

Operations Strategy in a Global Environment

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

PowerPoint slides by Jeff Heyl

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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

SUPPLIER	HEADQUARTERS COUNTRY	COMPONENT
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

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

Boeing's Global Supply-Chain Strategy

Some of the International Suppliers of Boeing 787 Components

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

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.

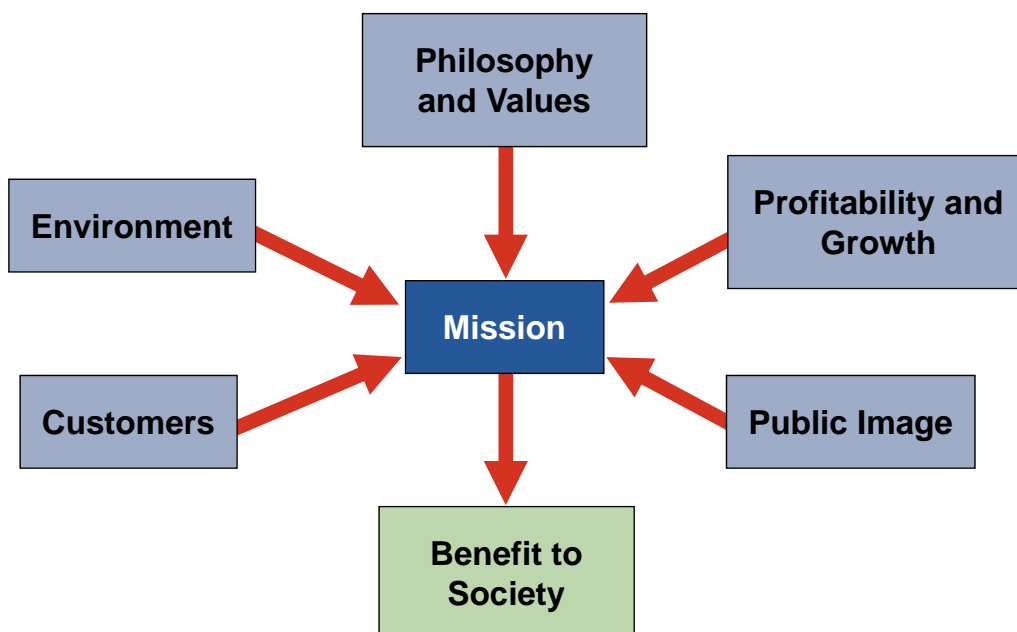
Figure 2.3

Arnold Palmer Hospital

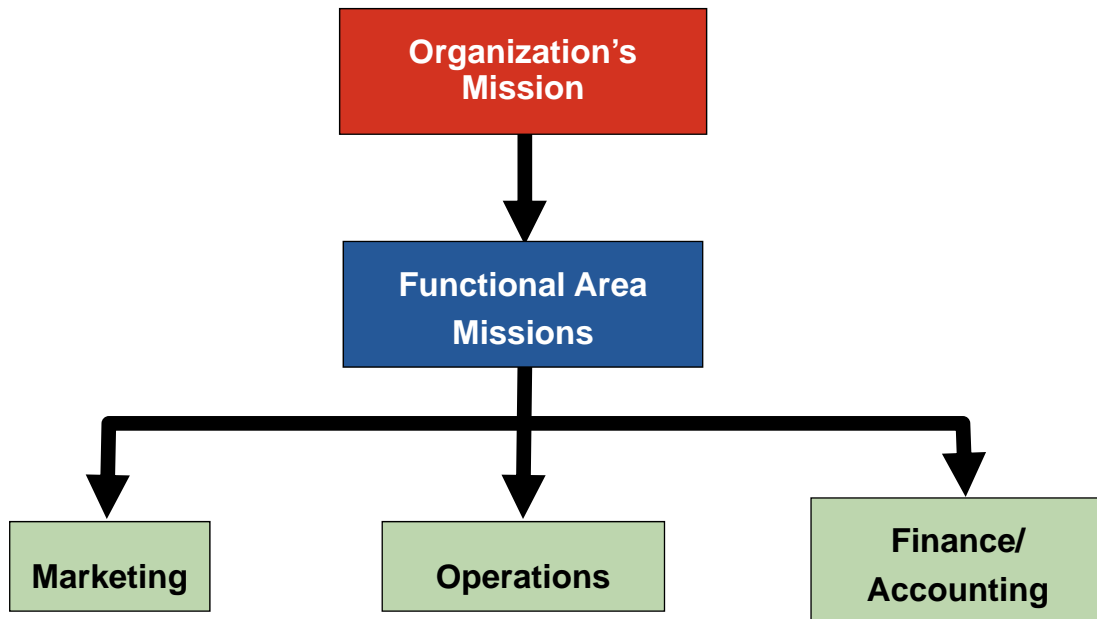
Arnold Palmer Hospital for Children provides state of the art, family-centered healthcare focused on restoring the joy of childhood in an environment of compassion, healing, and hope.

Figure 2.2

Factors Affecting Mission



Strategic Process



Sample Missions

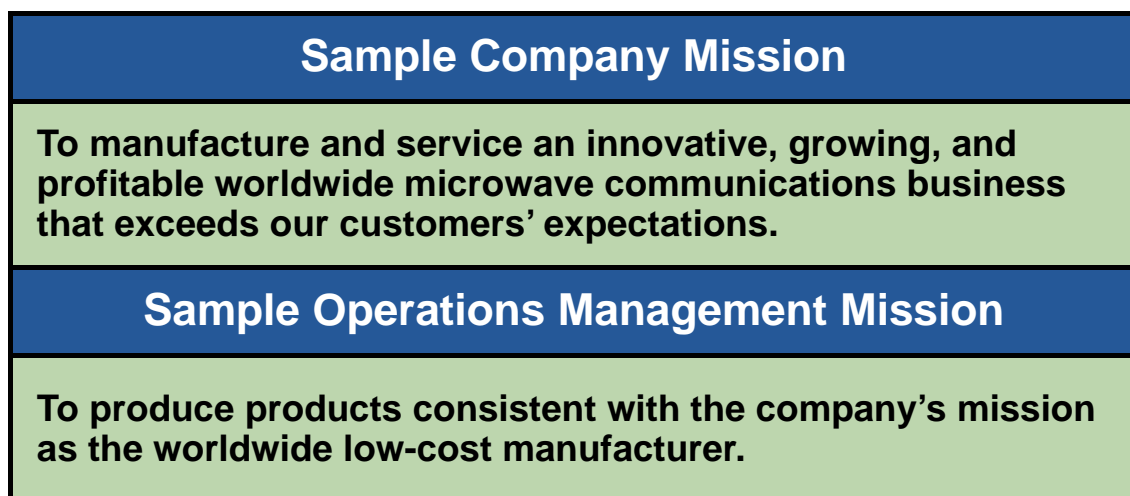


Figure 2.3

Sample Missions

Sample OM Department Missions	
Product design	To design and produce products and services with outstanding quality and inherent customer value.
Quality management	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
Process design	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.

Figure 2.3

Sample Missions

Sample OM Department Missions	
Location	To locate, design, and build efficient and economical facilities that will yield high value to the company, its employees, and the community.
Layout design	To achieve, through skill, imagination, and resourcefulness in layout and work methods, production effectiveness and efficiency while supporting a high quality of work life.
Human resources	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

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

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

10 Operations Decisions	Strategy	Example	Competitive Advantage
Product	DIFFERENTIATION:	Innovative design Safeskin's innovative gloves	
Quality		Broad product line Fidelity Security's mutual funds	
Process		After-sales service Caterpillar's heavy equipment service	
Location	Experience Hard Rock Café's dining experience		
Layout	COST LEADERSHIP:	Low overhead Franz-Colruyt's warehouse-type stores	
Human resource		Effective capacity ... Southwest Airline's aircraft utilization	
Supply chain	Inventory Walmart's sophisticated distribution system		
Inventory	RESPONSE:	Flexibility Hewlett-Packard's response to volatile world market	
Scheduling		Reliability FedEx's "absolutely, positively, on time"	
Maintenance		Quickness Pizza Hut's 5-minute guarantee at lunchtime	

Figure 2.4

Issues In Operations Strategy

- ▶ Resources view
- ▶ Value-chain analysis
- ▶ Porter's Five Forces model
- ▶ Operating in a system with many external factors
- ▶ Constant change

Product Life Cycle

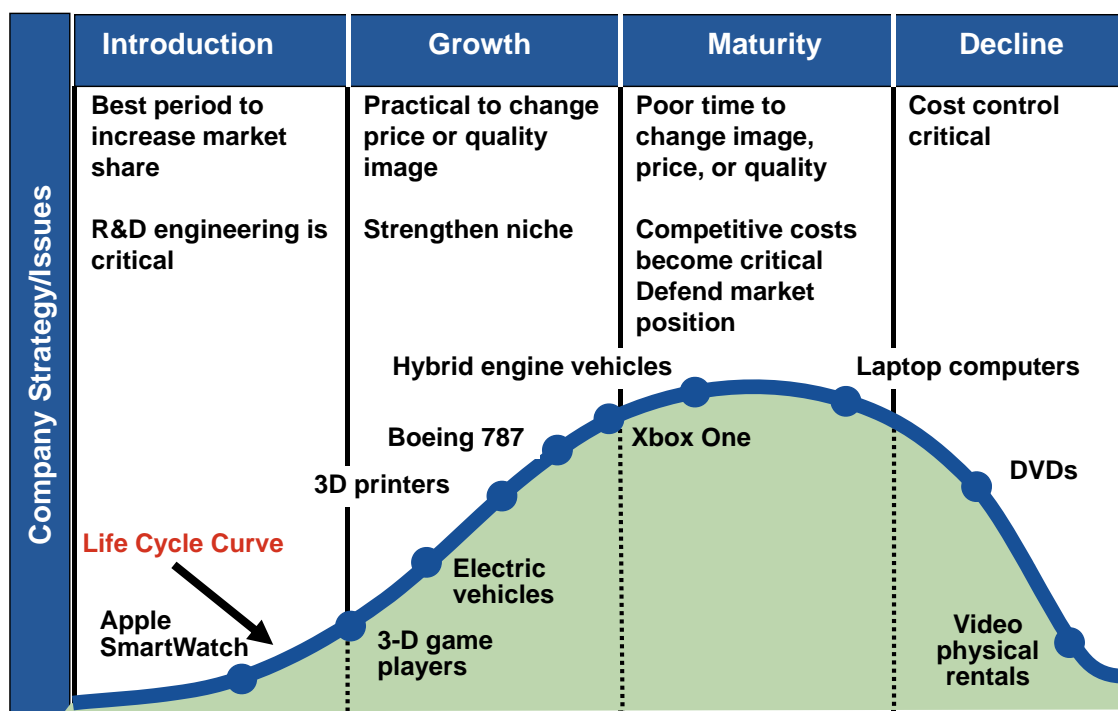


Figure 2.5

Product Life Cycle

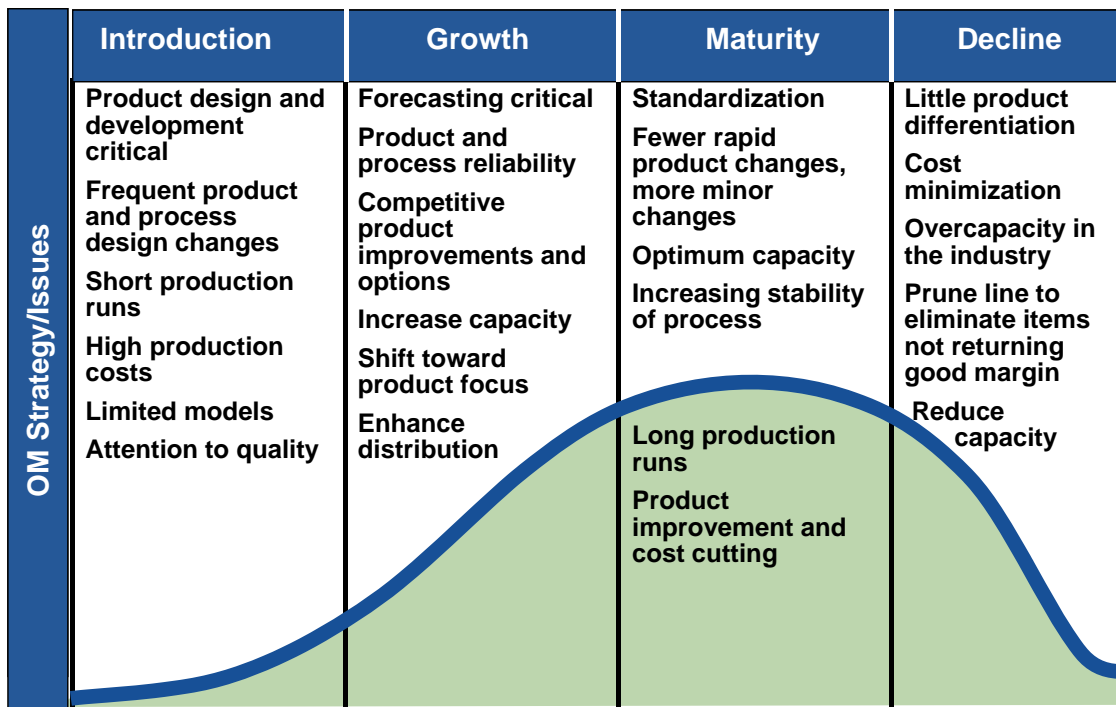
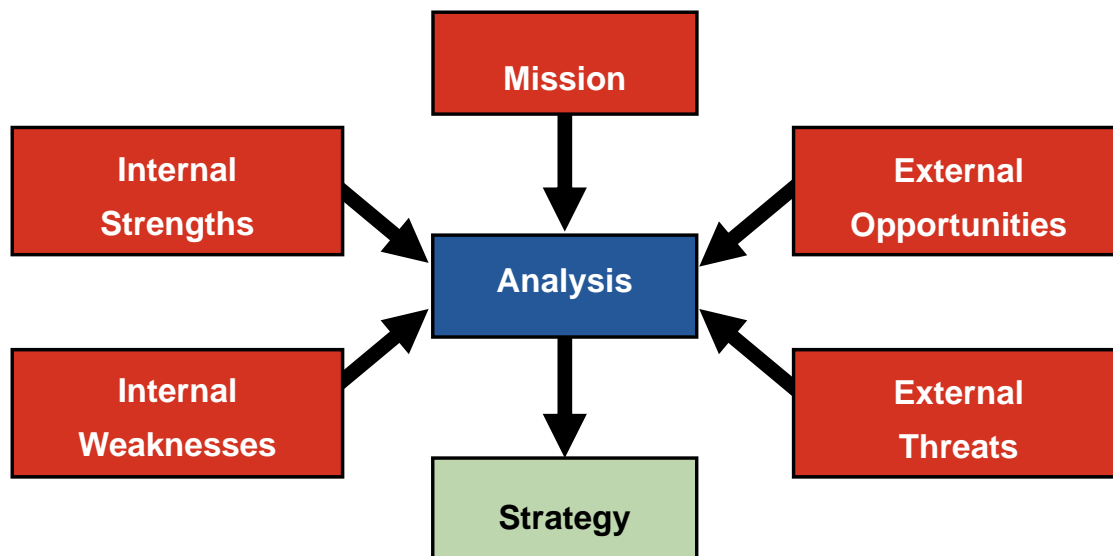


Figure 2.5

SWOT Analysis



Strategy Development Process

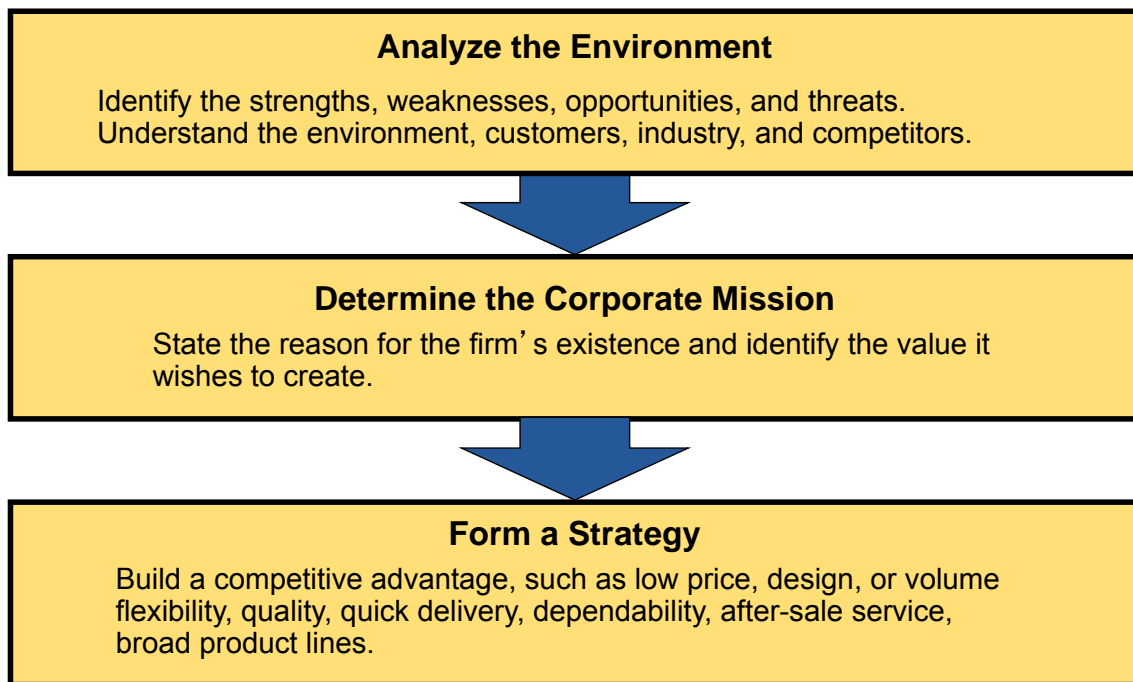


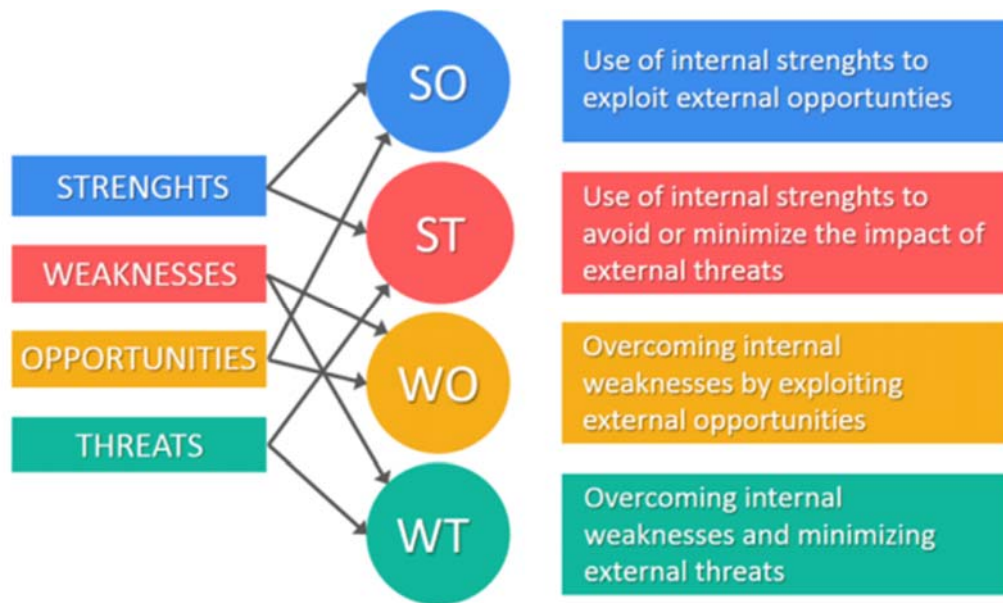
Figure 2.6

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.businessstudiesnotes.com/marketing/marketing-management/tows-matrix-strategies/>

Assignment (5%)

Refreshing mission and strategy

Instructions

1. Team up 4-5 students per group.
2. Review the current mission and generic strategy of Starbucks Coffee. (10 minutes)
3. Conduct SWOT analysis. (15 minutes)
4. Develop TOWS matrix and generate at least one strategy for each matrix. (15 minutes)
5. Prepare your presentation. (15 minutes)
6. Present your work. (5-10 minutes)

Assignment

Refreshing mission and strategies

Starbucks Coffee's **Mission Statement**:

"To inspire and nurture the human-spirit – one person, one cup and one neighborhood at a time."

Starbucks Coffee's **Generic Strategy**:

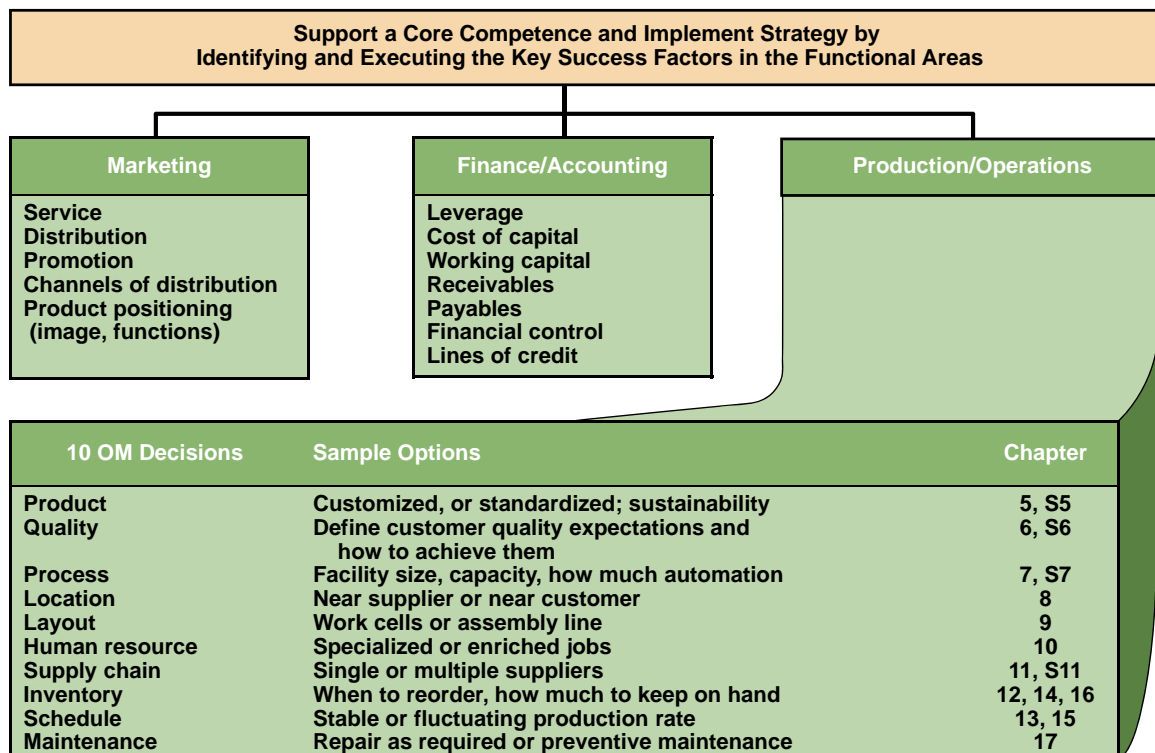
"Broad differentiation on innovation of specialty ingredients, products and supply chain."

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



Activity Mapping at Southwest Airlines

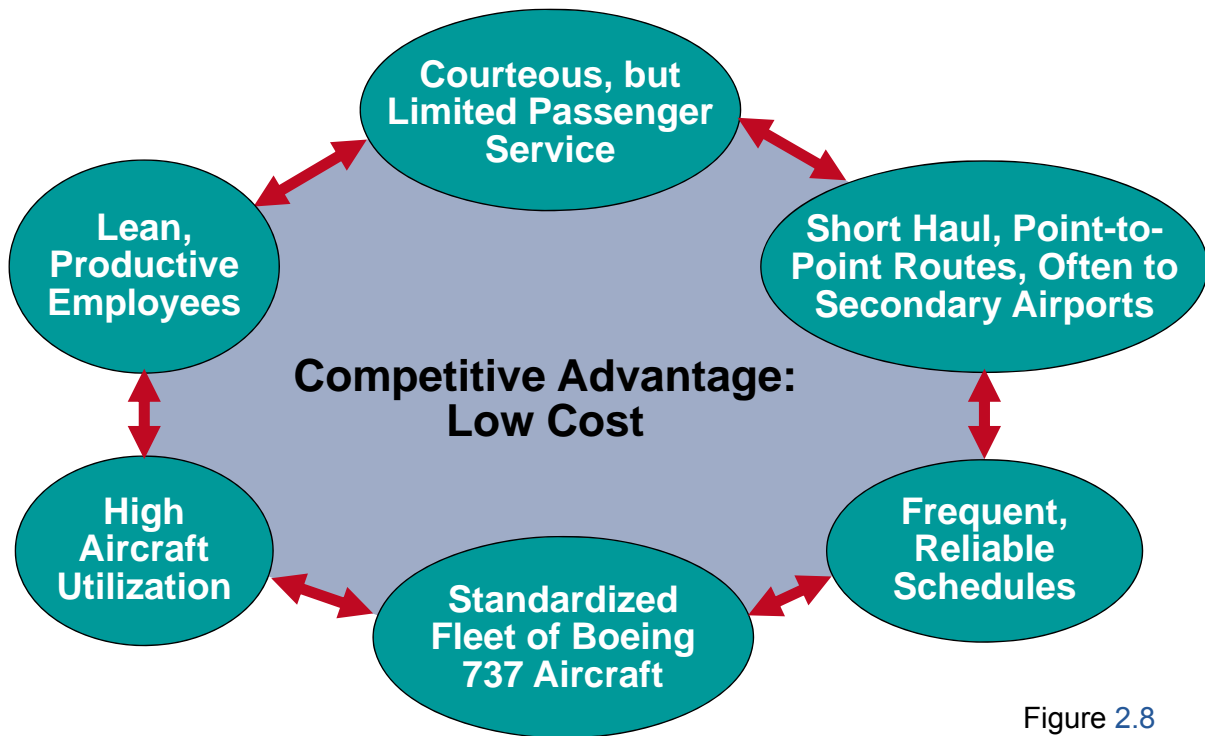


Figure 2.8

Activity Mapping at Southwest Airlines

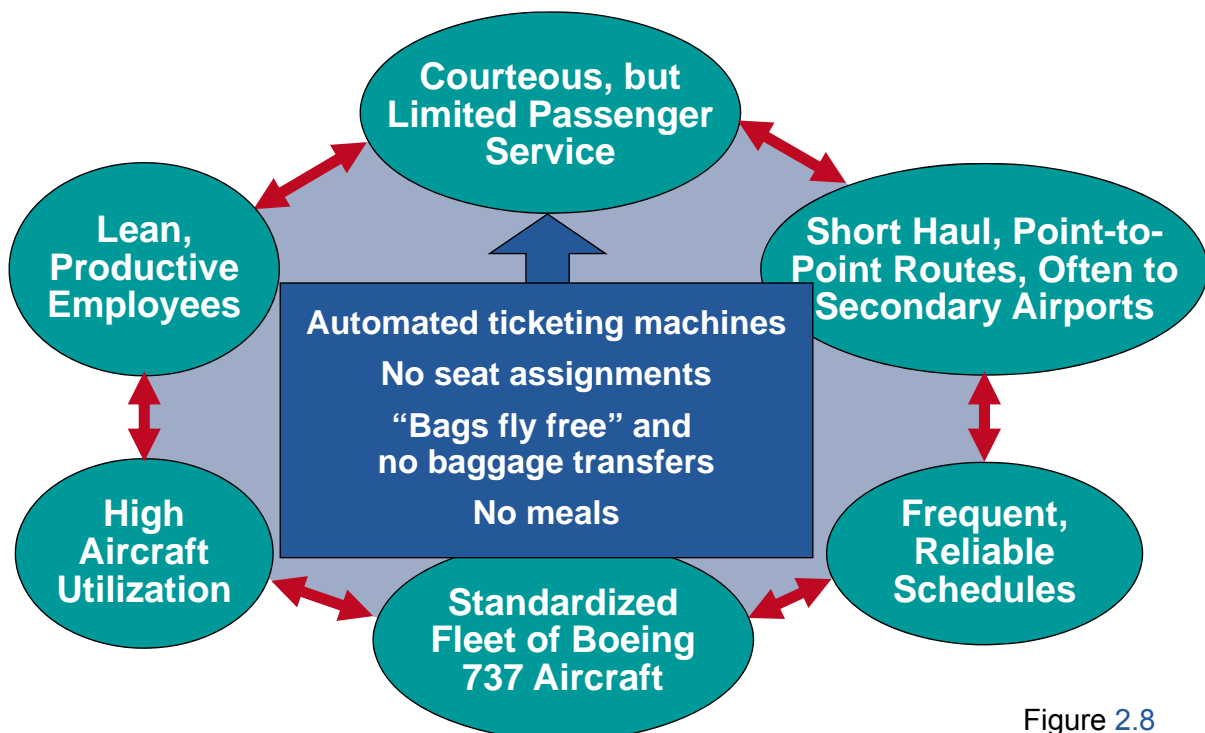


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Activity Mapping at Southwest Airlines

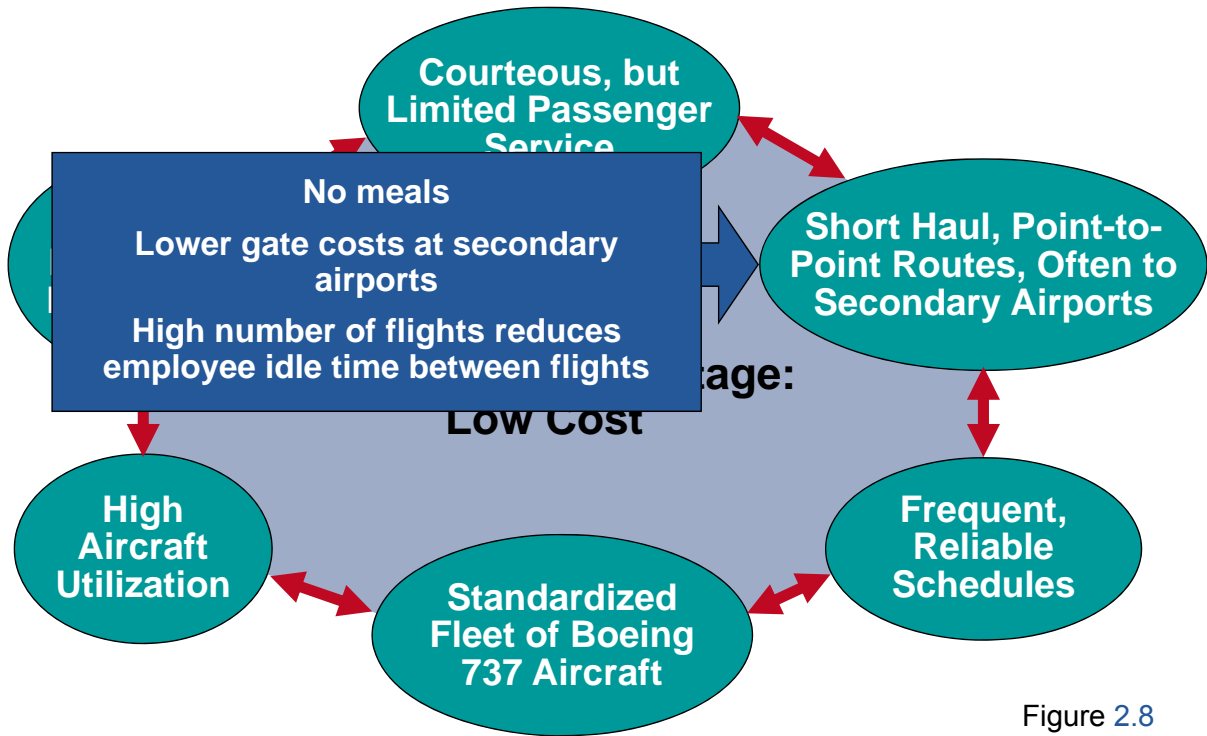


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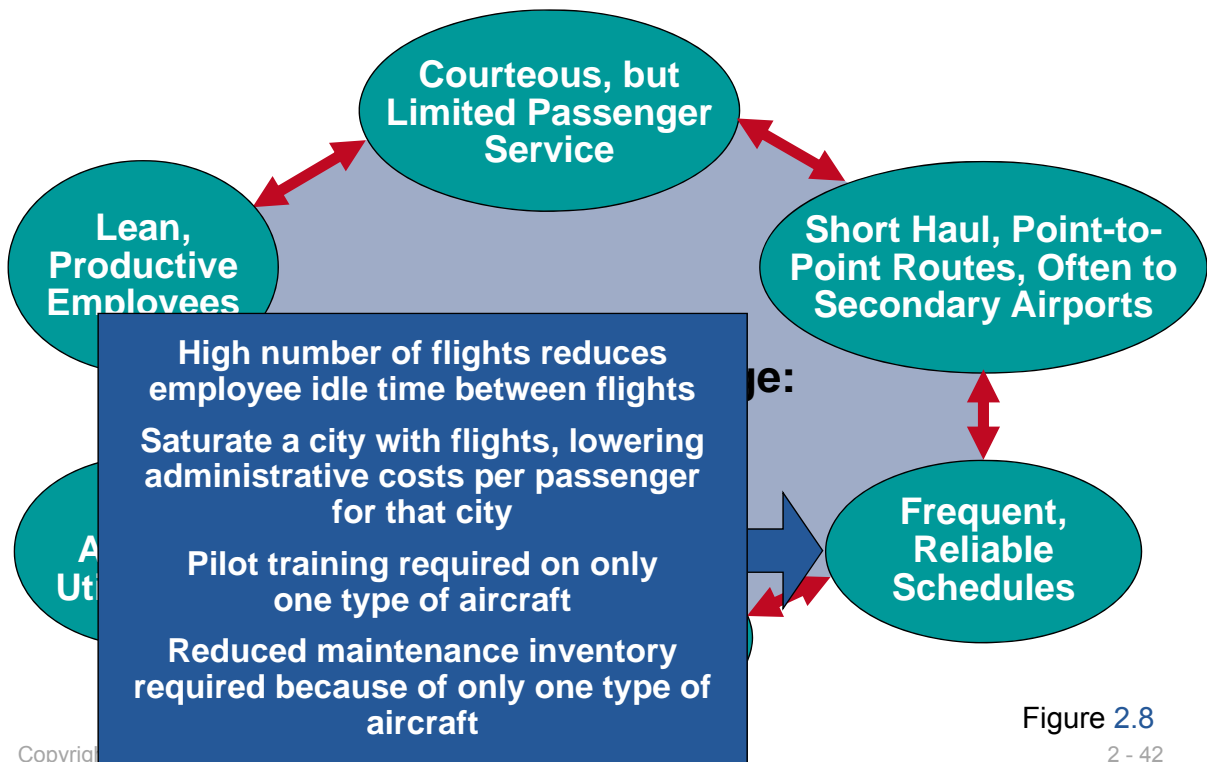


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Activity Mapping at Southwest Airlines

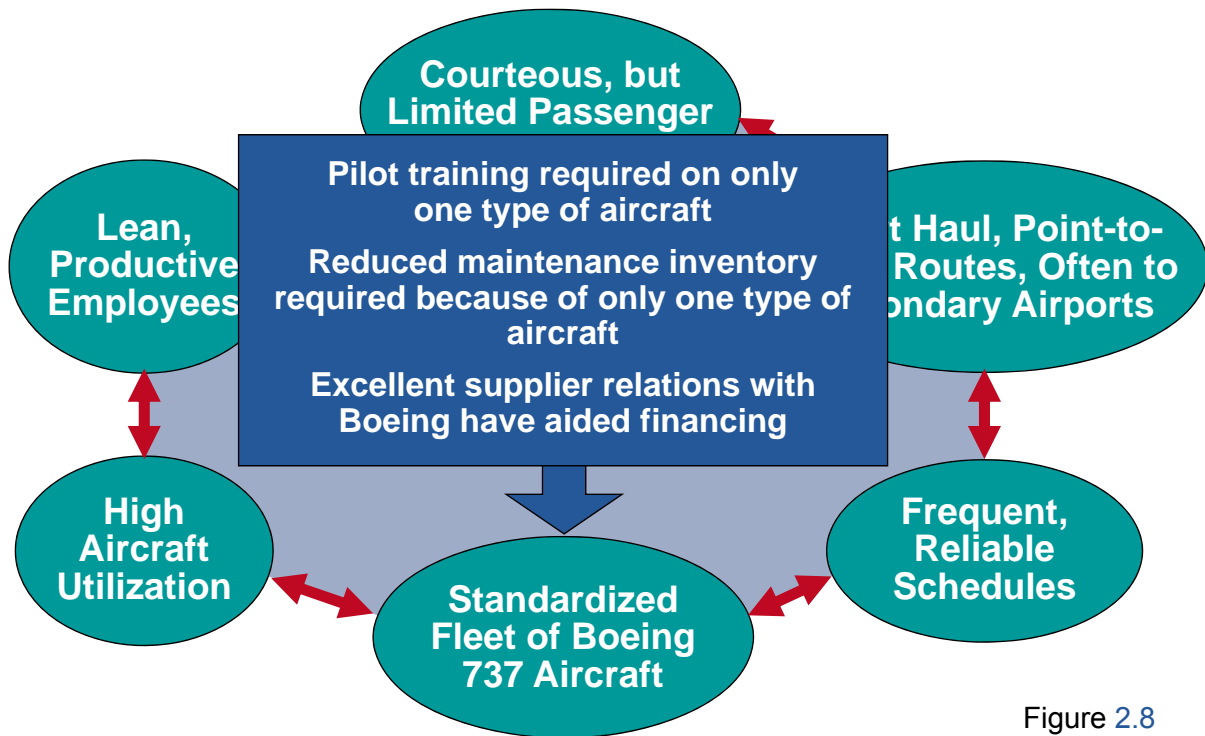


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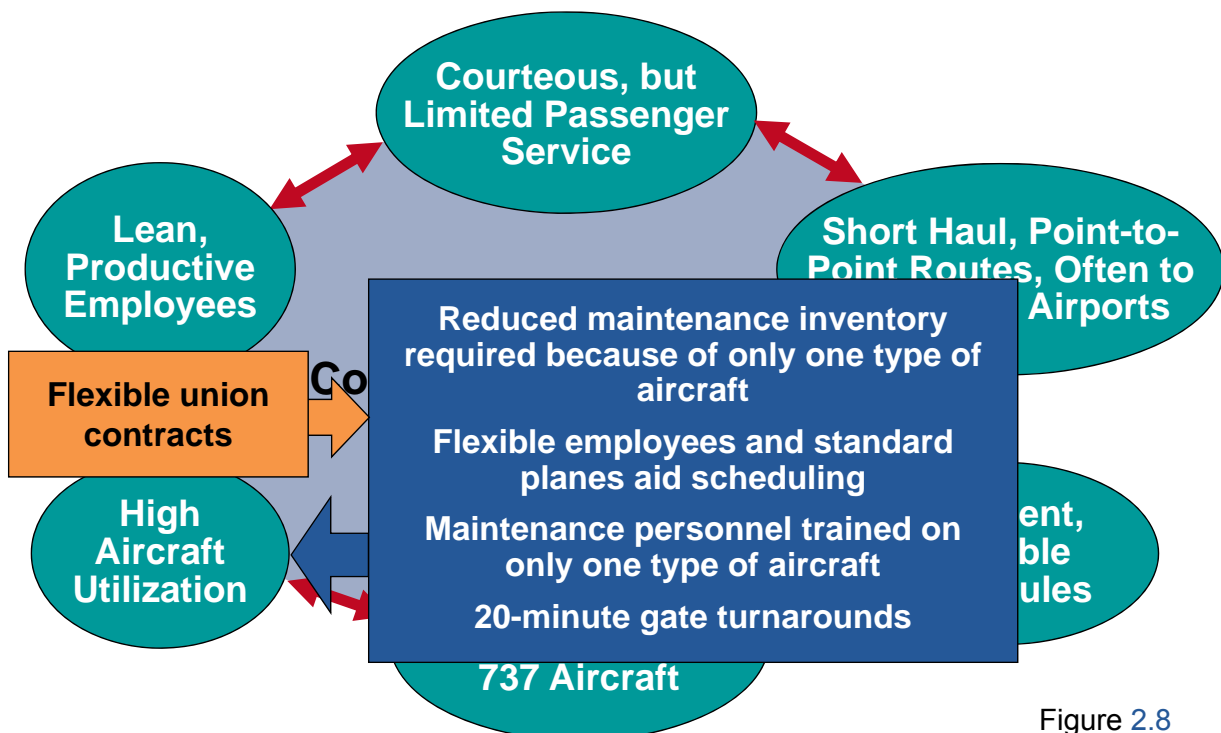


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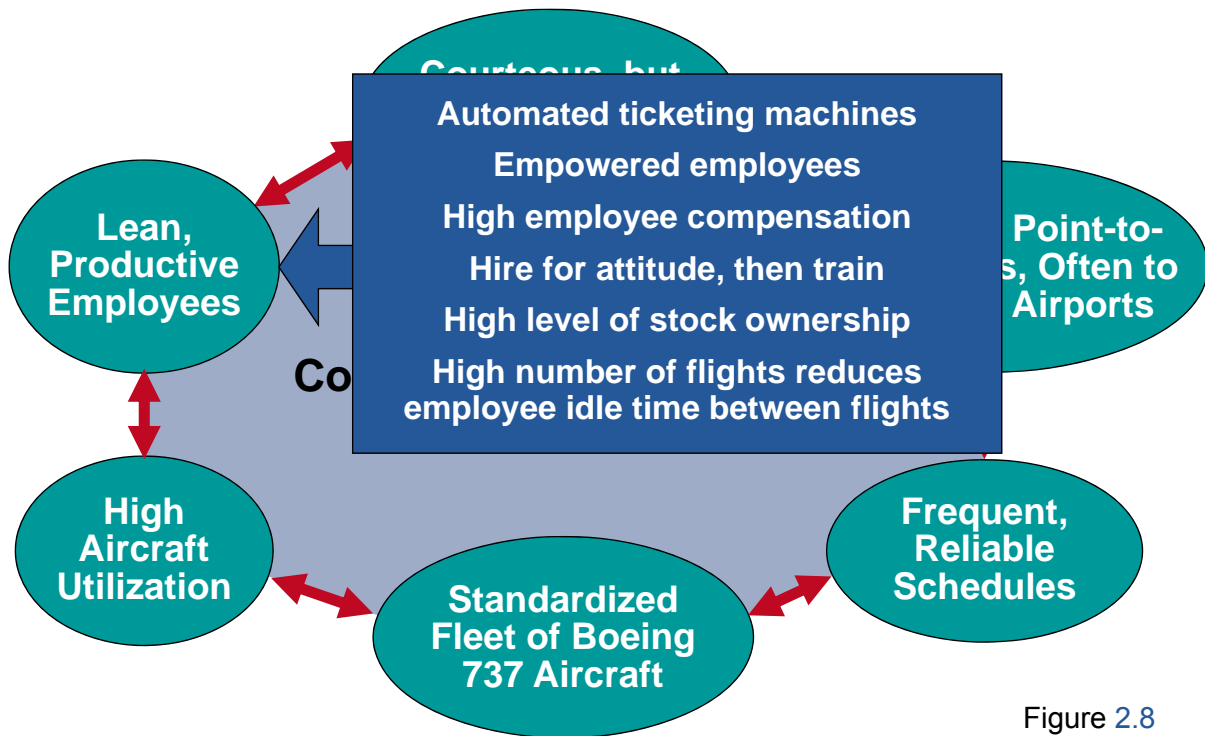


Figure 2.8

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Implementing Strategic Decisions

	BRAND NAME DRUGS, INC.	GENERIC DRUGS CORP.
COMPETITIVE ADVANTAGE	PRODUCT DIFFERENTIATION STRATEGY	LOW COST STRATEGY
Product selection and design	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
Quality	Quality is major priority, standards exceed regulatory requirements	Meets regulatory requirements on a country-by-country basis, as necessary
Process	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
Location	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

COMPETITIVE ADVANTAGE	BRAND NAME DRUGS, INC.	GENERIC DRUGS CORP.
	PRODUCT DIFFERENTIATION STRATEGY	LOW COST STRATEGY
Layout	Layout supports automated product-focused production	Layout supports process-focused “job shop” practices
Human resources	Hire the best; nationwide searches	Very experienced top executives provide direction; other personnel paid below industry average
Supply chain	Long-term supplier relationships	Tends to purchase competitively to find bargains
Inventory	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
Scheduling	Centralized production planning	Many short-run products complicate scheduling
Maintenance	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

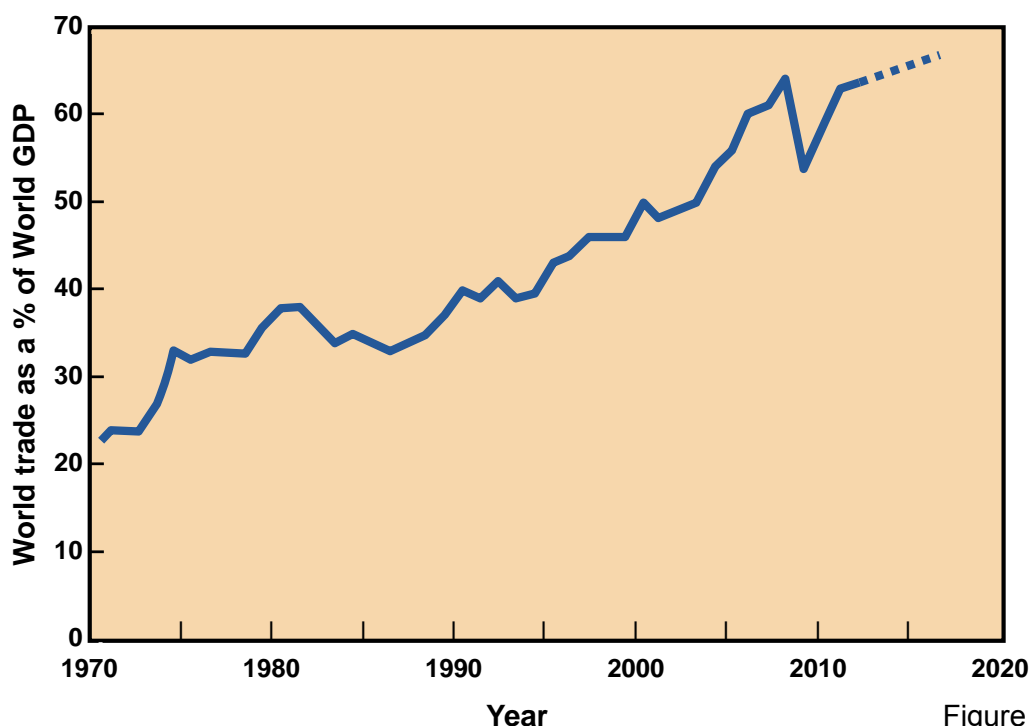


Figure 2.1

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

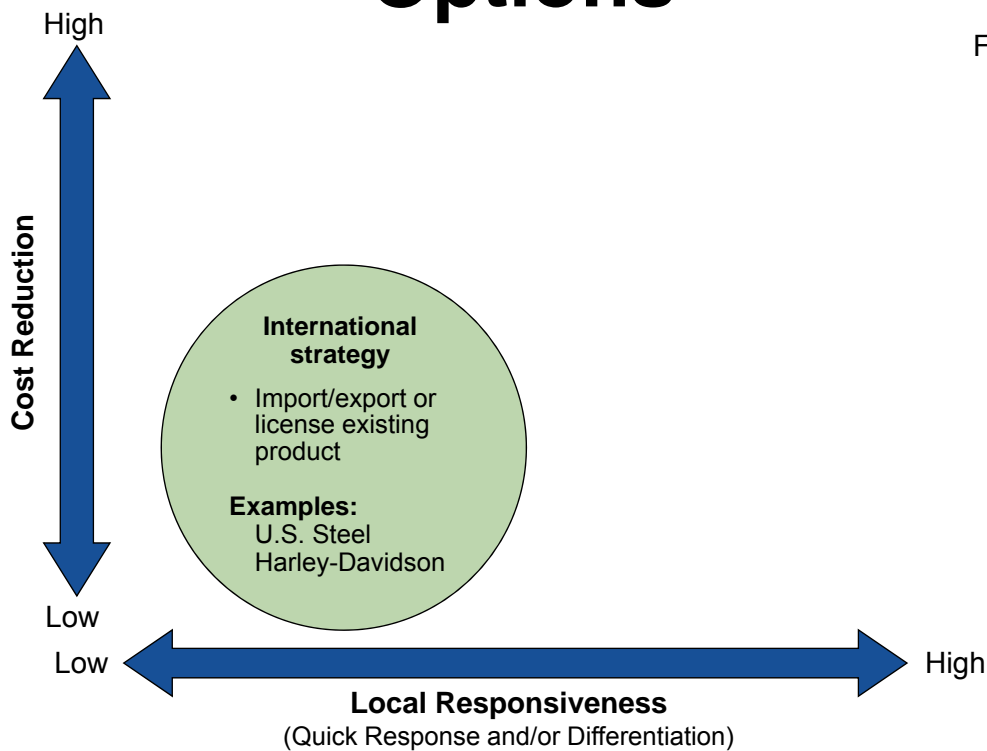
- ▶ National literacy rate
- ▶ Rate of innovation
- ▶ Rate of technology change
- ▶ Number of skilled workers
- ▶ Political stability
- ▶ Product liability laws
- ▶ Export restrictions
- ▶ Variations in language
- ▶ Work ethic
- ▶ Tax rates
- ▶ Inflation
- ▶ Availability of raw materials
- ▶ Interest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

Global Operations Strategy Options



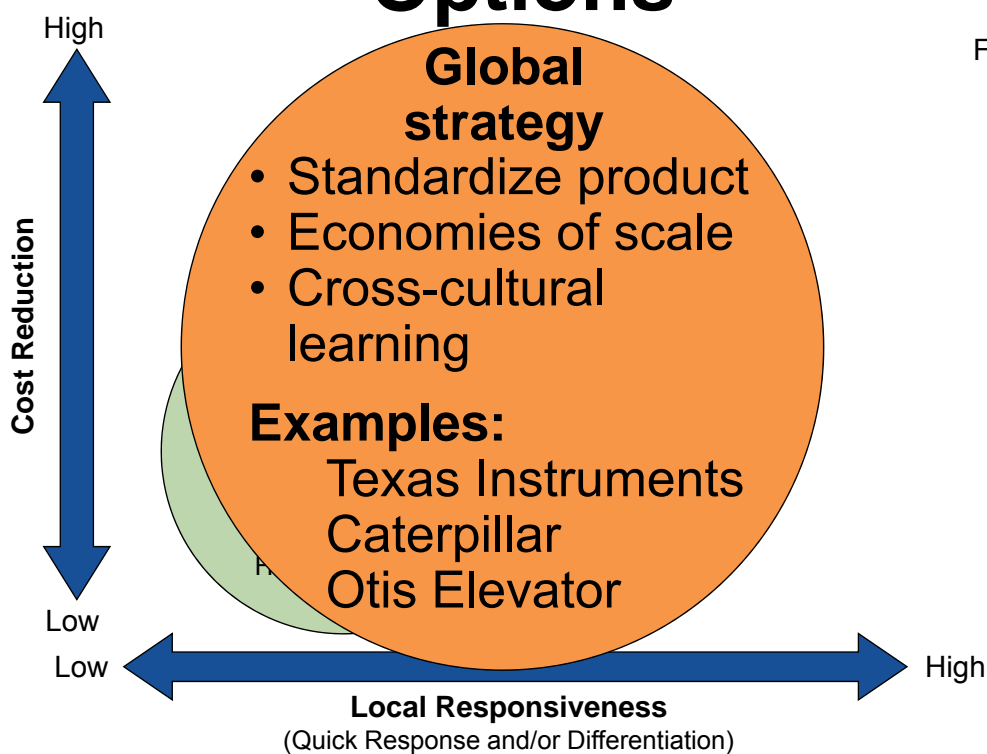
Global Operations Strategy Options

Figure 2.9



Global Operations Strategy Options

Figure 2.9



Global Operations Strategy Options

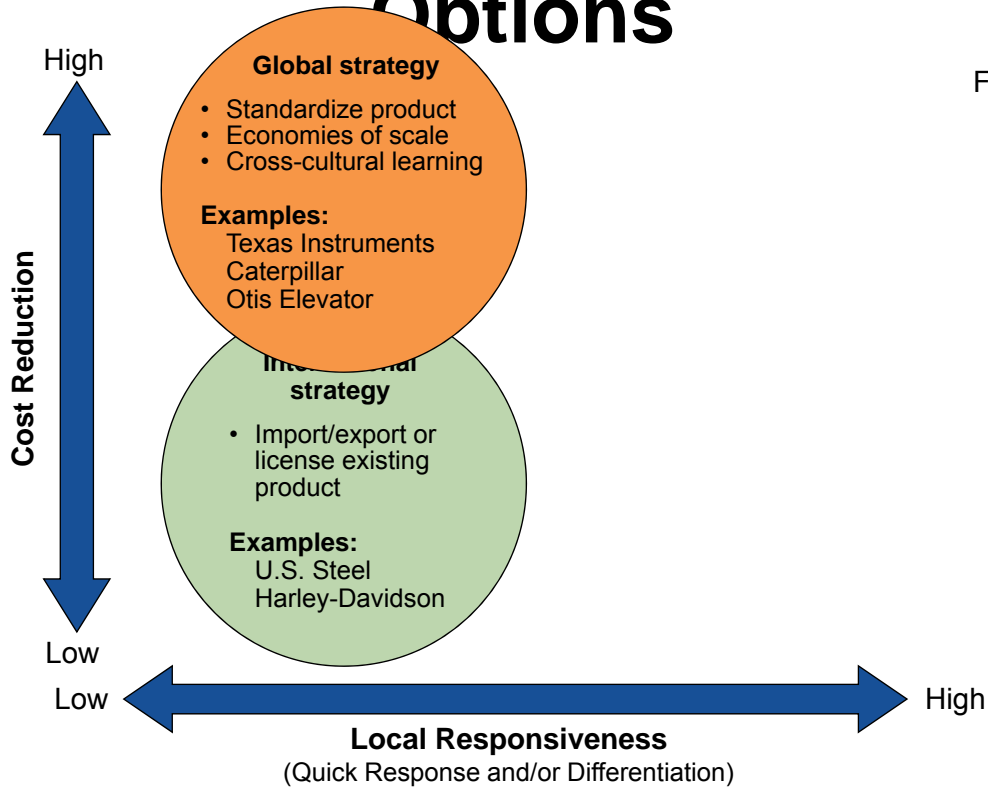


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Global Operations Strategy Options

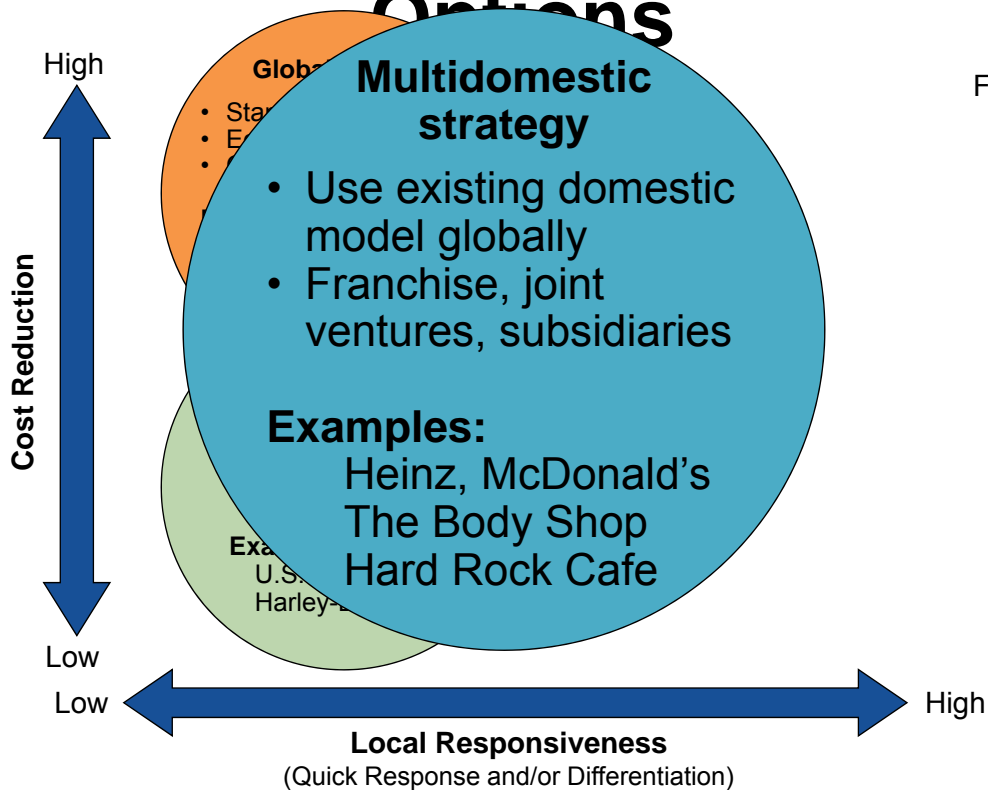


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Global Operations Strategy Options

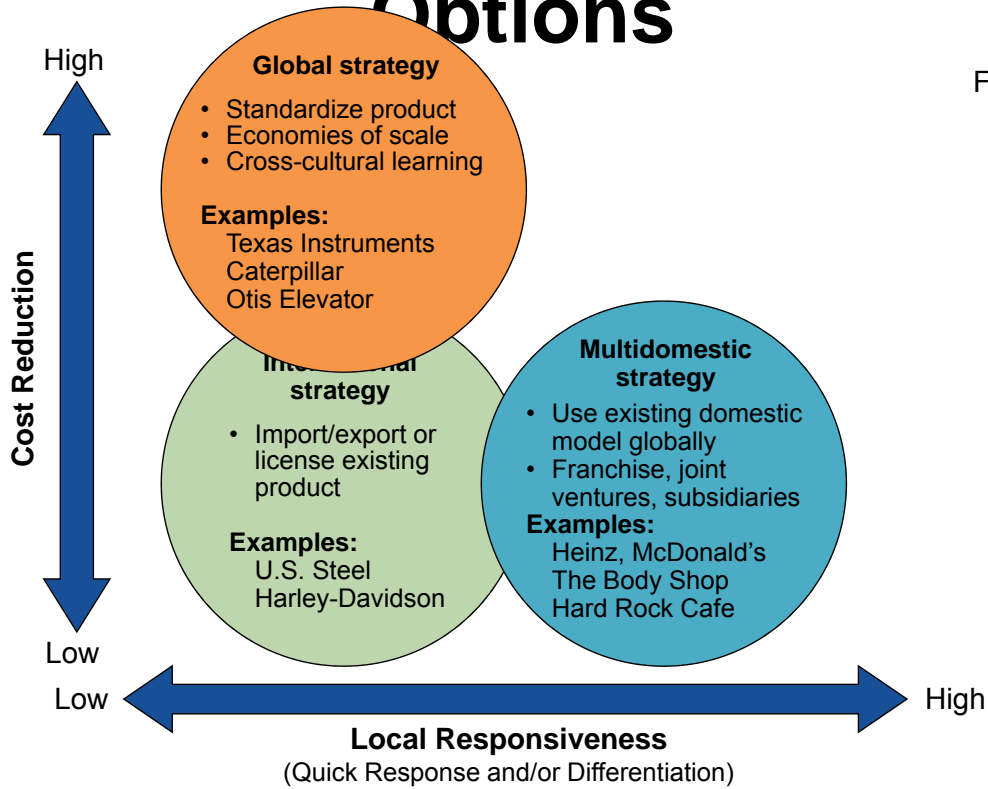


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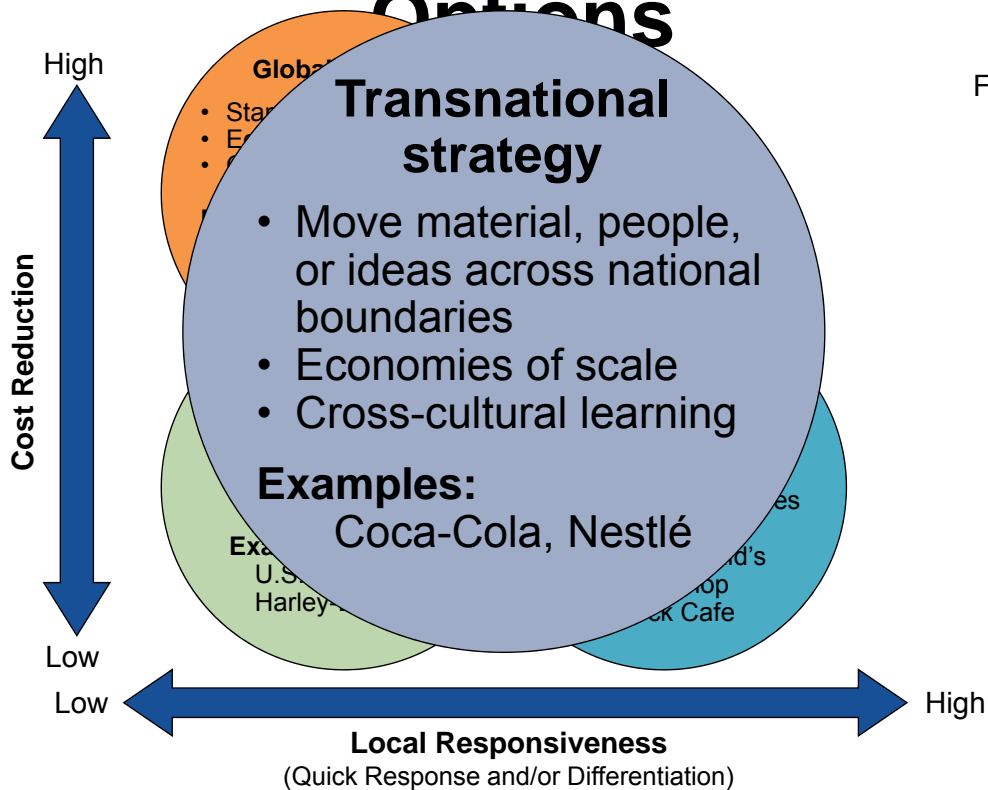


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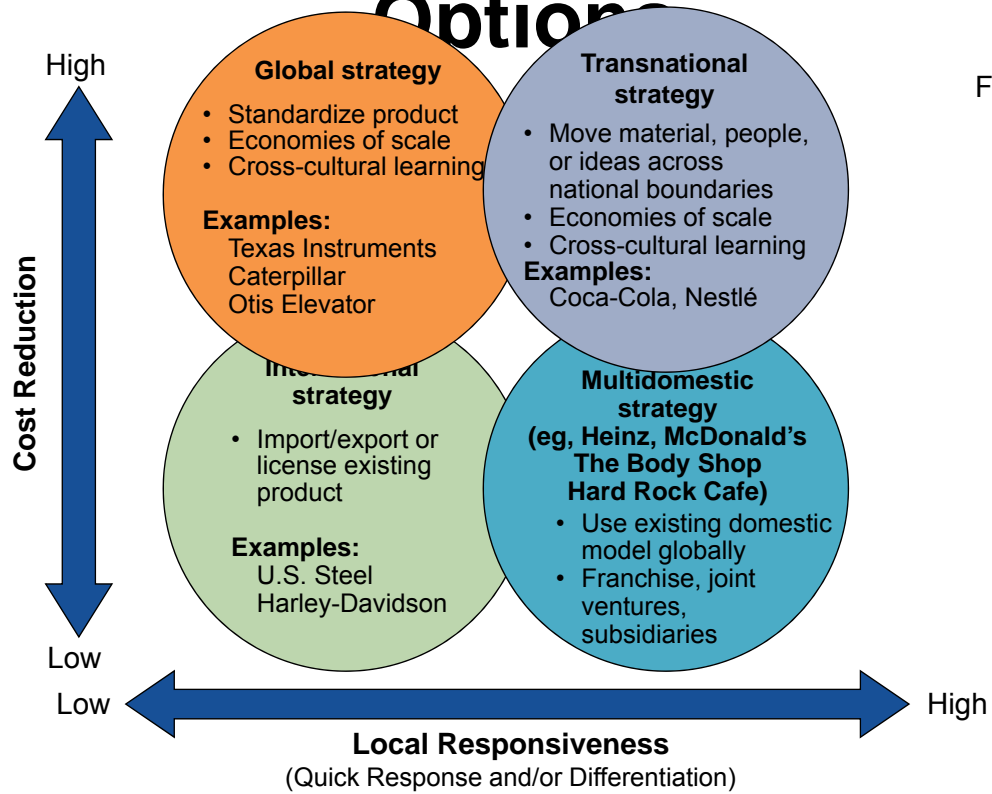


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