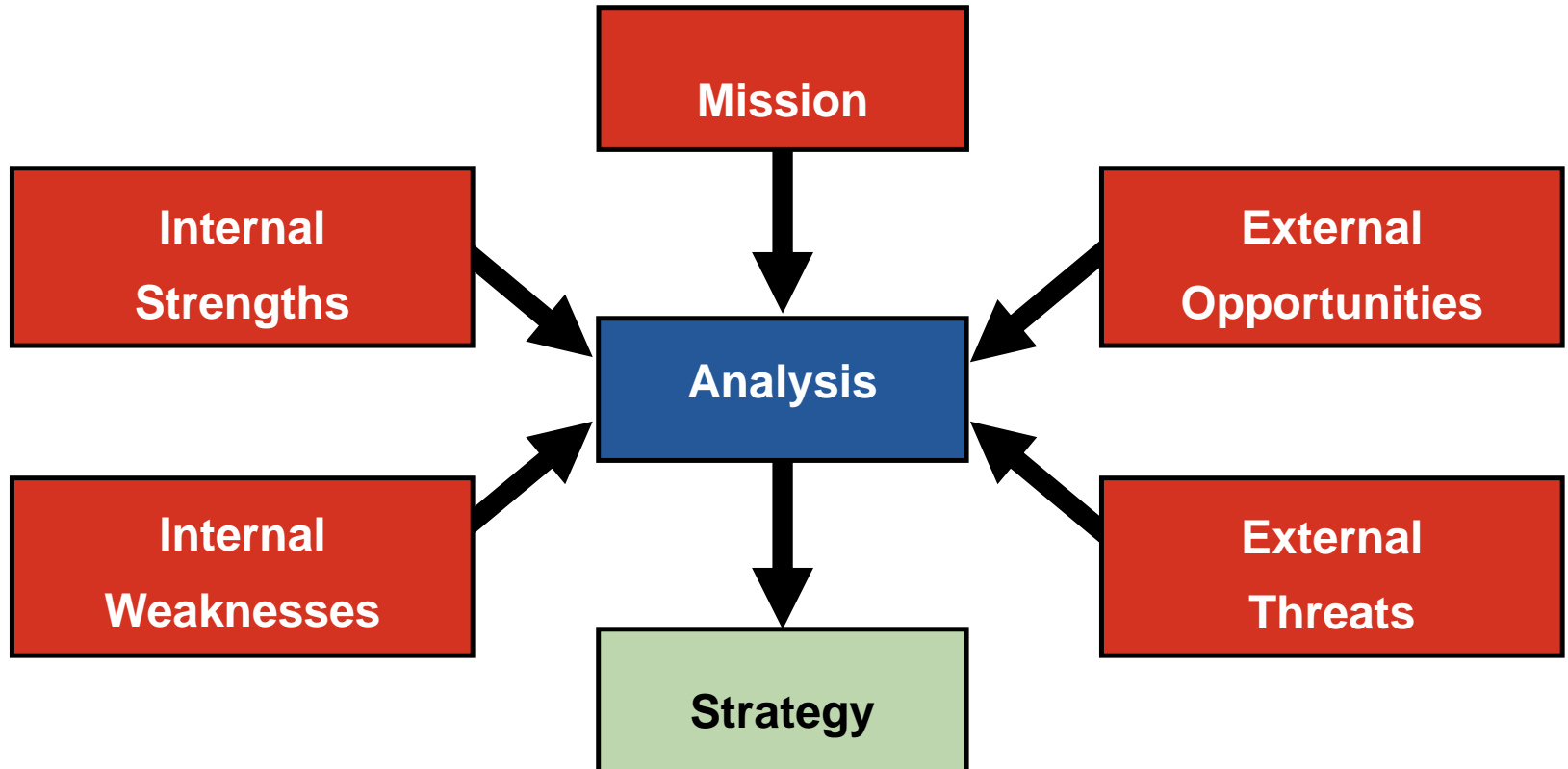


Figure 2.4

# SWOT Analysis



# Strategy Development Process

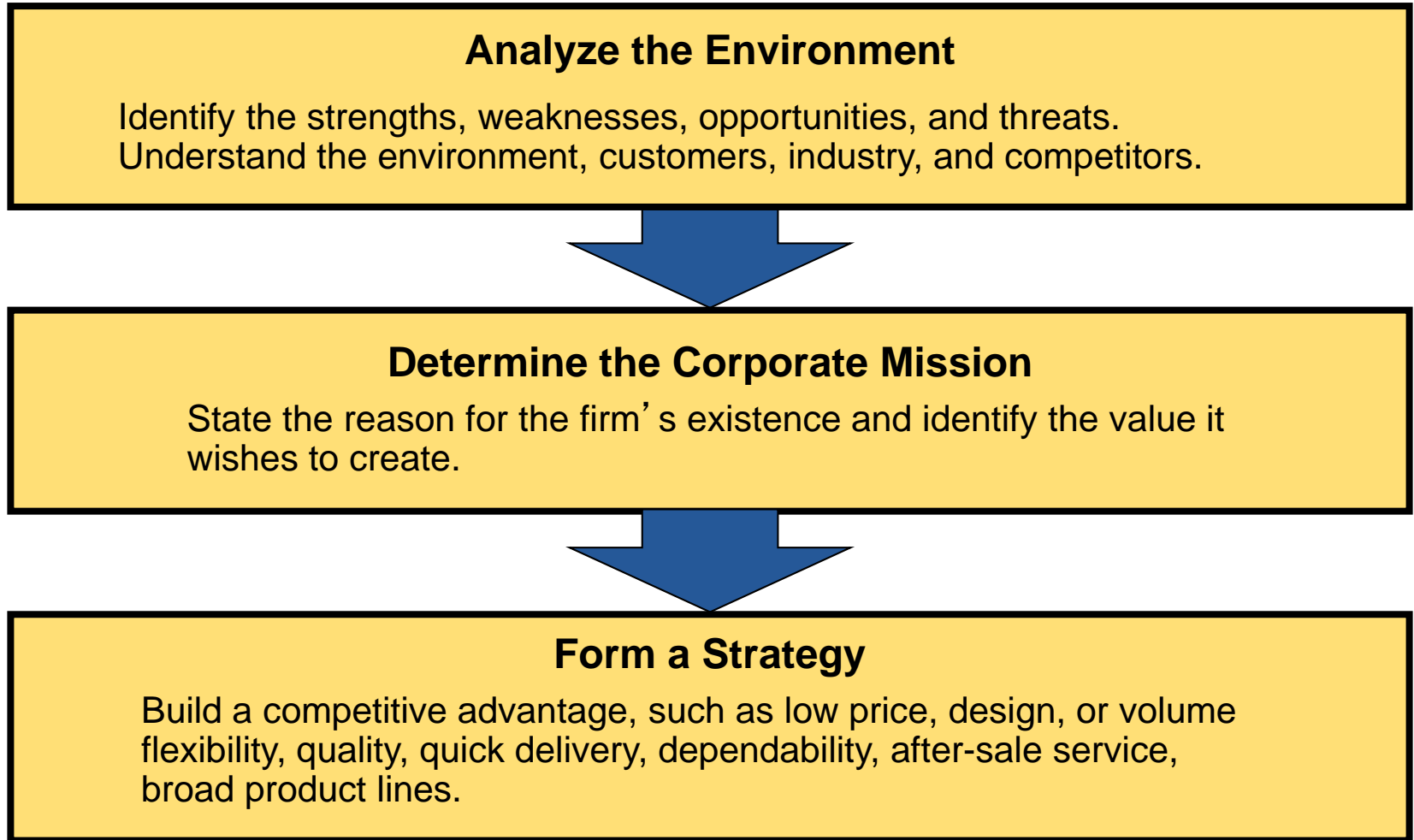


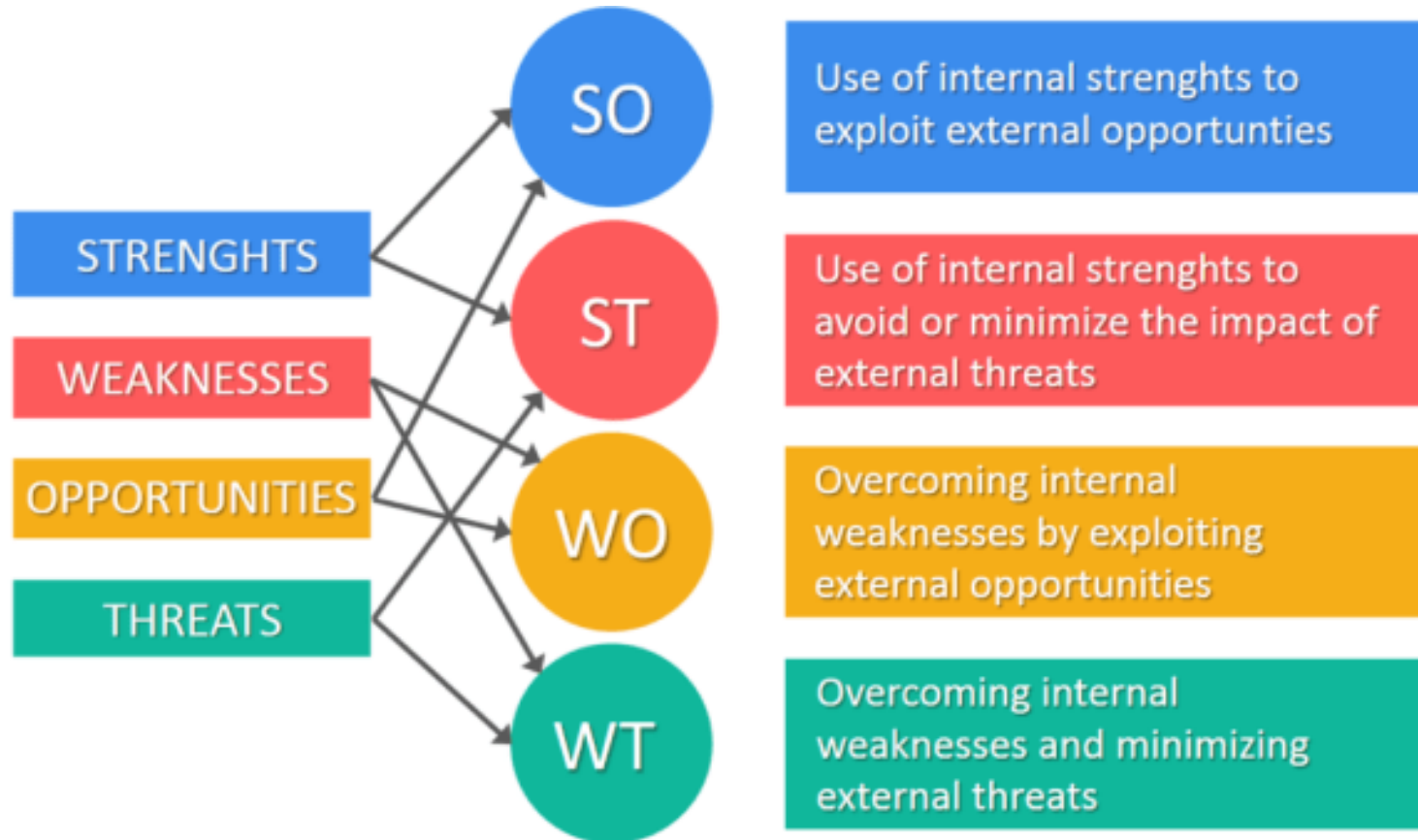
Figure 2.6

# TOWS Matrix (1)



Source: <https://www.business-to-you.com/swot-analysis/>

# TOWS Matrix (2)



Source: <https://www.business-to-you.com/swot-analysis/>

# Steps for Developing TOWS

1. Ranking of external opportunities
2. Ranking of external threats
3. Ranking of internal strengths
4. Ranking of internal weaknesses
5. Matching of internal strengths with the external opportunities & specification of the results in the cell of SO strategies
6. Matching of the internal weaknesses with the external opportunities & specification of the results in the cell of WO strategies
7. Matching of internal strengths with the external threats & specification of the results in the cell of ST strategies
8. Matching of the internal weaknesses with the external threats & specification of the results in the cell of WT strategies

Source: <http://www.businessstudynotes.com/marketing/marketing-management/tows-matrix-strategies/>

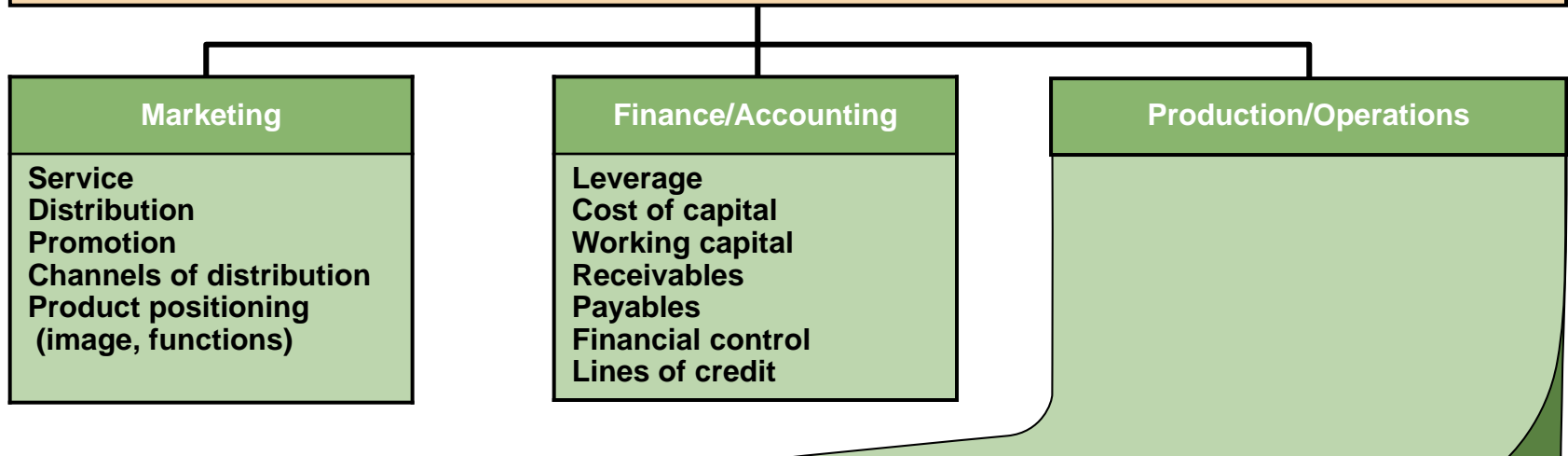
# Strategy Development and Implementation

- ▶ Identify key success factors
- ▶ Integrate OM with other activities
- ▶ Build and staff the organization

*The operations manager's job is to implement an OM strategy, provide competitive advantage, and increase productivity*

# Key Success Factors

Support a Core Competence and Implement Strategy by Identifying and Executing the Key Success Factors in the Functional Areas



10 OM Decisions	Sample Options	Chapter
Product	Customized, or standardized; sustainability	5, S5
Quality	Define customer quality expectations and how to achieve them	6, S6
Process	Facility size, capacity, how much automation	7, S7
Location	Near supplier or near customer	8
Layout	Work cells or assembly line	9
Human resource	Specialized or enriched jobs	10
Supply chain	Single or multiple suppliers	11, S11
Inventory	When to reorder, how much to keep on hand	12, 14, 16
Schedule	Stable or fluctuating production rate	13, 15
Maintenance	Repair as required or preventive maintenance	17

# Activity Mapping at Southwest Airlines

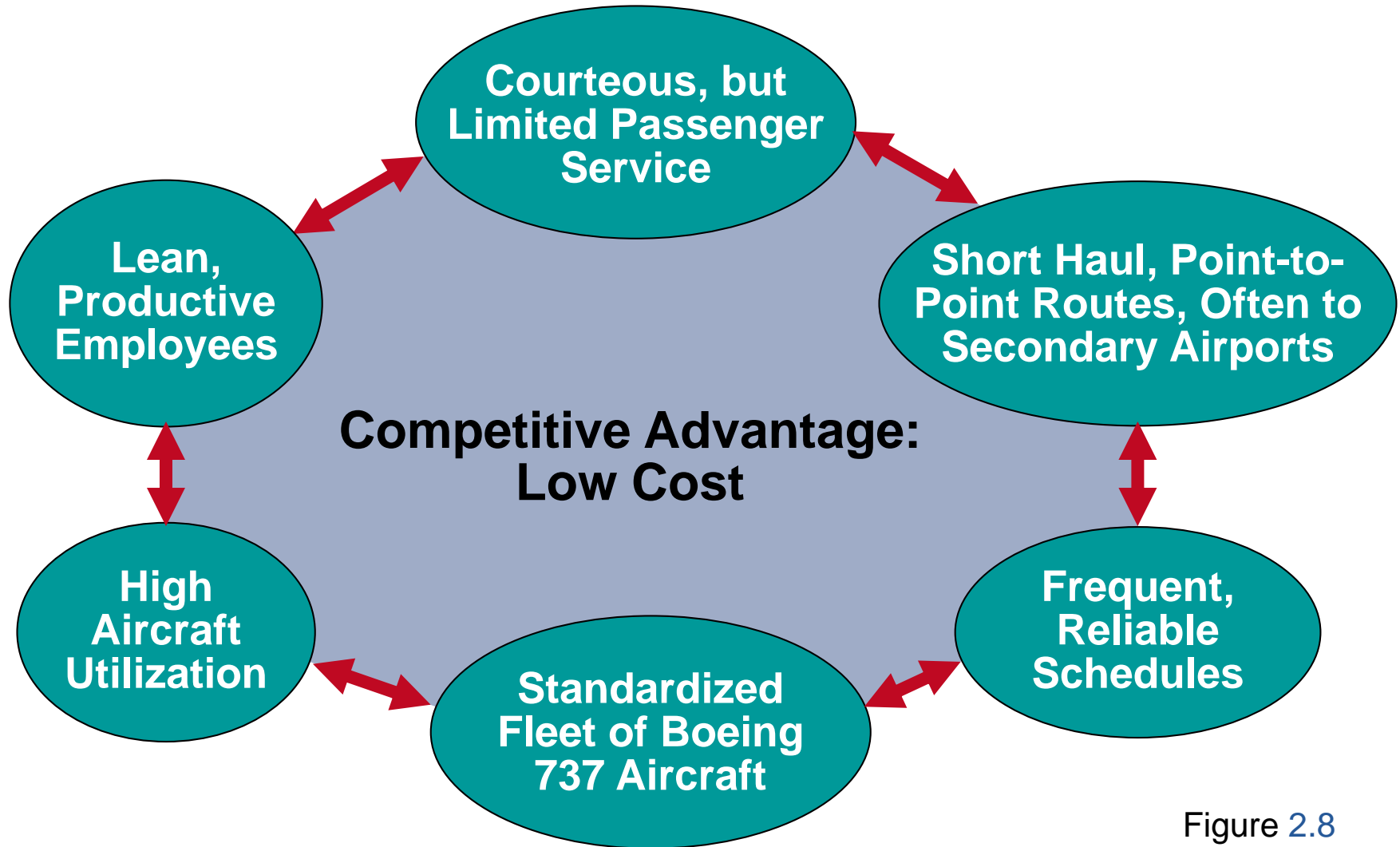


Figure 2.8

# Activity Mapping at Southwest Airlines

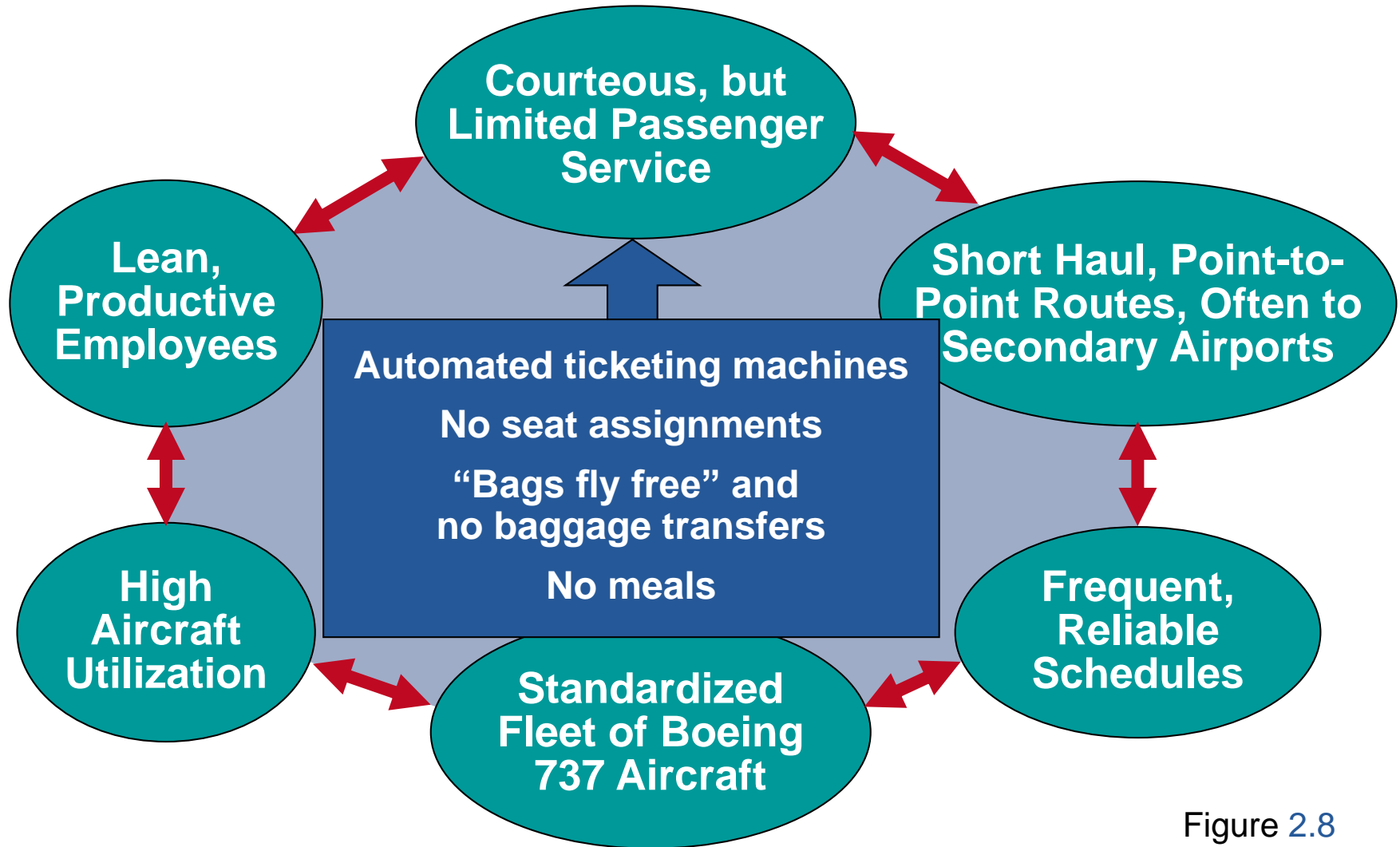


Figure 2.8

# Activity Mapping at Southwest Airlines

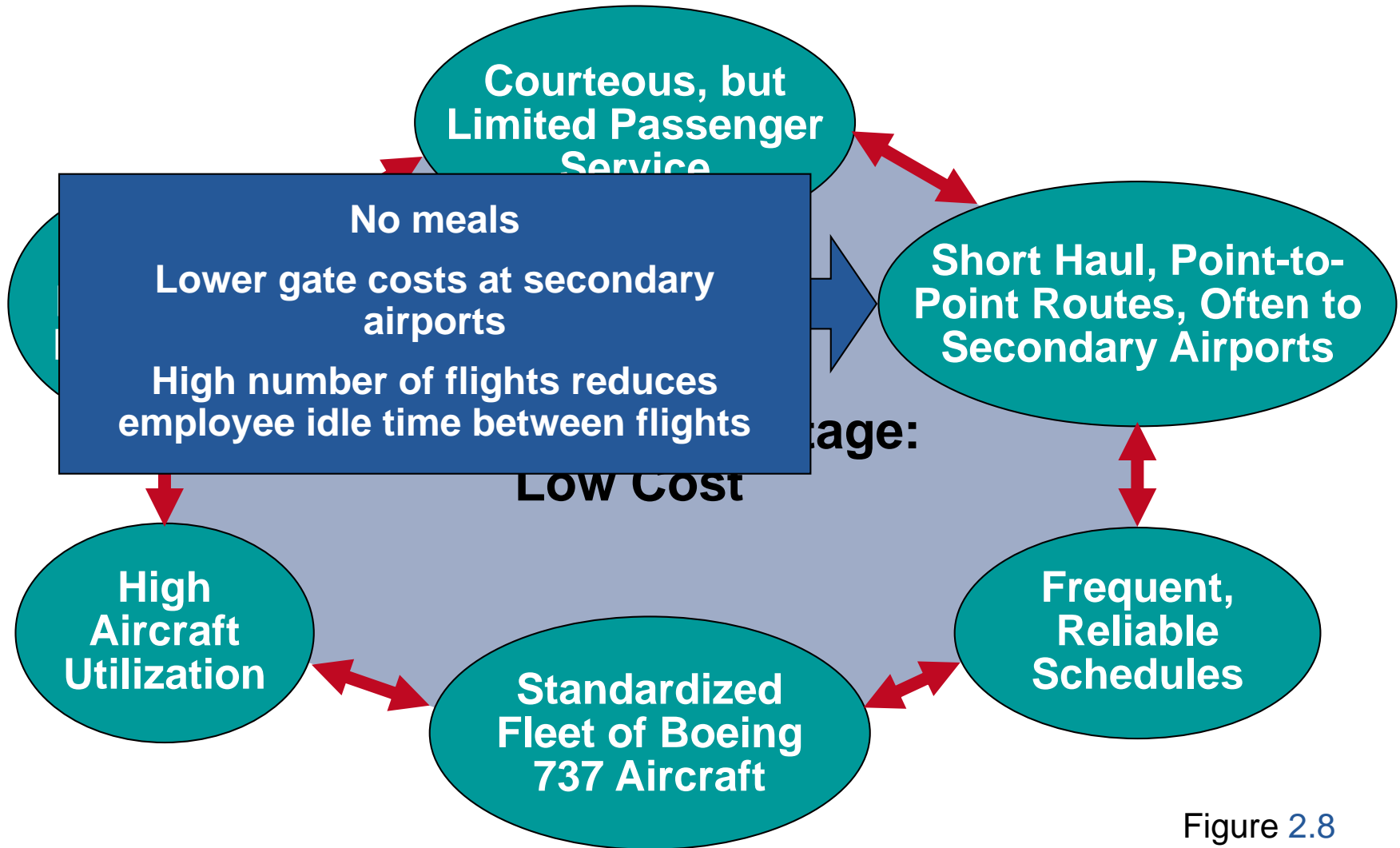


Figure 2.8

# Activity Mapping at Southwest Airlines

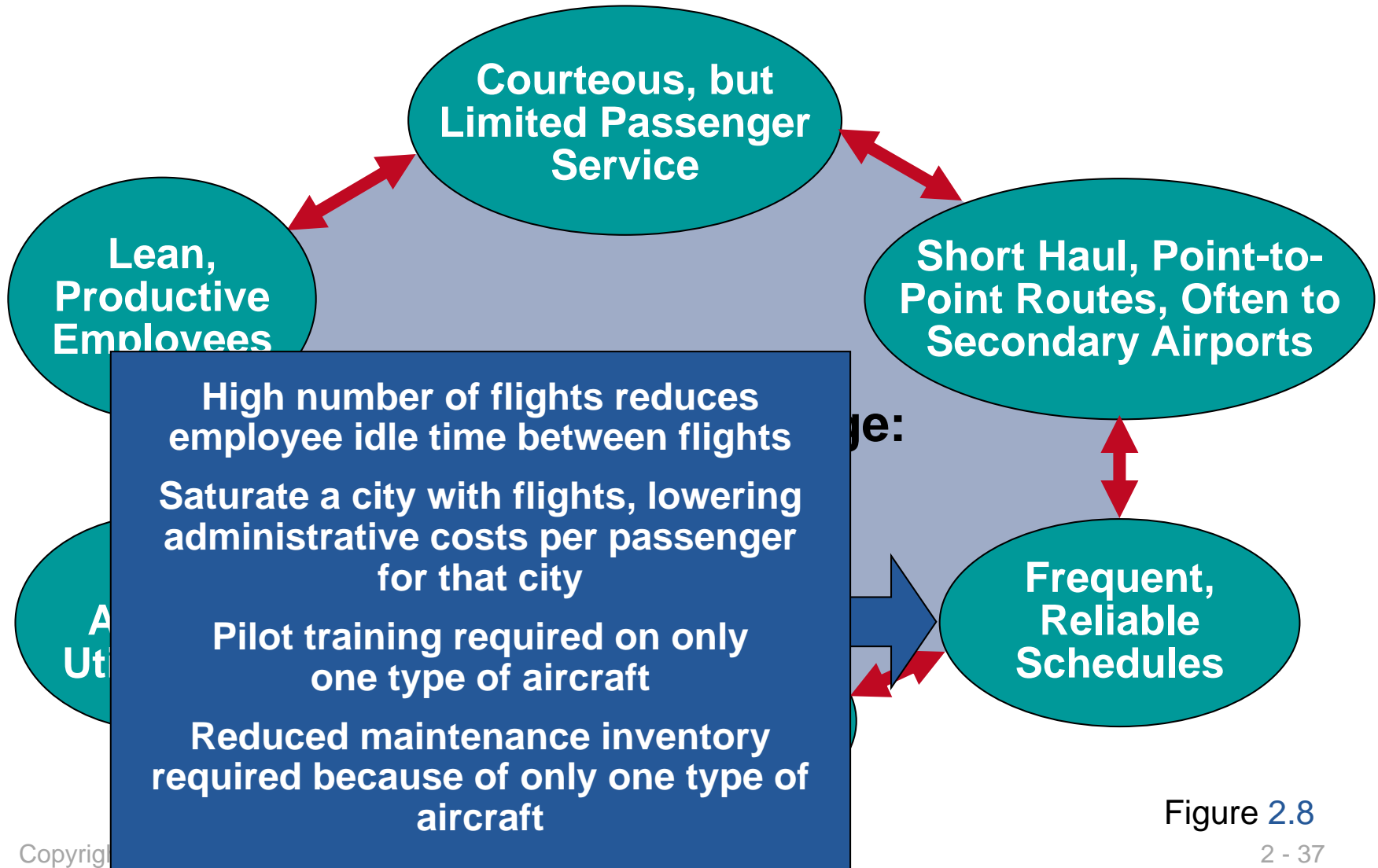


Figure 2.8

# Activity Mapping at Southwest Airlines

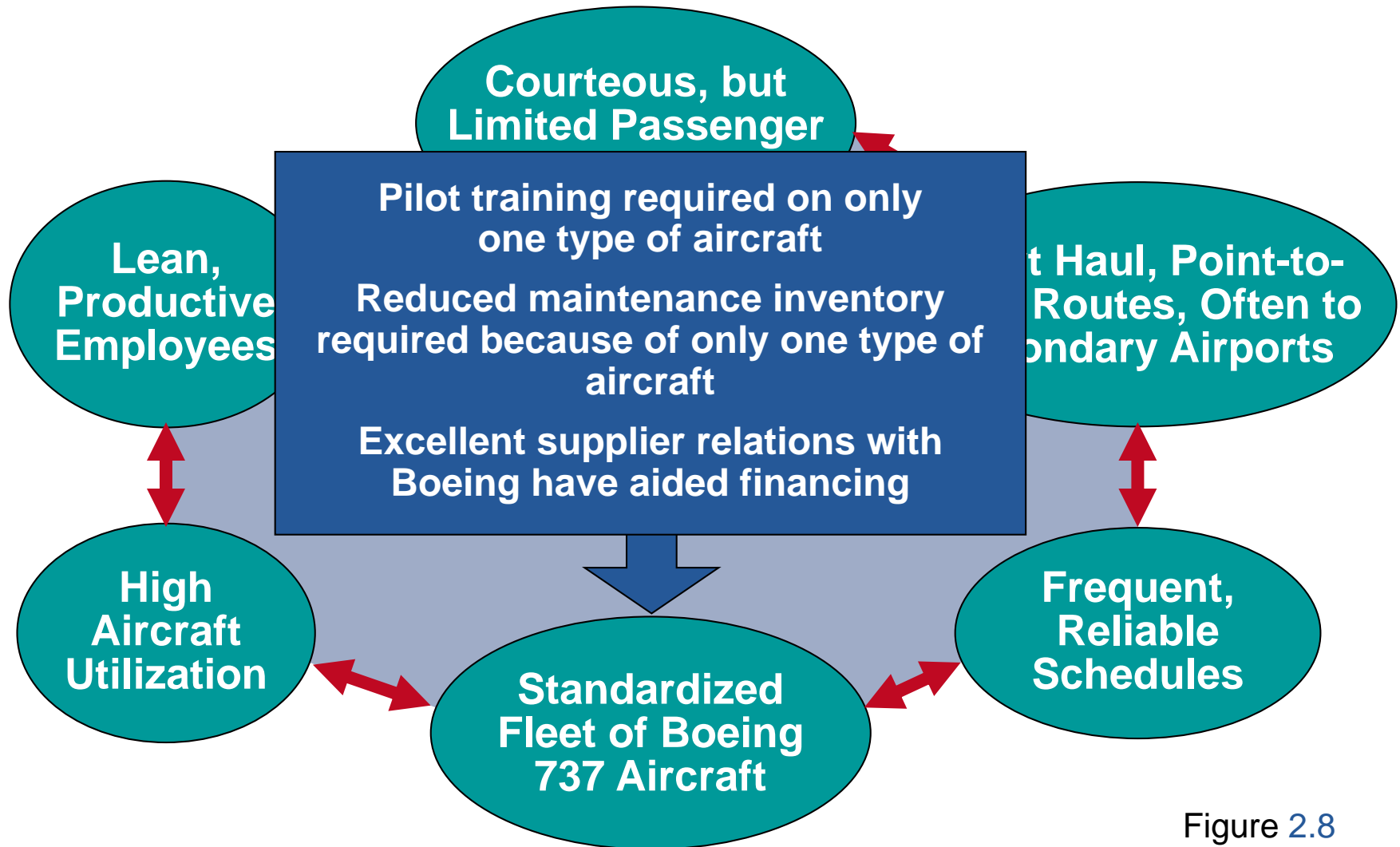


Figure 2.8

# Activity Mapping at Southwest Airlines

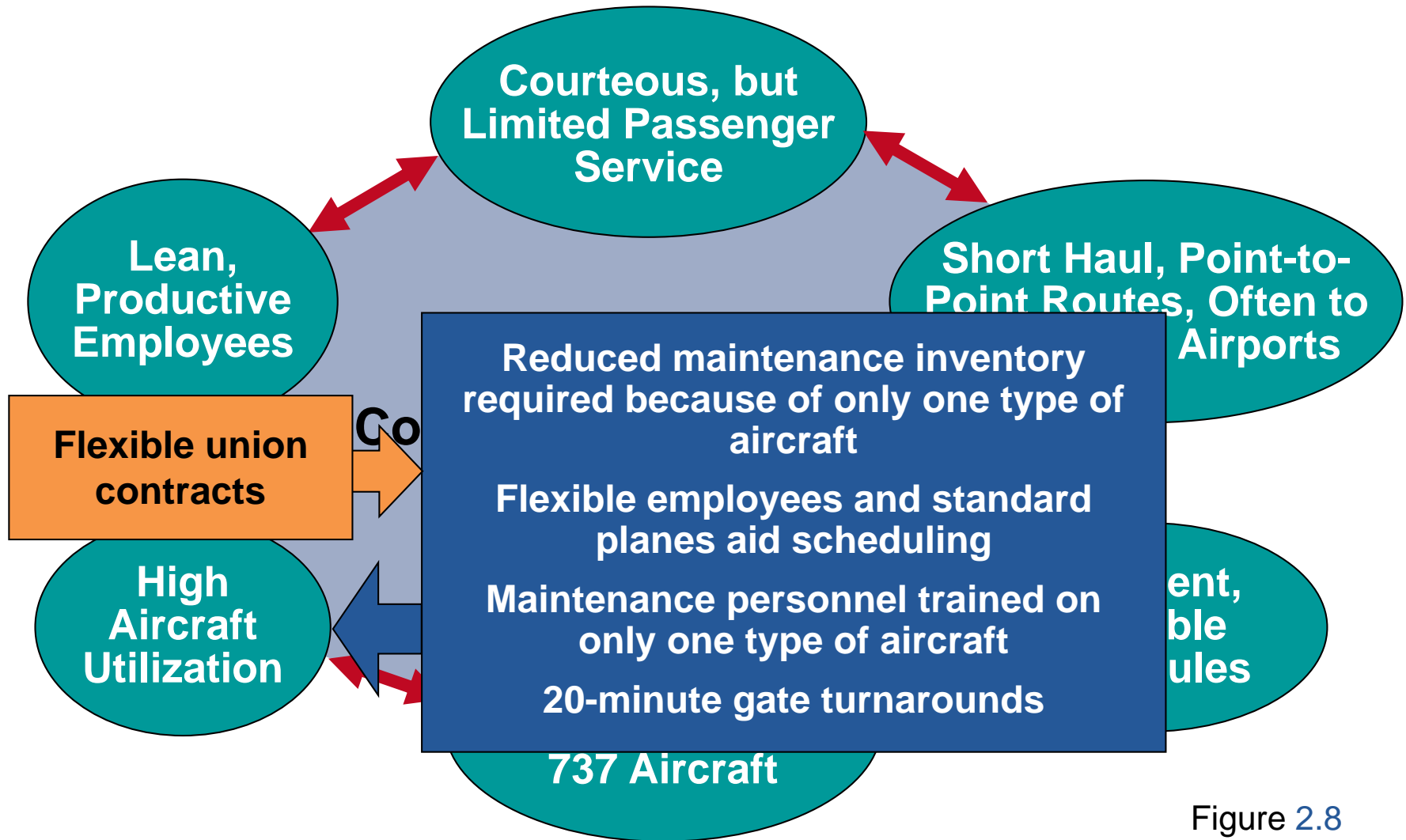


Figure 2.8

# Activity Mapping at Southwest Airlines

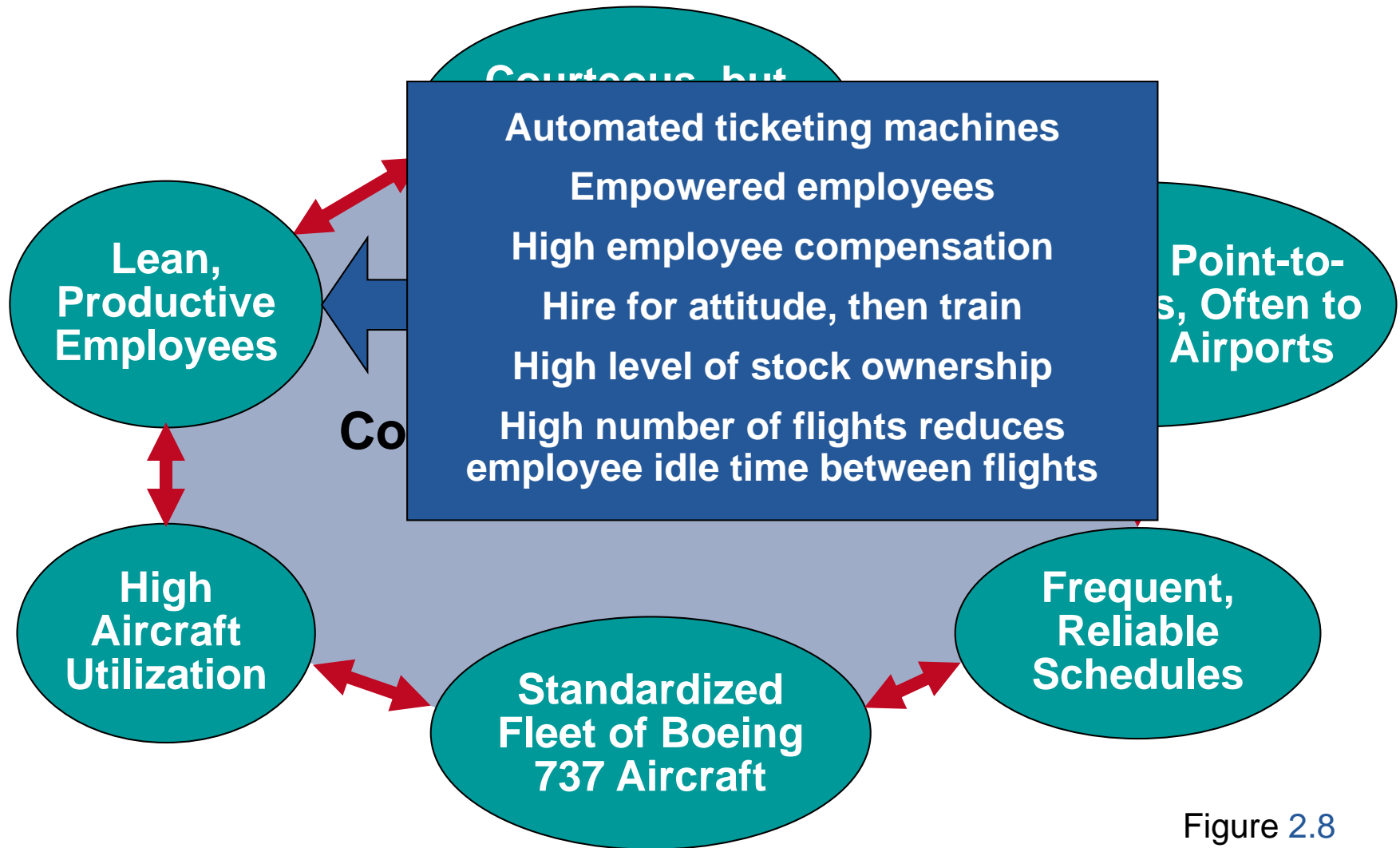


Figure 2.8

# Implementing Strategic Decisions

**TABLE 2.1** Operations Strategies of Two Drug Companies

	<b>BRAND NAME DRUGS, INC.</b>	<b>GENERIC DRUGS CORP.</b>
<b>COMPETITIVE ADVANTAGE</b>	<b>PRODUCT DIFFERENTIATION STRATEGY</b>	<b>LOW COST STRATEGY</b>
<b>Product selection and design</b>	Heavy R&D investment; extensive labs; focus on development in a broad range of drug categories	Low R&D investment; focus on development of generic drugs
<b>Quality</b>	Quality is major priority, standards exceed regulatory requirements	Meets regulatory requirements on a country-by-country basis, as necessary
<b>Process</b>	Product and modular production process; tries to have long product runs in specialized facilities; builds capacity ahead of demand	Process focused; general production processes; “job shop” approach, short-run production; focus on high utilization
<b>Location</b>	Still located in city where it was founded	Recently moved to low-tax, low-labor-cost environment

# Implementing Strategic Decisions

**TABLE 2.1** Operations Strategies of Two Drug Companies

	<b>BRAND NAME DRUGS, INC.</b>	<b>GENERIC DRUGS CORP.</b>
<b>COMPETITIVE ADVANTAGE</b>	<b>PRODUCT DIFFERENTIATION STRATEGY</b>	<b>LOW COST STRATEGY</b>
<b>Layout</b>	Layout supports automated product-focused production	Layout supports process-focused “job shop” practices
<b>Human resources</b>	Hire the best; nationwide searches	Very experienced top executives provide direction; other personnel paid below industry average
<b>Supply chain</b>	Long-term supplier relationships	Tends to purchase competitively to find bargains
<b>Inventory</b>	Maintains high finished goods inventory primarily to ensure all demands are met	Process focus drives up work-in-process inventory; finished goods inventory tends to be low
<b>Scheduling</b>	Centralized production planning	Many short-run products complicate scheduling
<b>Maintenance</b>	Highly trained staff; extensive parts inventory	Highly trained staff to meet changing demands

# Strategic Planning, Core Competencies, and Outsourcing

- ▶ **Outsourcing** – transferring activities that traditionally been internal to external suppliers
- ▶ Accelerating due to
  - 1) Increased technological expertise
  - 2) More reliable and cheaper transportation
  - 3) Rapid development and deployment of advancements in telecommunications and computers

# Strategic Planning, Core Competencies, and Outsourcing

- ▶ Subcontracting - contract manufacturing
- ▶ Outsourced activities
  - ▶ Legal services
  - ▶ IT services
  - ▶ Travel services
  - ▶ Payroll
  - ▶ Production
  - ▶ Surgery

# Theory of Comparative Advantage

- ▶ If an external provider can perform activities more productively than the purchasing firm, then the external provider should do the work
- ▶ Purchasing firm focuses on core competencies
- ▶ Drives outsourcing

# Risks of Outsourcing

**TABLE 2.2** Potential Advantages and Disadvantages of Outsourcing

ADVANTAGES	DISADVANTAGES
Cost savings	Increased logistics and inventory costs
Gaining outside expertise that comes with specialization	Loss of control (quality, delivery, etc.)
Improving operations and service	Potential creation of future competition
Maintaining a focus on core competencies	Negative impact on employees
Accessing outside technology	Risks may not manifest themselves for years

# Rating Outsourcing Providers

- ▶ Insufficient analysis most common reason for failure
- ▶ *Factor-rating method*
- ▶ Points and weights assigned for each factor to each

# Rating Provider Selection Criteria

**TABLE 2.3** Factor Ratings Applied to National Architects' s Potential IT Outsourcing Providers

FACTOR (CRITERION)	IMPORTANCE WEIGHTS	OUTSOURCING PROVIDERS		
		BIM (U.S.)	S.P.C. (INDIA)	TELCO (ISRAEL)
1. Can reduce operating costs	.2	3	3	5
2. Can reduce capital investment	.2	4	3	3
3. Skilled personnel	.2	5	4	3
4. Can improve quality	.1	4	5	2
5. Can gain access to technology not in company	.1	5	3	5
6. Can create additional capacity	.1	4	2	4
7. Aligns with policy/philosophy/culture	.1	2	3	5
Total Weighted Score	1.0	3.9	3.8	3.8

Score for BIM =  $(.2 * 3) + (.2 * 4) + (.2 * 5) + (.1 * 4) + (.1 * 5) + (.1 * 4) + (.1 * 2) = 3.9$

# Global Strategies

- ▶ Boeing – sales and supply chain are worldwide
- ▶ Benetton – moves inventory to stores around the world faster than its competition by building flexibility into design, production, and distribution
- ▶ Sony – purchases components from suppliers in Thailand, Malaysia, and around the world

# Global Strategies

- ▶ Volvo – considered a Swedish company, purchased by a Chinese company, Geely. The current Volvo S40 is assembled in Belgium, South Africa, Malaysia and China on a platform shared with the Mazda 3 (built in Japan) and the Ford Focus (built in Europe).
- ▶ Haier – A Chinese company, produces compact refrigerators (it has one-third of the U.S. market) and wine cabinets (it has half of the U.S. market) in South Carolina

# Growth of World Trade

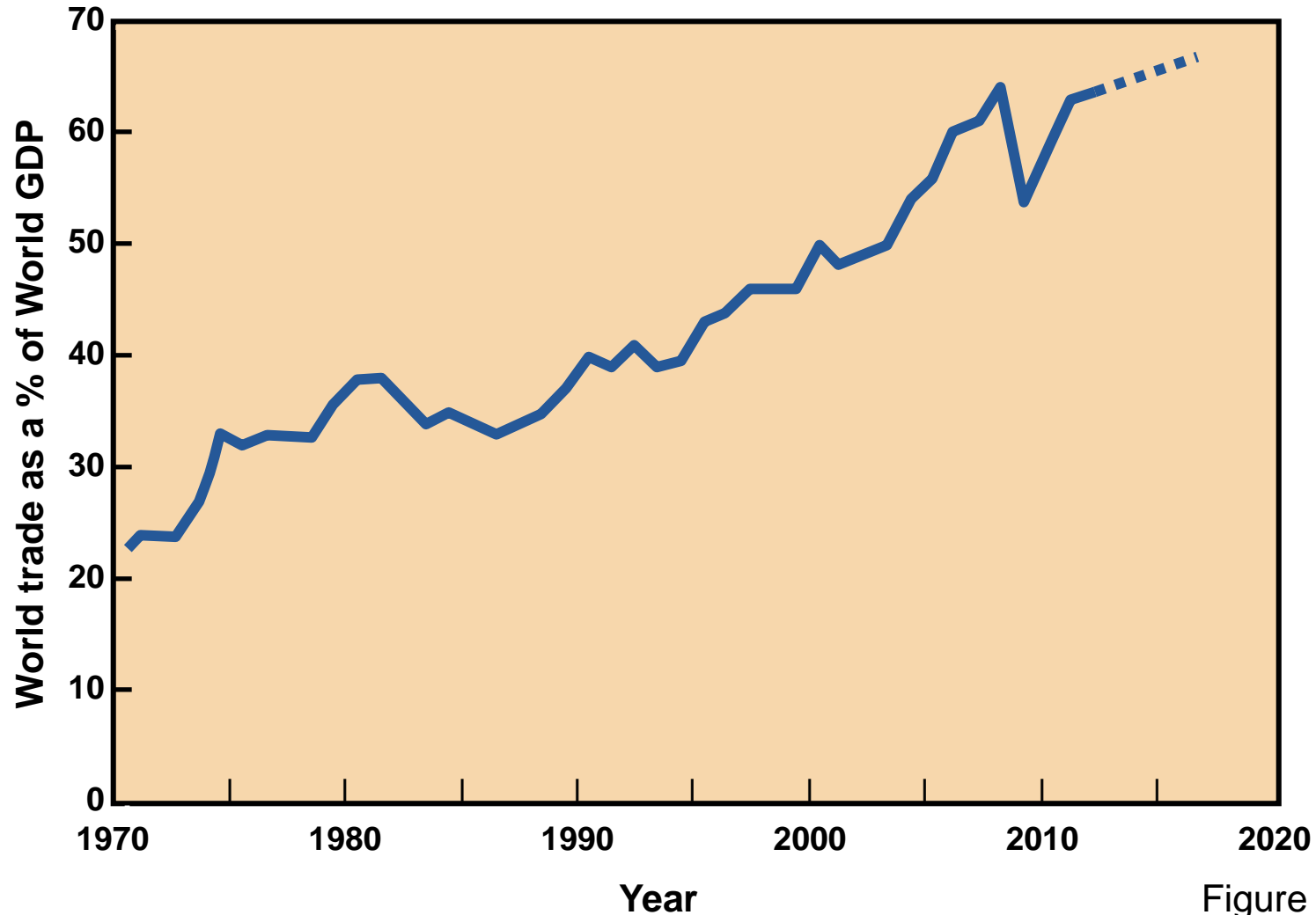


Figure 2.1

# Reasons to Globalize

1. Improve the supply chain
2. Reduce costs and exchange rate risks
3. Improve operations
4. Understand markets
5. Improve products
6. Attract and retain global talent

# Improve the Supply Chain

- ▶ Locating facilities closer to unique resources
  - ▶ Auto design to California
  - ▶ Athletic shoe production to China
  - ▶ Perfume manufacturing in France

# Reduce Costs

- ▶ Risks associated with currency exchange rates
- ▶ Reduce direct and indirect costs
- ▶ Trade agreements can lower tariffs
  - ▶ Maquiladoras
  - ▶ World Trade Organization (WTO)
  - ▶ North American Free Trade Agreement (NAFTA)
  - ▶ APEC, SEATO, MERCOSUR, CAFTA
  - ▶ European Union (EU)

# Improve Operations

- ▶ Understand differences between how business is handled in other countries
  - ▶ Japanese – inventory management
  - ▶ Germans – robots
  - ▶ Scandinavians – ergonomics
- ▶ International operations can improve response time and customer service

# Understand Markets

- ▶ Interacting with foreign customers, suppliers, competition can lead to new opportunities
  - ▶ Cell phone design moved from Europe to Japan
  - ▶ Extend the product *life cycle*



# Improve Products

- ▶ Remain open to free flow of ideas
- ▶ Toyota and BMW manage joint research and development
  - ▶ Reduced risk, state-of-the-art design, lower costs
- ▶ Samsung and Bosch jointly produce batteries

# Attract and Retain Global Talent

- ▶ Offer better employment opportunities
  - ▶ Better growth opportunities and insulation against unemployment
  - ▶ Relocate unneeded personnel to more prosperous locations

# Cultural and Ethical Issues

- ▶ Social and cultural behavior differs
- ▶ International laws, agreements, codes of conduct for ethical behaviors
- ▶ Mobility of capital, information, goods, and people

# Companies Want To Consider

- ▶ National literacy rate
- ▶ Rate of innovation
- ▶ Rate of technology change
- ▶ Number of skilled workers
- ▶ Political stability
- ▶ Product liability laws
- ▶ Export restrictions
- ▶ Variations in language
- ▶ Work ethic
- ▶ Tax rates
- ▶ Inflation
- ▶ Availability of raw materials
- ▶ Interest rates
- ▶ Population
- ▶ Transportation infrastructure
- ▶ Communication system

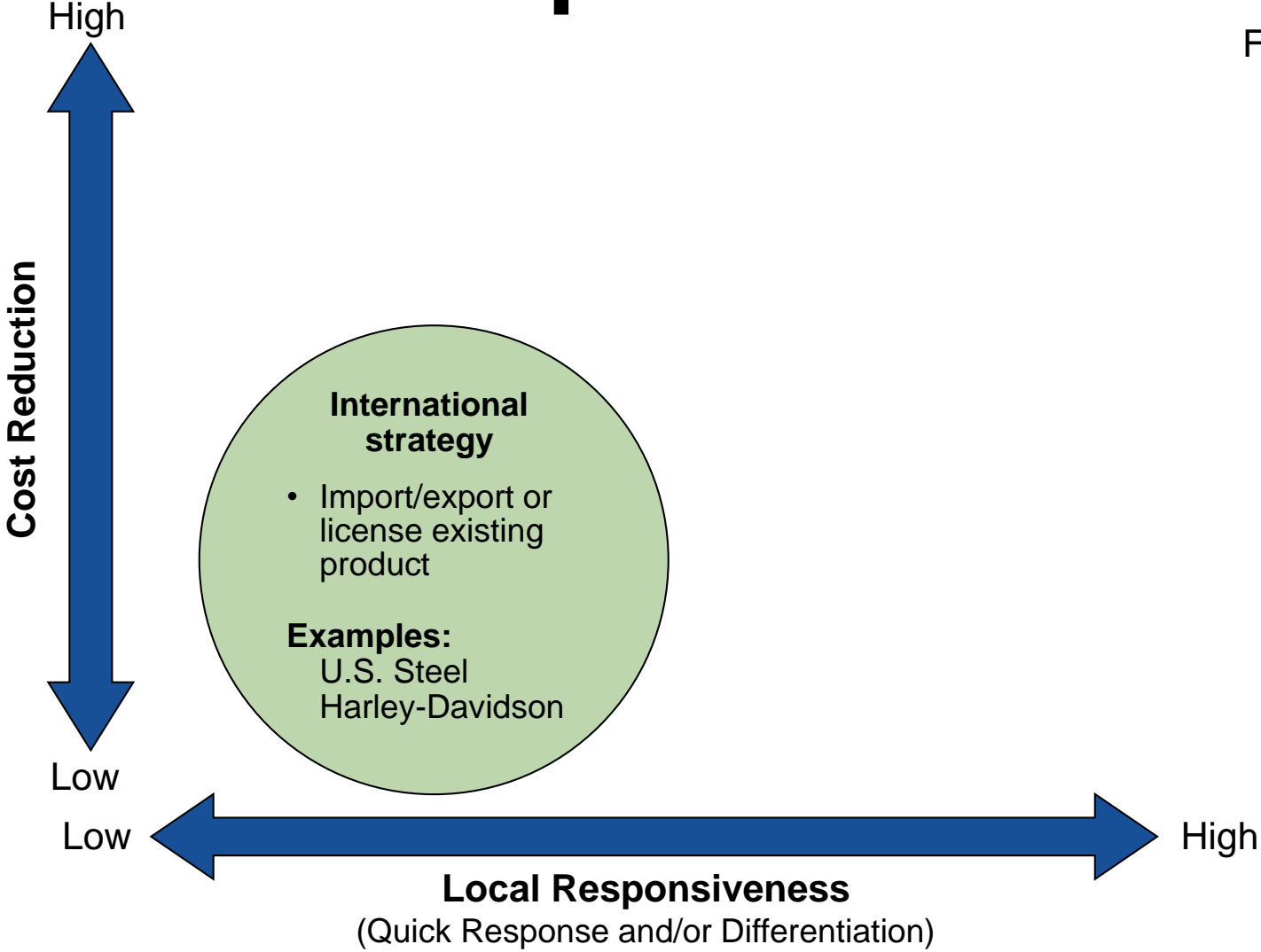
# Global Operations Strategy Options

Figure 2.9



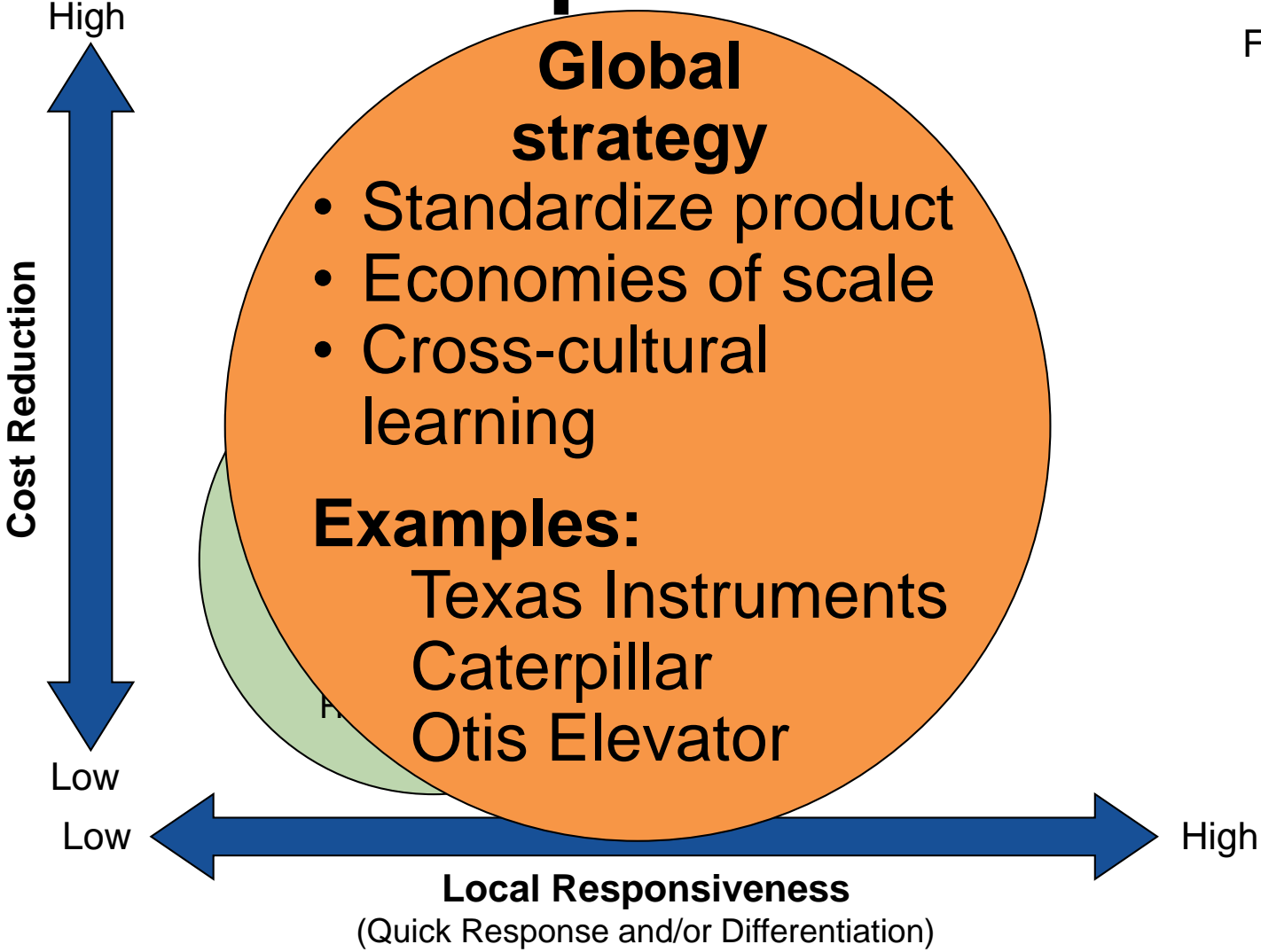
# Global Operations Strategy Options

Figure 2.9



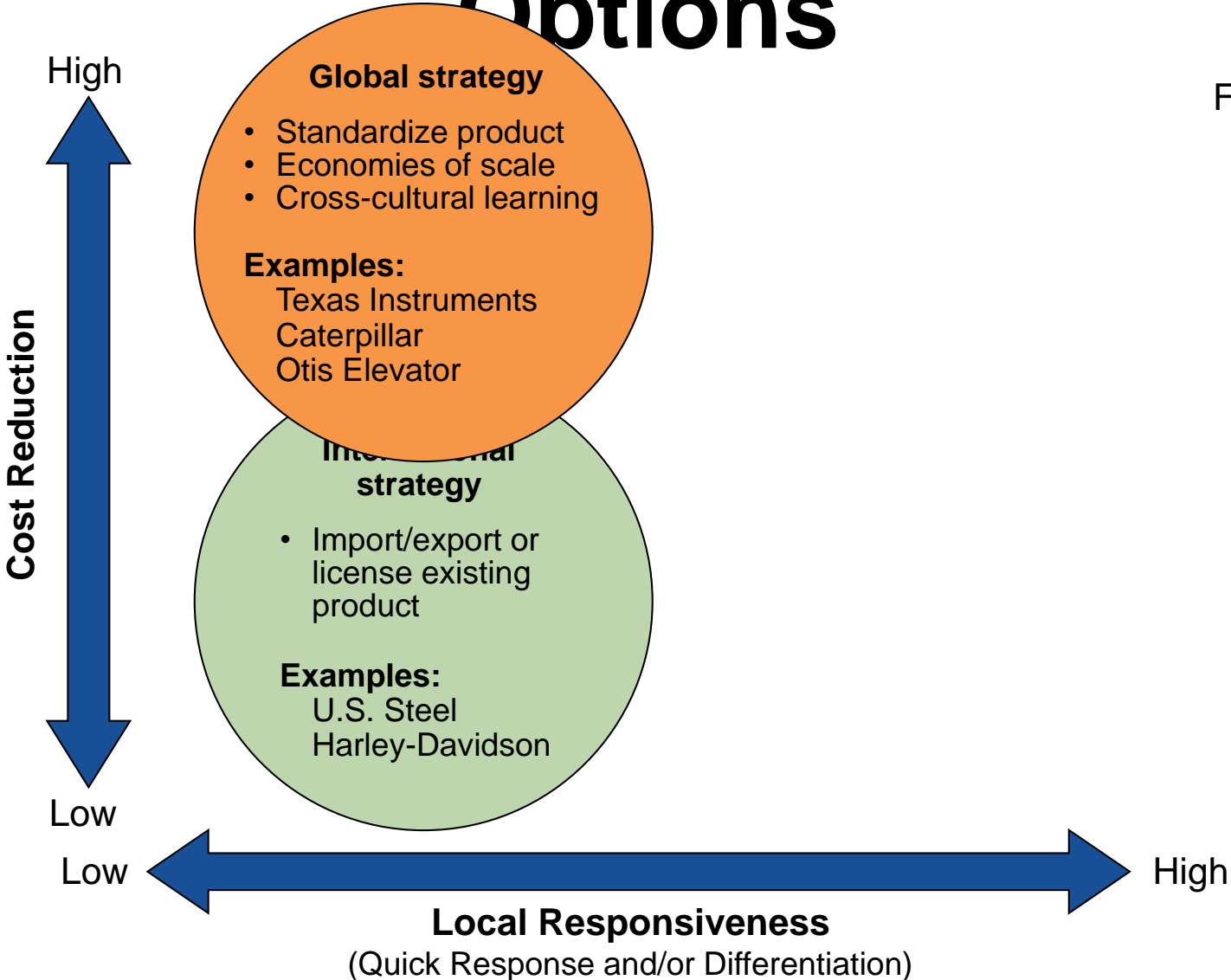
# Global Operations Strategy Options

Figure 2.9



# Global Operations Strategy Options

Figure 2.9



# Global Operations Strategy Options

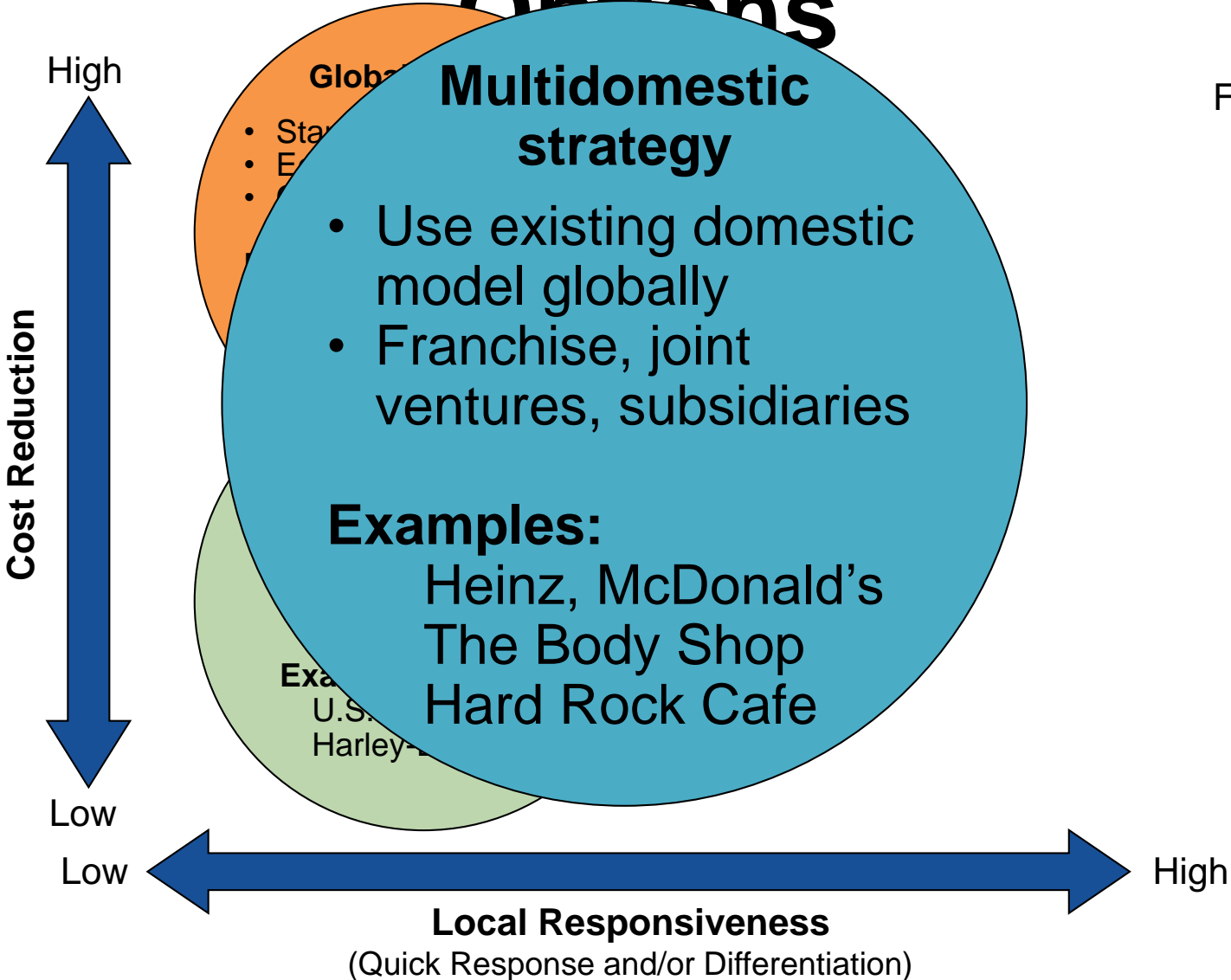
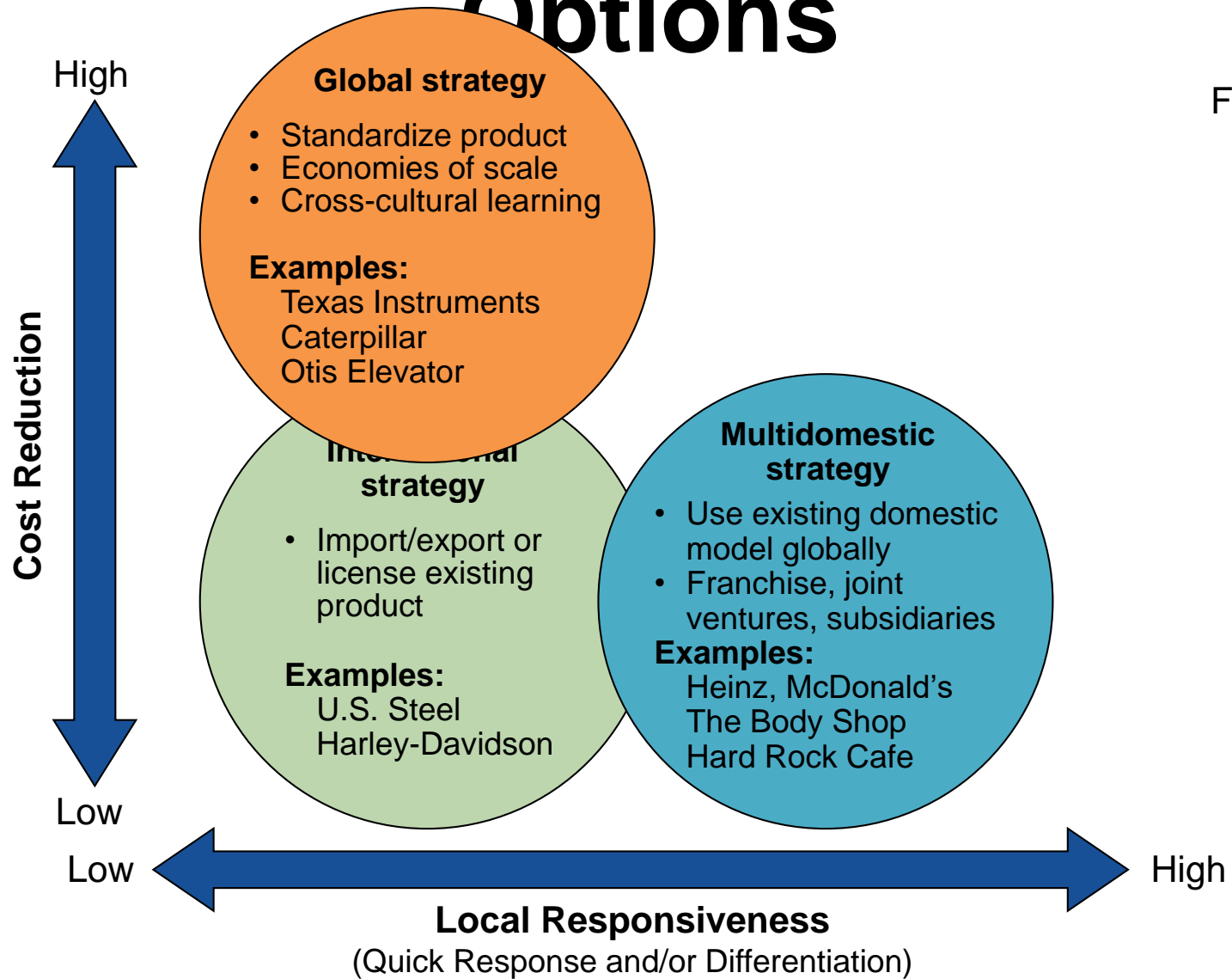


Figure 2.9

# Global Operations Strategy Options

Figure 2.9



# Global Operations Strategy Options

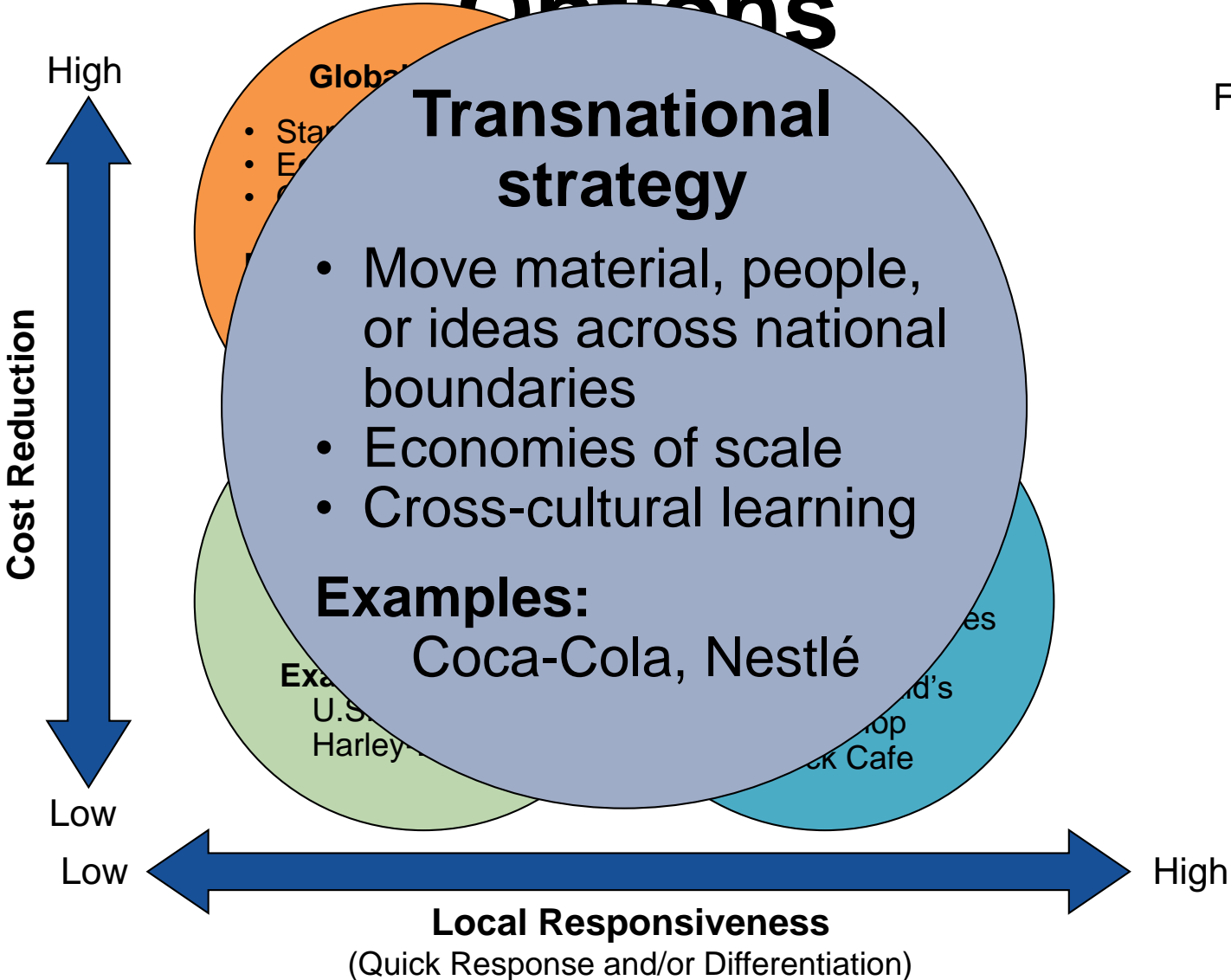


Figure 2.9

# Global Operations Strategy

## Options

Figure 2.9

