

A close-up photograph of several metal scoops resting on a large pile of dark brown, roasted coffee beans. The beans are spilling out of a burlap sack. The lighting is warm, highlighting the texture of the beans and the metal of the scoops.

Operations and Supply Chain Management Introduction

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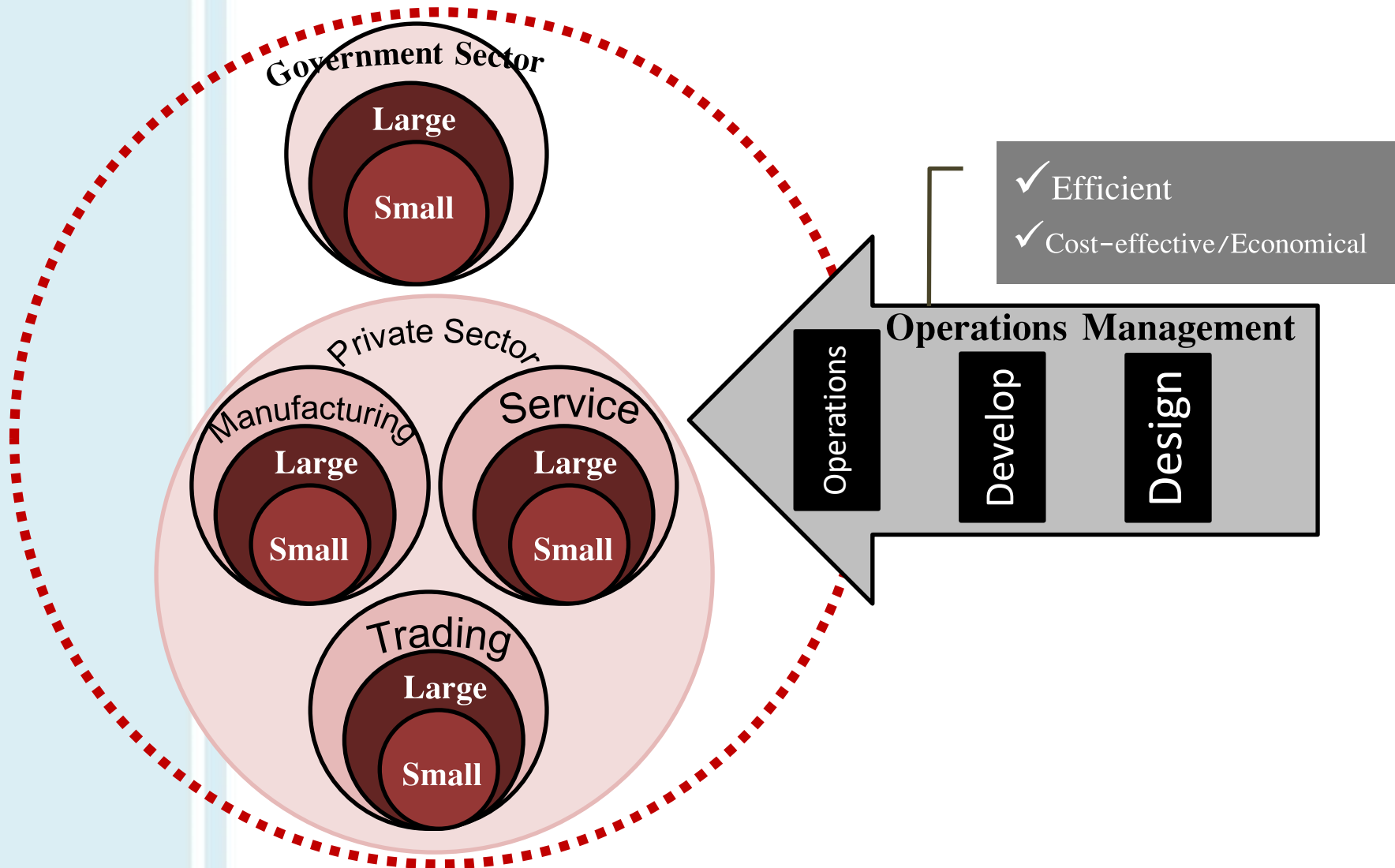
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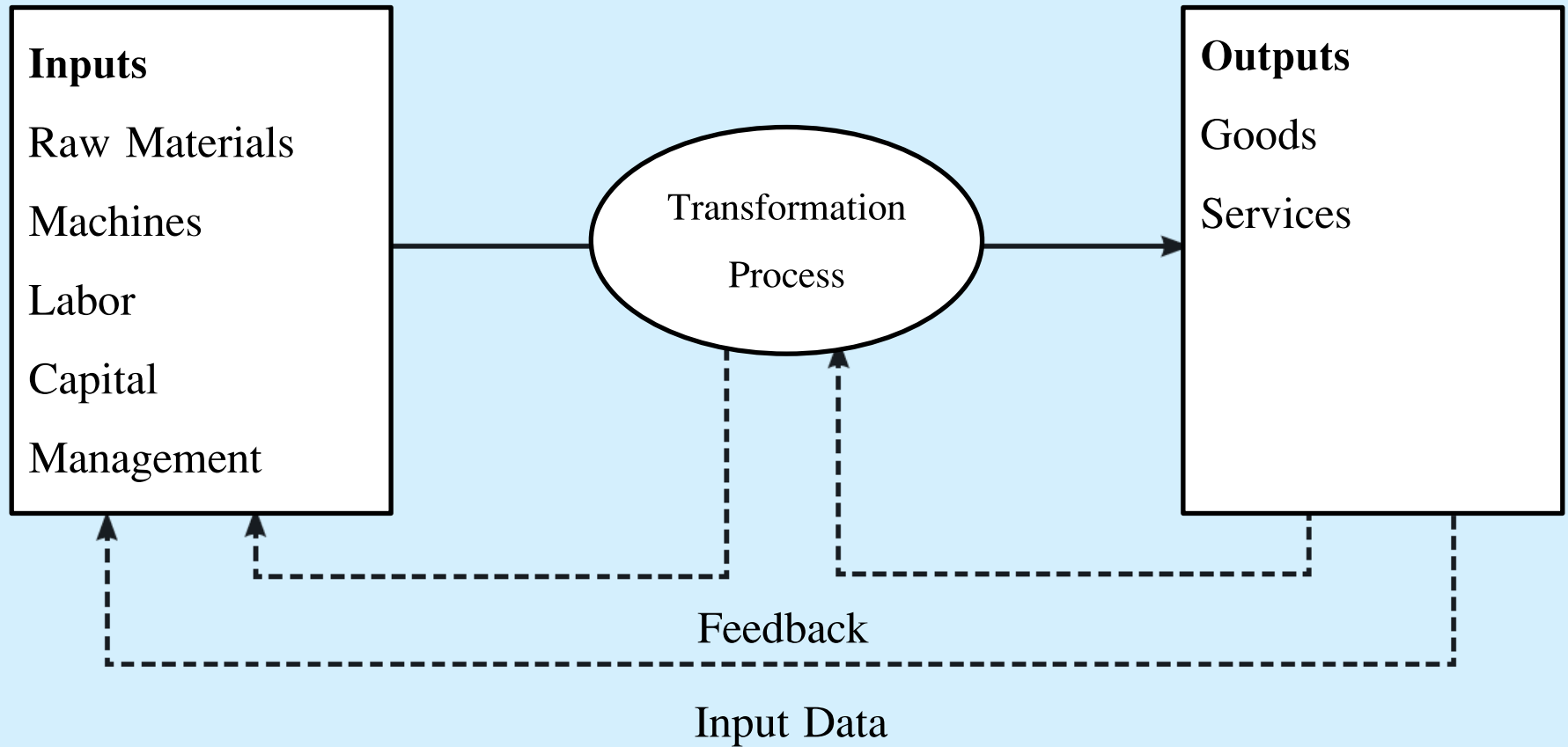
Learning Objectives

- 1 To understand the definition and components of operations management
- 2 To be able to explain the roles and responsibilities of the operations function
- 3 To understand the evolution of operations and supply chain management for business competitiveness, including various obstacles in operations management
- 4 To be able to explain the definition and steps of developing an operations strategy

Operations Management



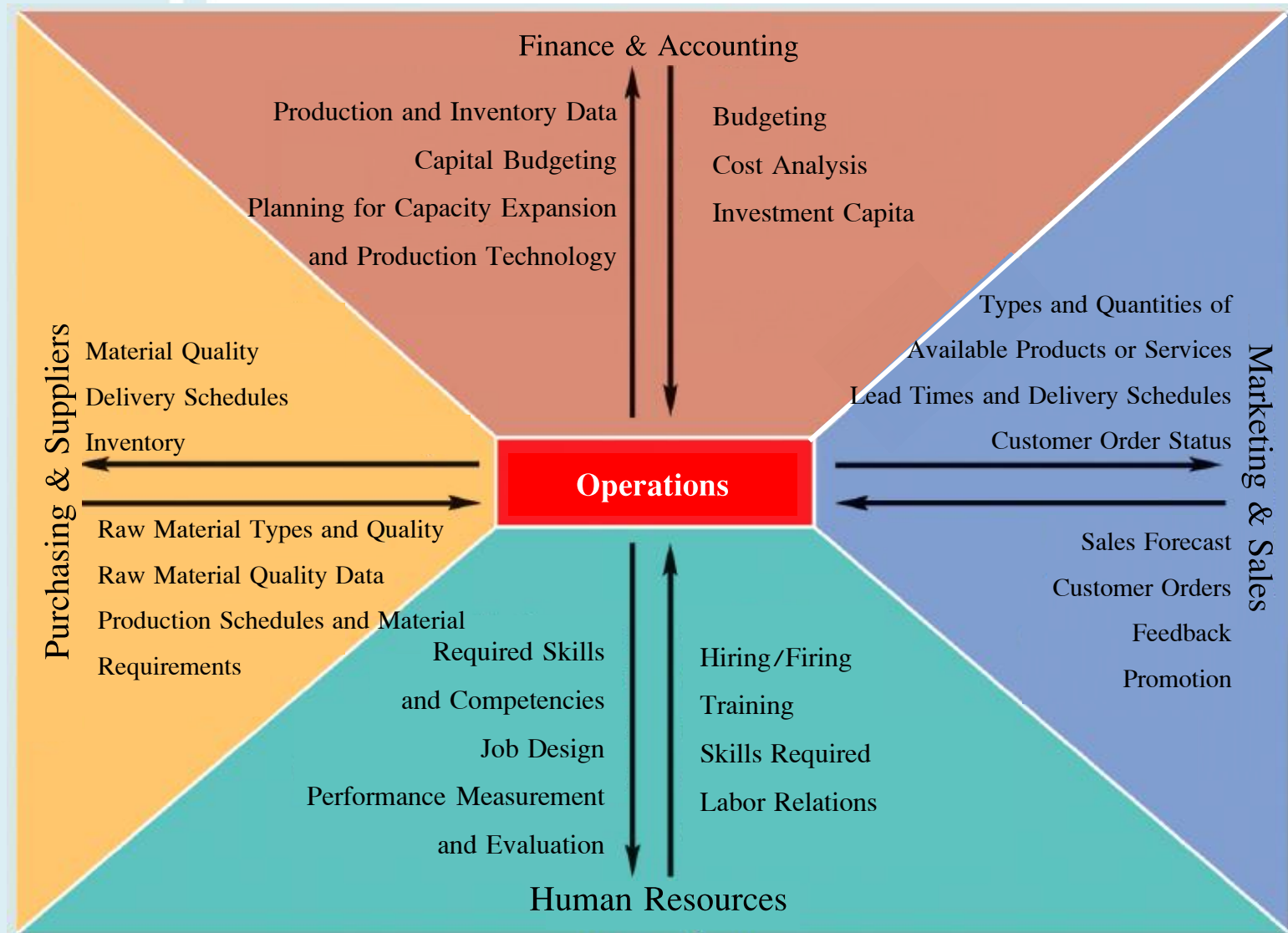
Operations Process Model



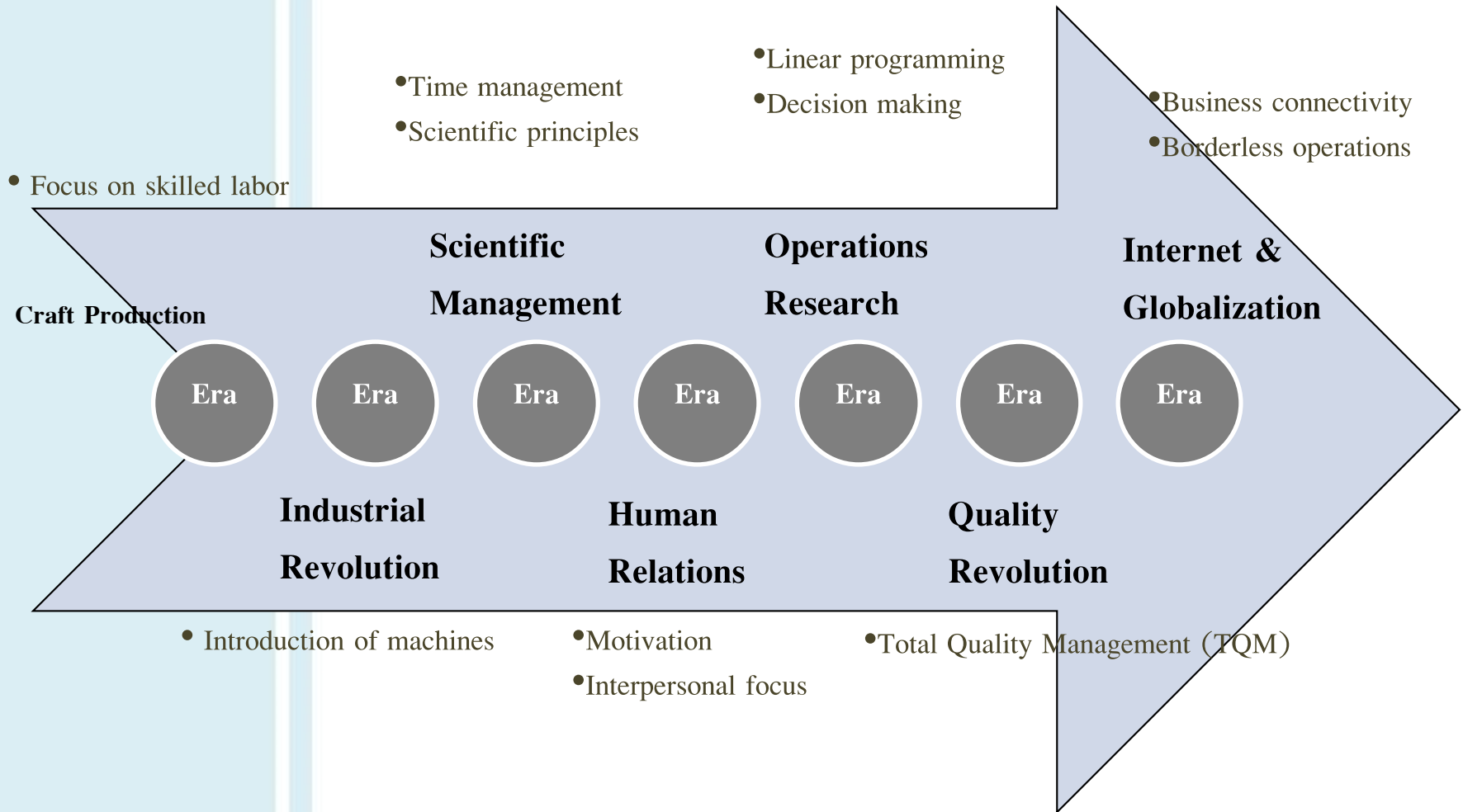
Types of Transformation

- Physical
- Locational
- Exchange
- Physiological
- Psychological
- Informational

The Evolution of Operations and Supply Chain Management



The Evolution of Operations and Supply Chain Management



Productivity Measurement

Output units can be either the quantity produced or the monetary value of the output.

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

Productivity Calculations

Single-Factor Productivity

$$\frac{\text{Output}}{\text{Labor}}$$

$$\frac{\text{Output}}{\text{Materials}}$$

$$\frac{\text{Output}}{\text{Capital}}$$

Multi-Factor Productivity

$$\frac{\text{Output}}{\text{Labor} + \text{Capital}}$$

$$\frac{\text{Output}}{\text{Labor} + \text{Capital} + \text{Materials}}$$

Total Factor Productivity

$$\frac{\text{Total Output}}{\text{Total Inputs Used in Production}}$$

Example: Productivity Calculation

OSBORN Industrial Co., Ltd. needs to prepare a productivity report for the board of directors, reporting: 1) Labor Productivity, 2) Machine Productivity, and 3) Total Factor Productivity

Units Produced	100,000	units
Labor Hours	10,000	hours
Machine Hours	5,000	hours
Material Cost	\$35,000	
Energy Cost	\$15,000	
Labor Wage	\$15	hour
Machine Cost	\$10	hour

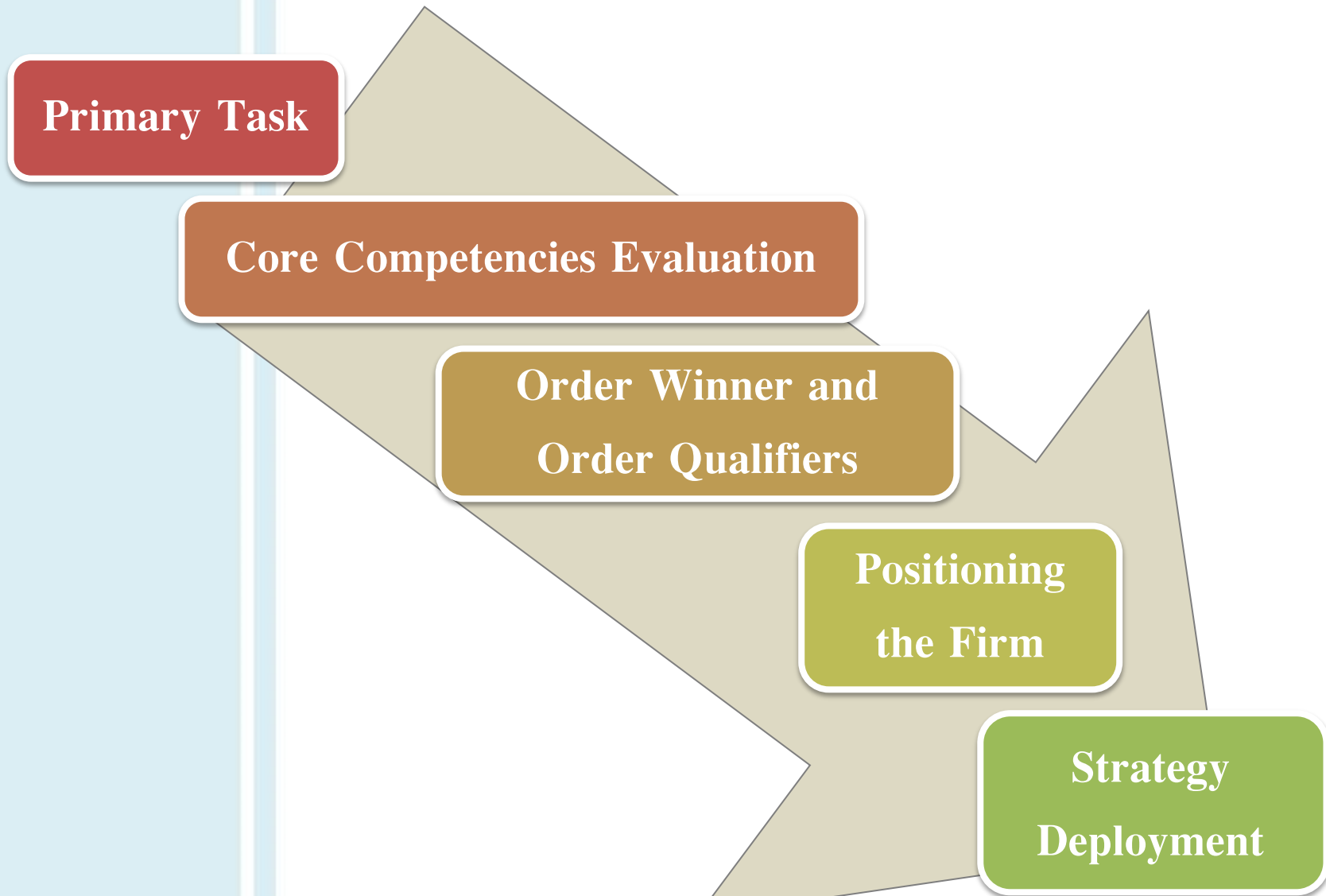
Productivity Calculation Example – Solutions

Solutions

$$1. \text{ Labor Productivity} = \frac{100,000}{10,000} = 10 \text{ units/hour}$$

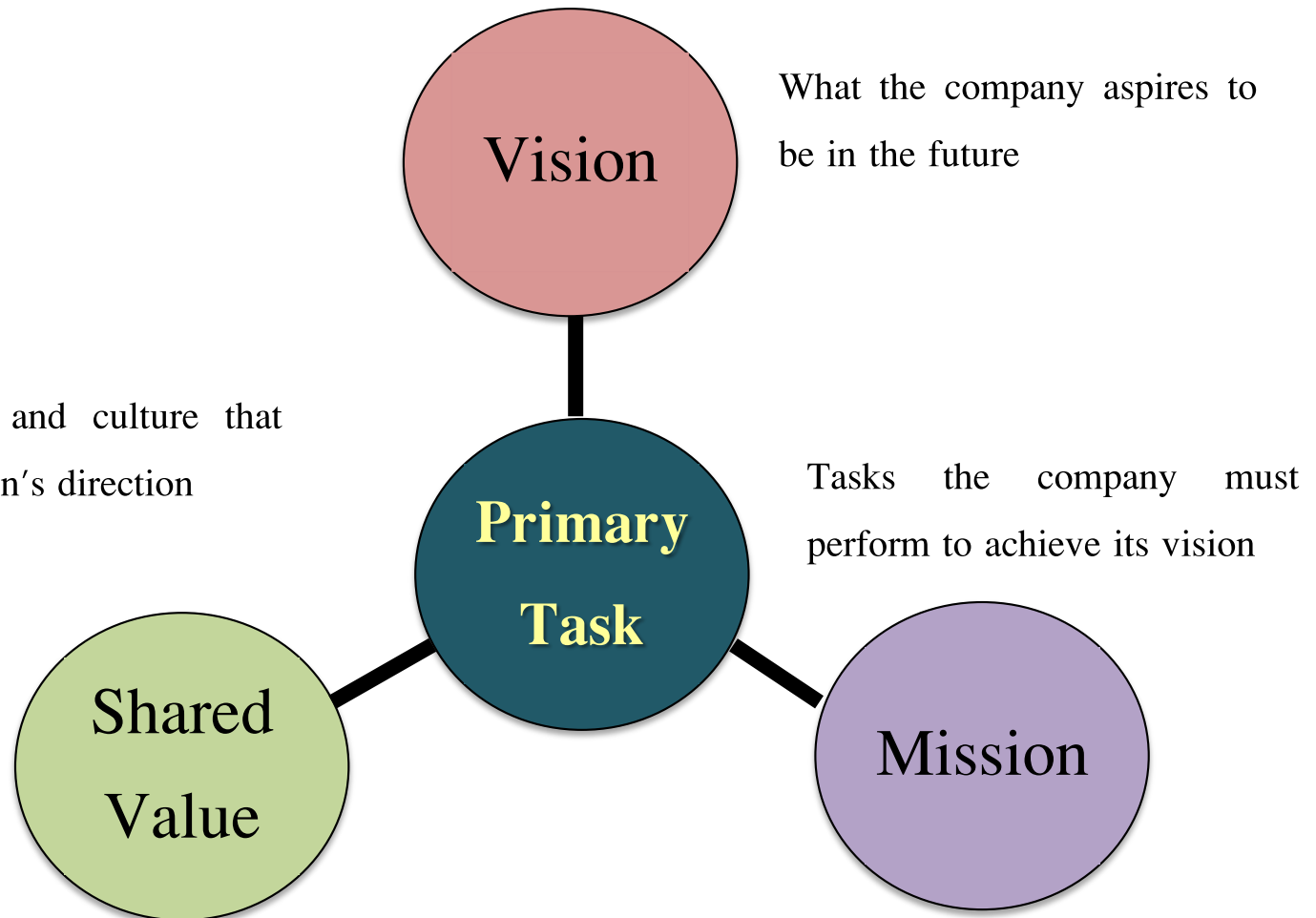
$$2. \text{ Machine Productivity} = \frac{100,000}{5,000} = 20 \text{ units/hour}$$

$$3. \text{ Total Factor Productivity} = \frac{100,000}{(10,000 \times \$15) + (5,000 \times \$10) + \$35,000 + \$15,000}$$
$$= 0.4 \text{ units/cost}$$



Primary Task

Attitudes, policies, and culture that unify the organization's direction



Core Competencies Evaluation

Identifying superior organizational strengths, such as higher quality or lower costs

Order Winner and Order Qualifiers

Identifying consumer reasons for purchasing and the key winning factors for products/services

Positioning the Firm

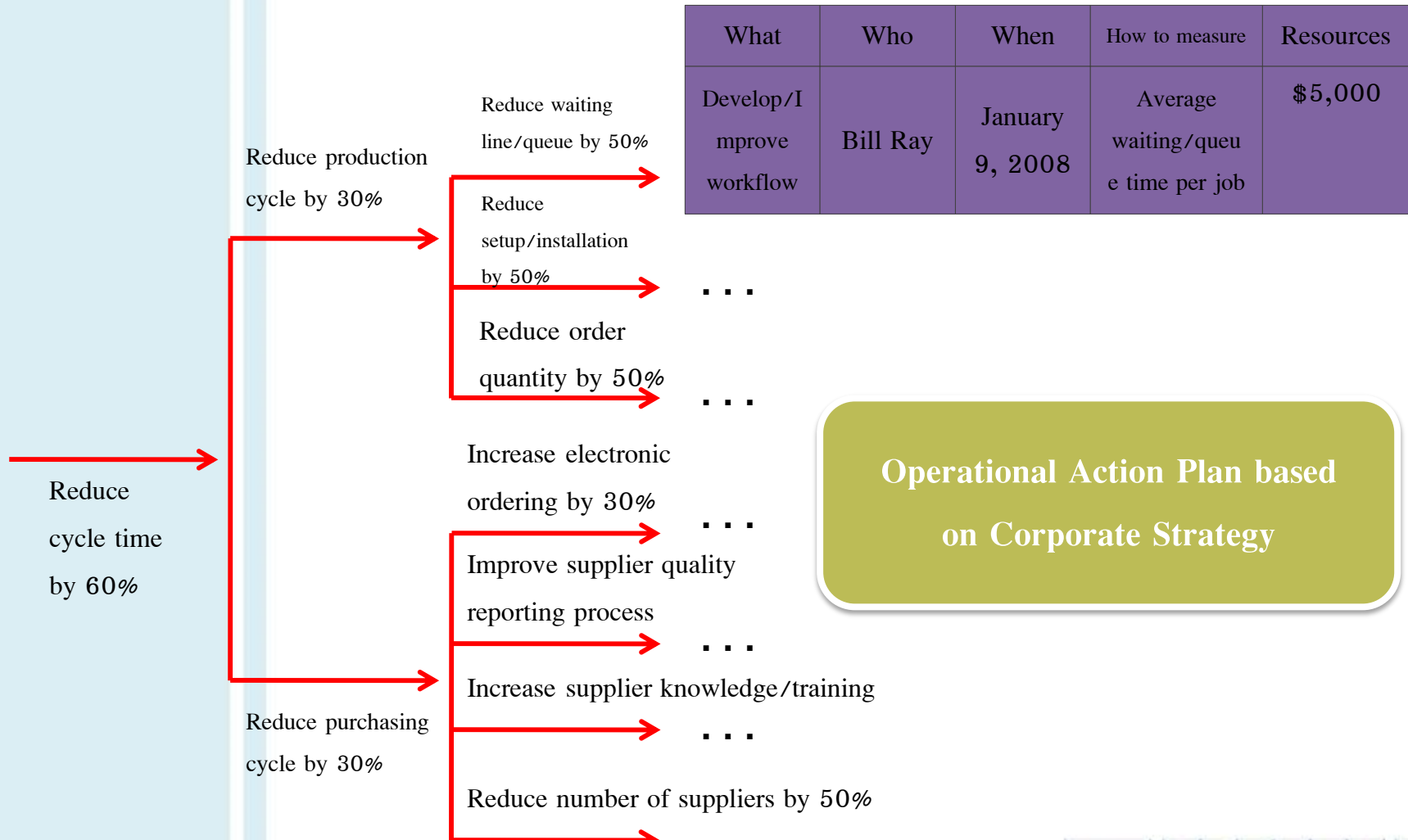
Competing on Quality

Competing on Cost

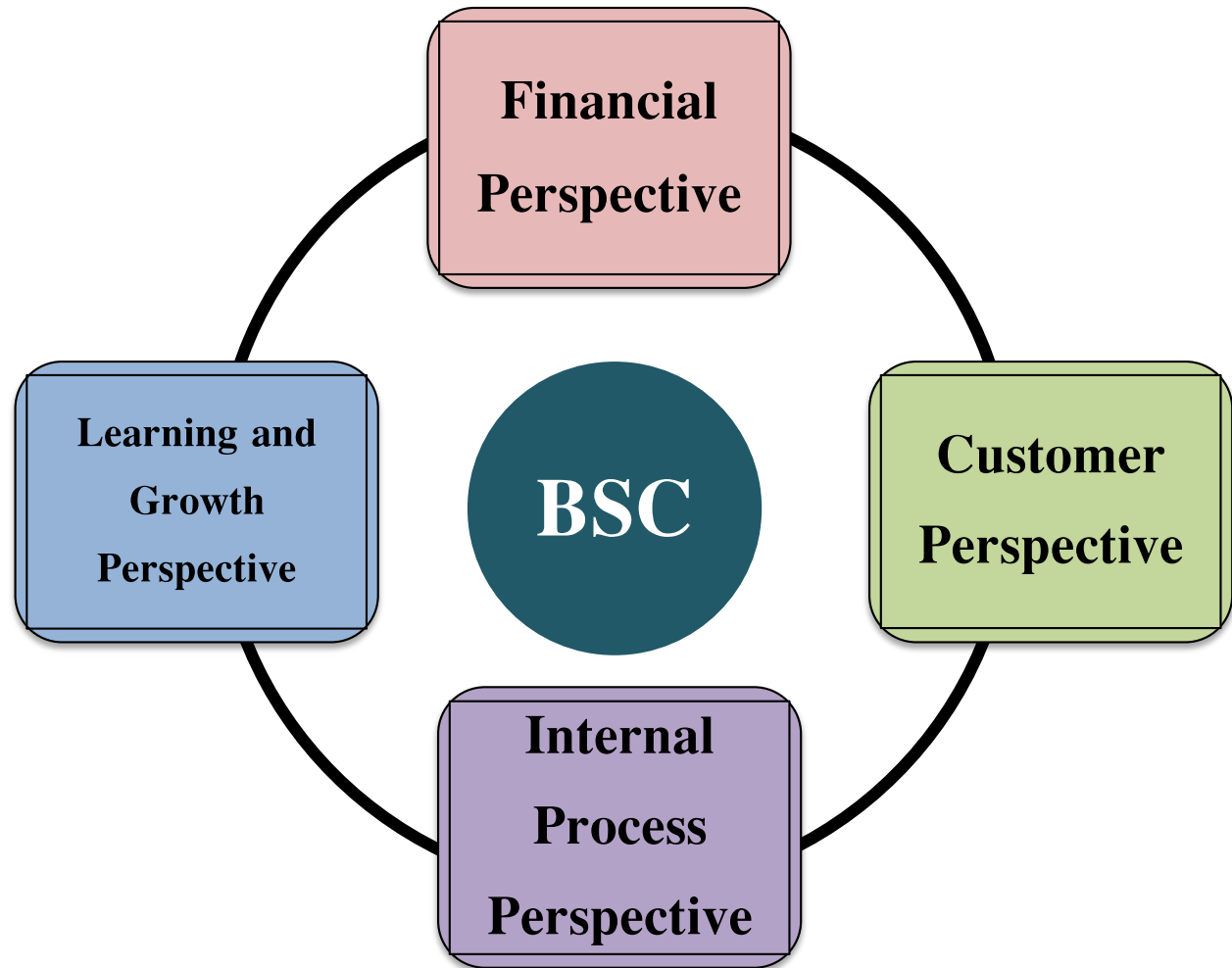
Competing on Speed

Competing on Flexibility

Strategy Deployment



Strategy Deployment





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