Operations and Productivity

Chapter 1

Learning objectives

At the end of this lesson, you should be able to:

1. **Define** operations management
2. **Explain** the distinction between goods and services
3. **Describe** supply chain
4. **Discuss** importance of operations management

5. **Explain** the difference between production and productivity
6. **Compute** productivity index
8. **Identify** the critical variables in enhancing productivity

What is Operations/Production Management?

What is Operations/Production Management

Discipline that applies to all enterprises

Office, Universities, Banks, Hospitals, Factories, Warehouse…..

How to manage operations - suppliers and customers located all over the world

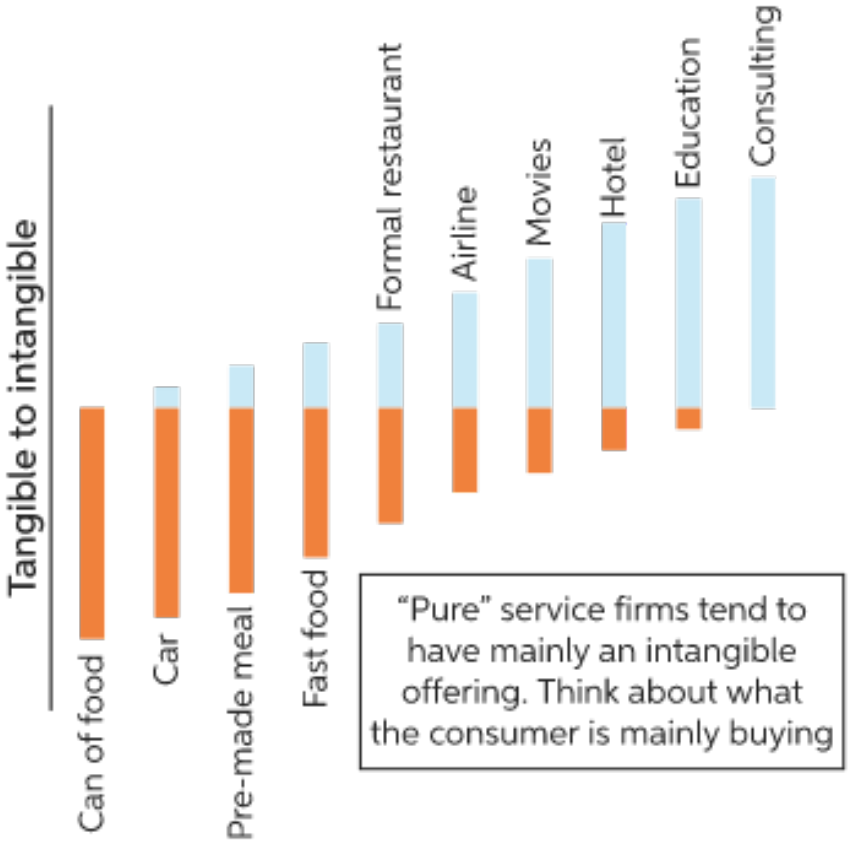
Need effective and efficient tools and techniques to produce products and deliver services - Quality, Costs, Delivery, + safety + sustainability +...

What is production ?

Creation goods and services.

What is difference between goods and services?

Transfer funds between banks, liver transplant, filling up hotel room, education of a student - Services



The production activities of tangible and intangible products are called operations = Need managing

Definition of OM /PM

Operations management (OM) is the set of activities that create value in the form of goods and services by **transforming inputs into outputs**

Give one example of a product you frequently use

Give one example of input.

Give one example of output.

Organizing to Produce Goods and Services

- Essential functions:
  1. **Marketing** – generates demand
  2. **Production/operations** – creates the product
  3. **Finance/accounting** – tracks how well the organization is doing, pays bills, collects the money

Organizational Charts

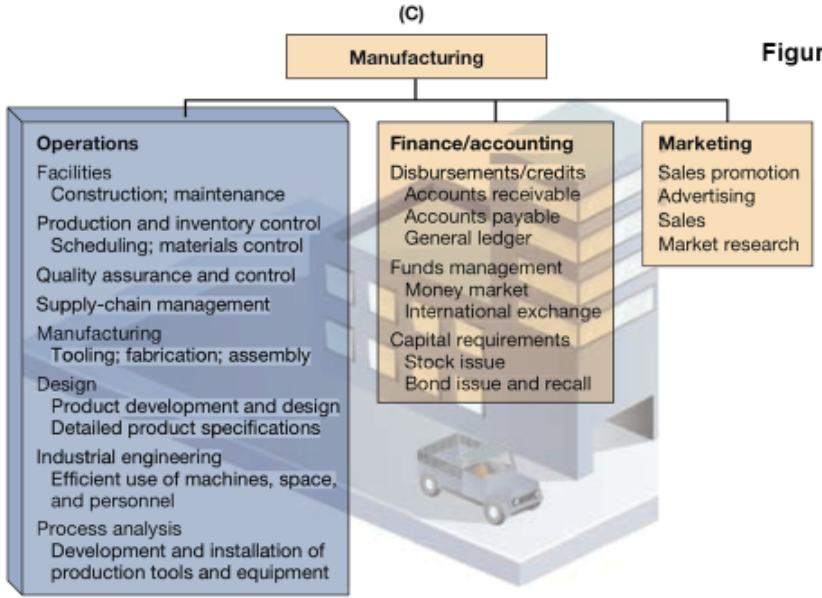


Figure 1.1

Organizational Charts

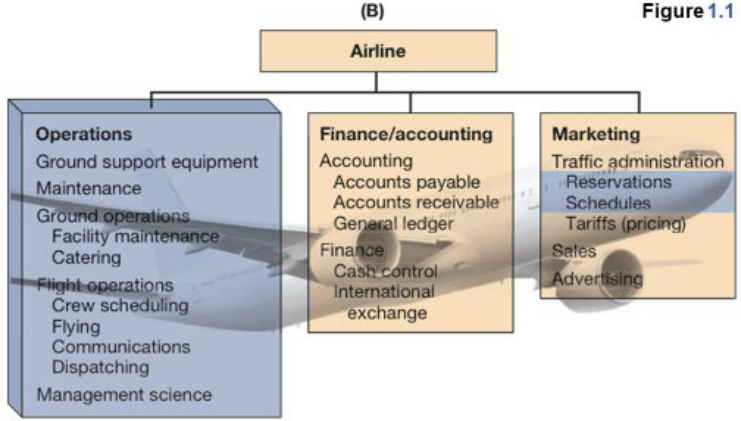
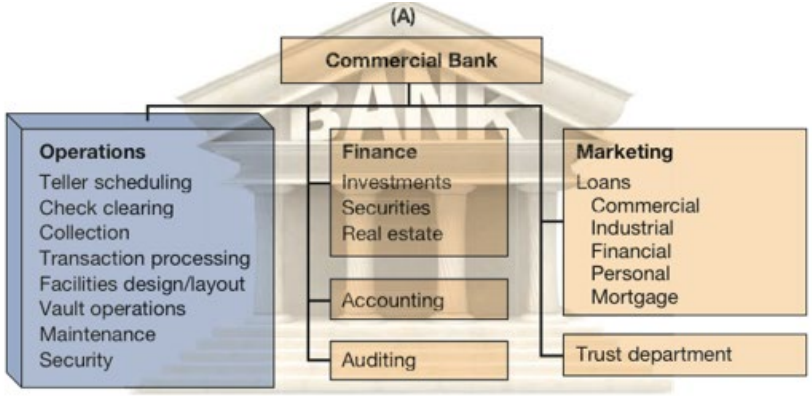


Figure 1.1



What is supply chain?

What is meaning of this term ? Supply chain

Do you make or buy your raw materials, parts, components?

Where do source your raw materials from?

How to ensure products delivery promise?

How to ensure efficiency?

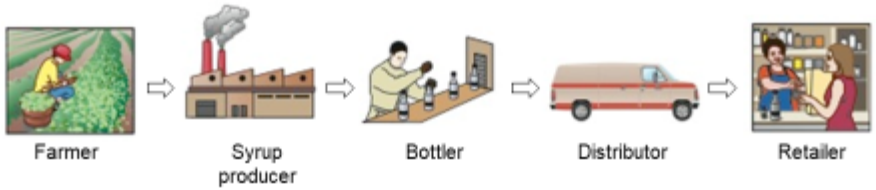
How to manage supply chain - order, delivery, quality, costs?

Value added through Supply Chain

The Supply Chain

- A global network of organizations and activities that supply a firm with goods and services
- Members of the supply chain collaborate to achieve high levels of customer satisfaction, efficiency and competitive advantage.

Figure 1.2



Value to customer - create through Marketing, Operations and Finance

Firms depend on suppliers for inputs (raw materials, packaging, machines, etc)

Specialized knowledge of making products and producing services

Why study Operations Management?

What is goal of any operations?

Need to study how people organize themselves

Need to know how to produce the goods and services

Need to understand the job of Operations Manager

Companies must survive through increasing effective operations = Need OM knowledge

For Increased Profits and Reduced Costs = Need to Optimize Operations

Options for Increasing Contribution

TABLE 1.1

		MARKETING OPTION	FINANCE /ACCOUNTING OPTION	OM OPTION
	CURRENT	INCREASE SALES REVENUE 50%	REDUCE FINANCE COSTS 50%	REDUCE PRODUCTION COSTS 20%
Sales	$100,000	$150,000	$100,000	$100,000
Cost of goods	–80,000	–120,000	–80,000	–64,000
Gross margin	20,000	30,000	20,000	36,000
Finance costs	–6,000	–6,000	–3,000	–6,000
Subtotal	14,000	24,000	17,000	30,000
Taxes at 25%	–3,500	–6,000	–4,200	–7,500
Contribution	$ 10,500	$ 18,000	$ 12,750	$ 22,500

What Operations Manager do?

What are the 5 management functions (or jobs)?

What Operations Managers Do

Basic Management Functions

- Planning
- Organizing
- Staffing
- Leading
- Controlling

Operations manager applies the 5 management process to the 10 decisions areas

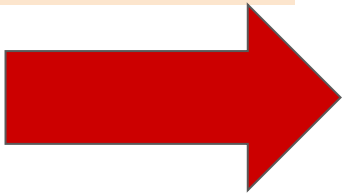


TABLE 1.2 Ten Strategic Operations Management Decisions

DECISION	CHAPTER(S)
1. *Design of goods and services:* Defines much of what is required of operations in each of the other OM decisions. For instance, product design usually determines the lower limits of cost and the upper limits of quality, as well as major implications for sustainability and the human resources required.	5, Supplement 5
2. *Managing quality:* Determines the customer's quality expectations and establishes policies and procedures to identify and achieve that quality.	6, Supplement 6
3. *Process and capacity strategy:* Determines how a good or service is produced (i.e., the process for production) and commits management to specific technology, quality, human resources, and capital investments that determine much of the firm's basic cost structure.	7, Supplement 7
4. *Location strategy:* Requires judgments regarding nearness to customers, suppliers, and talent, while considering costs, infrastructure, logistics, and government.	8
5. *Layout strategy:* Requires integrating capacity needs, personnel levels, technology, and inventory requirements to determine the efficient flow of materials, people, and information.	9
6. *Human resources and job design:* Determines how to recruit, motivate, and retain personnel with the required talent and skills. People are an integral and expensive part of the total system design.	10
7. *Supply chain management:* Decides how to integrate the supply chain into the firm's strategy, including decisions that determine what is to be purchased, from whom, and under what conditions.	11, Supplement 11
8. *Inventory management:* Considers inventory ordering and holding decisions and how to optimize them as customer satisfaction, supplier capability, and production schedules are considered.	12, 14, 16
9. *Scheduling:* Determines and implements intermediate- and short-term schedules that effectively and efficiently utilize both personnel and facilities while meeting customer demands.	13, 15
10. *Maintenance:* Requires decisions that consider facility capacity, production demands, and personnel necessary to maintain a reliable and stable process.	17

The Strategic Decisions

1. **Design of goods and services**
   - Defines what is required of operations
   - Product design determines quality, sustainability and human resources
2. **Managing quality**
   - Determine the customer's quality expectations
   - Establish policies and procedures to identify and achieve that quality

Table 1.2 (cont.)

s

3. **Process and capacity design**
   - How is a good or service produced?
   - Commits management to specific technology, quality, resources, and investment.
4. **Location strategy**
   - Nearness to customers, suppliers, and talent.
   - Considering costs, infrastructure, logistics, and government.

Table 1.2 (cont.)

The Strategic Decisions

5. **Layout strategy**
   - Integrate capacity needs, personnel levels, technology, and inventory
   - Determine the efficient flow of materials, people, and information.
6. **Human resources and job design**
   - Recruit, motivate, and retain personnel with the required talent and skills.
   - Integral and expensive part of the total system design.

Table 1.2 (cont.)

The Strategic Decisions

7. Supply-chain management

- Integrate supply chain into the firm's strategy.
- Determine what is to be purchased, from whom, and under what conditions.

8. Inventory management

- Inventory ordering and holding decisions.
- Optimize considering customer satisfaction, supplier capability, and production schedules.

Table 1.2 (cont.)

The Strategic Decisions

9. Scheduling

- Determine and implement intermediate- and short-term schedules.
- Utilize personnel and facilities while meeting customer demands.

10. Maintenance

- Consider facility capacity, production demands, and personnel.
- Maintain a reliable and stable process.

Table 1.2 (cont.)

Significant Events in OM

Cost Focus

Early Concepts
1776–1880
Labor Specialization (Smith, Babbage)
Standardized Parts (Whitney)

Scientific Management Era
1880–1910
Gantt Charts (Gantt)
Motion & Time Studies (Gilbreth)
Process Analysis (Taylor)
Queuing Theory (Erlang)

Mass Production Era
1910–1980
Moving Assembly Line (Ford/Sorensen)
Statistical Sampling (Shewhart)
Economic Order Quantity (Harris)
Linear Programming
PERT/CPM (DuPont)
Material Requirements Planning (MRP)

Quality Focus

Lean Production Era
1980–1995
Just-in-Time (JIT)
Computer-Aided Design (CAD)
Electronic Data Interchange (EDI)
Total Quality Management (TQM)
Baldrige Award
Empowerment
Kanbans

Customization Focus

Mass Customization Era
1995–2005
Internet/E-Commerce
Enterprise Resource Planning
International Quality Standards (ISO)
Finite Scheduling
Supply Chain Management
Mass Customization
Build-to-Order

Globalization Focus

Globalization Era
2005–2020
Global Supply Chains
Growth of Transnational Organizations
Instant Communications
Sustainability
Ethics in a Global Workforce
Logistics

Figure 1.4

The Heritage of OM

- Division of labor (Adam Smith 1776; Charles Babbage 1852)
- Standardized parts (Whitney 1800)
- Scientific Management (Taylor 1881)
- Coordinated assembly line (Ford/ Sorenson 1913)
- Gantt charts (Gantt 1916)
- Motion study (Frank and Lillian Gilbreth 1922)
- Quality control (Shewhart 1924; Deming 1950)

The Heritage of OM

- Computer (Atanasoff 1938)
- CPM/PERT (DuPont 1957, Navy 1958)
- Material requirements planning (Orlicky 1960)
- Computer aided design (CAD 1970)
- Flexible manufacturing system (FMS 1975)
- Baldrige Quality Awards (1980)
- Computer integrated manufacturing (1990)
- Globalization (1992)
- Internet (1995)

Frederick W. Taylor

- Born 1856; died 1915
- Known as ‘father of scientific management’
- In 1881, as chief engineer for Midvale Steel, studied how tasks were done
  - Began first motion and time studies
- Created efficiency principles

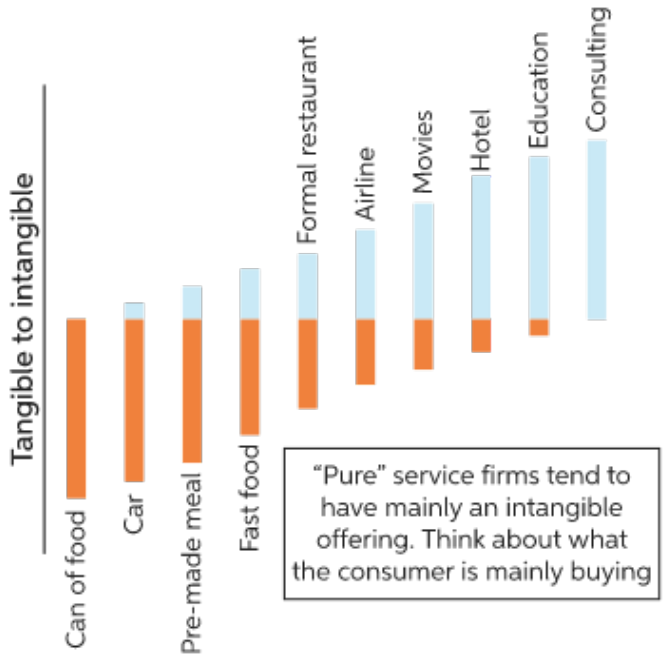
Taylor's Principles

Management Should Take More Responsibility for:

- Matching employees to right job
- Providing the proper training
- Providing proper work methods and tools
- Establishing legitimate incentives for work to be accomplished

Operations for Goods and Services

- Manufacturers produce tangible product, services often intangible
- Operations activities often very similar
- Distinction not always clear
- Few pure services



Differences Between Goods and Services

TABLE 1.3

CHARACTERISTICS OF SERVICES	CHARACTERISTICS OF GOODS
Intangible: Ride in an airline seat	Tangible: The seat itself
Produced and consumed simultaneously: Beauty salon produces a haircut that is consumed as it is produced	Product can usually be kept in inventory (beauty care products)
Unique: Your investments and medical care are unique	Similar products produced (iPods)
High customer interaction: Often what the customer is paying for (consulting, education)	Limited customer involvement in production
Inconsistent product definition: Auto Insurance changes with age and type of car	Product standardized (iPhone)
Often knowledge based: Legal, education, and medical services are hard to automate	Standard tangible product tends to make automation feasible
Services dispersed: Service may occur at retail store, local office, house call, or via internet.	Product typically produced at a fixed facility
Quality may be hard to evaluate: Consulting, education, and medical services	Many aspects of quality for tangible products are easy to evaluate (strength of a bolt)
Reselling is unusual: Musical concert or medical care	Product often has some residual value

Goal of ALL organizations should be

Productivity

What is productivity?

P = Output /Input
Ratio of production output/goods and services (dollar value or some physical measure) with the input measurement (labor man-hours, costs of raw material and others)

Important Note!
Production is a measure of output only and not a measure of efficiency
Production is NOT Productivity

Objective is to improve productivity
- **Efficiency and effectiveness**

Productivity Measurement

Units produced = 1000 units

Labor hours used = 250 hours

P = 1000/250 = 4 units per hour

How to increase Productivity?

Called Single factor Productivity

Productivity Measurement

If more than one resource or input such as material, energy usage, capital, etc.

Called Multifactor productivity or Total Factor Productivity (TFP)

P = Output / Labor + Material + Energy + Capital + Miscellaneous

Make sure same measurement units - example Dollar per dollar

Collins Title Productivity

Old System:

Staff of 4 works 8 hrs/day — 8 titles/day
Payroll cost = $640/day — Overhead = $400/day

New System:

14 titles/day — Overhead = $800/day

$$\text{Old multifactor productivity} = \frac{8 \text{ titles/day}}{\$640 + 400} = .0077 \text{ titles/dollar}$$

$$\text{New multifactor productivity} = \frac{14 \text{ titles/day}}{\$640 + 800}$$

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$$\text{New multifactor productivity} = \frac{14 \text{ titles/day}}{\$640 + 800} = .0097 \text{ titles/dollar}$$

Chapter 2

Operations Strategy in Global Environment

Learning objectives

At the end of this lesson, you should be able to:

1. **Define** mission and strategy
2. **Identify and explain** three strategic approaches to competitive advantage
3. **Explain** key success factors and core competencies used in strategy development
4. **Apply** factor rating method to evaluate both country and provider outsources
5. **Explain** four global operations strategy options

Outline

1. A Global View of Operations
2. Developing Missions and Strategies
3. Achieving Competitive Advantage Through Operations
4. Issues in Operations Strategy
5. Strategy Development and Implementation
6. Strategic Planning, Core Competencies, and Outsourcing
7. Global Operations Strategy Options

Global Operations and Supply Chain

Growth in world trade, global capital markets, and movement of people internationally = economic integration and interdependence results in **globalisation**

Global **competitiveness** - impacts quality, variety, customization, convenience, timeliness, costs = global strategies contribute to efficiency, **add value to goods and services**

Complexity, risks, competition intensified

Figure 2.1

Boeing Global Supply Chain strategy for Competitive Advantage

Some of the International Suppliers of Boeing 787 Components

SUPPLIER	HQ COUNTRY	COMPONENT
Latecoere	France	Passenger doors
Labinel	France	Wiring
Dassault	France	Design and product life cycle management software
Messier-Bugatti	France	Electric brakes
Thales	France	Electrical power conversion system
Messier-Dowty	France	Landing gear structure
Diehl	Germany	Interior lighting
Cobham	UK	Fuel pumps and valves
Rolls-Royce	UK	Engines
Smiths Aerospace	UK	Central computer system
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
Kawasaki Heavy Ind.	Japan	Forward fuselage, fixed sections of wing
Teijin Seiki	Japan	Hydraulic actuators
Mitsubishi Heavy Ind.	Japan	Wing box
Chengdu Aircraft	China	Rudder
Hafei Aviation	China	Parts
Korean Airlines	South Korea	Wingtips
Saab	Sweden	Cargo and access doors

Components from Boeing's worldwide supply chain come together on assembly lines in Everett, Washington, and Charleston, South Carolina. Although components come from throughout the world, about 35% of the 787 structure comes from Japanese companies.

Reasons for Globalisation

1. Improve the supply chain
2. Reduce costs (labor, taxes, tariffs, etc.)
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

- Foreign locations with lower wage rates can lower 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
  - 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

- Cultures can be quite different
- Attitudes can be quite different towards
  - Punctuality
  - Lunch breaks
  - Environment
  - Intellectual property
  - Thievery
  - Bribery
  - Child labor

Match Product & Parent

- Braun Household Appliances
- Firestone Tires
- Godiva Chocolate
- Haagen-Dazs Ice Cream
- Jaguar Autos
- MGM Movies
- Lamborghini Autos
- Alpo Petfoods

1. Volkswagen
2. Bridgestone
3. Campbell Soup
4. Tata Motors Limited
5. Proctor and Gamble
6. Nestlé
7. Pillsbury
8. Sony

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Match Product & Country

- Braun Household Appliances
- Firestone Tires
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1. Great Britain
2. Germany
3. Japan
4. United States
5. Switzerland
6. India

Match Product & Country

- Braun Household Appliances
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- Haagen-Dazs Ice Cream
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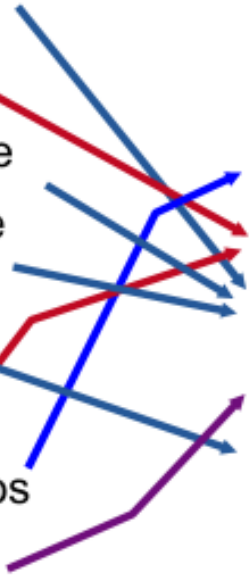


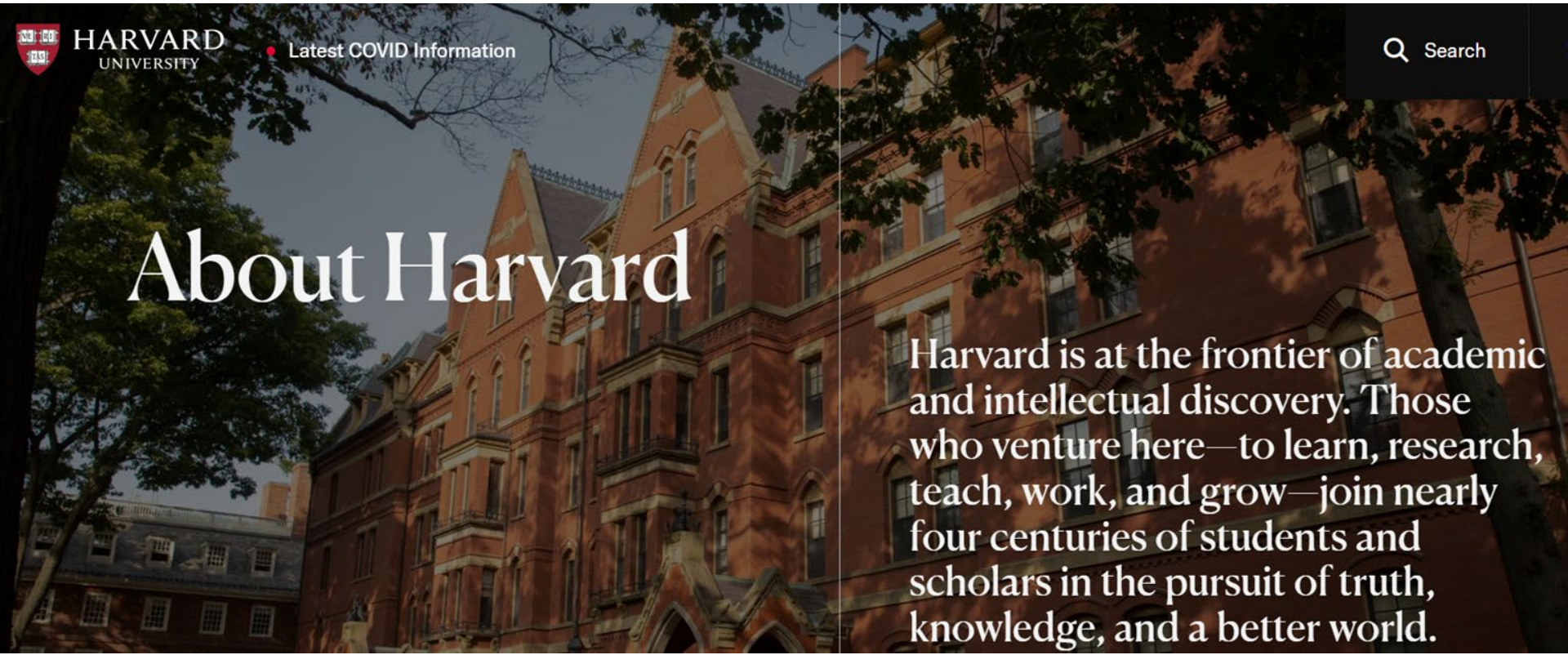
1. Great Britain
2. Germany
3. Japan
4. United States
5. Switzerland
6. India

Missions and Strategy

What is mission ?

Mission is where is the organization **purpose for existence**
Answers “What do we **contribute to society**?”
Focus and boundaries of our business activities

Companies develop MISSION STATEMENTS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HIGHER EDUCATION, HIGHER PURPOSE

As a research university and nonprofit institution, Harvard is focused on creating educational opportunities for people from many lived experiences.

明治大学
MEIJI UNIVERSITY

– Founding Spirit –

Rights and Liberty, Independence, and Self-Government

– Philosophy –

Individual Empowerment

– Mission –

To realize a free, peaceful, and prosperous society

through the development of knowledge and human resources

Make home the happiest place in the world.

Combining tangible and intangible products and services that contribute to contentment

Becoming a leading company in ESG management

Sekisui House Technology: Becoming the world's de facto standard

We aim to become a global company that integrates tangible and intangible products and services with a focus on housing.

Intel Shapes the Future of Technology

Our Purpose

We create world-changing technology that improves the life of every person on the planet.

We are inspired to:

- Drive innovation that makes the world safer, builds healthy and vibrant communities, and increases productivity.
- Harness our reach around the globe to better society, business, and the planet.
- Push ourselves and our industry peers to be more responsible, inclusive, and sustainable.

We have big ambitions, and a growing sense of urgency to work with others and address world challenges no one can tackle alone.

TOYOTA

Toyoda Principles: Five Main Principles of Founder Sakichi Toyoda

Sakichi Toyoda, Founder of Toyota

- Always be faithful to your duties, thereby contributing to the company and to the overall good.
- Always be studious and creative, striving to stay ahead of the times.
- Always be practical and avoid frivolousness.
- Always strive to build a homelike atmosphere at work that is warm and friendly.
- Always have respect for spiritual matters, and remember to be grateful at all times.

Vision

Creating Mobility for All

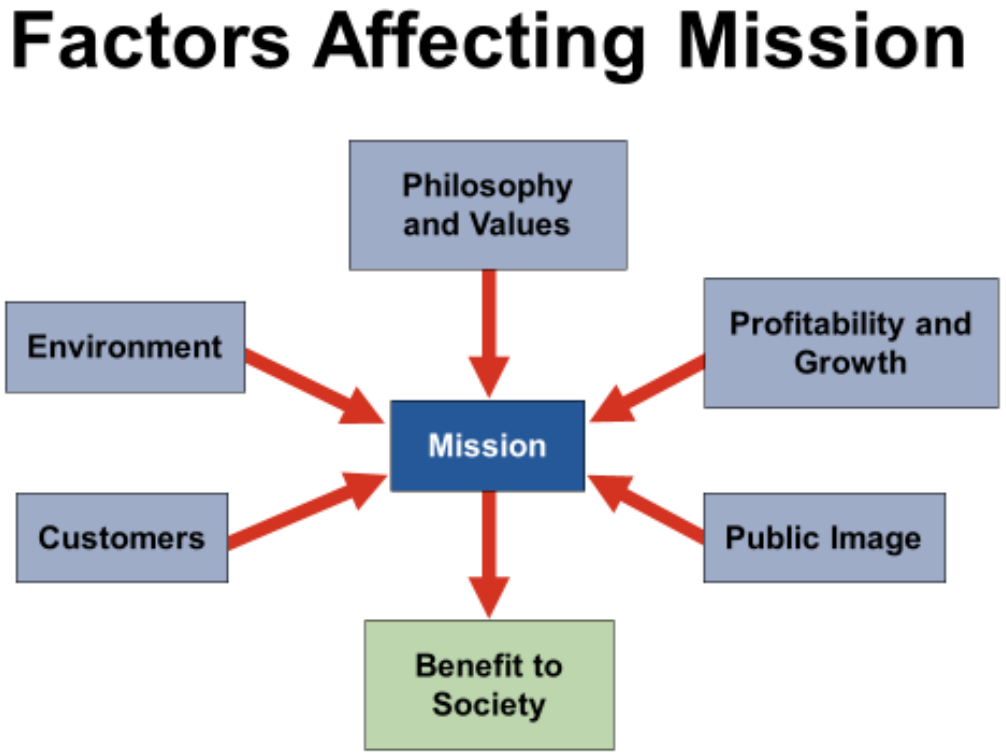
In a diverse and uncertain world,
Toyota strives to raise the quality
and availability of mobility. We wish
to create new possibilities for all humankind
and support a sustainable relationship
with our planet.

Mission

Producing Happiness for All

We make the happiness of others our first priority.
We make better products more affordable.
We value every second and every cent.
We give all our effort and offer all our ingenuity.
We look forward, not backward.
We believe the impossible is possible.

What factors will determine company's mission?



Strategy

What is strategy?

How are strategies developed?

What strategies can be used to achieve our mission?

Action plan to achieve mission
Functional areas have strategies.

Strategies exploit **opportunities** and **strengths**, neutralize **threats,** and avoid **weaknesses**

Competitive advantage - Firms compete based on 3 strategies

1.Differentiation - better or different = UNIQUENESS

2. Costs leadership - cheaper than competitor

3. Response - responsive, delivery time, On time or promised, efficient serives

Differentiation (Unique)

Product features - any examples

Experience difference - engage customers - service quality - any examples?

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

The World's First Tatami Starbucks! Kyoto Ninenzaka Yasaka Chaya

Competing on costs

Any examples?

Low cost leadership = achieving maximum value as defined by customers
Low cost or cheap does not mean low value or low quality

Competing on Response

How you define response?

Reliable and Quick
What is reliable? What is quick?

Flexible =Able to match market changes such as design innovations, or volume fluctuations

Reliability is meeting schedules

And dependable accurate services (information in website, etc)

Timeliness is quickness
in design, production,and delivery

Ability to respond, change, and adapt to new situations including Covid pandemic now

OM's Contribution to Strategy

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

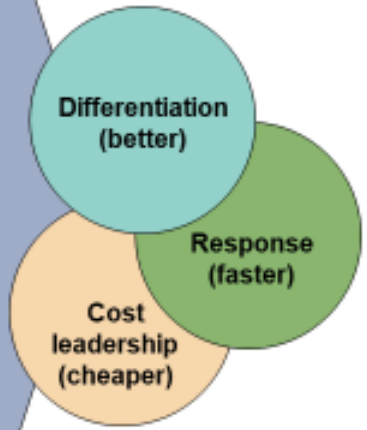


Figure 2.4

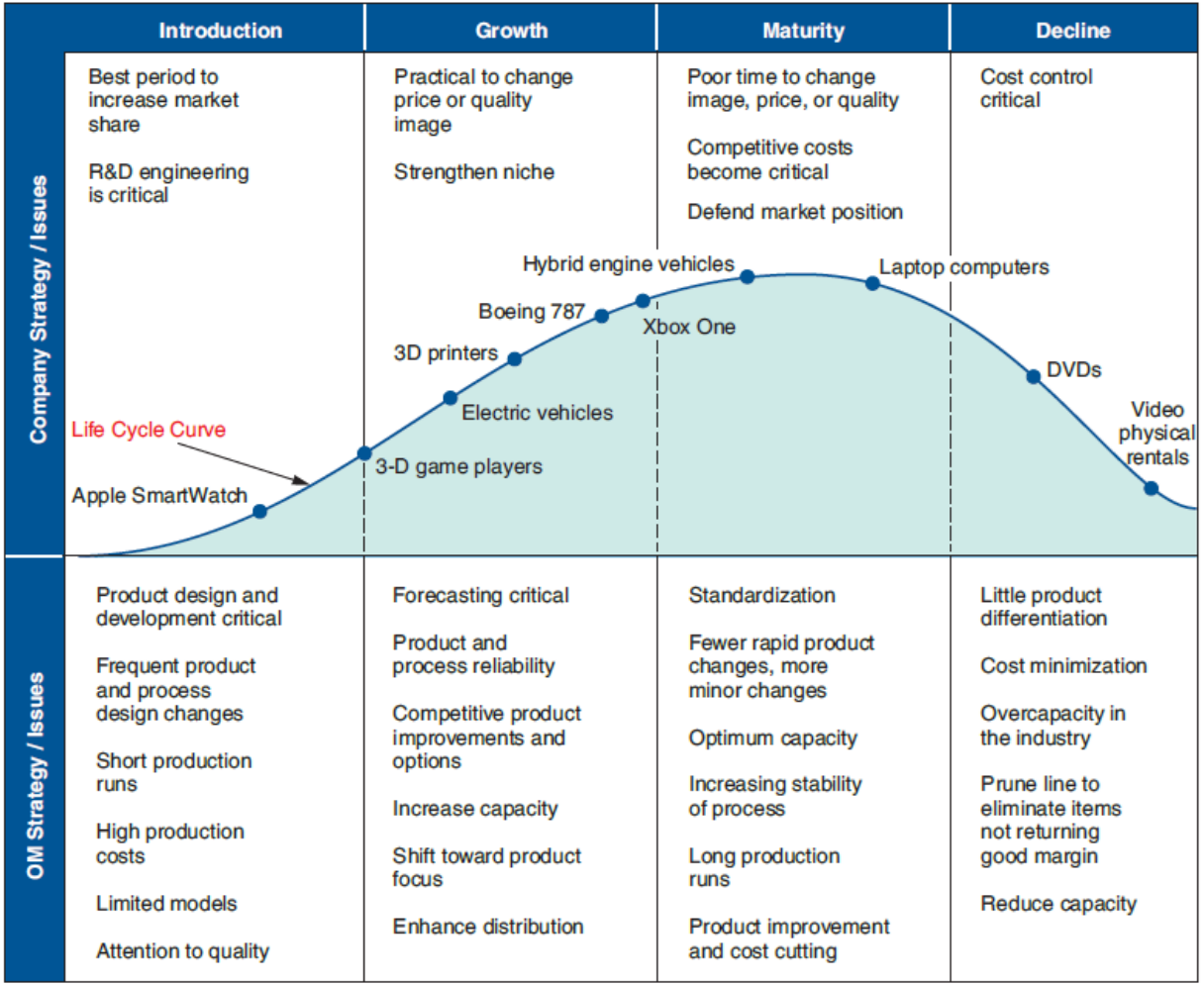


Figure 2.5

Strategies and Issues During Product Life Cycle

Strategy Development and Implementation

Strategy Development Process

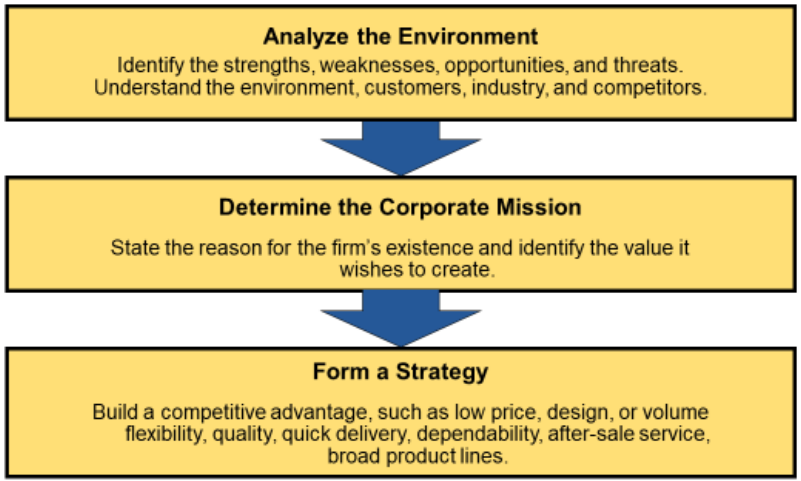
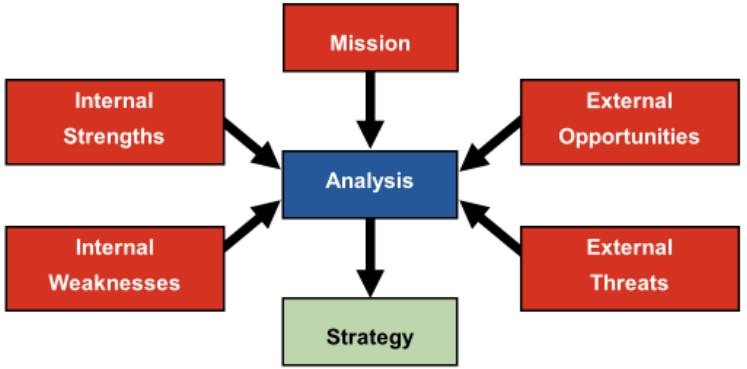


Figure 2.6

SWOT Analysis



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

Identify Key Success Factors and Core Competencies

KSFs = activities necessary to achieve mission - must get right - Delivery Process for FedEX

What are core competencies?

Set of skills, talents, and capabilities of the firm to win market

KSFs and Core Competencies

Honda's core competence is the design and manufacture of gas-powered engines. This competence has allowed Honda to become a leader in the design and manufacture of a wide range of gas-powered products. Tens of millions of these products are produced and shipped around the world.

Automobiles

Julie Lurch/Shutterstock

Generators

American Honda Motor Co., Inc.

Motorcycles

Courtesy of www.HondaNews.com

Water Pumps

American Honda Motor Co., Inc.

Marine Motors

American Honda Motor Co., Inc.

Race Cars

American Honda Motor Co., Inc.

4-Wheel Scooters

American Honda Motor Co., Inc.

Snow Blowers

American Honda Motor Co., Inc.

For car company ?? what are key activities must have to compete??

Develop strategies - example Southwest airlines

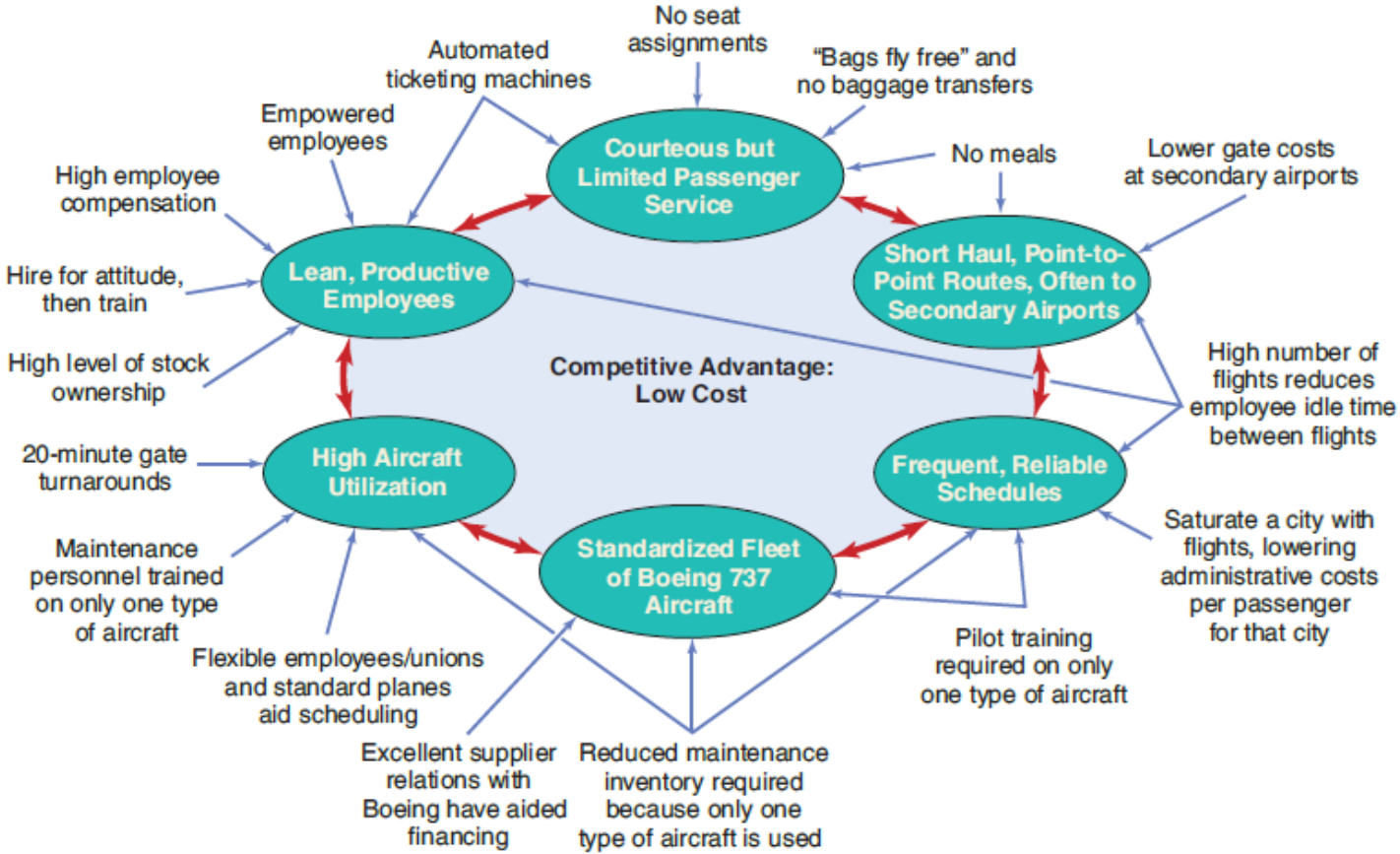


Figure 2.8

Activity Mapping of Southwest Airlines' Low-Cost Competitive Advantage

To achieve a low-cost competitive advantage, Southwest has identified a number of key success factors (connected by red arrows) and support activities (shown by blue arrows). As this figure indicates, Southwest's low-cost strategy is highly dependent on a very well-run operations function.

TABLE 2.1 Operations Strategies of Two Drug Companies*

COMPETITIVE ADVANTAGE	BRAND NAME DRUGS, INC.	GENERIC DRUG CORP.
	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
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 hired to 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

*Notice how the 10 decisions are altered to build two distinct strategies in the same industry.

Outsourcing as a strategy

What is outsourcing?

Which activities do you oursource?

Outsourcing - transferring activities to outside / external parties/suppliers/contractors

Non-core or low value adding activities

Combination of low cost and more specialization

Increased technological expertise

More reliable and cheaper transportation

Rapid development and deployment of advancements in telecommunications and computers

Keith Lanpher/Alamy

Contract manufacturers such as Flextronics provide outsourcing service to IBM, Cisco Systems, HP, Microsoft, Sony, Nortel, Ericsson, and Sun, among many others. Flextronics is a high-quality producer that has won over 450 awards, including the Malcolm Baldrige Award. One of the side benefits of outsourcing is that client firms such as IBM can actually improve their performance by using the competencies of an outstanding firm like Flextronics. But there are risks involved in outsourcing.

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	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 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
Totals	1.0	3.9	3.3	3.8

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

Global Operations Strategy Options

What is international business?

International business
A firm that engages in cross-border transactions.

Global strategy
A strategy in which operating decisions are centralized and headquarters coordinates the standardization and learning between facilities.

Multidomestic strategy
A strategy in which operating decisions are decentralized to each country to enhance local responsiveness.

Multinational corporation (MNC)
A firm that has extensive involvement in international business, owning or controlling facilities in more than one country.

International strategy
A strategy in which global markets are penetrated using exports and licenses.

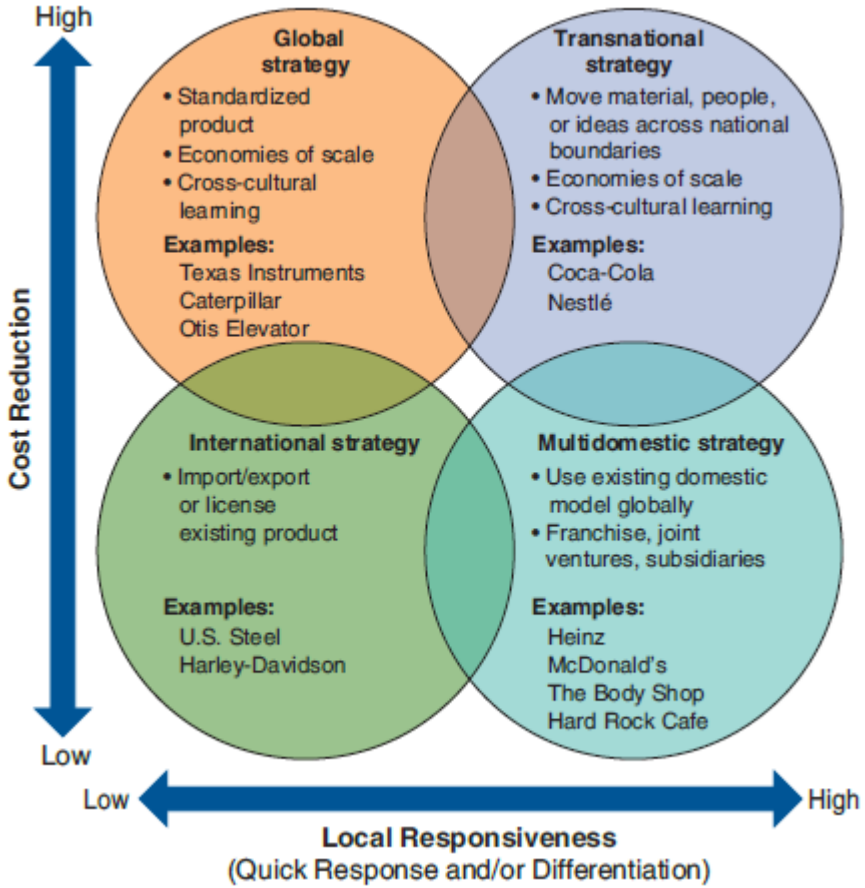


Figure 2.9

Four International Operations Strategies

Source: See a similar presentation in M. Hitt, R. D. Ireland, and R. E. Hoskisson, *Strategic Management: Concepts, Competitiveness, and Globalization*, 8th ed. (Cincinnati: Southwestern College Publishing).

Match the strategies with the proper companies/services below

OPERATIONS STRATEGY	COMPANY OR SERVICE
After sales service	3M
Customization	Domino Pizza
Fast and reliable delivery	Easy Jet, Ryanair
High quality	Eurodisney
Innovation	Fast Food Restaurant, Couriers
Location	Lexus, Five-Stars Hotels
Low cost	PCs
Product feature	Rolex
Rapid innovation	Supermarkets, Banks, ATMs
Responsiveness (short processing time)	Tailor
Service	Toyota