

# A Framework for Operations Strategy

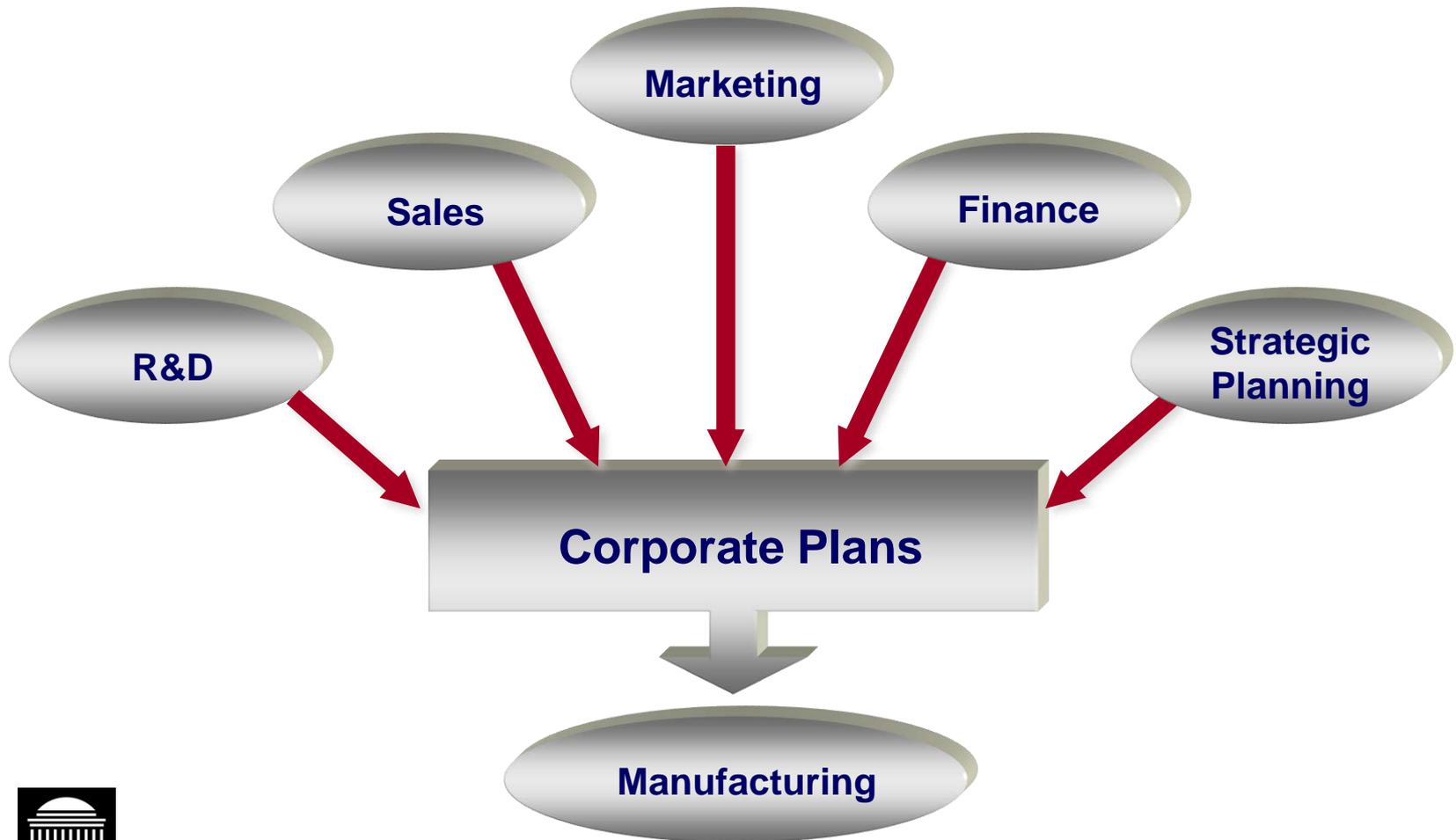
How operations can be used for competitive advantage in today's world



# Problem One: Conflicts

- **More capacity**
- **Variety**
- **Cost**
- **Meeting targets**
- **Better forecasts**
- **Economical operations**
- **Other strategic criteria**
- **Maintaining quality**

# Problem Two: Role in Strategy



# We first address some business strategy issues

- **Which businesses should we be in?**
- **How do we compete and compare with our competitors in each one?**
- **What dimensions of customer performance do we focus on**
- **To answer these questions, we first look at alternative views of how individual businesses compete**

# Competitive Strategy: The Positioning View

## Sources of Barriers to Entry

- Economies of scale
- Product differentiation and brand loyalty
- Capital requirements
- Switching costs
- Access to distribution channels
- Cost disadvantages independent of scale
- Proprietary product technology
- Favorable access to raw materials
- Favorable locations
- Government subsidies
- Learning or experience curve
- Government policy



threat



bargaining power



## Buyers Have Power When:

- Buyers are concentrated or purchase large volumes relative to industry sales
- Purchases represent a significant fraction of their costs
- Products purchased are standard or undifferentiated
- Buyers face few switching costs
- Buyers earn low profits
- Buyers can backward integrate
- Products purchased are unimportant to quality of buyers' products
- Buyer has full information



bargaining power



## Suppliers Have Power When:

- Fewer suppliers than those supplied
- No substitute products
- Industry is not an important customer
- Suppliers' input is important to industry
- Supplier products are differentiated or switching costs are high
- Suppliers may forward integrate

## Sources of Intense Rivalry

- Numerous or equally balanced competitors
- Slow industry growth
- High fixed or storage costs
- Capacity augmented in large increments
- Diverse competitors
- High strategic stakes
- High exit barriers

threat

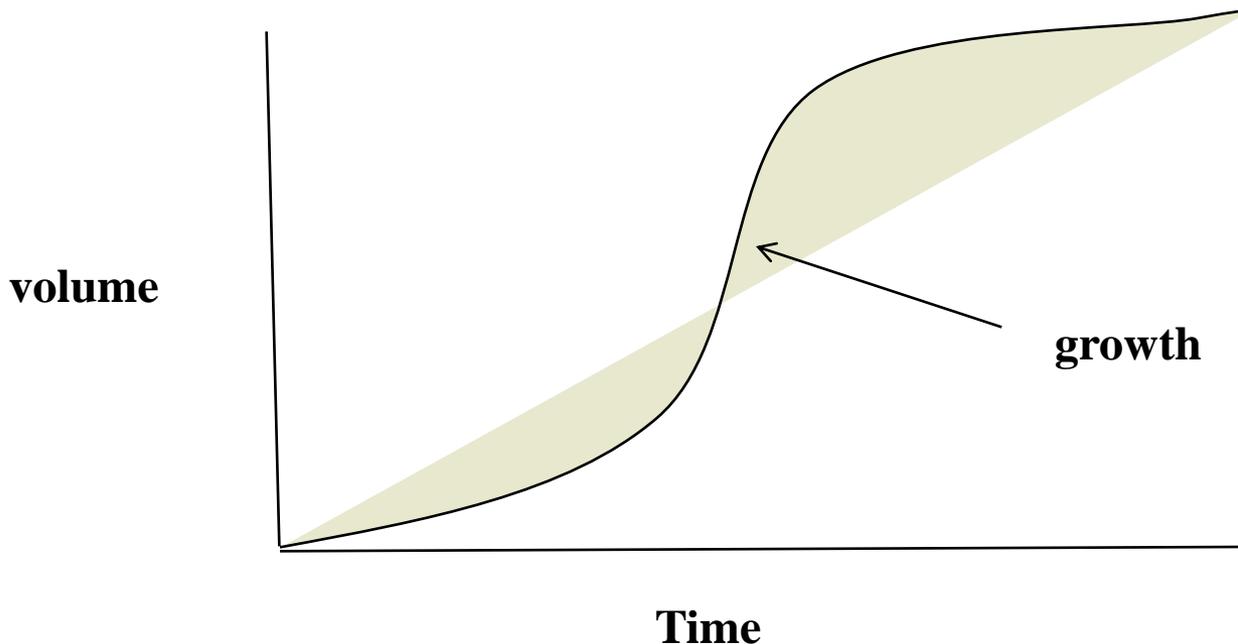


## Substitutes May Become a Threat When:

- Good price performance
- Low switching costs
- Industry is willing to substitute

# Competitive Strategy: The Positioning View

- Positioning is based on the external market, industry dynamics, and the structure of the value chain



# Competitive Strategy: The Positioning View

- **Options for firm positioning:**
  - Cost leadership
  - Differentiation
- **And, by focusing on segments**
  - Distinct customer groups
  - Groups with similar needs
- **BUT, assumes operations excellence is not a source of competitive advantage**

# Competitive Strategy: The Resource-Based View

- **Competitive advantage is derived from the firm's development of unique bundles of resources and capabilities that are:**
  - Inimitable: are difficult or costly to imitate or replicate
  - Valuable: allow the firm to improve its market position relative to competitors
  - Rare: in relatively short supply

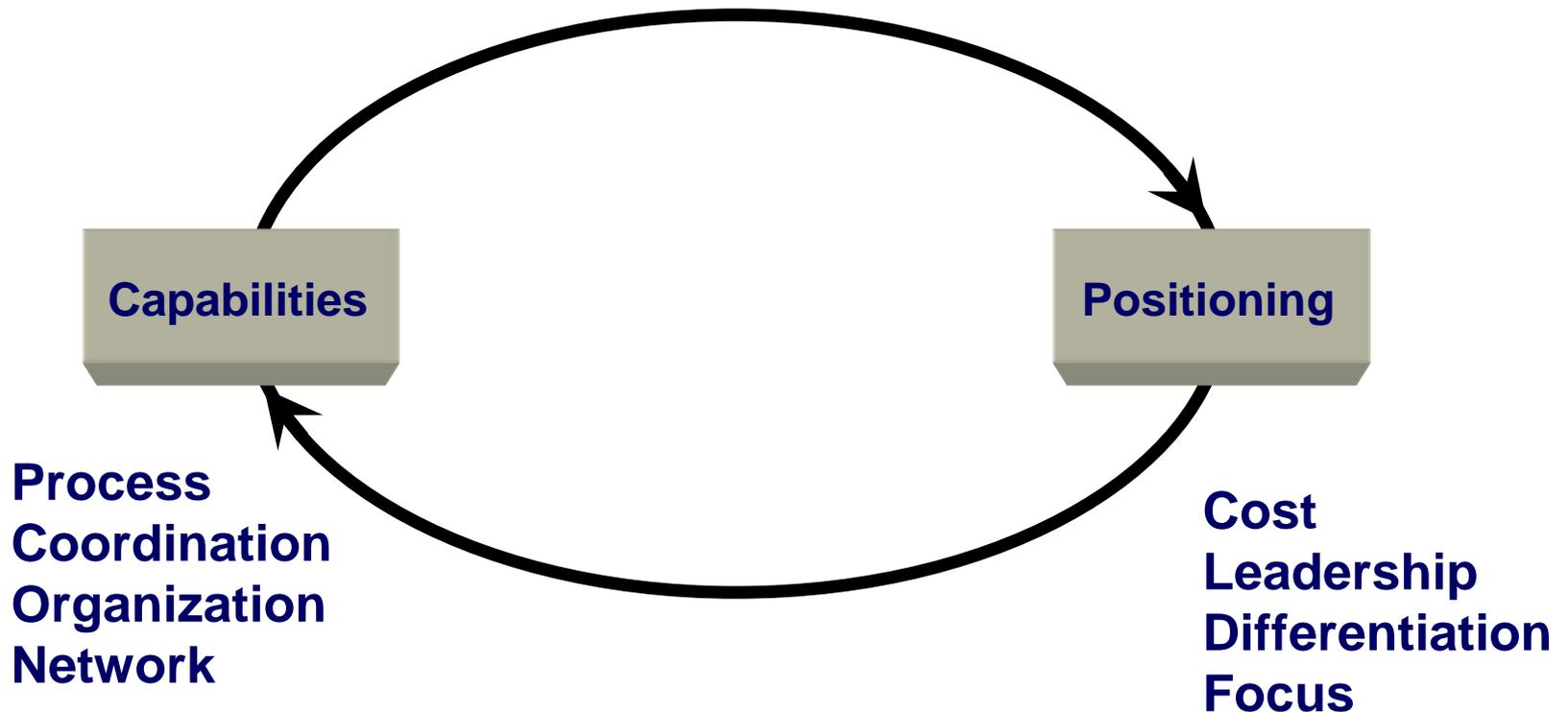
# Competitive Strategy: The Resource-Based View

- **Resource: an observable, but not necessarily tangible, asset that can be valued and traded**
  - e.g., brand, patent, parcel of land, license
  - Asset or input to production than an organization owns, controls or has access to on a semi-permanent basis
- **Capability: not observable, and hence necessarily intangible, cannot be valued and changes hands only as part of an entire unit**
  - Processes, activities or functions performed within a system
  - Utilize the organization's resources
  - Example: How a company innovates

# Competitive Strategy: The Resource-Based View

- **Types of capabilities**
  - Process-based
    - e.g., McDonald's
  - Systems- or coordination-based
    - e.g., Ritz-Carlton
    - e.g., Southwest Airlines
  - Organization-based
    - e.g., Toyota
  - Network-based
    - e.g., Dell and the fulfillment supply chain
    - e.g., Cisco and the technology suppliers

# Competitive Strategy: Integrating the Positioning and Resource-Based Views



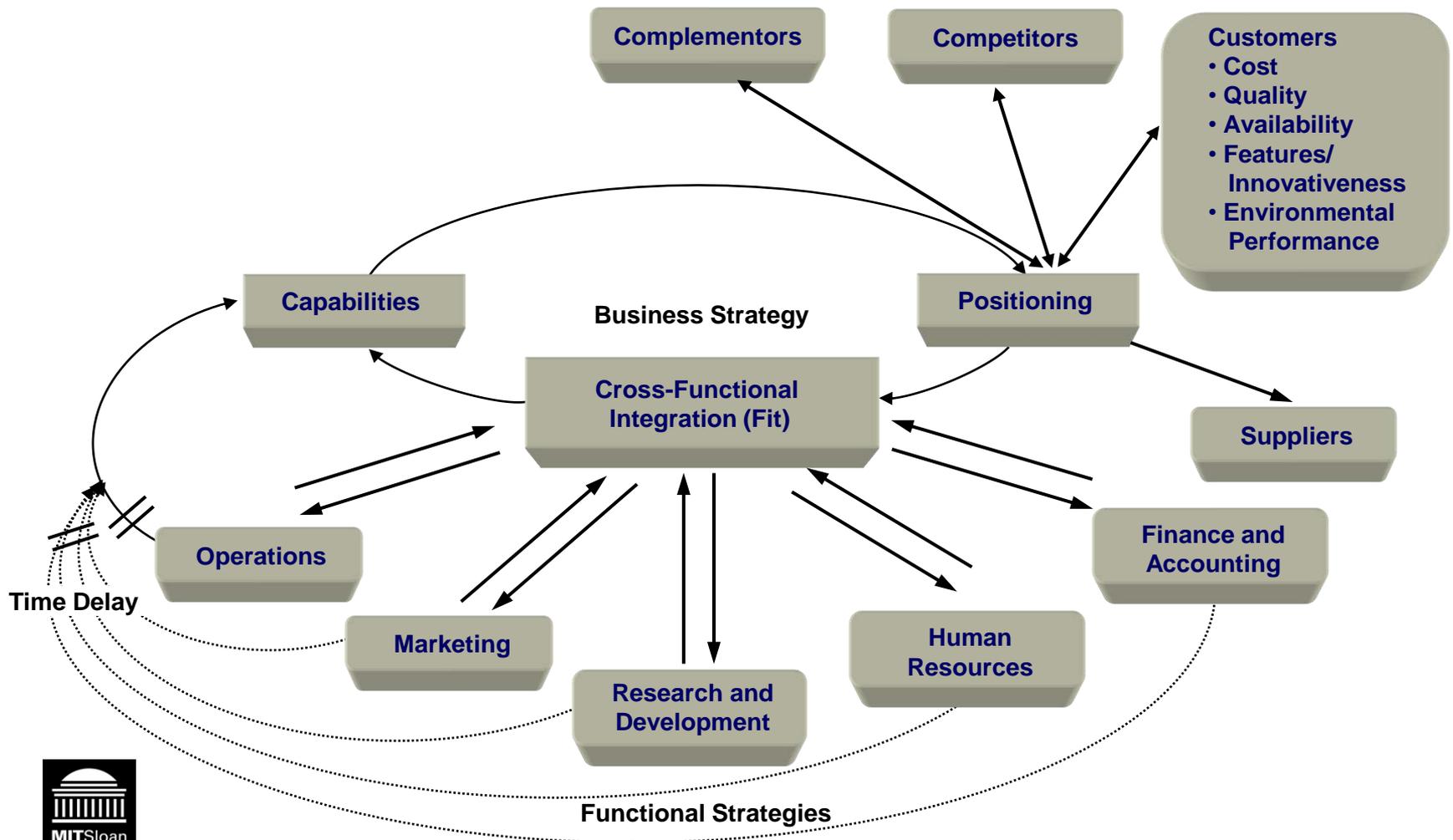
# The process must then involve three levels:

- Corporate
- Business Unit
- Function

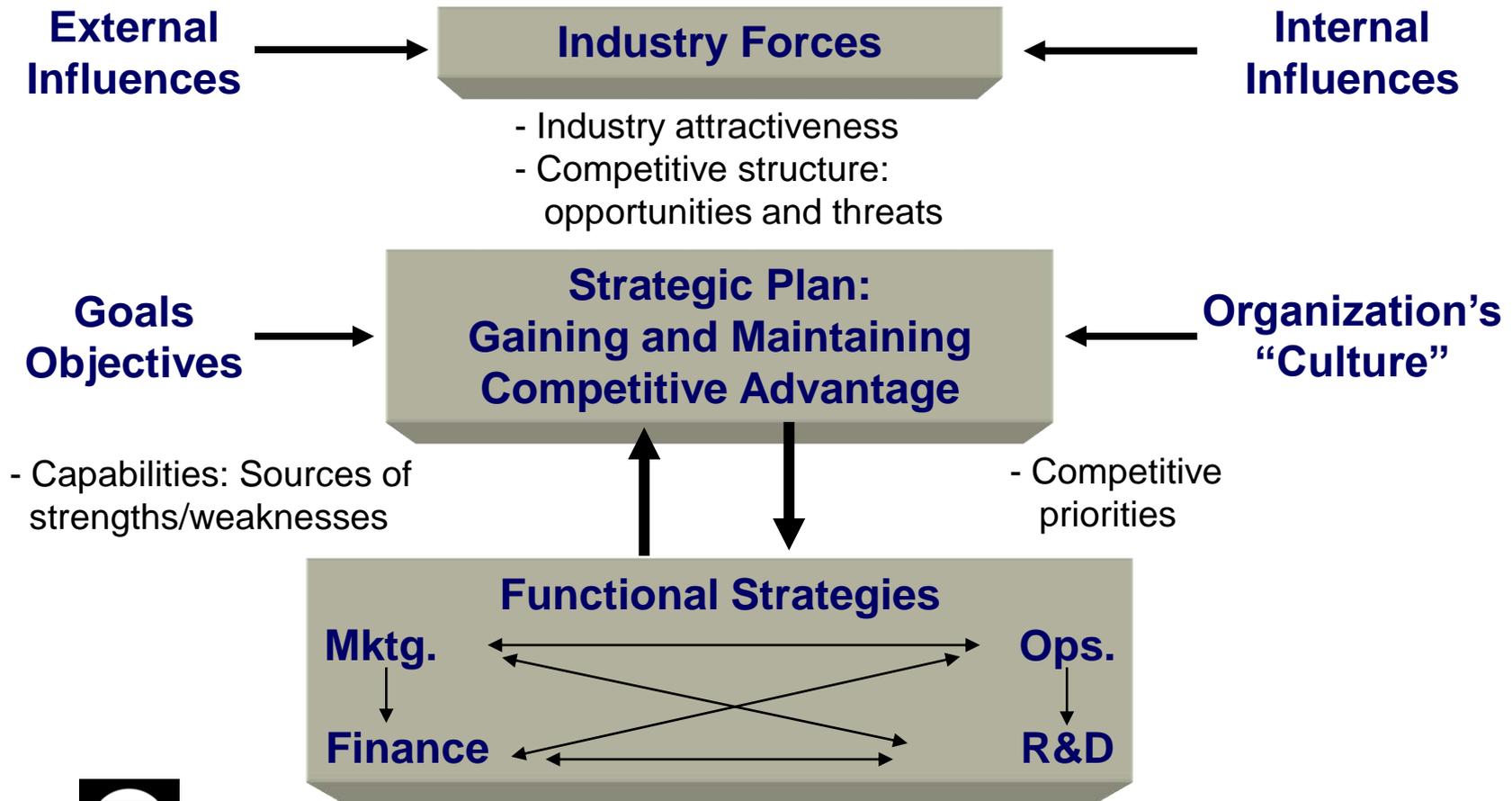
# ...as well as customer goals

- **Cost**
- **Quality**
- **Availability**
- **Features/Innovativeness**
- **Environmental Performance**

# ...yielding an integrated framework



# The essence is internal/external and functional fit



But there is a fourth level!

# Fourth level: Decision Category Approach

- **The decision category approach examines manufacturing decision categories for consistency with strategic vision**
  - Structural decisions
    - Bricks and mortar
    - Machinery
  - Infrastructure
    - People
    - Systems
    - Procedures
  - Fit with business, corporation, and other functions

# Companies vary considerably on this ideal approach

- **Use of both capabilities and positioning**
- **Formality of process**
- **Type of formal method**
- **Input of operations**
- **Focus on all decision categories**

# Major Manufacturing Decision Categories

## 1. FACILITIES

- size
- location
- focus

## 2. CAPACITY

- amount
- timing
- type

## 3. VERTICAL INTEGRATION AND SUPPLIER MANAGEMENT (The technology supply chain)

- direction
- extent
- interfaces
- collaboration

## 4. PRODUCTION TECHNOLOGIES AND PROCESSES

- equipment
- automation
- interconnectedness
- scale
- flexibility

## 5. WORK FORCE AND MANAGEMENT

- RFI?
- Policies (wages, security, etc.)
- skill levels

## 6. INFORMATION TECHNOLOGIES

- use and level of investment
- parity or differentiation

## 7. SUPPLY CHAIN AND MATERIALS (The fulfillment supply chain)

- logistics facilities and methods
- inventory policies
- vendor relations
- production planning

## 8. ORGANIZATION AND INCENTIVES

- structure
- reporting levels
- degree of centralization
- role of staff
- control/reward systems
- costing systems

## 9. BUSINESS PROCESSES

- product generation
  - interfaces
  - responsibilities
  - vendor development
- order fulfillment
- service and support
- quality and CI, flexibility, and other cross-cutting capabilities



# IT decisions

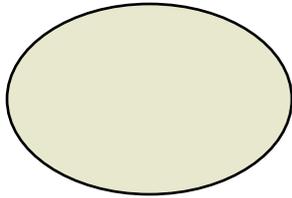
- **How much to invest**
- **Where to focus investment**
- **Standardized or customized applications**
- **Should IT be standardized within the company**
  - Standardization allows common learning and implementation advantages
  - But there is less flexibility for local needs
- **Organization, implementation and measurement**
- **Parity or competitive advantage**

# Measures of Performance

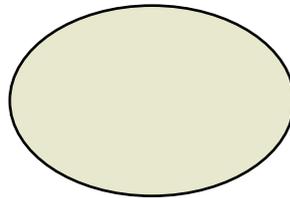
The strategic mission matches the organization's strengths to a limited set of external measures of performance

- **Operations Costs**
  - Unit costs
  - Total (volume) costs
  - Lifetime costs
- **Availability**
  - Percentage of on-time shipments
  - Response to results for info or changes
  - Product and volume flexibility
  - Delivery time
- **Quality**
  - Return rate
  - Product reliability and durability
  - Cost and rate of field repairs
- **Innovativeness and Features**
  - Product innovativeness
  - Time to market and development cycle
- **Environmental Performance**
  - Ease of disassembly and recycling
  - Use of resources

# Decision Categories map to 3D concurrent engineering

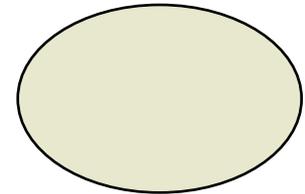


## Product



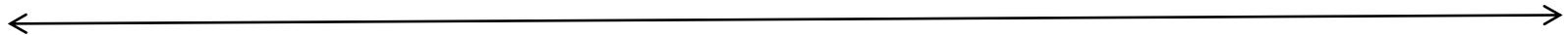
## Process

Process technology  
Capacity  
Facilities  
IT  
Business Processes- PG



## Supply Chain

Fulfillment SC  
Materials mgmt  
Supplier mgmt  
Vertical integration



**Infrastructure** – HR, organization, IT infrastructure, other business processes

**Identify the right measures!**

# The Classic Strategies

Strategy	Technology	Infrastructure	Marketing & Sales
<ul style="list-style-type: none"> <li>• Low unit cost</li> </ul>	<ul style="list-style-type: none"> <li>• Specialized equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Materials planning and control</li> </ul>	<ul style="list-style-type: none"> <li>• Narrow line</li> <li>• Price</li> </ul>
<ul style="list-style-type: none"> <li>• High service level</li> </ul>	<ul style="list-style-type: none"> <li>• Reserve capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Inventory</li> </ul>	<ul style="list-style-type: none"> <li>• Dependability</li> </ul>
<ul style="list-style-type: none"> <li>• Wide line custom products</li> </ul>	<ul style="list-style-type: none"> <li>• Flexible machines</li> <li>• Reserve capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Worker skills</li> </ul>	<ul style="list-style-type: none"> <li>• Customer needs and scheduling</li> </ul>
<ul style="list-style-type: none"> <li>• Product innovation</li> </ul>	<ul style="list-style-type: none"> <li>• General purpose</li> </ul>	<ul style="list-style-type: none"> <li>• Development</li> <li>• Team skills</li> </ul>	<ul style="list-style-type: none"> <li>• Market leadership</li> <li>• New segments</li> </ul>

# Present Operations Policies

Operations Unit \_\_\_\_\_

Decision Category	Description of Past Policy	Strengths	Weaknesses
Production technologies & processes			
Capacity			
Workforce & management			



# Summary of decision category framework

- **Understanding of external (value chain, dynamics, competitors, etc.) and internal (capabilities)**
- **Consistency at four levels (corporation, business, function, and decision category)**
- **Strategy is pattern of decisions within the nine categories**
- **Strategy is the identification of the competitive priorities from the five means of competition**

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