



KS SUPPLY CHAIN FUNDAMENTALS

02 Strategy

SS 2025



PLM Institute of
Production and
Logistics Management

Learning goals

- Understand the connection between company mission, company strategy and operations strategy.
- Being able to distinguish between different company strategies and knowing their implications for Operations and Supply Chain Management.
- Understanding the notion of productivity and how it is measured.

*Stevenson, WJ: Operations Management. McGraw-Hill Education Ltd;
latest edition - Chapter 2*

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Competitiveness

Marketing and operations influence competitiveness.

Marketing

- Identifying consumer needs and wants.
- Understanding trade-off decisions (price and quality) of consumers.
- Advertising and promotion to inform potential customers about products and services.

Operations

- **Product- and service design** (match the organization's and SC's capabilities with customer needs and wants).
- **Productivity** has a major impact on the **costs**.
- **Location** decisions impact transportation costs and customer convenience.
- **Quality** and **service** can be a sustainable differentiator.
- **Quick response** (quick delivery, quickly handling complaints..).
- **Inventory management** to effectively match supply and demand.

Mission and strategy

- **Mission** Reason why the organization exists.
- **Goals** Details and scope of the mission.
- **Strategy** Plans to achieve the goals.

Three basic business strategies:

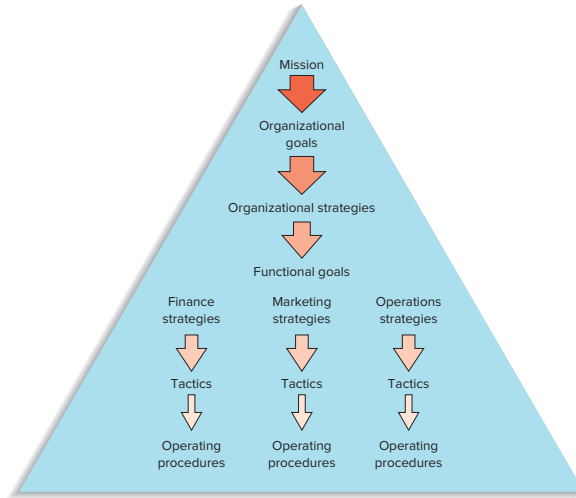
- Low cost
- Responsiveness
- Differentiation

Mission Statements:

Microsoft : To help people and businesses throughout the world to realize their full potential

Starbucks : To inspire and nurture the human spirit – one cup and one neighborhood at a time.

Planning and decision making - hierarchical



Source: Stevenson (2021)

Example

Clara is a student at JKU. She would like to have a career in business, have a good job, and earn enough to live comfortably. A possible scenario for achieving her goals might look something like this:

- **Mission:** Live a good life.
- **Goal:** Successful career, good income.
- **Strategy:** Obtain a college education
- **Tactics:** Select a university and a major; decide how to finance university.
- **Operations:** Register, buy books, take courses, study.

Examples of company strategies

- **Low Cost:** Outsourcing of operations into countries with low labor costs.
- **Specialization:** Focus on few product lines and services to reach higher quality.
- **Newness:** Focus on innovation to create new products and services.
- **Flexibility:** Focus on fast reaction and individualization.
- **High quality** Focus on being quality leader in the industry.
- **Service:** Focus on service aspects (helpful, reliable, ...).
- **Sustainability:** Focus on eco-friendly and energy-efficient operations.

Walmart: manages its supply chain very successfully (effectively organized flow of goods and information, eg stores next to distribution centers → regular replenishment → competitive advantages).

Strategy formulation

1. Combining the strategy directly with the mission and vision statement of the organization.
2. Evaluating strengths, weaknesses, opportunities, and threats (SWOT) as well as main expertise. (SWOT is often seen as the link between organizational strategy and operations strategy.)
3. Identifying “Order Winners” and “Order Qualifiers”.
4. Selecting one or more strategies (eg Low Cost, Flexibility, Service) that are focused.

Order Qualifiers = minimum standards to be acceptable for a product to be considered for purchase.

Order Winners = characteristics of goods and services that cause them to be perceived as better than the competition.

Operations strategy

Operations Strategy Follows the organization strategy which provides the overall direction for the organization.

Supply Chain Strategy The supply chain strategy specifies how the supply chain should function to achieve supply chain goals. The supply chain strategy should be aligned with the business strategy. (eg how the company cooperates with their suppliers. Customer relationship policy)

Sustainability Strategy for the whole company: formulating goals for products and services, processes, the entire SC; Measurement of target achievement.

Examples: Dell and Apple

Dell The student Michael Dell started in 1984 to assemble computers in his room at a student dorm. He used components that he did not produce himself and sold the computers directly to customers. This allowed him to keep the costs low and deliveries fast. Direct sales of PCs is a standard practice today, however, it was a new concept at the time. Dell was able to keep **inventory** as well as the number of workers **low**. This was made possible due to the strong cooperation and information of his suppliers.



Source:
<https://www.logodesign.org/the-history-of-the-dell-logo/>

Through **direct contact with his customers** he gained insight into their needs and wishes and communicated them to his suppliers. Low inventory levels enabled him to change to newly released components more quickly as well as pass on price reductions faster.

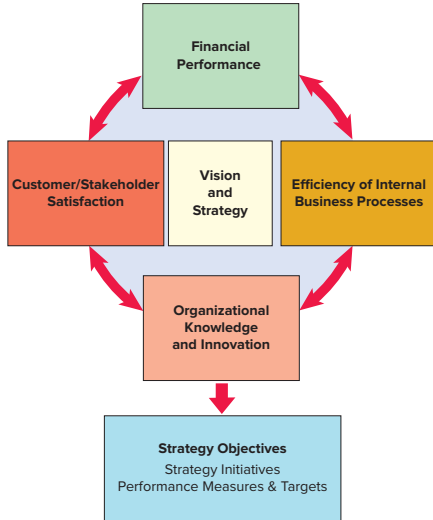
Apple “A major key to Apple’s continued success is its ability to keep pushing the boundaries of innovation. Apple has demonstrated how to create growth by dreaming up products so new and ingenious that they have upended one industry after another.”

Balanced Score Card

The **Balanced Scorecard (BSC)**, developed by Robert Kaplan and David Norton in the 1990s, is a top-down management system that organizations can use to clarify their vision and strategy and transform them into action.

- Move away from a purely financial perspective of the organization
- Additional dimensions: Customers, internal processes, learning and growth
- Managers develop objectives, metrics, and targets for each objective and measure the target achievement of each goal.
- Initiatives to achieve objectives are developed, and links among the different perspectives are identified.
- Results are monitored and used to improve performance.

Balanced Score Card



- Has been improved and revised.
- In the base version sustainability, the supplier perspective, national relations as well as the “Community”-perspective are missing.
- Companies have to be vary of the consequences of their actions in these areas (their reputation).

Balanced Score Card Examples

Perspective	Objective	Measure	Target	Initiative
Financial	Become retail leader	Market share	15% in Europe	New online platform
Customer	Attract new customers	Number of customers	1 mill customers/month	Decrease prices
Internal Processes	Improve process efficiency	Avg. steps per process	10	Lean manufacturing
Innovation & Learning	Knowledgeable workforce	Number of employees with a univ. degree	50%	Allow hour reductions for course work

Productivity

Among the primary responsibilities of a manager is to achieve productive use of the resources of their organization.

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

Higher productivity means lower costs

Can be calculated for a single operation, a department, a facility, a whole company.

$$\text{Productivity growth} = \frac{\text{Current Prod.} - \text{Previous Prod.}}{\text{Previous Prod.}} \times 100$$

Computing productivity

Example:

$$\frac{\text{Number of motel rooms cleaned}}{\text{Number of workers}} = \text{Number of motel rooms cleaned per worker}$$

Partial Measures

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

$\frac{\text{Output}}{\text{Machine}}$

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

$\frac{\text{Output}}{\text{Energy}}$

Multifactor Measures

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

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

Total Measure

$\frac{\text{Goods and services produced}}{\text{All inputs used to produce them}}$

Examples

Four workers install 720 m² of carpet in eight hours.

$$\text{Productivity} = \frac{\text{m}^2 \text{ of carpet installed}}{\text{Labor hours worked}} = \frac{720}{4 \times 8} = 22.5 \text{ m}^2 \text{ per hour}$$

A machine produces 70 pieces in two hours. However, two pieces were unusable.

$$\text{Productivity} = \frac{\text{Usable pieces}}{\text{Production time}} = \frac{70-2=68}{2} = 34 \text{ pieces per hour}$$

Output: 7040 units. Input: EUR 1000 for labor, EUR 520 for material, EUR 2000 for overhead.

$$\text{Productivity} = \frac{\text{Output}}{\text{Labor+Material+Overhead}} = \frac{7040}{1000+520+2000} = 2 \text{ units per euro input}$$

Factors that affect productivity...

... are methods, capital, quality, technology, and management.

Technology

Drones

Automation

GPS devices

Copiers and scanners

Calculators

Smartphones

Internet, search engines

Apps

3D printers

Voicemail, mobile phones

Radio frequency ID tags

Email

Software

Medical Imaging

Computers

Technology has to be used wisely!

Improving Productivity

1. Develop productivity measures (indicators).
2. Ensure effectivity (production without any orders to fill)
3. Develop methods for achieving productivity improvements (listen to employees' ideas)
4. Establish reasonable goals for improvement.
5. Consider incentives to reward workers for contributions.
6. Measure improvements and publicize them.

Summary

- To remain competitive, organizations must frequently assess their competitors' strengths and weaknesses, as well as their own.
- Strategies provide the direction for the organization.
- Functional and supply chain strategies have to be aligned with the goals and strategies of the overall organization.
- Three primary business strategies: low cost, responsiveness, differentiation.
- Productivity determines the cost of goods and services. Improving productivity can result in a competitive advantage.
- High productivity is essential if low cost is the chosen strategy.