Operations Management

Dr. Maleesha Mallawarachchi

Lecture Objectives

- Understanding Operations Management and Global Supply Chains
- Defining missions and strategies and how operations can provide competitive advantages
- Examining the development and implementation of strategy within Operations Management

Operations Management

- Operations management is “the activity of managing the resources which are devoted to the production and delivery of products and services” (Slack, et al 2014).

- Operations management is the administration of business practices to create the highest level of efficiency possible within an organization.
- Operations management is concerned with converting materials and labor into goods and services as efficiently as possible.
- A critical function of operations management relates to the management of inventory through the supply chain.

Supply Chains

A supply chain is a “network of facilities and activities that performs the functions of product development, procurement of material from suppliers, the movement of materials between facilities, the manufacturing of products, the distribution of finished goods to customers, and after-market support for sustainment” (Mabert and Venkataraman1998).

Supply Chains

- A supply chain is a network between a company and its suppliers to produce and distribute a specific product or service.
- The entities in the supply chain include producers, vendors, warehouses, transportation companies, distribution centers, and retailers.
- The functions in a supply chain include product development, marketing, operations, distribution, finance, and customer service.
- Supply chain management results in lower costs and a faster production cycle.

Supply Chains

Supply Chain Management vs. Business Logistics Management

Supply chain Vs Logistics

Supply chains are responsible for the overall sourcing, processing, and delivery of goods to the end customer,

while logistics specifically focuses on moving and storing goods between different supply chain organizations.

Logistics

Logistics refers specifically to the part of the supply chain that deals with the planning and control of the movement and storage of goods and services from their point of origin to their destination.

Logistics management begins with the raw materials and ends with the delivery of the final product.

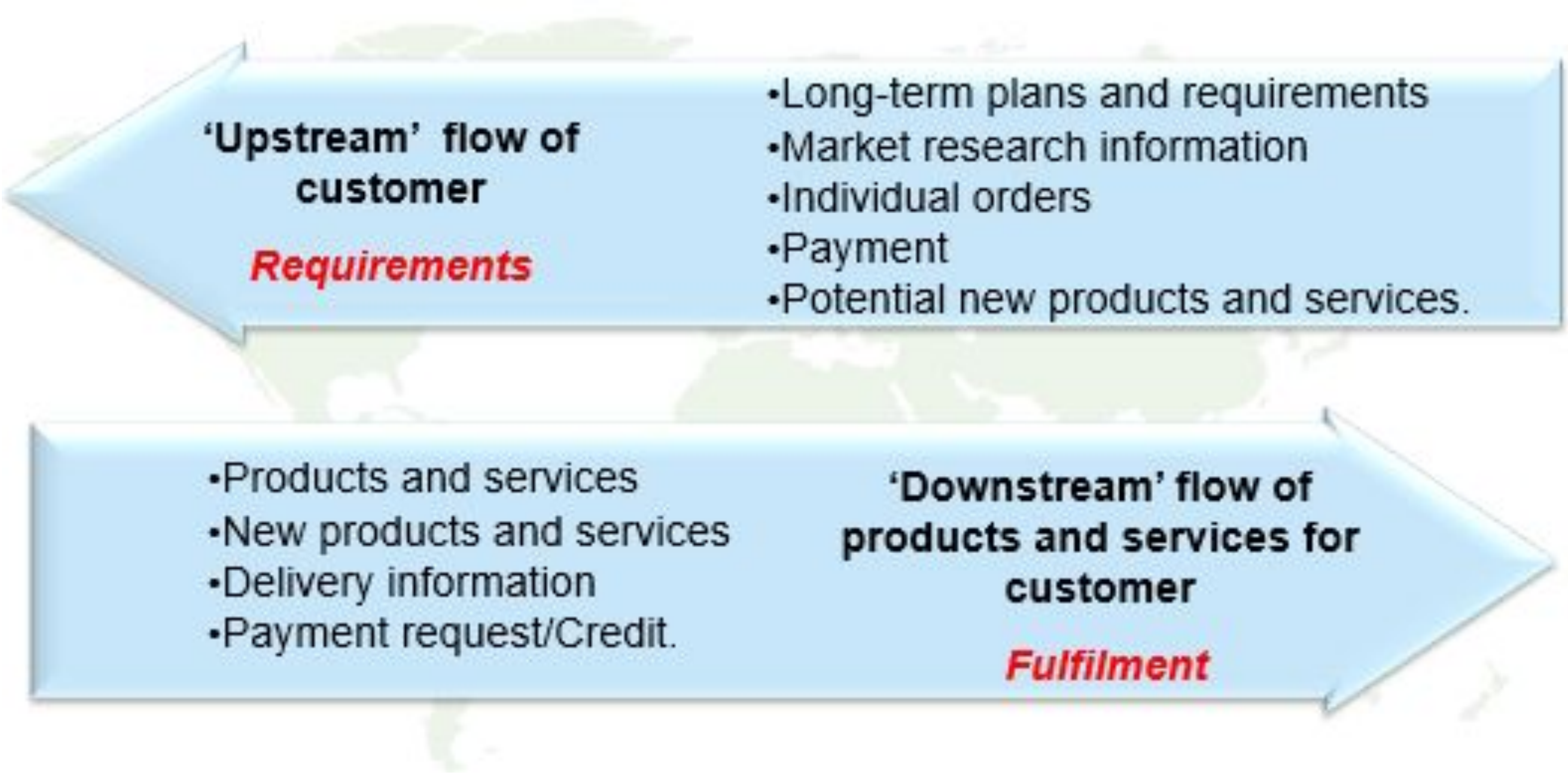
Successful logistics management ensures that there is no delay in delivery at any point in the chain and that products and services are delivered in good condition.

Flows in Supply Chains

Three main flows in Supply Chains are

- Material (Product) Flow
- Information Flow
- Financial Flow

Flows in Supply Chains



Material (Product) Flow

This is the flow of the physical product from supplier all the way down to the customer.

This flow is usually uni-directional, that is, it only flows one direction from supplier to customer.

However, in certain instances, when the customer returns the product, the flow occasionally goes in the other direction.

A typical flow of materials usually begins with the raw materials suppliers to manufacturers to warehouses and distribution to the final customer.

Information flow

This flow is bi-directional, that is, it goes both direction in the supply chain.

Financial flow

Financial flow involves the movement of money from the customer to the supplier.

Usually, when the customer receives the product and pays for it the money travels back to the supplier.

Sometimes the finances flow the other direction (from supplier to customer) in form of debit.

Strategy in Operations Management

Strategy is an action that managers take to attain one or more of the organization’s goals.

Strategy can also be defined as “A general direction set for the company and its various components to achieve a desired state in the future.

Strategy results from the detailed strategic planning process.

Strategy in Operations Management

- Setting broad objectives that direct an enterprise towards its overall goal.
- Planning the path (in general rather than specific terms) that will achieve these goals.
- Stressing long-term rather than short-term objectives.
- Dealing with the total picture rather than stressing individual activities.
- Being detached from, and above, the confusion and distractions of day-to-day activities.

Operational strategies

A business operational strategy is a decision-making process that shapes an organization's long-term plans to achieve the objectives in its mission statement.

It comprises specific actions management wants to take to achieve a specific aspect of a company's operations.

Operational strategies connect the firm's programs, policies, guidelines and workforce in a way that allows each branch to support others in achieving a common goal.

Operational strategies

An effective business strategy creates steps that cohesively bond business plans with resources, capacity, time, location and competition.

Operational strategies strengthen a company's overall strategy and may help achieve marketplace advantage over competitors.

It can also improve an organization's competencies and infrastructure, allowing it to better serve customers and keep or even extend its competitive advantage over others in the market.

Five Forces affecting Strategy

Porter's Five Forces is a framework for analyzing a company's competitive environment.

The number and power of a company's competitive rivals, potential new market entrants, suppliers, customers, and substitute products influence a company's profitability.

Five Forces analysis can be used to guide business strategy to increase competitive advantage.

Porter's five forces

1. Competition in the industry

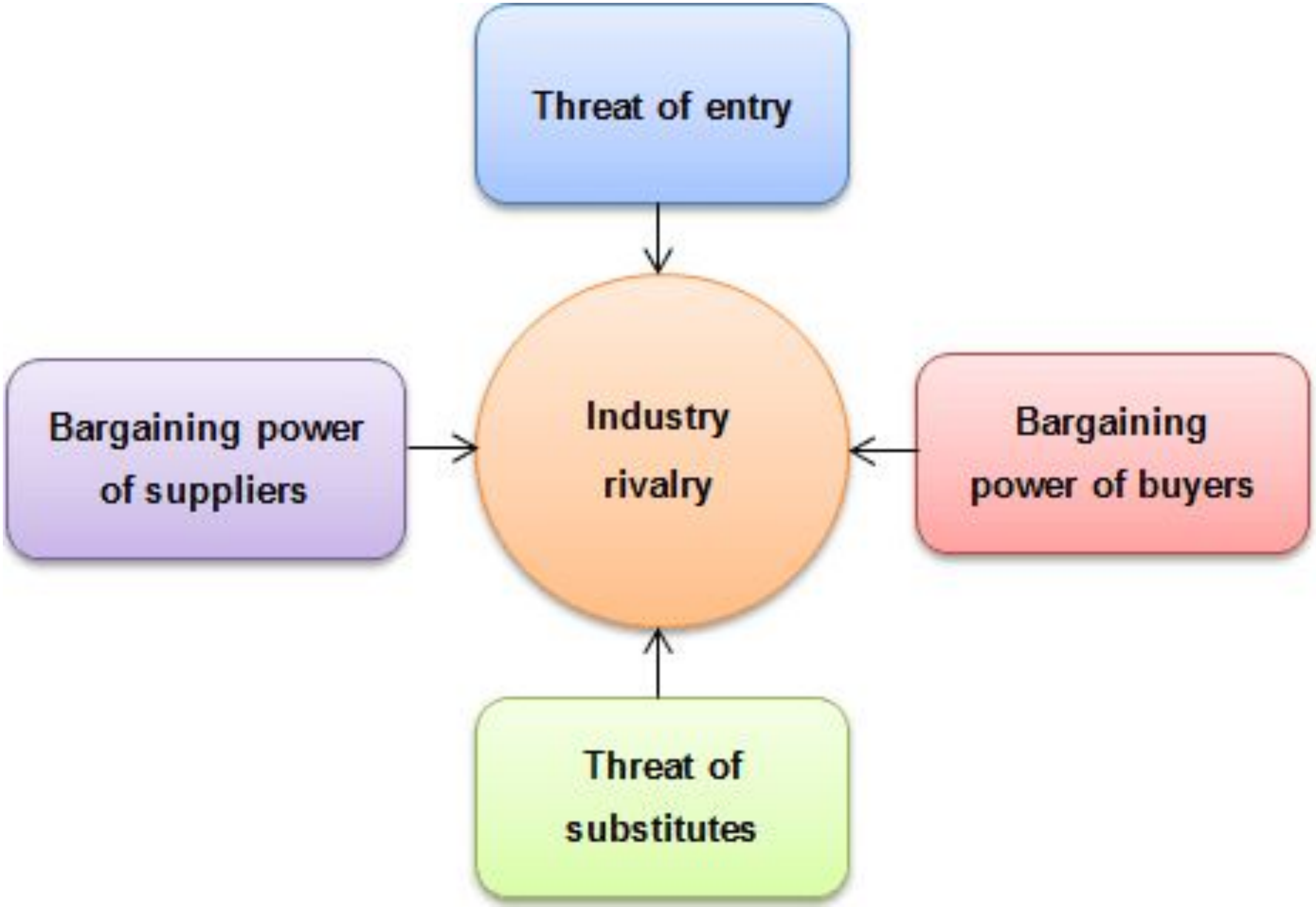
2. Potential of new entrants into the industry

3. Power of suppliers

4. Power of customers

5. Threat of substitute products

Porter's five forces



Competition in the Industry

Refers to the number of competitors and their ability to undercut a company.

The larger the number of competitors, along with the number of equivalent products and services they offer, the lesser the power of a company.

Suppliers and buyers seek out a company's competition if they are able to offer a better deal or lower prices.

Conversely, when competitive rivalry is low, a company has greater power to charge higher prices and set the terms of deals to achieve higher sales and profits.

Potential of New Entrants Into an Industry

Refers to the force of new entrants into its market.

The less time and money it costs for a competitor to enter a company's market and be an effective competitor, the more an established company's position could be significantly weakened.

An industry with strong barriers to entry is ideal for existing companies within that industry since the company would be able to charge higher prices and negotiate better terms.

Power of Suppliers

Addresses how easily suppliers can drive up the cost of inputs.

It is affected by the number of suppliers of key inputs of a good or service, how unique these inputs are, and how much it would cost a company to switch to another supplier.

The fewer suppliers to an industry, higher the switching costs between rival suppliers the more a company would depend on a supplier.

As a result, the supplier has more power and can drive up input costs and push for other advantages in trade.

Power of Customers

The ability of customers to drive prices lower

Affected by how many buyers or customers a company has, how significant each customer is, and how much it would cost a company to find new customers or markets for its output.

A smaller and more powerful client base means that each customer has more power to negotiate for lower prices and better deals.

Threat of Substitutes

Substitute goods or services that can be used in place of a company's products or services pose a threat.

When there are no close substitutes, a company will have more power to increase prices and lock in favorable terms.

Operations Strategy – Key Questions

- Is it comprehensive?
- Is it coherent?
- Does it correspond with strategic objectives?
- Does it identify critical issues?

Competitive Advantage

Competitive advantage is what makes an entity's products or services more desirable to customers than that of any other rival.

Competitive advantages can be broken down into comparative advantages and differential advantages.

Comparative advantage is a company's ability to produce something more efficiently than a rival, which leads to greater profit margins.

A differential advantage is when a company's products are seen as both unique and of higher quality, relative to those of a competitor.

Achieving Competitive Advantage through Operations

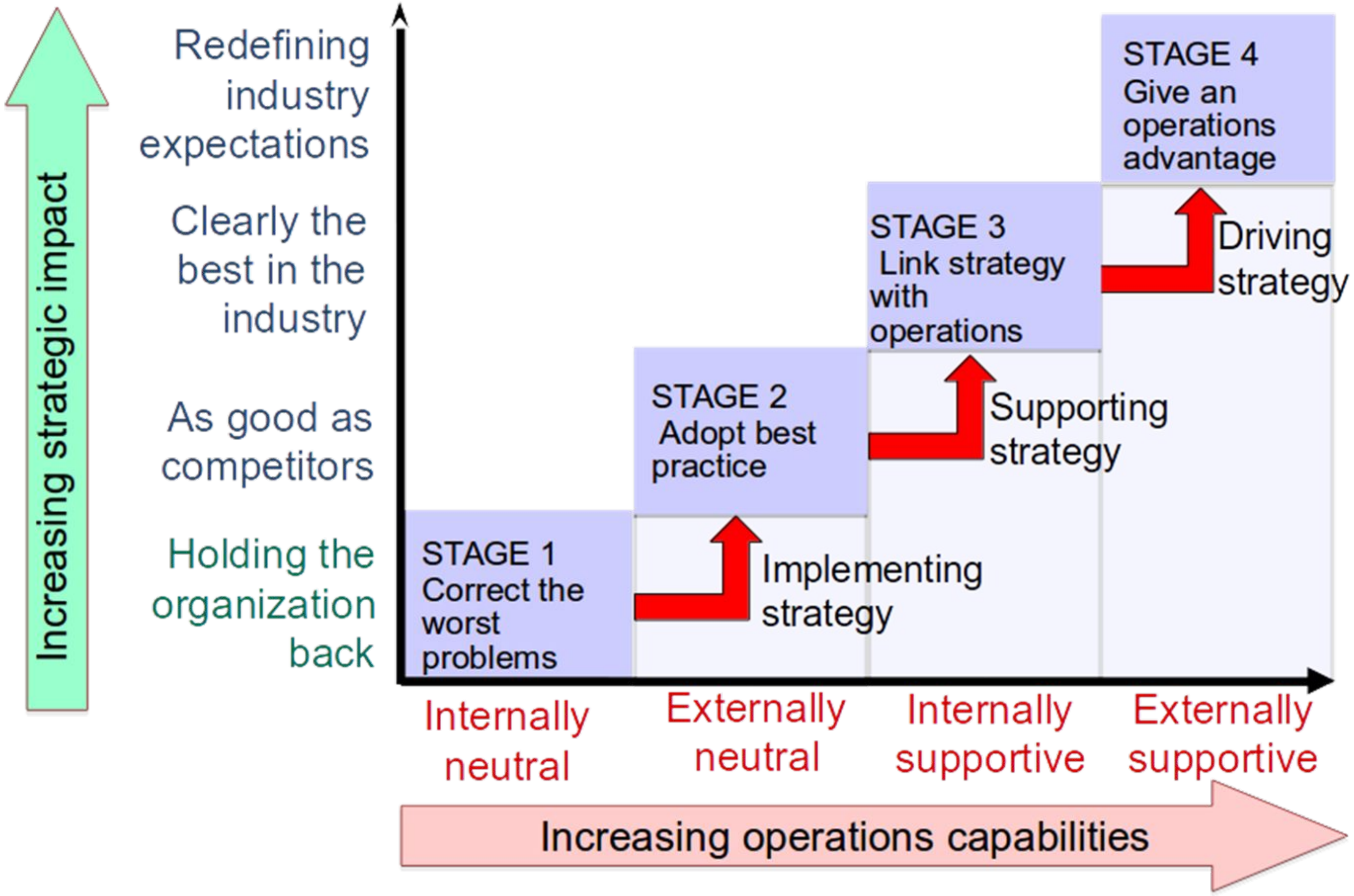
Competitive advantage requires the creation of a system that has a unique advantage over competitors.

The main goal is to create customer value and experience in an efficient and sustainable way.

A company/organization can achieve competitive advantage through three strategies, that are differentiation, low-cost leadership and response.

Operations managers implement some combination of these three strategies to achieve competitive advantage.

Four Stage model of Operations contribution



The Hayes and Wheelwright four-stage model

At the lowest levels of capability (Stage 1) the operation is seen as holding the organization back.

This is because the operation regularly underperforms, relative to its market requirements, and/or regularly makes mistakes that can deliver low quality product or service to the customer at tremendous cost of loss of reputation and rework.

The Hayes and Wheelwright four-stage model

At Stage 2: they are striving to adopt best practice in their industry and are usually as good as their competitors at serving their market.

These operations are good enough to help implement the organization's strategy but the operation itself does not convey any competitive advantage.

The Hayes and Wheelwright four-stage model

At Stage 3 the operation offers the best capabilities in the sector and so the competitive strategy can be linked to operations.

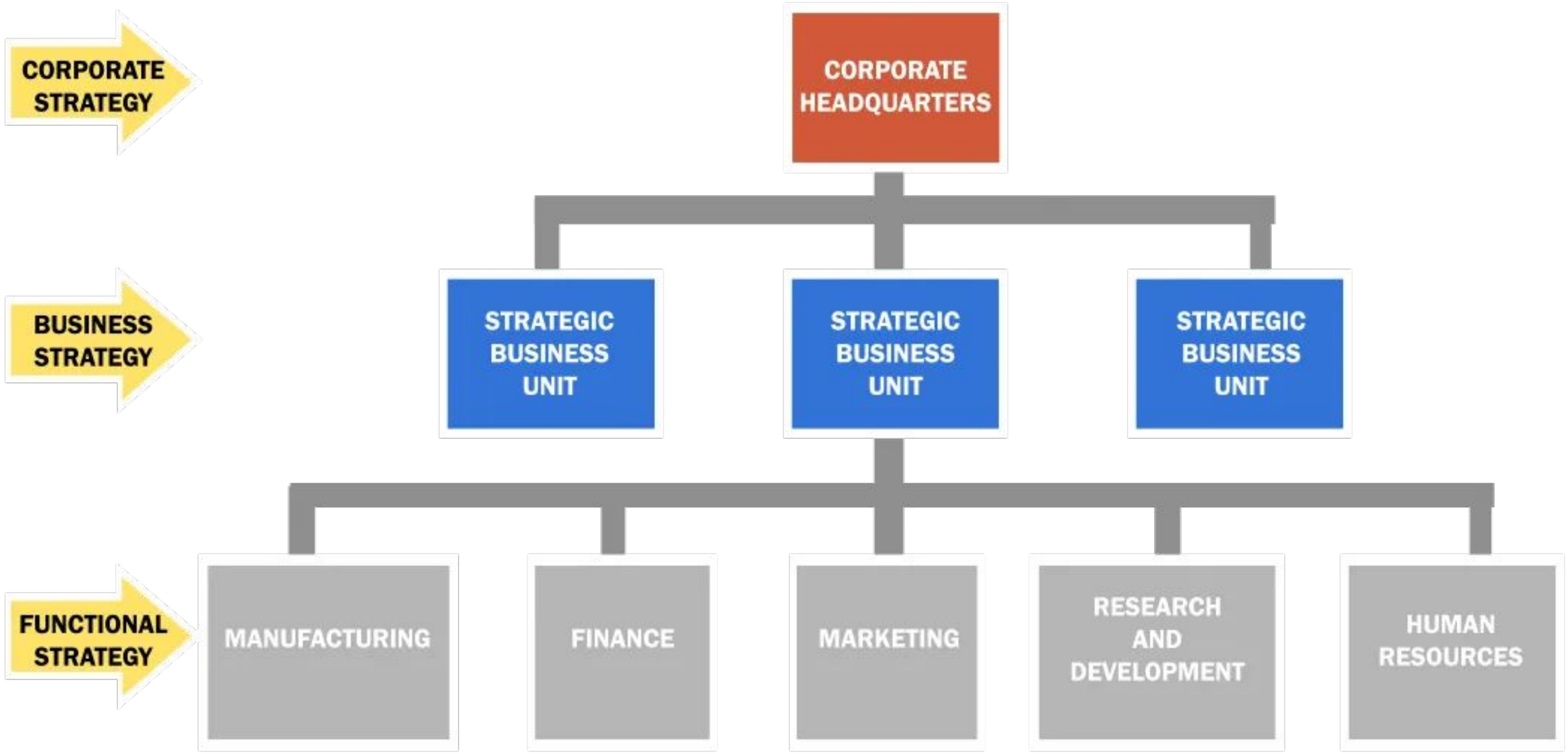
The organization can exploit the operations’ capabilities to offer better prices, differentiated products, faster deliveries or greater flexibility to maximize returns and increase market share.

The Hayes and Wheelwright four-stage model

Stage 4 is where operations convey such a competitive advantage through their performance and capability that the entire organization strategy can be built around the operation.

In these situations, the market expectations of what can be achieved are changed by the operations performance.

Levels of strategies

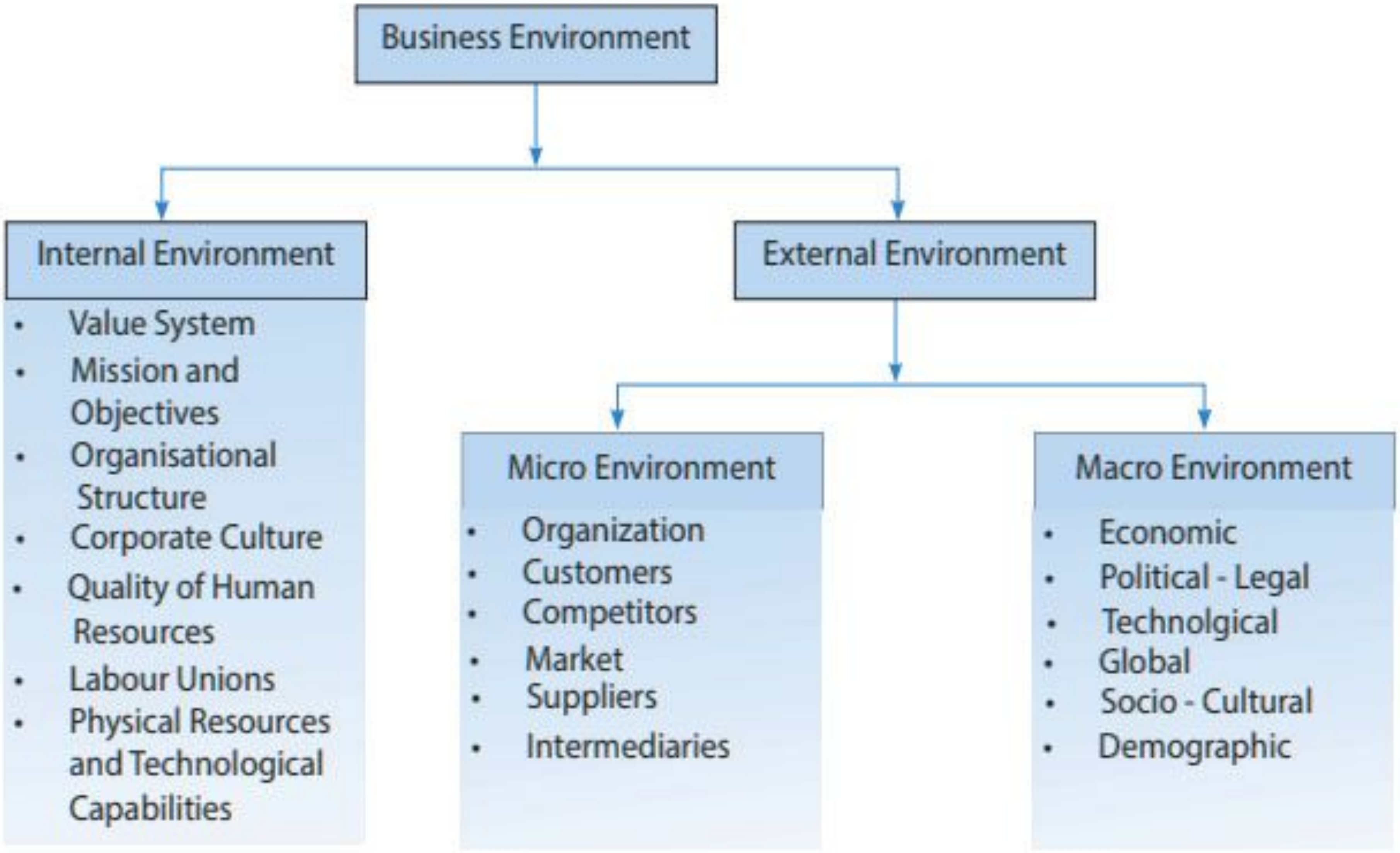


Developing Strategies

Environmental scanning

The ongoing tracking of trends and occurrences in an organization's internal and external environment that bear on its success, currently and in the future.

The results are extremely useful in shaping strategies.


Business Environment
Internal Environment
External Environment
Value System
Mission and Objectives
Organisational Structure
Corporate Culture
Quality of Human Resources
Labour Unions
Physical Resources and Technological Capabilities
Micro Environment
Organization
Customers
Competitors
Market
Suppliers
Intermediaries
Macro Environment
Economic
Political - Legal
Technolgical
Global
Socio - Cultural
Demographic

Important Factors for Environmental Scanning

- Events – These are specific occurrences which take place in different environmental sectors of a business occur either in the internal or the external environment.
- Trends –are general courses of action or tendencies along which the events occur. They are groups of similar or related events which tend to move in a specific direction. Further, trends can be positive or negative.
- Issues – In wake of the events and trends, some concerns can arise. These are Issues.
- Expectations – Some interested groups have demands based on their concern for issues. These demands are Expectations.

Environmental scanning

- The internal environment offers strengths and weaknesses to business while the external environment brings opportunities and threats.
- The four influencing environmental factors known as SWOT.

SWOT

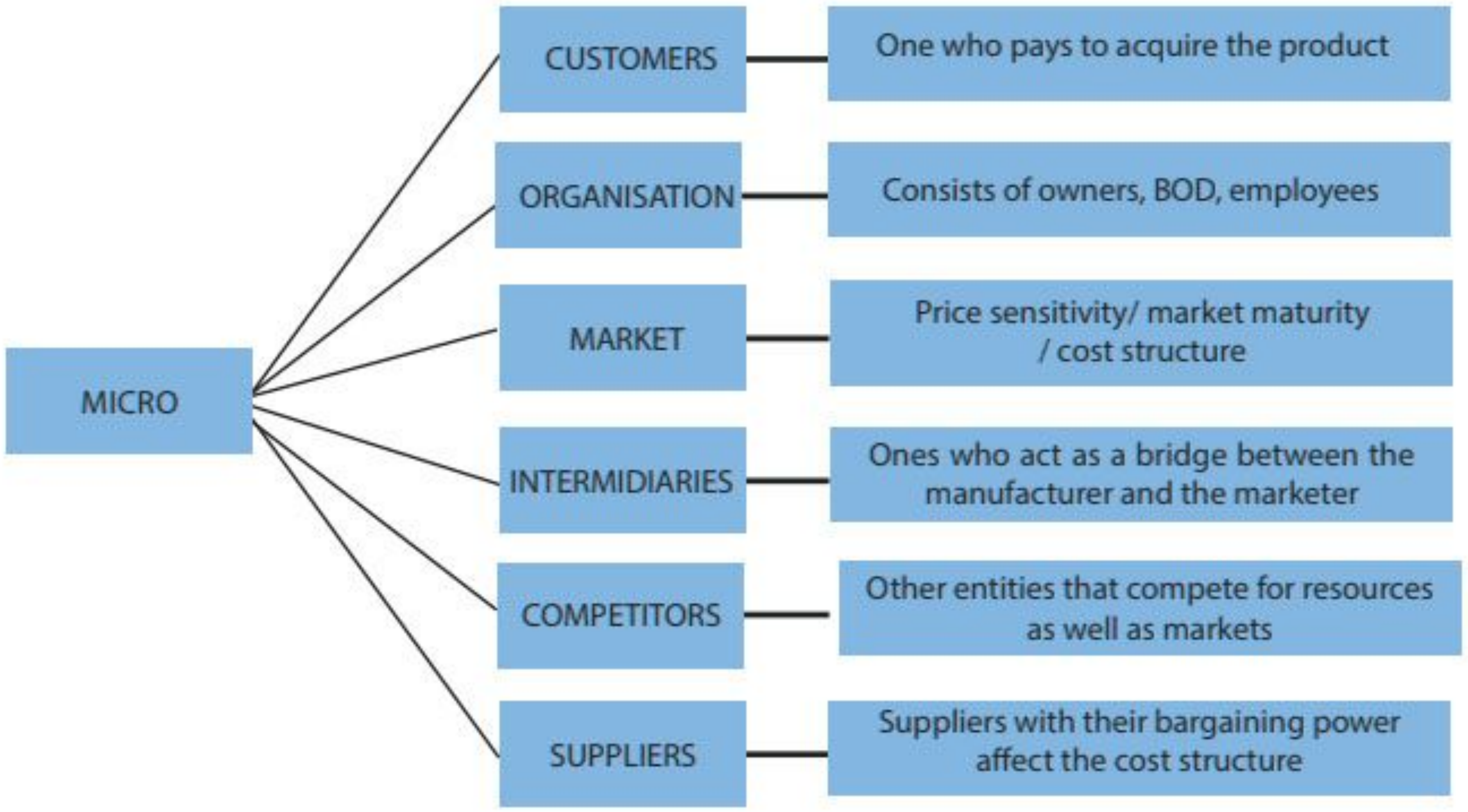
- Strength – an inherent capacity of an organization which helps it gain a strategic advantage over its competitors.
- Weakness – an inherent constraint or limitation which creates a strategic disadvantage for a business.
- Opportunity – a favorable condition in the organization's environment enabling it to strengthen its position.
- Threat – an unfavorable condition in the organization's environment causing damage to the organization.

Micro-environment

The micro environment relates to the immediate periphery of an organization and directly influences the organization on a regular basis.

Hence, it is also known as the task environment.

Micro-environment



PESTLE or PESTEL Analysis

PESTEL is an acronym and the letters stand for Political, Economic, Social, Technological, Environmental and Legal.

Also, this framework helps to keep track of all the changes happening in the macro environment.

Mission

The mission statement: The basis for startups' strategic planning.

A mission statement outlines a startup's underlying motivation for being in business.

The mission statement is not a strategic objective, but rather the basis on which the strategic objectives and strategic plan are developed.

Mission: Google - “to organize the world's information and make it universally accessible and useful”

Core Competencies

- Core competencies are the defining characteristics that make a business stand out from the competition.
- Identifying and exploiting core competencies is important for a new business making its mark or an established company trying to stay competitive.
- A company's people, physical assets, patents, brand equity, and capital all contribute to a company's core competencies.
- Examples of companies that have core competencies that have allowed them to remain successful for decades include McDonald's, Apple, and Walmart.

Core Competencies

- McDonald’s has standardization. It serves nine million pounds of French fries every day, and every one of them has precisely the same taste and texture.
- Apple has style. The beauty of its devices and their interfaces gives them an edge over its many competitors.
- Walmart has buying power. The sheer size of its buying operation gives it the ability to buy cheap and undersell retail competitors.

Competitive advantages

Core competencies lead to competitive advantages.

Competitive advantage is what makes an entity's products or services more desirable to customers than that of any other rival.

Competitive advantages can be broken down into comparative advantages and differential advantages.

Comparative advantage is a company's ability to produce something more efficiently than a rival, which leads to greater profit margins.

A differential advantage is when a company's products are seen as both unique and of higher quality, relative to those of a competitor.

Competitive advantages

		Competitive advantage	
		Lower costs	Differentiation
Competitive scope	Broad target	Cost leadership	Differentiation
	Narrow target	Cost focus	Differentiation focus

Competitive priorities

The dimensions that a firm's production system must possess to support the demands of the markets in which the firm wishes to compete.

The competitive priorities are the ways in which the Operations Management function focuses on the characteristics of cost, quality, flexibility and speed.

The firm’s customers will determine which of the competitive priorities are emphasized.

Operation Management in Healthcare

Operations management is essential for the provision of health services, a rapidly changing field.

The goal of operations managers in healthcare is to streamline costs and to obtain funding to maintain adequate levels and quality of services offered.

Learning from other industries

Retail	Building layout and configuration, customer flows, use of forecasts and planning, electronic commerce
Airlines	Scheduling, logistics, strategic pricing (yield management)
Chemicals	Efficiencies, economies of scale, extensive use of linear programming and quantitative modeling
Electronics	Technology innovation, product life-cycle management, pricing strategy
Telecommunications	Command and control center

Roles and trends in healthcare OM

Primary Role of Operations Managers	Evolving Trends
1. Reduce costs	Standardization Optimization Resource tracking systems
2. Reduce variability and improve logistical flow	Integrated service delivery Analytics Supply chain management
3. Improve productivity	Information technology; mobile devices; asset and patient tracking systems ROI
4. Provide higher quality services	Evidence-based health care Six Sigma
5. Improve business processes	Outsourcing Globalization

Discussion Questions

1. Why do we need operations management for health care?
2. How does health care represent a system?
3. What are the key goals of operations managers?
4. Does operations management impact a hospital's competitive advantage?
5. What are three of the key trends affecting hospital operations?
6. Who is considered the "father" of scientific management?
7. How are decisions made in organizations?
8. What are the basic steps of a rational management decision-making process?
9. What are the common sources of cost increases in health care?

Thank you