

Operations Management

Contemporary Concepts and Cases

Chapter Outline

- Why Study Operations Management?
- Definitions of Operations Management and Supply Chains
- Decisions at Pizza U.S.A.
- Operations Decisions - A Framework
- Cross-Functional Decision Making
- Operations as a Process
- Contemporary Operations Themes

Why Study Operations Management?

- Cross-functional nature of decisions
- Operations is a major function in every organization
- Principles of process thinking can be applied across the business
- Operations Management is an interesting and challenging field of study

Definition of Operations Management

*The operations **function** of an organization is responsible for producing and delivering goods or services of value to customers of the organization.*

*Operations managers make **decisions** to manage the transformation **process** that converts inputs into desired finished goods or services.*

Key Points in OM Definition

Decisions:

The operations manager must decide:

- Process, quality, capacity, inventory

Function:

Major functional areas in organizations:

- Operations, marketing, finance

Process: planning and controlling the transformation process and its interfaces

Major **Decisions** at Pizza USA

A Framework for OM

■ Process

- How to produce & deliver?

■ Quality

- Criteria, measurement & process for achieving?

■ Capacity

- Physical facilities & labor?

■ Inventory

- What, when & how much?

Definition of Supply Chain

- Network of manufacturing and service operations that supply one another
- From raw materials through manufacturing to the end consumer
- Flows of materials, money, and information
- Links operations **across** organizations

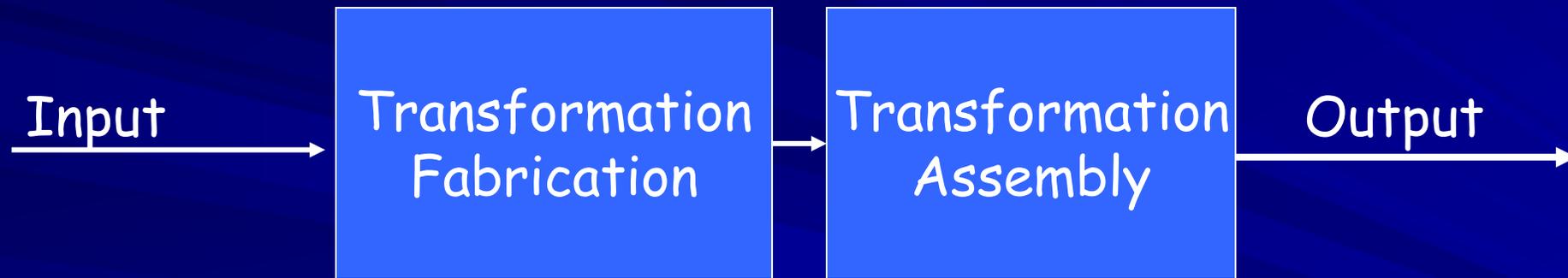
Cross-Functional Decision Making

- Operations as the primary **function**.
- Other primary functions:
 - Marketing
 - Finance
- Supporting functions: all others
- Major cross-functional decision making relationships (See Table 1.2)

Operations as a Process



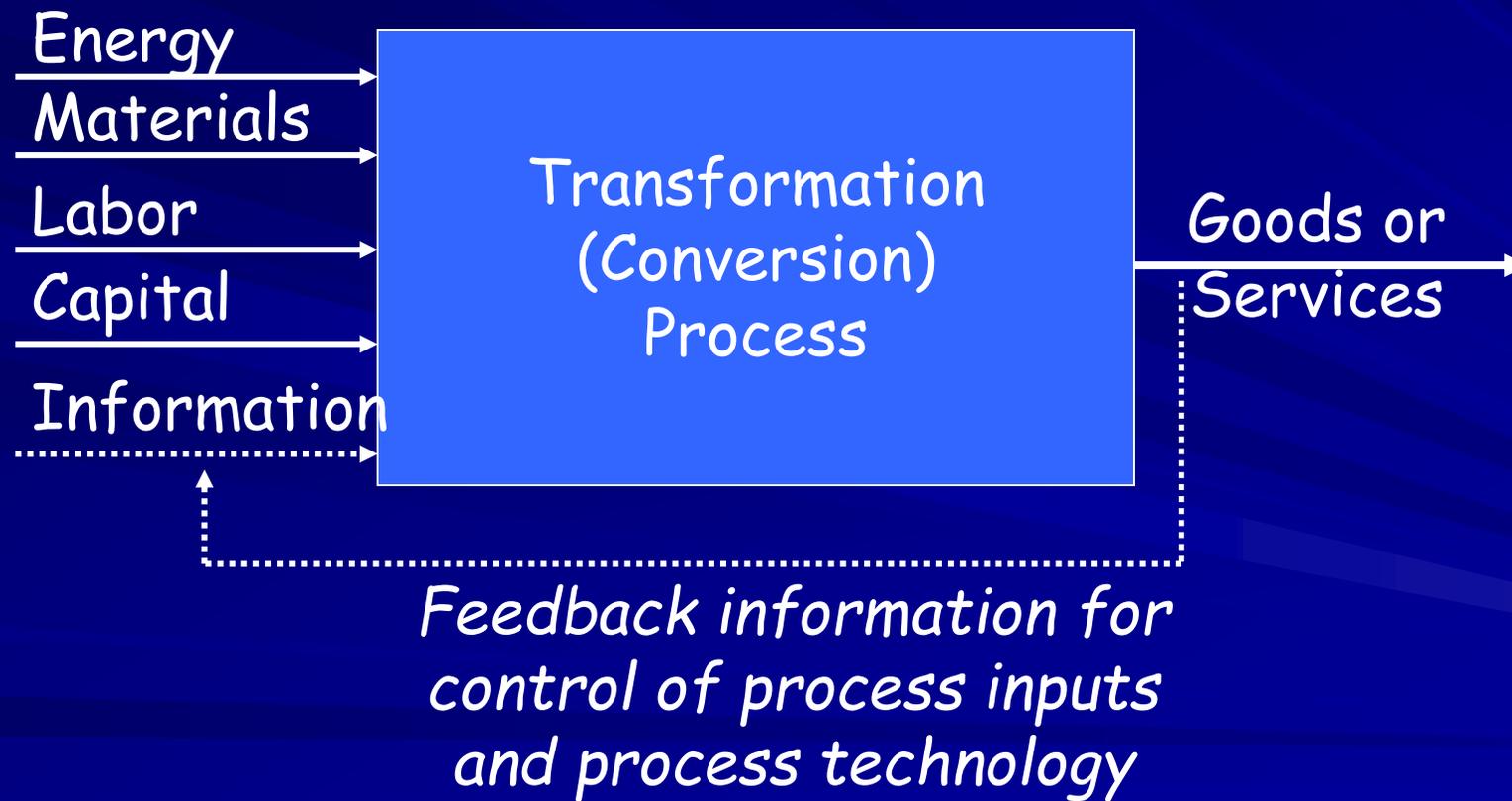
Operations as a Process



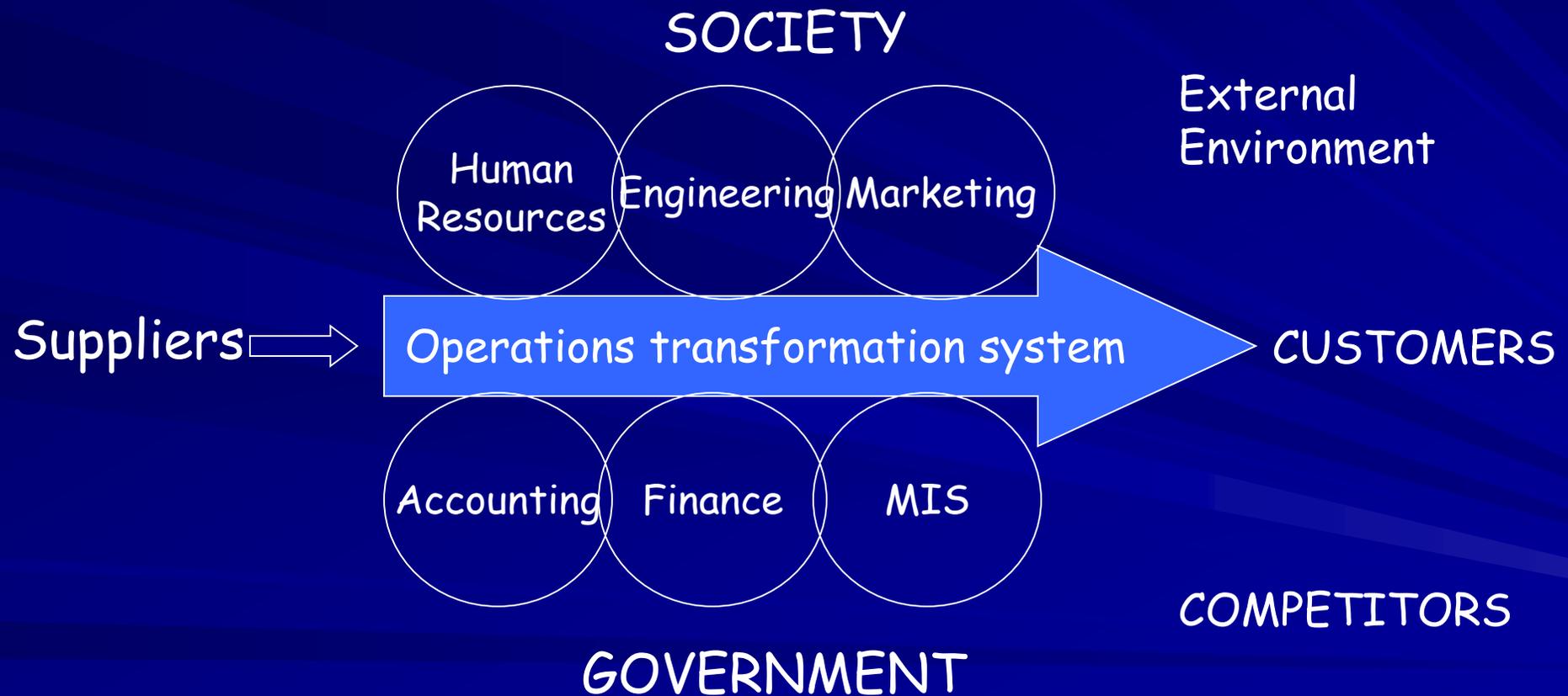
Fabrication: making the parts

Assembly: putting the parts together

Operations as a Process (Figure 1.1)



Relation of Operations to its Environment (Figure 1.2)



Contemporary Operations Themes

- Service and Manufacturing (differences and implications)
- Customer-Directed Operations
- Lean Operations
- Integration of Operations with other Functions
- Environmental Concerns and Sustainability
- Supply Chain Management
- Globalization of Operations

Operations Strategy

Operations Strategy

“Operations strategy is a consistent pattern of business decisions for the transformation system and associated supply chain that are linked to the business strategy and other functional strategies, leading to a competitive advantage for the firm.”

McDonald's Operations Strategy

- Mission: fast, quality, low cost
- Objectives: process, quality, capacity, inventory
- Strategic decisions: process, quality, capacity, inventory
- Distinctive competence: continuous improvement of the transformation process

Global Scope of Operations and Supply Chains

- “Traditional” versus “Global” company, *i.e.*, companies operating in one country vs. those operating in many.
- Characteristics of the “*Global Corporation*” are different from the traditional company.
- Operations must have a global distinctive competence.

Characteristics of “*Global Corporations*”

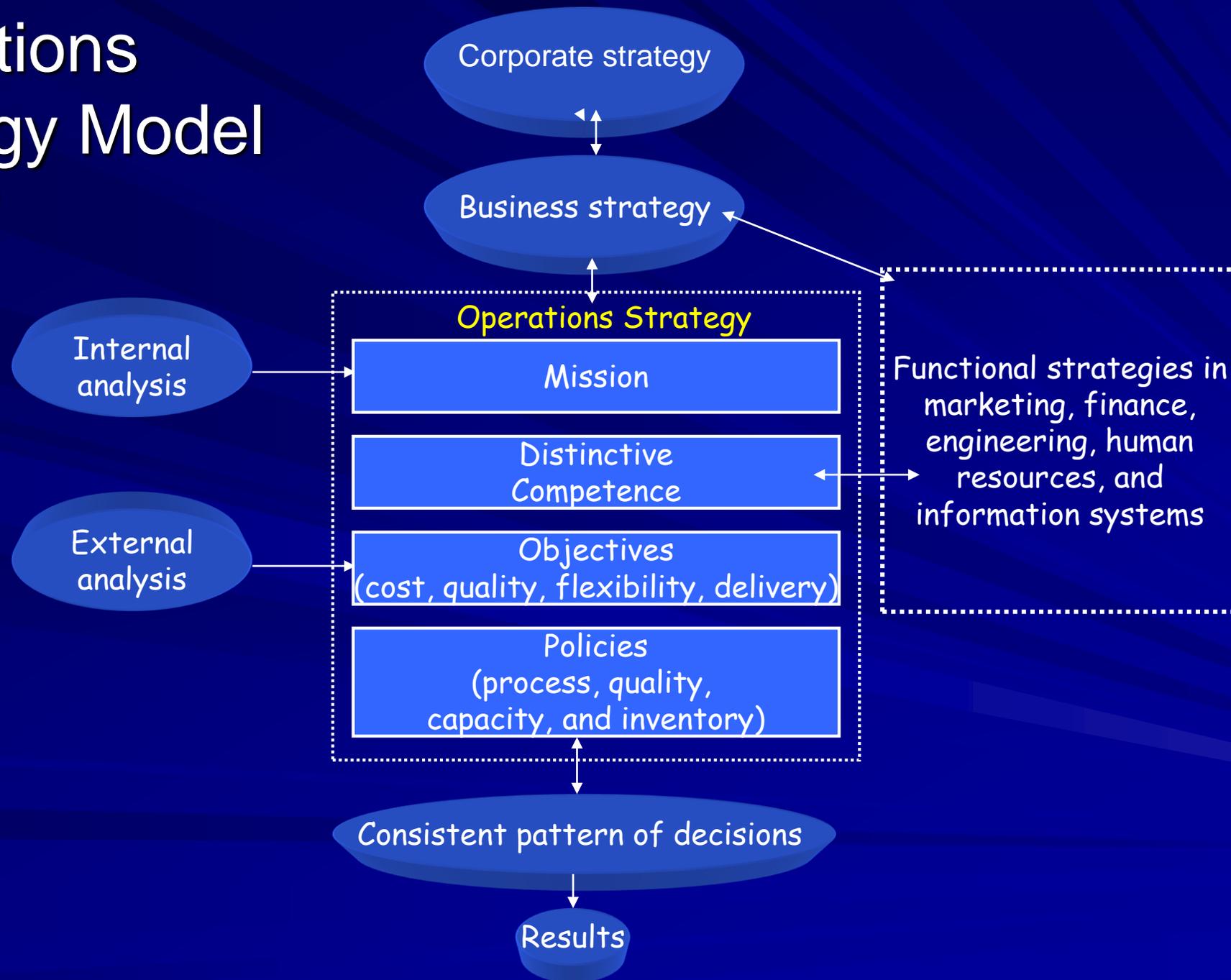
- Facilities & plants located worldwide, not country by country.
- Products & services can be shifted among countries.
- Sourcing is on a global basis.
- Supply chain is global in nature.
- Product design & process technology are global.
- Products fit global tastes.
- Demand is considered on worldwide basis.
- Logistics & inventory control is on worldwide basis.
- Divisions have world-wide responsibility.

Supply Chain Strategy

- Should aim at achieving a competitive advantage for the entire supply chain.
- Two type of supply chain strategies:
 - Imitative products (*e.g.* commodities)
 - Predictable demand
 - Efficient, low-cost supply chain
 - Innovative products (*e.g.* new technologies)
 - Unpredictable demand
 - Flexible, fast supply chain
- Firms must choose the right supply chain for each product or group of products and not use “one size fits all” strategy.

Operations Strategy Model

(Figure 2.1)



Distinctive Competence

- *"Something an organization does better than any competing organization that adds value for the customer."*
- *"Something that operations does better than anyone else."*

Operations Strategic Objectives

- Cost
- Quality
- Delivery
 - Time
 - Reliability
- Flexibility
 - Schedule
 - Product change

How does a firm use them to gain a competitive advantage, and how do they trade-off?

Examples of Important Strategic Decisions in Operations

(Table 2.3)

<i>Strategic Decision</i>	<i>Decision Type</i>	<i>Strategic Choice</i>
Process	Span of process	Make or buy
	Automation	Handmade or machine-made; flexible or hard automation
	Process flow	Project, batch, line or continuous
	Job specialization	High or low specialization
Quality Systems	Supervision	Centralized or empowered workers
	Approach	Prevention or inspection
	Training	Technical or managerial training
	Suppliers	Selected on quality or cost
Capacity	Facility size	One large or several small facilities
	Location	Near markets, low cost or foreign
	Investment	Permanent or temporary
Inventory	Amount	High or low levels of inventory
	Distribution	Centralized or decentralized warehouse
	Control Systems	Control in great detail or less detail

Linking Operations to Business Strategies

■ Business strategy alternatives

- Product imitator

 - Operations must focus on keeping costs low.

- Product innovator

 - Operations must maintain flexibility in processes, labor and suppliers.

■ Order qualifiers and winners

- Qualifiers: why you consider the product/service

- Winners: why you choose the product/service

Linking Operations to Business Strategies

■ Business strategy alternatives

– Product imitator

- Order winner = price (keep cost low)
- Order qualifiers = flexibility, quality, delivery

– Product innovator

- Order winner = flexibility (rapid introduction of new products)
- Order qualifiers = cost, delivery, quality

Environment & Sustainable Operations

Sustainability: minimizing or eliminating the environmental impact of operations.

The 'greening' of operations.

- Product development
- Sourcing
- Manufacturing
- Packaging
- Distribution
- Transportation
- Services
- End-of-life management (e.g. recycling)

Summary

- McDonald's Operations Strategy
- Global Scope of Operations and Supply Chains
- Supply Chain Strategy
- Operations Strategy Model
- Emphasis on Operations Objectives
- Linking Strategies
- Environmental and Sustainable Operations