

# Innovation management as a tool of qualitative changes in the food processing industry

## *Manažment inovácií ako nástroj kvalitatívnych zmien v potravinárskom priemysle*

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**Abstract:** The paper deals with theoretical and practical aspects of the innovation process as well as its final results and impact on qualitative level of the supply in the market with food products. From this point of view, we consider an innovation process as an alternative approach how to reach competitive advantage. The paper also points at several possibilities how to manage innovation process in order to create a new product with certain features of competitiveness. There follows from the research that the innovation process is not only the question of new product development but it is also the question of technological approach, new markets entering as well as organization changes in the company.

**Key words:** innovation, product, qualitative change, food market, food processing industry, competitiveness

**Abstrakt:** Príspevok sa zaoberá teoretickými a praktickými aspektmi inovačného procesu ako aj jeho vplyvom na kvalitatívnu úroveň ponuky na trhu potravín. Z uvedeného hľadiska inovačný proces považujeme za jeden z alternatívnych prístupov k dosiahnutiu konkurenčnej výhody. Príspevok tiež poukazuje na niekoľko možností ako riadiť a orientovať inovačný proces v záujme vytvoriť nový výrobok s určitými prvkami konkurencieschopnosti. Z uskutočneného výskumu vyplýva, že inovačný proces nie je len otázkou vytvorenia nového výrobku, ale je to tiež otázka technologického prístupu, vstupu na nové trhy ako aj otázka organizačných zmien v podniku.

**Kľúčové slová:** inovácia, výrobok, kvalitatívna zmena, trh potravín, potravinársky priemysel, konkurencieschopnosť

Strong domestic and international competition as well as differentiation of consumer needs and wants to create requirements for new and innovative products. The process of innovation management is a very complicated one, following from marketing strategy and expressed in marketing and innovation programs for new and innovative products. Product development and introduction of new products in the market is an inevitable supposition how to survive in competitive market environment, how to be able to keep certain market share, how to widen market as well as increase outputs. A new product has to fulfil needs of consumers and the producer should offer the new product in the market for reasonable price. The goal of the paper is to summarise theoretical and methodological aspects of innovation process from different points of view in terms to apply them in practical marketing management in food processing industry.

## MATERIAL AND METHODS

The paper summarises main theoretical topics that devote attention to the process of innovation management and new product development. We followed from the fundamental theory on new product development (Šimo, Kretter, Vicen 2000; Kotler 1998) and also international

aspects of this process (Wild, Han 2000; Cateora, Graham 1999). In the second stage, we tried to define the position of new product development process in managerial decision-making (Paška 2000, Gozora 1996, Kotler 1998,). Finally, we paid attention to the innovation process as a source of competitive advantage (Nagyová 2000; Pinchot, Pellman 1999). Practical topics summarise information obtained by interview with business management on the set of 20 food processing companies (5 milk processing companies, 3 beverage producers, 1 brewery, 3 producers of cereal breakfast, 3 producers of chocolate products, pastries and sweets, 2 meat processing companies, 2 producers of soya products, 1 producer of plant oil and margarines) operating on the Slovak market during period of years 2001 and 2002. In the research we used method of analysis, synthesis and comparison.

## RESEARCH RESULTS

### **Innovation and its position in strategic decision-making**

Process of the strategic scenario formulating follows from external conditions in the market (taking into con-

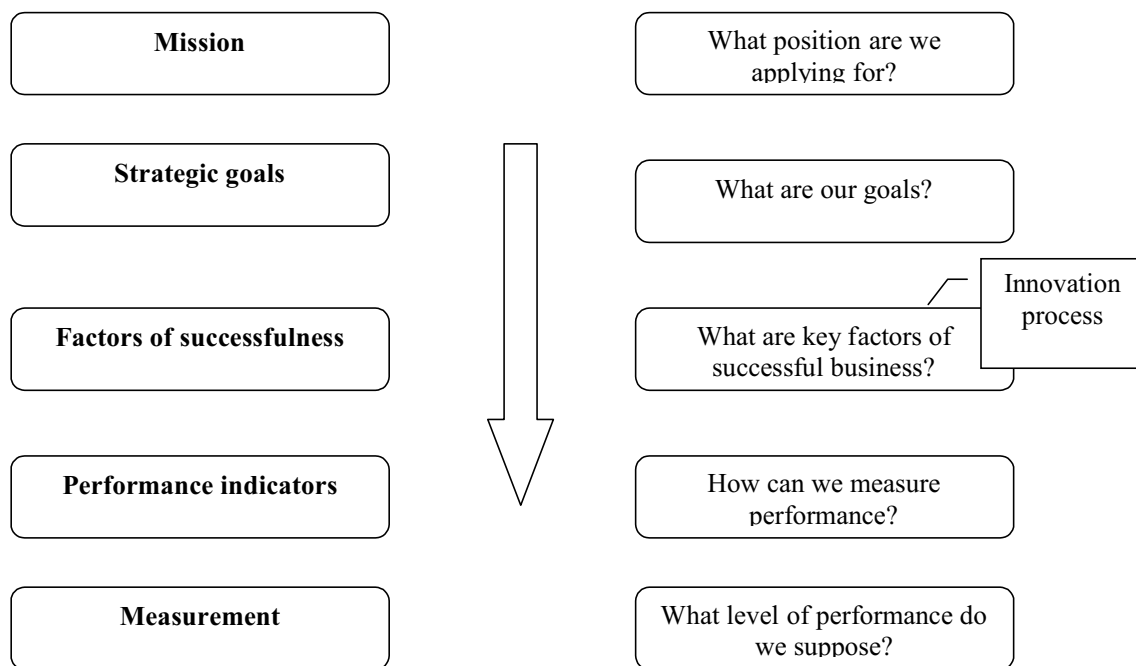


Figure 1. The decision-making tree of building the strategy

sideration present and supposed opportunities and threats) as well as internal possibilities and resources (present and supposed strengths and weaknesses). The goal is to create and keep comparative advantage in the market the from viewpoint of:

- geopolitical and macroeconomic situation,
- demand development and its qualitative structure (requirement for new products, trends in consumption, consumer behaviour, distribution channels),
- production inputs and technology,
- legislation (the Food Act, free movement of goods and services, regulation of foreign trade operations),
- trends in food consumption and life style,
- information technology development.

Based on research results, we describe a decision-making tree of building the strategy with the goal to keep a market position and create prerequisites for sustained development. We also emphasise the position of innovation in this process (Figure 1).

We distinguish between *technological approach* to innovation process (based on improvement of technological process) and *marketing approach* to innovation process (improvement of qualitative features of the product and its attributes). Another business activities, e.g. new market entering, new materials and inputs use, changes in production management as well as total quality management system building are also classified as innovation activities.

### Degree of newness

As perceived by the market, varying degrees of newness categorise all new products. We can define four degrees of newness as follows:

- *A congruent innovation* is actually not an innovation at all because it causes absolutely no disruption of the established consumption patterns. The product concept is accepted by the culture and the innovativeness is typically one of introducing variety and quality or functional features, style – exact in the sense that the market perceives no newness (e. g. newness in package design).
- *A continuous innovation* has the least disruptive influence on the established consumption patterns. Alteration of a product is almost always involved rather than the creation of a new product. Generally, the alterations result in better use patterns – perceived improvement in the satisfaction derived from its use (flavours in coffee).
- *A dynamically continuous innovation* has more disruptive effects than a continuous innovation, although it generally does not involve new consumption patterns. It may mean the creation of a new product or considerable alteration of the existing one designed to fulfil new needs arising from changes in life-styles or new expectations brought about by change (freeze-dried foods).
- *A discontinuous innovation* involves the establishment of new consumption patterns and the creation of previously unknown products. It introduces an idea or behaviour pattern where there was none before.

### Characteristics of innovations

All ideas for innovation and new product development should be analysed based on several criteria, as it is shown in the Figure 2. At the same time, these criteria point at possible ways in which we could conduct innovation process.

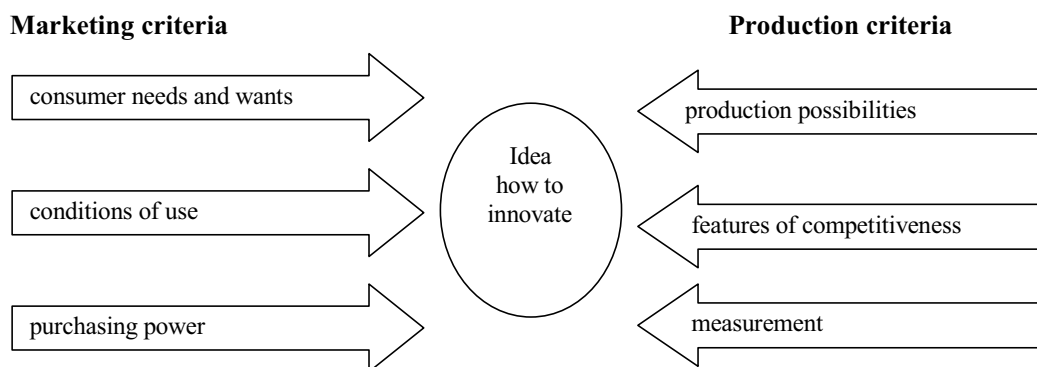


Figure 2. Criteria how to select a right idea for the innovation process

Table 1. Research results on orientation of the innovation process in the food-processing companies

Kind of production	New product development and its orientation					Innovation process and its orientation				
	A	B	C	D	E	A	B	C	D	E
Milk processing	x					x		x		x
Production of beverages	x					x	x		x	x
Brewery				x					x	x
Cereal products	x					x	x		x	x
Chocolate products, pastries and sweets	x					x	x		x	x
Meat processing			x			x	x			
Soya processing	x						x	x		
Oil and margarine production	x		x			x		x		

A – healthy food product, B – convenience food product, C – tradition and origin, D – relation to other actual trends, E – export as a reason for innovation

Detailed information on the innovation process orientation in the set of food-processing companies observed in our research is provided in Table 1. All companies devote attention to healthy food product production and actual trends in the market regarding to the production of convenience food products. We found also export expansion as a reason for innovation. Based on research results, we define the following perspective areas for new product development and innovation process:

- *healthy food products* (food products with lower amount of fat, sugar, cholesterol, food products enriched with vitamins, minerals, fiber),
- *convenience food products* (frozen food products, ready-to-eat meals),
- *tradition* (return to tradition recipes, acceptance of culture, habits),
- *question of origin* – country of origin, region of origin, original producer, original recipe,
- *actual trends on the market* (e. g. food products with pro-biotic cultures, natural products),
- *actual products* for certain season, holiday,

- *similarity with popular products* (design of package, using popular features in advertising),
- *green marketing*,
- *ethnic and regional diversification versus global products*.

Acceptance of new product in the market depends on its characteristics:

- *relative advantage* (the perceived marginal value of the new product relative to the old),
- *compatibility* (its compatibility with acceptable behaviour, norms and values),
- *complexity* (the degree of complexity associated with product use),
- *trialability* (the degree of economic and/or social risk associated with the product use),
- *observability* (the ease with which the product benefits can be communicated).

We can also mention here some features of competitiveness as a high quality, consumer oriented product characteristics, uniqueness and permanent innovation.

## CONCLUSION

The rapid and effective innovation process we could consider as a primary source of permanent competitive advantage in the 21<sup>st</sup> century. Permanent product innovation in harmony with marketing communication play the important role also in the process of strong brand building. Innovation is more than creativity. It is necessary to analyse this process from the viewpoint of economic efficiency. Finally, we could define the principles of effective innovation as follows:

- effective use of resources,
- new products, quality improvement,
- new methods how to eliminate the impact on environment,
- to reduce the time necessary for innovation process,
- to improve the methods how to communicate with customers,
- new information sources,
- improvement of organisational structures and marketing management structures.

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