Production Management I
- Lectures 11 -
Production Strategies

Training aims of the lecture:

• Introduction to the Management Concept of St. Gallen
• Explanation of the term “strategy”
• Analysis of the competition arena of an enterprise based on Porter's concept of “Five Forces”
• Derivation of the strategic success position
• Structure of the strategic profile (management profile)
• Dimensions and functions of the strategic programs
• Identification of the core processes with a process portfolio
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Brief Content of Lecture 11:

The establishment and development of successful production strategies is based on the fundamental elements of diagnosis, definition of objectives, and alternative ways for the development of strategic success positions and their implementation. The objective of this lecture is the demonstration of a methodology for strategy development in producing enterprises.

Based on the Management Concept of St. Gallen and an introduction to the term “strategy”, a method for the new strategic positioning of an enterprise is represented.

The presented instruments for strategy development generally result from four components, the composition of the strategy:

1. Analysis of the strategic starting situation (*Porter’s Concept of “Five Forces”*).
2. Determination of the future position of the strategic business units and the enterprise, considered as one unit in the environment. (*Strategic Success Positions, Strategic Profile*).
3. Identification of the key processes and development of abilities and resources for achieving the fixed objectives or objective values in the different fields of the enterprise. (*Strategic Program, Core Process Identification*).
4. Definition of criteria and standards, which can be communicated and used for determining the success of the strategies as well as the expected degree of objective achievement.

The combination of the mentioned instruments form the basis of a strategy audit. A case example is shown in the exercise, and the described instruments are practically used.
The new Management Model of St. Gallen

Enterprises act in an more and more complex environment. They have to maintain ground, but can also play a creative role in designing their surroundings. In this case, management – here the organisation, control and development of an enterprise (Ulrich, 2001) – is the handling of complexity.

Based on the system term, the new management model of St. Gallen differentiates six central categories.

- **Environmental sphere** describes the central context of business activities.
- **Stake holders** are groups of humans, organizations and institutions, who are affected by the processes of creating value and/or harm.
- **Themes of interaction** are "objects" of exchange between stake holders and enterprises.
- **Order** gives a coherent form to the daily occurances, by directing the occurances to certain effects and aims.
- **Processes** create value and the neccesary leadership. They can be characterized by an essential and temporal logic.
- **Development modes** describe the fundamental structure of the business advancement.
Production Management in the Management Concept of St. Gallen

The management concept of St. Gallen is a complete management approach, and can be applied for producing enterprises. (as shown above)

The distinction between three different levels of management is shown: the normative, the strategic, the operative level. These levels are once more differentiated into aspects of activity, structure, and acting, so nine fields are considerable. This lecture is concentrated on the strategic and operative level.

The normative management level specifies the general aims, principles, values and the culture of the enterprise. For keeping the enterprise running and progressive these aspects must be oriented to the right direction.

The strategic level supports these aims and principles with a suitable organization, converted by programs for the organization of efficiency bonus plans and business processes. The objective is the setup, use and care of so called success potentials, thus the requirement for retaining in competition.

Finally the operative management converts the ideas of the strategic management, e.g. planning and directing the orders for development and production.
The Strategic Management Process

The strategic initiative is of crucial importance for the strategic management process, as seen in the chain.

*Initiation* means the emergence of strategic initiatives in enterprises. Every impulse, that may affect the development of the enterprise essentially, can be seen as a strategic initiative. This includes the decision to enter new business fields or the consideration of cooperations.

*Positioning* determines the relation between the enterprise and its stake holders, the external relation. Stake holders are all groups, which could affect the enterprise or could be affected by the enterprise. Not only the exchange of money and goods plays a role, but also political and cultural influence.

The *Creation of Value* is connected to the interior of the enterprise, thus its abilities and value creating processes. These characteristics determine directly the freedom of action in relation to their environment. Strategic initiatives influencing the creation of value mostly aim at the improving organisational abilities, e.g. the creation of value model or the organisational structure.

A *Change* has been achieved, if the strategic initiative has become effective and the enterprise starts to change. This also concerns the basic organisational process, thus the emergence of strategic initiatives. The loop for the initiation is closed.

Finally the strategic initiative process, has to be observed and measured by *Performance Measurement*.
Instruments of the Strategy Development:

Substantial *Components of a Strategy* are:

a) the long-term aspect, with the intention of achieving the objectives
b) the decision about the allocation of resources and
c) the analysis of own strengths and weaknesses

The *Instruments for Strategy Development*, which will be described closer, are:

1. *Porter’s Five Forces* supports the analysis of the competitive environment.
2. *Strategic Success Positions (SSP)* specify the excellence of an enterprise, which allows it to be more successful than its competitors in the long term.
3. *Management Profiles* are used for the visualisation of the current and future strategies.
4. *Strategic Programs* constitute the objectives, purposes and means for achieving the new strategic position in four dimensions. They describe how the targeted change can be achieved.
5. *Process Portfolios* display the identified core processes with their objectives of effectiveness and efficiency.
Porter’s Five Forces as an Analysis Instrument for competition arenas

Porter’s Five Forces:
Porter (1980, 1985) developed the concept of the five competition forces, as an instrument for the analysis of the attractiveness of a special branch. The basic idea is, that the performance of an enterprise is dependant on five forces and their interaction:

- Power of suppliers and customers,
- threat by new competitors and substitute products as well as
- the rivalry of the established competitors.
Detailed Information: Analysis Instrument Porter's Five Forces

1: Description of the industry and the competitive environment

**Determination of the rivalry**
- Growth of the industry
- Fix- (or Storage-) costs/creation of value
- Times of overcapacity
- Product differences
- Identity of the brand
- Conversion costs
- Concentration and balance
- Strategic interests of the enterprise
- Barriers for withdrawal

2: Negotiation strength of the suppliers

**Determination of the supplier's power**
- Differentiation of input
- Conversion costs of suppliers and enterprises of the industry
- Substitute-inputs
- Supplier concentration
- Importance of the size of order for the suppliers
- Costs in relation to the total turnover in the industry
- Influence of the input on costs or differentiation
- Danger of forward integration compared to the danger of backward integration caused by enterprises of the industry

3: Threat by Substitute products

3/5: Threat by new competitors

**Barriers for entry regarding new competitors**
- Economies of scale
- Internal product differences
- Identity of the brand
- Conversion costs
- Capital requirements
- Access to distribution
- Absolute cost advantage
- Internal training curve
- Access to required input
- Internal cost-efficient product design
- Governmental politics
- Expected retaliation measures

4: Negotiation strength of the customers

**Determination of the customer strength**

**Negotiation strength**
- Concentration of customers vs. concentration of enterprises
- Quantity of customers
- Conversion costs of customers vs. conversion costs of enterprises
- Information level of customers
- Ability of backward integration
- Substitute Products
- Stamina

**Price responsiveness**
- Price/total turnover
- Product differences
- Identity of the brand
- Influence on quality/ performance
- Customer profits
- Incentives of decision-makers

Source: Porter

Notes to the figure:
Price Spiral – Singularity increases the profit

The majority of the investment good markets has no price elasticity!
Price quality = f(Singularity)

Notes to the figure:

\[ \Delta P_A = \text{Price decline competitor A} \]
\[ A_{01} = \text{Product price competitor A in 2001} \]
\[ B_{02} = \text{Product price competitor B in 2002} \]

\[ \Delta P_A > \Delta P_B \]
Singularity Portfolio

Market vitality (Market growth)

> 10%
- Innovation fields
  - Technology development
  - Availability of solutions
- Innovation leadership
  - Market development
  - Availability of capacities

< 10%
- Opportunity business
  - External control
  - Supplementary business
- Niche leadership
  - Oligopoly
  - Elimination of competitors

Temporal Differentiation
Long-term Singularity
Strategic Business

Notes to the figure:
The funds for R&D, investments and acquisitions are assigned in accordance to the portfolio position

Comparable Precepts are applicable to:
- Investments
- Acquisitions

Notes to the figure:
Reference Strategies – Overview

1. **Design Strategy**  
   (Market developer)

2. **Oligopoly Strategy**  
   (Dominance in the industry)

3. **Market Leader Strategy**  
   (Scale effect)

4. **Technology Leverage Strategy**  
   (Competence option)

5. **Innovation Leverage Strategy**  
   (Driving Innovation)

6. **Lateral Strategy**  
   (Collaboration)

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**Notes to the figure:**
Examples for different Reference Strategies

Notes to the figure:
Strategic Success Position (SSP)

Definition

By developing important and dominant abilities, Strategic Success Positions are consciously created conditions, that allow the enterprise to achieve excellent results over a long period of time, in comparison with its competitors.

Examples

1. Image (Technology image, social image, ...)
2. Distribution network (sales agencies, distribution channels, ...)
3. Scale effects (capacities, economies of scale, ...)
4. Quality (Product and process quality, warranties, ...)
5. Tender (Assortment, services, incentive system, ...)
6. Proximity to customers (Customer consulting, ...)
7. Innovation ability (First mover, technology leadership, ...)
8. Financing (Finance service, prefinancing, ...)
9. Cooperation ability (Partnership, structures that allow easy cooperation, ...)

Notes to the figure:

Strategic Success Positions are not identical with those factors, that would convey a customer to buy a certain product. An overlapping of both terms is possible, though.

In contrast to this is the term of the Strategic Success Factors, which is a basis for a customer decision to buy a product.

While the above terms are defined relative to the competition, Strategic Success Potentials (SSPot) or Value Potentials (VP) may be seen as fixed points.

Bleicher uses the image of “light of stars” (SSPot) vs. the “light of passing ships” (SSP), which call for a different navigation.
Identification of Strategic Success Positions

<table>
<thead>
<tr>
<th>Importance of the SSP</th>
<th>Quality</th>
<th>Distribution Network</th>
<th>Proximity to customers</th>
<th>Innovation ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>until today</td>
<td>1</td>
<td></td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>in the future</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

SSP holder today:
- Company
- Competitor A
- Company
- Competitor B

Notes to the figure:
The Strategic Profile and the Strategic Program

Strategic Programs:

Concerning competition, the managerial policy of an enterprise must be substantiated by specific objectives and measures for realisation. Objectives and measures form substantial segments of strategic management. Their stimulative nature creates specific paths for the implementation of the managerial policy. Beside the objectives provide organisational structures and management systems, which also includes the problem handling of their supporters.
Strategic Profile:

For the definition of strategic programs, a pattern is required, which alleges the substantial aspects of a strategic option. Dependent on the demands, its desired characteristics are to be scaled and shaped.

The request for strategic reasoning and acting is to be detailed (Bleicher, 1993) within four ranges, the:

- **Products**, 
- **Activity-(Value-creating-)chains**, 
- **Competitive behaviour** 
- **Resources**.

The four mentioned ranges can be seen in the four quadrants, illustrated in the above pattern. The profile serves on the one hand for visualising the actual situation of an enterprise or section, on the other hand a second step can indicate the target strategy which allows to deviate a migration path. A central positioning in the pattern complies with a stabilizing strategy (standardized mass program, conformist, internal synergy potential and deterministic resource allocation). The outer regions in the pattern point to a changing strategy (individual niche program, pionier, external synergy potential, open resource handling).
Product Program Strategies

- Cover of a broad tender, which includes all conceivable needs of a customer group
- Big Assortment as an incentive for the customer contact, borne by the thought of the dispersion on a multiplicity of market segments and the "economies of scope"
- Concentration on specific tenders in the context of a more comprehensive assortment
- Outstanding competence in the program emphasis as an incentive for the customer contact
- Borne by the thought of the concentration on single market segments and the "economies of scale"

Notes to the figure:

- The individualisation creates an acquisitional potential, which eases the pricing pressure
  - The composition of the market service are specifically custom-tailored
    - Standardisation may allow advantages in the price war
  - The composition of the market service is fixed and must meet the needs of a multiplicity of customers
Activity Strategies

- Pronounced cost consciousness demands an expected long life of the assigned potentials (including R&D-investments), which forms market performances with a low innovation level.
- All value creating activities will be analysed, to achieve a rationalising with cost reduction.
- The will to exchange the assigned potentials also at short notice (including R&D-investments, if an increase of satisfaction results) generates innovative market performances.
- All value creating activities are analysed, with the objective, to increase the satisfaction of the partners needs.

Notes to the figure:
The Elements of the Strategy Audit

- Align to relevant strategic success positions
- Define a strategic program for achieving the strategic success positions
- Specification of Objectives, Means and Methods as parts of the strategic program

Strategy Audit:

A strategy audit serves the management for the refurbishment of the current market and enterprise situation and for the analysis of possible trends.
### Strategic Program

<table>
<thead>
<tr>
<th>Economy Performance Strategy</th>
<th>Financial Strategy</th>
<th>Social Strategy</th>
<th>Information Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Objectives</td>
<td>Profit Objectives</td>
<td>Personnel oriented and social Objectives</td>
<td>Availability Objectives</td>
</tr>
<tr>
<td>Economy Objectives</td>
<td>Economy Objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of Production</td>
<td>Capital reserve</td>
<td>Personnel Facilities</td>
<td>Management Systems</td>
</tr>
<tr>
<td>Capital structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methods</td>
<td>Production Methods</td>
<td>Personnel-referred behaviour standards</td>
<td>Acquisition of information and processing methods</td>
</tr>
<tr>
<td>Distribution Methods</td>
<td>Economy Method</td>
<td></td>
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</tbody>
</table>

**Notes to the figure:**
Example: Strategic Program for a Textile Machine Manufacturer

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Economy Performance Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>15% increase in market share within the next 7 years</td>
<td></td>
</tr>
</tbody>
</table>

| Means                                            |
| Module concept / Distribution concept            |

| Methods                                          |
| Basics development / Order engineering           |

Notes to the figure:
The Strategic Plausibility

The strategic plausibility:
Core Process Identification:

Based on the business vision and the business missions derived from it (strategic program), processes can be identified, by which the enterprise wants to concentrate on the future demands. Objective of the process identification is to designate the important processes and to create a common understanding for the customer needs, as well as the creation of the necessary abilities for execution.

The process Efficiency describes the use of resources for a specific process. The less resources are used for a certain output, the higher is the efficiency.

The process Effectivity describes the contribution of a process to the value that the customer actually notices, in relation to the strongest competitor.

**Definition:** A **Core process** is a main process, which has a significant effect on the market success of the enterprise and a substantial influence on the fulfillment of strategic success positions (SSP's).

**Note:** Order processing from Parts Manufacturing, Assembly, SU and Logistics

**Legend:** SU = Start-Up
Derivation of the Process Strategies from the Process Portfolio

Process Strategy:

For the strategic evaluation, following the process identification, processes are usually analyzed concerning their efficiency, i.e. evaluated by their profitability. The danger exists, that a change project, since optimized by efficiency criteria, degenerates to a cost reduction program, without using the chance of a fundamental strategic reorientation. For example, the process design of a traditional distribution of a machine manufacturer, gets to its limits, if the basic business conditions are not changed. Only a consistent market development, which systemizes the world-wide know-how transfer and guarantees a professional surrounding to the salesmen, allows the necessary fundamental progress for the distribution. For keeping this option, based on the concept of the strategic success positions after Pümpin, two further aspects apart from the efficiency must be considered. On the one hand orientation at the competition must take place. On the other hand, the processes, in terms of effectiveness, will be evaluated, regarding how strongly they promote the customer needs and/or how well they support the creation or the achieving of strategic success positions.