

THE STRATEGIC MANAGEMENT OF A LIFE CYCLE IN THE PRODUCTION BRANCH

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Abstract—To meet the needs of consumers primarily means to appear on the market with products, services and ideas. The integral part of business and development policy of the company is based on the assumption of the necessity and usefulness on more complete customization of products related to desires, demands and needs of consumers. Observing any kind of product, we can clearly notice that it goes through several stages during its life cycle. Also, a product can not be remained forever in the market and during its stay achieve a good income. It is unavoidable, if it experiences a success, it must experience a decline too. For this reason, it is necessary to innovate the existing products in various ways in order to keep them as long as possible in the market.

Keywords—strategic management, life cycle, production branch.

I. INTRODUCTION

STRATEGIC management deals with the management of the company in terms of the so-called action „imperative of change“, respectively, when changes create changes. Through strategic management managers and companies are trained to achieve the objectives in changing conditions, therefore, the strategy represents a result of the strategic management process and a guiding idea for decision-making.

The process of strategic management consists of stage of the strategic analysis, formulation, evaluation and implementation strategies. Therefore, the main educational goal is in introducing students to the process of strategic analysis, formulation, evaluation and implementation strategy. In order to achieve this, it is indispensable to understand the postulates of proactive access in management, to be acquainted with modern management concepts and tools that are used in the process of strategic management, as well as with the use of possible ways of the strategic resources. As the strategic management is a scientific discipline-oriented practice, implementation of such a defined educational goals will permeate efforts that the only true test of the

validity of acquired knowledge and skills is their practical applicability [1].

II. PHASES OF A LIFE CYCLE OF THE PRODUCTION BRANCH

During the life cycle of a branch are coming to fore the various generic strategies, functional fields, value creation activities and objectives. We distinguish four phases of the life cycle of manufacturing branches:

- introduction phase,
- growth phase,
- maturity phase,
- decline phase.

Strategy in the introductory phase is of characteristics of the introduction phase undertaken when:

- products are unknown to buyers,
- segment is not clearly defined in the market,
- characteristics of products are clearly defined,
- differentiated strategy is represented,
- competitive battle is limited,
- we have a small sales increase,
- we have rapid technological changes,
- the need for cash is expressed, etc.

Special attention is paid to the development of products and finding a way that the clients are forced to notice or try the product or impose a product to be a part of the standards, in order to be a competitive product.

Strategy in a growth phase involves the characteristics of growth phase, primarily:

- when it comes to a sudden increase in sales and income,
- when competition achieved intensity,
- when the market demands specialty and differentiation of products,
- when the emphasis is given in product design, etc.

In this case, a special emphasis is given to sales and marketing, strong brand recognition, differentiated product and financial resources for further investment in R&D and marketing.

Table 1: Phases of the life cycle of branches [1]

	Introduction	Growth	Maturity	Decline
Generic strategies	Differentiation	Differentiation	Differentiation, general leadership in costs	General leadership in costs, Focus
Rate of growth	Low	Very low	Low to moderate	Negative
Nr. of segments	Very small	Several	Big	Small
Intensity of competition	Law	In increase	Very strong	Variable
Emphasis on the design process	Very strong	Strong	Very strong	Small
Emphasis on the design process	Small	Low to moderate	Strong	Small
Main functional fields	R&D	Sales and Marketing	Production	General management and finance
General objectives	Increase market awareness	Create demand among consumers	Defend own part of the market	Consolidation, harvest maintenance or leaving

If we analyse the strategy in the maturity stage, we'll notice the following characteristics of the activity:

- when demand is slightly declined,
- market becomes oversupplied,
- marginal competitors leave the market and industry,
- when rivalry becomes more intense,
- when the focus of general leadership strategies is in costs,
- when the focus is on process innovation, primarily aimed to reduce production costs, etc.

General and main objective of this maturity strategy on production and defense of its part of the market and the extension of life expectancy of the product.

The characteristics of the branches in decline phase are:

- negative growth rate of the market,
- threaten profit and sales,
- variability of the intensity of competition,
- application of the general strategy of application,
- behaviour of companies depending on competition, etc.

We'll mention and four basic strategies in the phase of decline, and these are: maintenance, harvesting, leaving the market and consolidation.

If there is a decline phase, it is necessary to take steps in order to bring to a reversal or a turnaround phase. Primarily, there is going to the removal of assets or a part of assets and costs, then selective cleaning of products and markets, and finally slow and cautious productivity advancement.

III. SOME EXAMPLES OF THE LIFE CYCLE OF PRODUCTION BRANCHES

Typical life cycle of a product - This is the same life-cycle framework that was shown in figure 1. Remember that besides the manufacturing stages, the life cycle of a product includes distribution, use, and final disposal. The raw-material acquisition life-cycle stage would include such activities as mining, crude oil extraction, and timber harvesting. Examples of material manufacture are the production of pigments from minerals or the production of plastics and solvents from petroleum feedstocks. Product manufacture includes activities like turning steel into car bodies, or pigments and solvents into paints. Product use emissions, such as those from car exhaust during driving or electricity consumption during use of a power tool, are included in a life-cycle inventory. Finally, in the disposal life-cycle stage the inventory of wastes, energy, and emissions that occur when products are sent to disposal are quantified (figure 1) [2].

The LCA framework shown here is simplified in order to clarify the life cycle stages. In a life-cycle inventory, the inputs and outputs of each life-cycle stage are quantified.

Process inputs can be divided into two kinds:

- 1) inputs of raw materials and energy resources (environmental input), and
- 2) inputs of products, semi-finished products or energy, which are outputs from other processes that must themselves be inventoried (economic input).

Similarly, there are two kinds of output:

- 1) outputs of emissions (environmental output), and

2) output of a product, a semi-finished product or energy (economic output) [2].

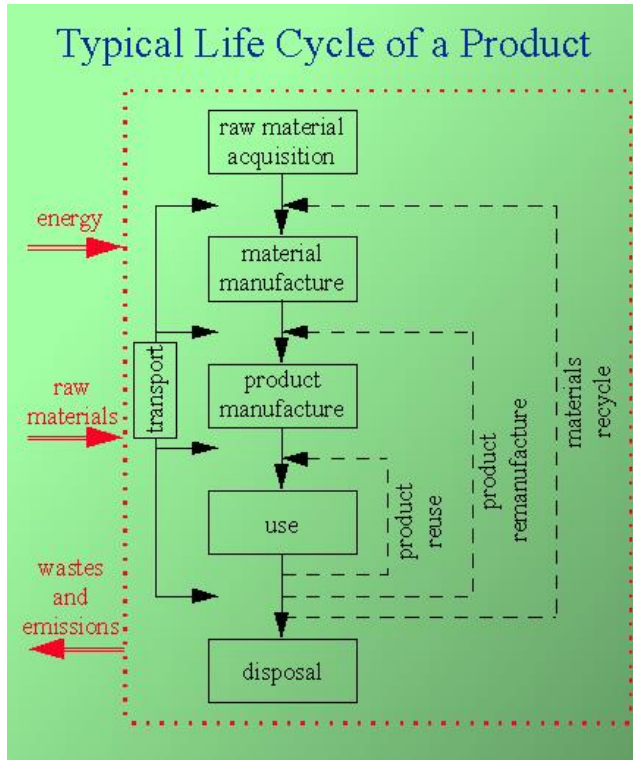


Fig. 1: Typical life cycle of a product [2]

Life Cycle Framework View - Definition of lifecycle acquisition box (figure 2) a process model in which products are developed and manufactured. Program Manager (PMS), together with its integrated product

teams (IPTs) using systems engineering (SE) process of turning requirements of hardware and software solutions for Varfighter. Sveobuhvatni outcome of early and ongoing technical planning is designing, developing and fielding systems that meet the contractual and performance requirements at an affordable Varfighter cen. SE process serves as the basis for the integration of production management systems in engineering activities [3].

A program manager should be able to:

- Define the development process for acquisition programs;
- Identify the roles and activities of manufacturing during the various phases of an acquisition program;
- Identify the various inputs and output documents that should contain the appropriate manufacturing considerations for that phase of the program; and
- Identify the opportunities and investments requirement in order to mitigate acquisition risk early.

Life Cycle Assessment for Suits - We've kicked off a new research project looking at the market for life cycle assessment services. Life cycle assessment (LCA) is going to have a major impact on the world of sustainability in the coming years. LCA involves looking in a holistic way at a system that produces products or services through all stages of its life cycle, from acquiring raw materials to manufacturing to use and recycling or disposal (figure 3).

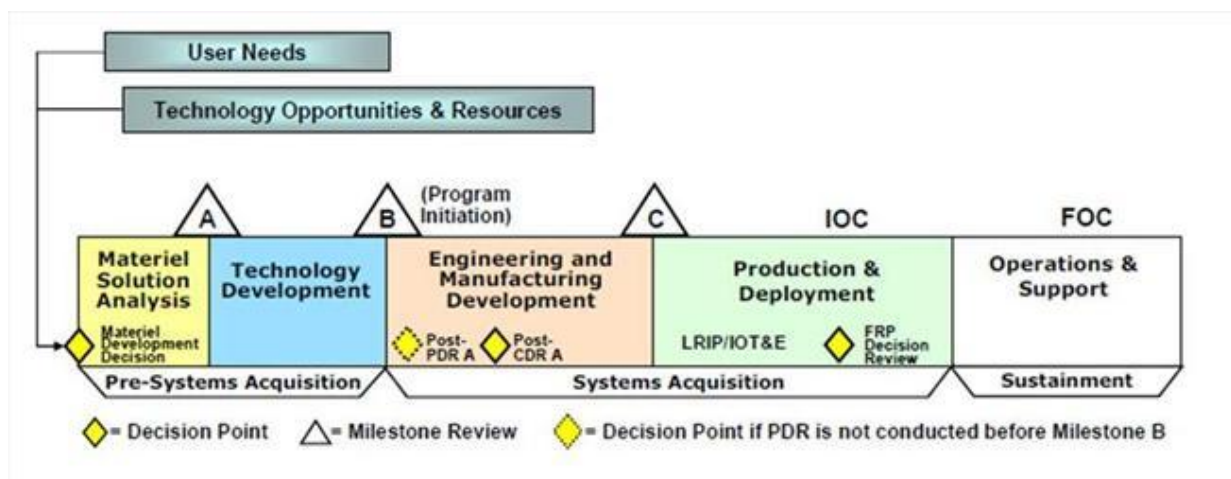


Fig. 2: Life Cycle Framework View [3]

Why are we looking at LCA? Our most recent study of senior sustainability executives revealed the growing importance of life cycle assessment to the sustainability movement. A number of the executives cited LCA as the cornerstone of their sustainability programs. Others were at work on simplified LCA-lite measures, which they felt would be more accessible to smaller companies that may

not have the resources to conduct full LCAs. A prominent executive at one well known company I spoke with suggested that there is a need for greater research and information on LCAs for the use of business executives who are responsible for their companies' sustainability programs.

Life cycle assessment is about 50 years old. Initially, it was developed in response to concerns about uncertain access to resources, including energy. In its early years LCA tended to be employed in industries that handled scarce, toxic and/or regulated materials or (and I'm speculating a big because I haven't fully researched it yet), where margins were low and the benefits from material stewardship are high.

LCA is a highly technical discipline and its practitioners tend to be highly trained and with advanced degrees. Executives with technical responsibilities, such as process engineers and manufacturing heads, are ones who traditionally have commissioned made use of LCA studies [4].



Fig. 3: Life Cycle Assessment for Suits [4]

Software systems and tools for life cycle assessment (LCA) are presented in the papers [5, 6].

Typical phases and activities in the life cycle of a manufactured product - Design for reliability means building reliability into the design of a system rather than incorporating it after development has begun or is finished. Reliability should be considered as a design parameter early in the life cycle of a product, preferably while product requirements are being defined or during feasibility analysis. Designing in reliability does not mean that reliability issues can be ignored for the remainder of a system's life cycle. Reliability evaluation and continuous improvement should take place throughout the life cycle of a system. Figure 4 illustrates some of the activities that take place throughout a system's life cycle. The life cycle phases and activities vary depending on the type of system being analyzed [7].

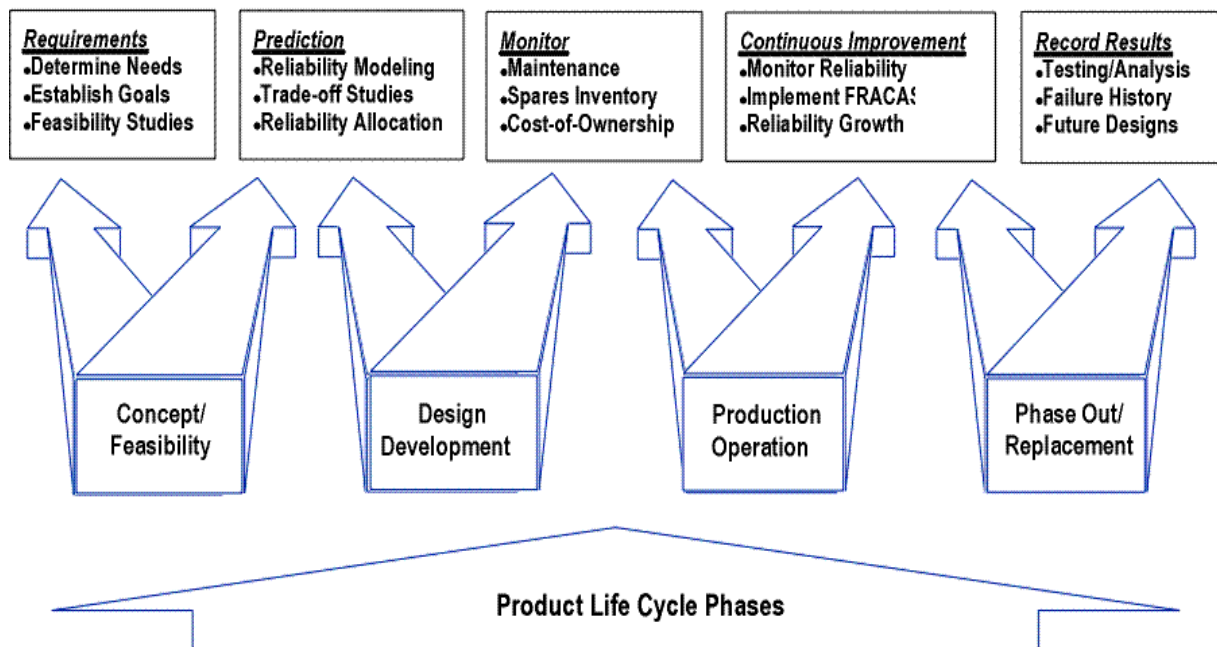


Fig. 4: Typical phases and activities in the life cycle of a manufactured product [7]

IV. CONCLUSION

If we want to avoid the unforeseeable consequences of the survival of any form of organizational production,

primarily is needed to work on a strategy that will help in bypassing of all problems that may be of a crucial significance for disappearance from the market scene.

Each study should be done thoroughly with plenty of samples from potential markets and make the rough estimate of the potential dangers. It is very important to see the conditions in which production, development and competitiveness can take place. Every market has risks, which should be reduced to a minimum, and this requires a good strategic management with a very prepared managers and modern technology. With continuous improvement and monitoring of contemporary brands and imposition by us, so that we become a brand in a trend.

Any other strategy would be disastrous with a great chance of being unsuccessful and non-competitive in the market.

The life cycle of a branch depends on numerous factors and characteristic activity.

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