PRODUCTION / OPERATIONS MANAGEMENT

Review of Production and Operations Management 21 Sept 2022



What is Production Management?

What is Production / Operations?

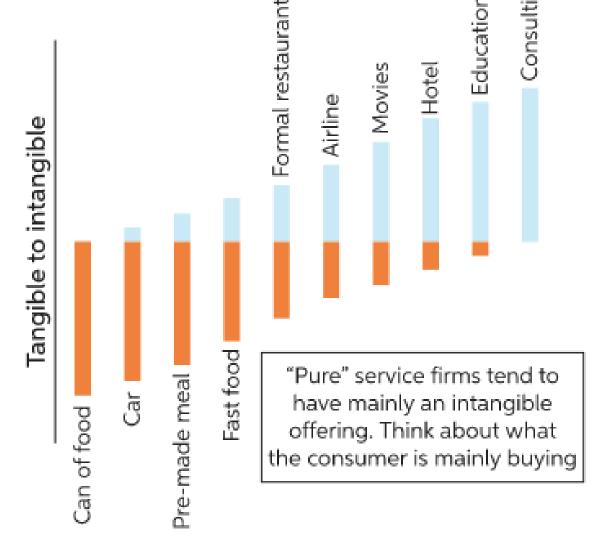
What is Management?

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

Production / Operations management (POM) 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.

Exhibit 1–3 Management Functions

Planning	Organizing	Leading	Controlling	>	Lead to
Defining goals, establishing strategy, and developing plans to coordinate activities	Determining what needs to be done, how it will be done, and who is to do it	Motivating, leading, and any other actions involved in dealing with people	Monitoring activities to ensure that they are accomplished as planned	org	hieving the ganization's stated purposes

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Why is Production Management important?

Why study Production Management?

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

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





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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: Innovative design	Safeskin's innovative gloves	
Quality	Broad product line After-sales service	Fidelity Security's mutual funds \ Caterpillar's heavy equipment service	
Process	Experience	Hard Rock Café's dining experience	
Location	COST LEADERSHIP: Low overhead	Franz-Colruyt's warehouse-type	Differentiation
Layout	Effective capacity use	stores Southwest Airline's aircraft utilization	(better)
Human resource	Inventory management	Walmart's sophisticated distribution system	Response (faster)
Supply chain	RESPONSE:		Cost leadership
Inventory	Flexibility	Hewlett-Packard's response to volatile world market	(cheaper)
Scheduling	Reliability Quickness	FedEx's "absolutely, positively, on time" Pizza Hut's 5-minute guarantee /	
Maintenance	Garcialo	at lunchtime	Figure 2.4

	Introduction	Growth	Maturity	Decline
Company Strategy / Issues	Best period to increase market share R&D engineering is critical Life Cycle Curve Apple SmartWatch	Practical to change price or quality image Strengthen niche Hybrid engine Boeing 787 3D printers Electric vehicles 3-D game players	Poor time to change image, price, or quality Competitive costs become critical Defend market position vehicles Laptop	Cost control critical computers DVDs Video physical rentals
OM Strategy / Issues	Product design and development critical Frequent product and process design changes Short production runs High production costs Limited models Attention to quality	Product and process reliability Competitive product improvements and options Increase capacity Shift toward product focus Enhance distribution	Standardization Fewer rapid product changes, more minor changes Optimum capacity Increasing stability of process Long production runs Product improvement and cost cutting	Little product differentiation Cost minimization Overcapacity in the industry Prune line to eliminate items not returning good margin Reduce capacity

Strategies and Issues During Product Life Cycle

Strategy Development and Implementation

Strategy Development Process

Analyze the Environment

Identify the strengths, weaknesses, opportunities, and threats.
Understand the environment, customers, industry, and competitors.

Determine the Corporate Mission

State the reason for the firm's existence and identify the value it wishes to create.

Form a Strategy

Build a competitive advantage, such as low price, design, or volume flexibility, quality, quick delivery, dependability, after-sale service, broad product lines.

SWOT Analysis

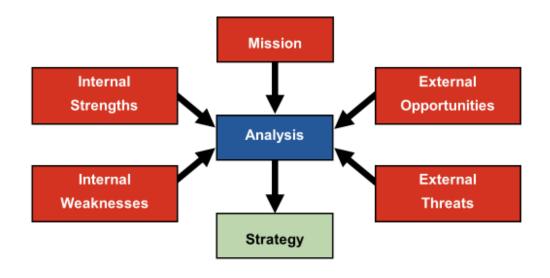


Figure 2.6

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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 gaspowered 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





Generators



Motorcycles

courtesy of www



Water Pumps



American Honda Motor Co., Inc.



American Honda Motor Co., Inc.

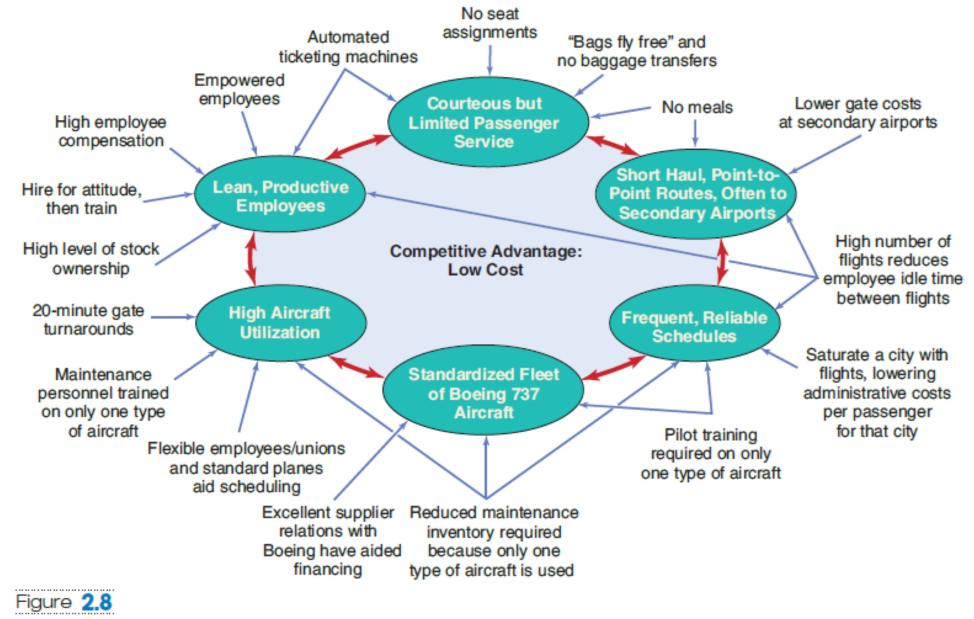


Snow Blowers



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

Develop strategies example Southwest airlines



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.

Implementing the Strategies

TABLE 2.1

Operations Strategies of Two Drug Companies*

COMPETITIVE	BRAND NAME DRUGS, INC.	GENERIC DRUG CORP.			
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	Meets regulatory requirements on a country-by-country			
	requirements Spring 2020	, as necessary			
Process	Product and modula Spring 2022	ess rocused, general production processes, Job			
	long product runs in ahead of demand semester	" approach, short-run production; focus on high ation			
Location	Still located in city where it was founded	Recently moved to low-tax, low-labor-cost environment			
Lavout	Lavout supports automated product-focused producti	ion Lavout supports process-focused "iob 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			

Fall 2022

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

Global Operations Strategy Options

What is international business?

International business

A firm that engages in crossborder 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).

