

# Competitiveness, Strategy, and Productivity

## Industrial Management IPE 4102



# Learning Objectives



Ways of competitiveness



Comparison and linkage  
between organization and  
operational strategy

Failure reasons of  
organization



Time-based strategie



Definition and  
importance of mission



Definition and  
importance of

# Competitiveness



How effectively an organization meets the wants and needs of customers relative to others that offer similar goods or services

Organizations compete through some combination of their marketing and operations functions

- What do customers want?
- How can these customer needs best be satisfied?

# Why Some Organizations Fail

1. Neglecting operations strategy
2. Failing to take advantage of strengths and opportunities and/or failing to recognize competitive threats
3. Too much emphasis on short-term financial performance at the expense of R&D
4. Too much emphasis in product and service design and not enough on process design and improvement
5. Neglecting investments in capital and human resources
6. Failing to establish good internal communications and cooperation
7. Failing to consider customer wants and needs



# Mission, Goals, and Strategy



- **Mission**

- The reason for an organization's existence
- It answers the question “What business are we in?”

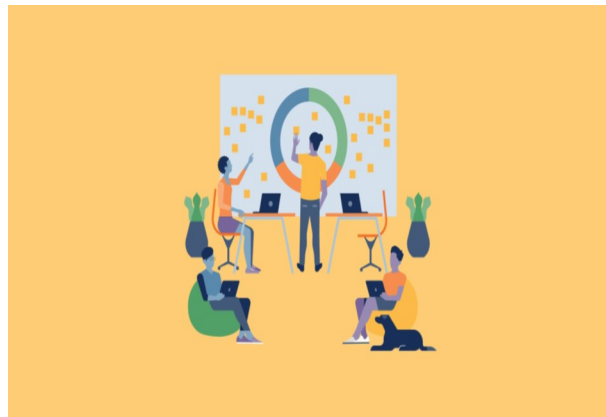
- **Goals**

- Provide detail and the scope of the mission
- Goals can be viewed as organizational destinations



- **Strategy**

- A plan for achieving organizational goals
- Serves as a roadmap for reaching the organizational destinations
- The organizational strategy guides the organization by providing direction for, and alignment of, the goals and strategies of the functional units
- The organizational strategy is a major success/failure factor
  - Low cost, responsiveness and differentiation from competitors are the basic strategies.



# Examples of Mission statements



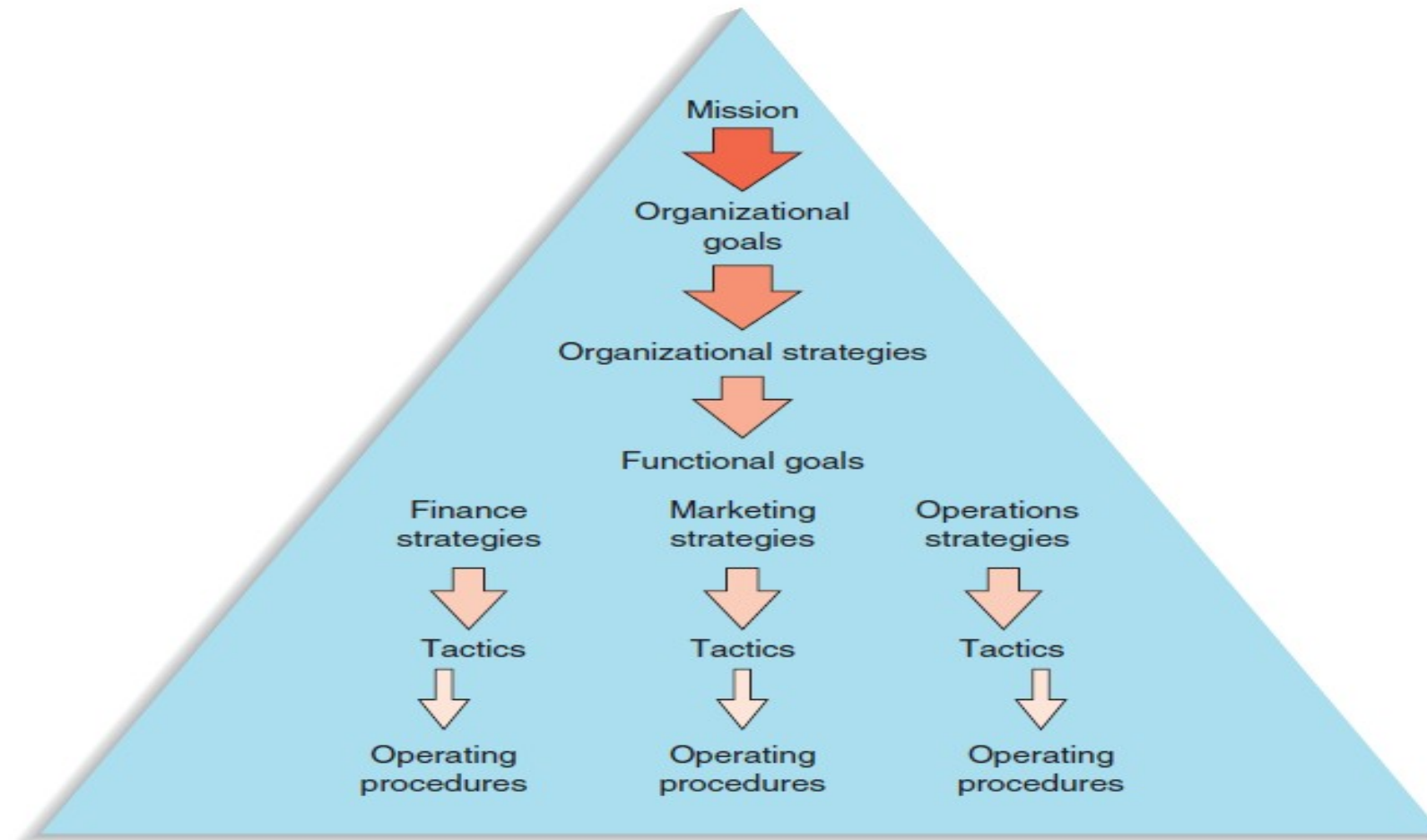
Microsoft	To help people and businesses throughout the world to realize their full potential.
Verizon	To help people and businesses communicate with each other.
Starbucks	To inspire and nurture the human spirit—one cup and one neighborhood at a time.
U.S. Dept. of Education	To promote student achievement and preparation for global competitiveness and fostering educational excellence and ensuring equal access.

# Tactics

- Tactics are the methods and actions used to accomplish strategies.
- They provide guidance and direction for carrying out actual operations.



# Hierarchical of planning and decision making



# Example scenario

Moumita is a high school student in ViqarunNessaNoon School. She would like to have a career in business, have a good job, and earn enough income to live comfortably.

Mission: Live a good life.

Goal: Successful career, good income.

Strategy: Obtain a college education.

Tactics: Select a college and a major; decide how to finance college.

Operations: Register, buy books, take courses, study.



# Strategy Formulation

- Effective strategy formulation requires taking into account:
  - Core competencies
  - Environmental scanning
    - SWOT
- Successful strategy formulation also requires taking into account:
  - Order qualifiers
  - Order winners



# Key steps in Strategy Formulation

Link strategy to the organization's mission or vision statement.

Assess SWOT and identify core competencies

Identify order winners and order qualifiers

Select one or two strategies (e.g., low cost, speed, customer service) to focus on



# Operations Strategy

The approach, consistent with organization strategy, that is used to guide the operations function.

		Management Level	Time Horizon	Scope	Level of Detail	Relates to
The overall organization	Mission	Top	Long	Broad	Low	Survival, profitability
	Strategy	Senior	Long	Broad	Low	Growth rate, market share
Operations	Strategic	Senior	Moderate to long	Broad	Low	Product design, choice of location, choice of technology, new facilities
	Tactical	Middle	Moderate	Moderate	Moderate	Employment levels, output levels, equipment selection, facility layout
	Operational	Low	Short	Narrow	High	Scheduling personnel, adjusting output rates, inventory management, purchasing

# Strategic OM Decision Areas

Decision Area	What the Decisions Affect
1. Product and service design	Costs, quality, liability and environmental issues
2. Capacity	Cost structure, flexibility
3. Process selection and layout	Costs, flexibility, skill level needed, capacity
4. Work design	Quality of work life, employee safety, productivity
5. Location	Costs, visibility
6. Quality	Ability to meet or exceed customer expectations
7. Inventory	Costs, shortages
8. Maintenance	Costs, equipment reliability, productivity
9. Scheduling	Flexibility, efficiency
10. Supply chains	Costs, quality, agility, shortages, vendor relations
11. Projects	Costs, new products, services, or operating systems



# Quality and Time Strategies



- **Quality-based strategies**

- Strategies that focus on maintaining or improving the quality of an organization's product or service.
  - It is a factor in both attracting and retaining customers.

- **Time-based strategies**

- Strategies that focus on the reduction of time needed to accomplish tasks
  - It is believed that by reducing time, costs are lower, quality is higher, productivity is higher, time-to-market is faster, and customer service is improved

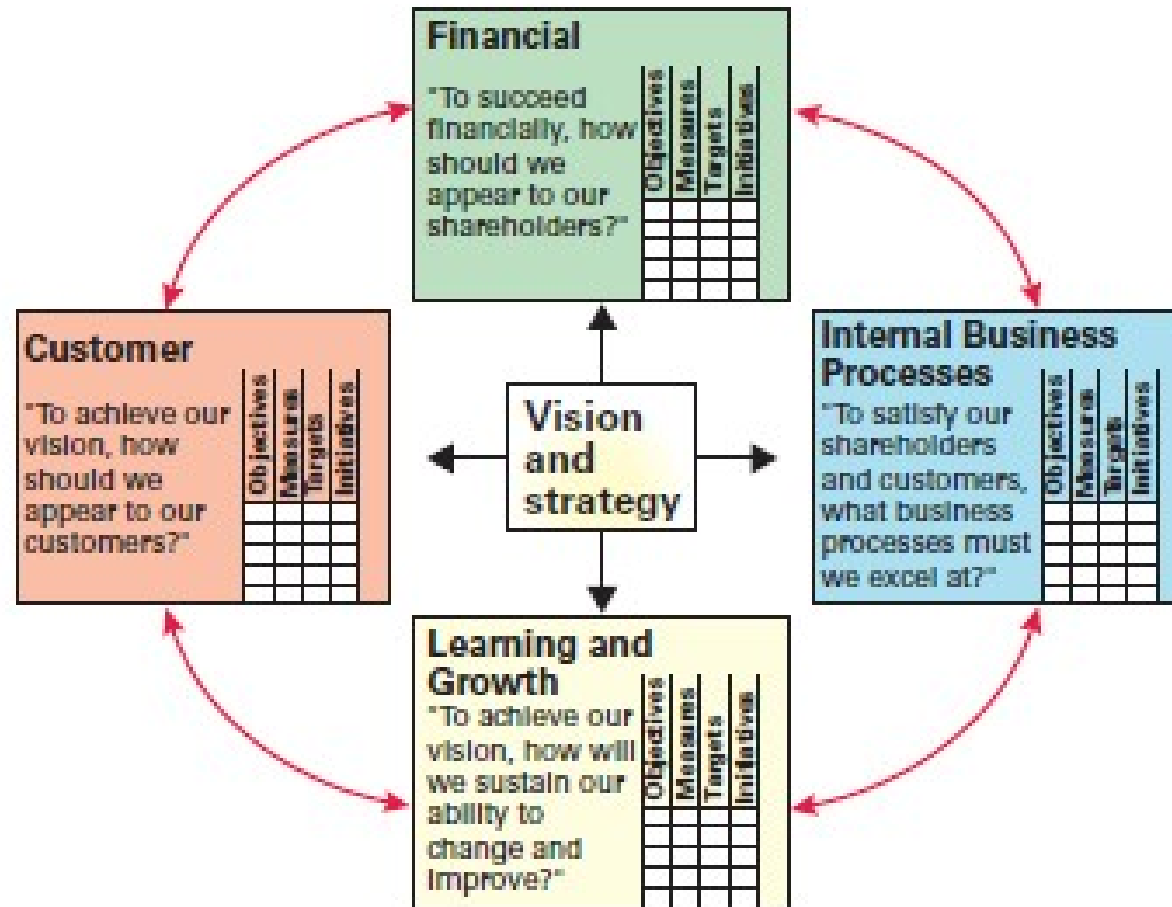


# Time-Based Strategies

- Areas where organizations have achieved time reductions:
  - Planning time
  - Product/service design time
  - Processing time
  - Changeover time
  - Delivery time
  - Response time for complaints



# Balanced Scorecard



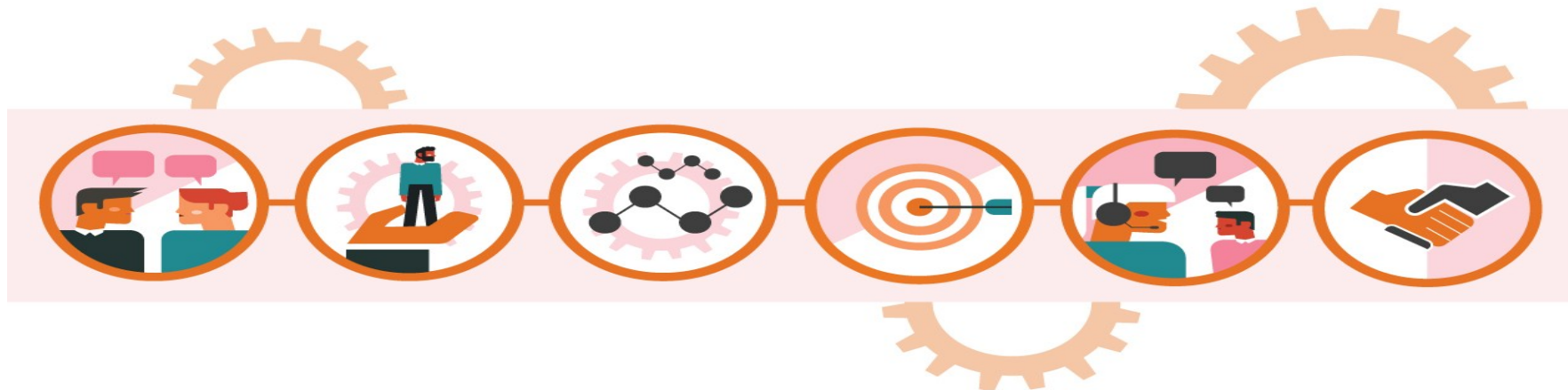
# Productivity

- **Productivity**

- A measure of the effective use of resources, usually expressed as the ratio of output to input

- **Productivity measures are useful for**

- Tracking an operating unit's performance over time
- Judging the performance of an entire industry or country



# Productivity Measures



$$\text{Productivity} = \frac{\text{Output}}{\text{Input}}$$

$$\text{Partial Measures } \frac{\text{Output}}{\text{Single Input}}; \frac{\text{Output}}{\text{Labor}}; \frac{\text{Output}}{\text{Capital}}$$

$$\text{Multifactor Measures } \frac{\text{Output}}{\text{Multiple Inputs}}; \frac{\text{Output}}{\text{Labor + Machine}}; \frac{\text{Output}}{\text{Labor + Capital + Energy}}$$

$$\text{Total Measure } \frac{\text{Goods or services produced}}{\text{All inputs used to produce them}}$$

# Service Sector Productivity

- Service sector productivity is difficult to measure and manage because
  - It involves intellectual activities
  - It has a high degree of variability
- A useful measure related to productivity is *process yield*
  - Where products are involved
    - ratio of output of good product to the quantity of raw material input.
  - Where services are involved, process yield measurement is often dependent on the particular process:
    - ratio of cars rented to cars available for a given day
    - ratio of student acceptances to the total number of students approved for admission.



# Productivity Measures

Determine the productivity for the following cases:

- Four workers installed 720 square yards of carpeting in eight hours.
- A machine produced 70 pieces in two hours. However, two pieces were unusable.

$$\begin{aligned} \text{a. Productivity} &= \frac{\text{Yards of carpet installed}}{\text{Labor hours worked}} \\ &= \frac{720 \text{ square yards}}{4 \text{ workers} \times 8 \text{ hours/worker}} \\ &= \frac{720 \text{ yards}}{32 \text{ hours}} \\ &= 22.5 \text{ yards/hour} \end{aligned}$$

$$\begin{aligned} \text{b. Productivity} &= \frac{\text{Usable pieces}}{\text{Production time}} \\ &= \frac{70 - 2 = 68 \text{ usable pieces}}{2 \text{ hours}} \\ &= 34 \text{ pieces/hour} \end{aligned}$$



# Factors Affecting Productivity

