

CREATION AND IMPLEMENTATION OF THE INNOVATION STRATEGY IN THE ENTERPRISE

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Abstract

The main aim of the article is on the base of detailed analysis of the literature and carried out research to develop a model of creation and subsequent implementation of innovative strategies in the enterprise. In the model of innovative strategy we focus on creating of effective system of work with innovations and knowledge of an enterprise. The paper contains recommendations for the successful implementation of innovative strategies within the enterprise. These recommendations should serve to business managers as a valuable tool in implementing an innovation strategy. There are also identified areas of potential problems at which managers must focus on achieving without-problems work with innovation in the enterprise. In research were used the following methods: comparative method, qualitative evaluation method, structured and semi-structured interviews, observation methods, document analysis method (method of content analysis) and questionnaire method.

Keywords: innovation, innovation strategy, innovative potential, innovative management.

JEL Classification: O31, M11, M31.

Introduction

Innovations are currently fundamental prerequisite of competitiveness (Strišš *et al.*, 2009). The economic crisis forced most businesses to savings in all business areas. On the other hand, it should be noted that the economic crisis for will gone and come again revival the economy and re-distribution of markets. Successful companies will be the ones that will have implemented an innovative strategy, will invest in research, development and innovate. Innovation is regarded as a key business process; it means that companies are trying through them to achieve a competitive advantage. The basic precondition for the creation and use of innovation in the enterprise is well formulated and implemented innovative strategy.

The definition of innovation strategy

Among the professional public is currently debate about definition of innovation strategy and allocation of areas of their operation. Kováč (2007) sees innovation as a strategy for determining long-term fundamental business objectives and determines the activities and resources for achieving these goals. Orientation objectives are focused on timely response to changes in signalling of need of innovations. According to him the innovation strategy must be based on variation, long term, systematism, the time factor and the concentration of resources and activities. The above-mentioned variability of innovation strategy highlights Zaušková (2006). Innovation strategy is often called in the scientific literature such as e.g. scientific and technical, development-innovation or research and development strategy. Zaušková (2006) gives some attention to the fact that the scope of the adjective (in the context of innovation strategy) may be wider, respectively narrower.

There are a few definitions of an innovation strategy in the literature, but each of these cover only a section of the overall role of an innovation strategy. Table 1 summarizes the definitions of the term innovation strategy.

Based on a thorough analysis of domestic and foreign literature, we can proceed to the following definitions of innovation strategy:

"Innovation strategy is innovative direction of company approach to the choice of objectives, methods and ways to fully utilize and develop the innovative potential of the enterprise. This is the direction given of its boundary, which determines the potential of innovative strategies."

Innovative potential of the strategy can be defined as the rate of innovation strategy, which would be attained in the optimal utilization of all sources of innovative strategy. The level of innovation potential strategy depends on the level and quality of the individual components of innovative resource of strategy.

Innovative sources of strategy, we understand the opportunities, skills, knowledge, experience, invention and innovation that are available to businesses, or are unable to obtain in good time. Innovative sources of strategy consist of four basic, interrelated, modules, namely: *Bank of inventions*, *Bank of innovative opportunities*, *Knowledge base*, *Bank of innovation*.

Table 1. Definitions of innovation strategy

Author(s)	Definition
Gilbert (1994)	Innovation strategy determines to what degree and in what way a firm attempts to use innovation to execute its business strategy and improve its performance.
Katz, Preez, Schutte (2010)	An innovation strategy is: – An incrementalist, functional, predetermined plan governing the allocation of resource to different types of innovations in order to achieve a company's overall corporate strategic objectives and, – A decision framework guiding a company about when and how it should selectively abandon the past and/or change its corporate strategy and objectives in order to focus on the business of the future.
Dodgson, Gann and Salter (2008)	An innovation strategy: – Helps firms decide in a, cumulative and sustainable manner, about the type of innovation that best match corporate objectives. – Guides decisions on how resources are to be used to meet a firm's objectives for innovation and thereby deliver value and build competitive advantage.
Strecker (2009)	Innovation strategy is defined as the sum of strategic choices a firm makes regarding its innovation activity. Innovation goals (ends) are not included – only means. Innovation strategy is considered a firm wide, cross-functional meta-strategy.

Source: own elaboration

Based on carried out detailed analysis domestic and foreign literature, it is showed that an innovative strategy is significantly affected by five basic (core) elements. It can be entered in the form of the functions of five variables that affect the implementation and realization of innovative strategies:

$$I_S = f(I_m, I_{PS}, L_M, P_K, O_S) \quad (1)$$

where I_S is innovation strategy, I_m innovation management, I_{PS} innovative potential of strategy, L_M lateral thinking, P_K pro-innovation climate and O_S is organizational structure.

Empirical research - situation in Slovak companies

Research was conducted in the period from January to September 2010. His primary task was to obtain and interpretation information about using of innovative marketing strategies in Slovak companies. Purposes of research was to identify the preparedness of selected Slovak companies to introduce and use innovative marketing strategies by identifying its key elements, work with innovative ideas, opportunities, innovation and application of lateral thinking. Research was conducted on a selective sample of 262 senior managers of medium and large enterprises operating in the Slovak Republic. Most managers were interviewed via an online questionnaire (82.3%). 17.7% of senior managers we contacted personally by the semi-structured interview. In the process of information processing has been used χ^2 test the independence of the qualitative data and cluster analysis.

The lack of literature about the definition, structure and use of an innovation strategy is reflected in the fact that very few companies have an explicit, documented innovation strategy. 29.6% of surveyed respondents did not address the issue of marketing innovation strategy. In the study phase is 9.5% of surveyed enterprises, 6.2% is in the process of deciding on its importance for the company and to 32.1% of surveyed enterprises seeking to implement an innovative marketing strategy to business practice. 22.6% of respondents said that marketing innovation strategy already in place, which is regarded as a positive development. The experience of these firms can make recommendations for the successful implementation of innovative strategies within the enterprise.

48.6% of respondents surveyed all innovative ideas recorded and, if necessary, use them. Conversely only 6.4% of respondents recorded no innovative ideas. 21.9% of surveyed marketing executives reported that their innovative ideas in business are always generated from scratch if necessary. 24.3% of surveyed respondents use analysis of innovative ideas in a group. Only 8.3% of respondents have system of rating innovative ideas, which is necessary for successful implementation of innovative marketing strategies.

For the major issues hindering the implementation of innovative marketing strategies in the enterprise managers identified the lack of necessary funds (45.2%), lack of enabling environment to support development of innovation (33.5%) and inefficient work with innovative ideas (28.1%).

χ^2 test the independence of the qualitative data showed that there is no dependence between the applied marketing strategy and business readiness to implement innovative marketing strategies.

Based on the results of cluster analysis we can conclude that the majority of companies surveyed (57.4%) fall into one cluster. It is made by marketing managers, who attach great importance to two elements of innovative marketing strategy namely product and lateral thinking. They realize all the benefits of applying lateral thinking in relation to the product. Lateral thinking understood as a way to achieve product innovations offering new needs for new customer groups.

Current approaches to creating of innovation strategy

Creating an innovation strategy is a complex process. Various authors state many variants of innovative strategies. Sabadka and Kováč (2004) consider innovation strategy as an integral part of an overall strategy that promotes innovation objectives. Šimková (2006) highlights the need to consider a range of factors. According to her the aim of creating of innovative strategies is find a balance between the potential for innovation, enterprise and all relevant factors of the internal environment. Table 2 presents four models of creating of innovation strategy by different authors.

Table 2. Models of creating of innovation strategy and their structure by different authors

Author(s)	Structure of model of innovation strategy
Rudy (2004)	1. Clarification of innovative ideas, 2. Formulate a vision of senior management, 3. Choice of effective ways of implementation.
Kadár a Vida (2007)	1. Mapping and assessing the impact of ambient operating system (socio-cultural, economic, technological, political and legislative implications), 2. Analysis and evaluation of the internal environment (the products' own resources, structure and development), 3. Formulating competitive strategies (high productivity, quality and customer satisfaction, profit maximization, organizational growth, improved market position), 4. Elaboration of implementing programs and projects, 5. Evaluation of the effectiveness of innovation.
Šimková (2006)	1. Analysis of the external environment (Step analysis, economic characteristics of the sector, analysis of industry dynamics, strategic maps, analysis of competitors, analysis of industry attractiveness) 2. Stakeholder analysis (opportunities and threats, strengths and weaknesses) 3. Internal environment analysis (evaluation of existing strategies, analysis of results in functional areas, vulnerability analysis, Space analysis, competitive analysis, key success factors).
Innovation Factory	1. Strategic intelligence, 2. Identification of opportunities for innovation, 3. Evaluation of the possibilities for innovation, 4. Formulation of an innovation strategy, 5. Definition of the need for organisational structures and processes, 6. Definition of the required organisational competences.

Source: own elaboration

Proposal for model of creating an innovation strategy

The diversity of approach for creating innovation strategy refers to the fact that the innovation strategy as a system of work with innovation in the enterprise is evolving. It is possible to create a relatively universal model that will ensure successful implementation and follow-up realization of innovative strategies in the company. When creating a model of innovative strategies must be suitably chosen structural elements of the model to show to the importance of innovation in the enterprise. Following the opinions of many authors dealing with the issue of creating a model of innovative strategies in the company and a thorough analysis of the structure of approaches of creating innovative strategy we propose model of creation of the innovation strategy. We follow from the model of creating strategy under Jakubíková (2008). The process of creating an innovation strategy is a complex process that contains six main parts. This is a defining vision and mission of the enterprise, identifying strategic objectives, detailed analysis business environment (internal and external), formulation of strategy, its implementation and subsequent evaluation associated with the control (Jakubíková, 2008).

The model (Figure 1) we have developed especially in area of the strategic objectives of the innovation strategy and its link to corporate strategy, internal analysis of company and formulation of strategy, where we bring new insights to elaborate of application possibilities of system of innovation support. In the area of implementation strategy we have developed recommendations (advices) for managers. They represent a valuable tool in the implementation and subsequent implementation of innovative business strategies.

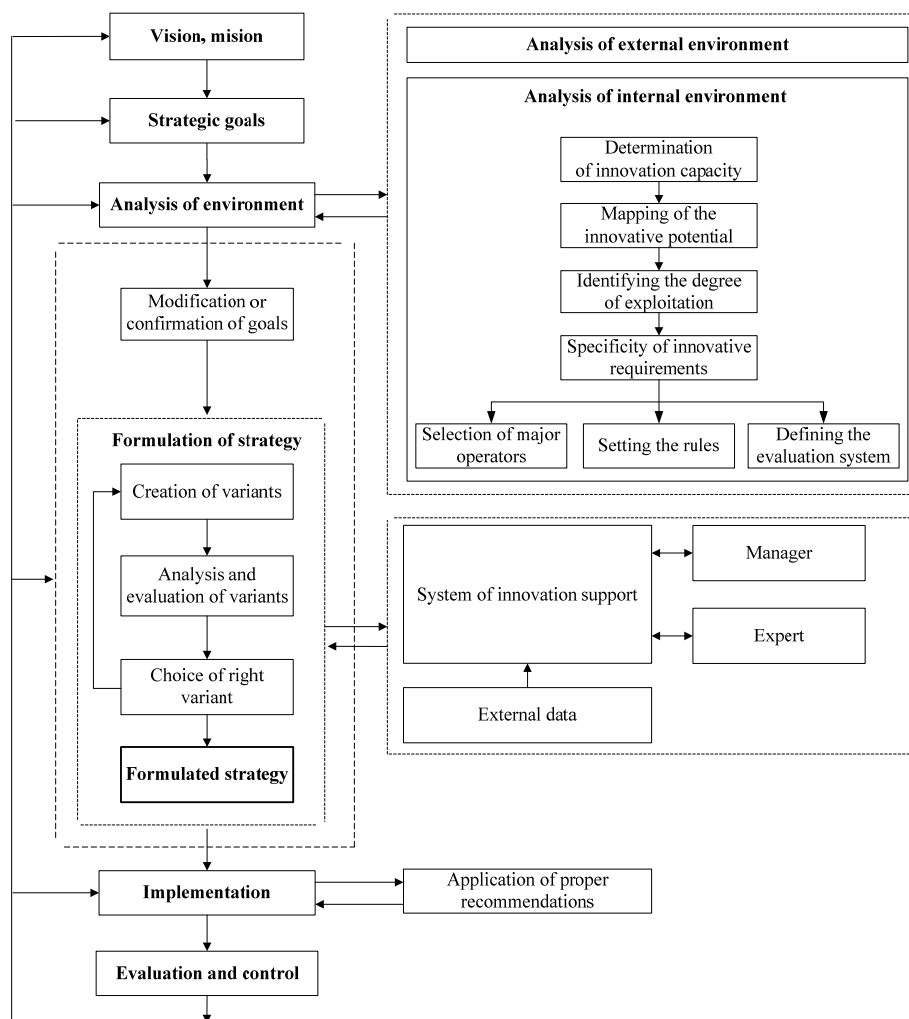


Figure 1. Model of creation and implementation of innovation strategy
 Source: own elaboration

The strategic objectives of innovation strategy and its link to corporate strategy

Innovation strategy is a summary of the strategic decisions on which are managed and carried out innovative activities in the enterprise. A successful innovation strategy must have variants, i.e. is processed in the variants that reflect past, current and expected future developments. Long term effects, taking into account all relevant factors acting on the business, as well as the time factor. The implementation of innovation strategy is necessary to ensure all available resources and its link with corporate strategy and other departments of the company, especially with the marketing department and information technology. The company must have secured an effective collection and sharing of information and knowledge to support innovation. To be created a good innovation strategy is essential that business managers were familiar with the detailed business strategy.

Analysis of business environment

Preparation of innovative strategies must be purposeful and must be based on analysis of internal and external environment, planning and innovative design. In the area of strategic analysis and planning is essential that the company fully used appropriate methods of strategic management. The subject of strategic analysis is primarily scientific and technical capabilities of the enterprise, competition, the manufacturing company's potential (the potential of human, material and financial resources). Strategic analysis of responses to important questions, such as the existence of their own original research and development enterprise, the existence of new opportunities for the development of innovation, the existence of creative potential for the development of inventions and the like. This information significantly affects the process of innovation strategy.

Before the creation of innovative strategies in the enterprise should be an audit of the current situation. An audit includes identification and analysis of human potential, competitors, partners, customers and

business needs to create innovations. For analysis of the initial position of a company may be based on broad methodological apparatus of strategic management. This is particularly the forecasting method (expert, simulation, projection, and forecast type of scenarios), conceptually methodological tools (SWOT analysis, BCG matrix, matrix product - technology, map of project risks, SPACE analysis STEEP analysis, Porter analysis ...) and innovative graphs (method S-curves, J-curve method, the method of "gap analysis").

Analysis of internal environment includes the creation of innovation capacity, innovation potential mapping, identifying the current level of use of the innovation capacity of innovation and specification requirements. Innovation capacity is formed by the sum of knowledge, experience, resources, assets and managerial capabilities and skills in business available, or is able to obtain in due time.

Strategy formulation

The most important process of innovation strategy we consider the formulation of the strategy. At this stage there are generated the different variants of innovation strategy, their analysis and evaluation according to established rules and criteria specified. On the base of the previous activities may be selected a suitable solution, which is the optimal option innovation strategy for the company. Strategy formulation process is marked by more intensive computations occurring mainly in the selection of appropriate solutions. Even in generating different options strategies it is required innovative use of information technology.

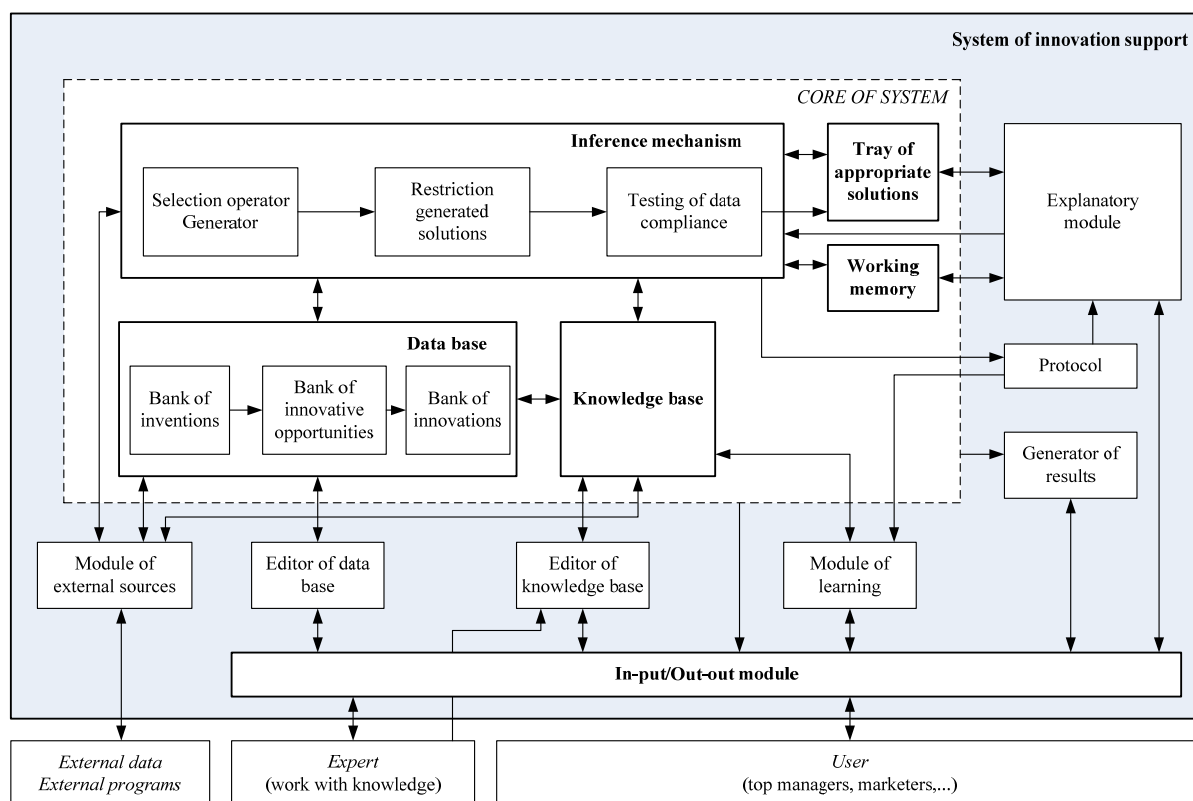


Figure 2. Proposal for system architecture to work with innovation (system of innovation support)

Source: own elaboration

For subsequent evaluation of alternatives is necessary that the intermediate results are stored in some area for the purpose of subsequent confrontation and comparison with current outputs. It should also on base on more data and knowledge, which must be stored in transparent database. This will prevent often situations when can happen exchanging of data, its searching, lost of data and not using due to absence of awareness of their existence within the enterprise. All these assumptions and requirements for successful development of innovative strategies can be achieved by introducing system of innovation support that will provide to senior managers the detailed information needed for decision making.

Based on an analysis of the literature on the creation of knowledge and expert systems (Návrát *et al.*, 2007; Spalek *et al.*, 2005; Liday & Kelemen, 1996), and after careful examination of the issue of innovative strategies (Horňáková & Zaušková, 2008; Dupal' & Molnár, 2002; Kováč, 2007; Tidd *et al.*, 2007; Dupal' *et*

al., 1997; Zaušková, 2006; Zaušková & Loučanová, 2008) we proposal system of innovation support (Figure 2). Table 3 briefly characterized by its main elements.

The main objective of the proposed system will achieve the best response to real data on innovation and thereby ensure high quality decision making in creating innovative strategies.

Table 3. Characteristics of the essential elements of system of innovation support

Element of system	Brief description
Knowledge Base	Provides space for the collection of all knowledge that can be used in the innovation process.
Data Base	Contains all the unique information relating to innovation. It consists of Bank of inventions, Bank of innovative opportunities and Bank of innovations. Bank of inventions is a space for the search, creation, evaluation and storage of inventions (suggestions, ideas, thoughts), which may be in the next phase in the shaping of innovation strategy. Bank of innovative opportunities is a space to store and work with the identified innovation opportunities. It also serves to store the innovative opportunities for business is not immediate importance. The bank of innovations keeps all the created innovation and creating an environment for their effective management and their conversion into a successful innovation strategy.
Working memory	Provides space for storage of intermediate solutions and the timing of action to working out.
Inference mechanism	Allows finding the required knowledge in a knowledge base, data base and using them to create an innovation strategy.
In-put / Out-put module	The interface between system and its surroundings, which is mainly represented by top managers and workers involved in the process of innovation strategy.
Explanatory module	Clarifies, explains and justify decisions which are the output of the system.
Protocol	Stores the history of the solution.
Editor of Knowledge Base and Date Base	Ensure continued updating, completion and dissemination of the knowledge base.
Module of learning	Its main objective is to support knowledge acquisition.
Generator of results	Summarizes partial results in a reasoned and integrated whole, without unnecessary information, the requested form and intelligible form.
Module of external sources	Provides communication of the expert system with their environment. The main activity of this model is to work with external data and work with external programs.

Source: own elaboration

Recommendations for successful implementation of innovation strategy

For the successful implementation of innovation strategy is essential to avoid more potential problems. *Insufficient development of an innovative program* it is a common problem in implementing innovative strategies in the enterprise. Managers rely too much on technology. That the enterprise to be able to successfully implement an innovation strategy must have a sufficient basis for innovative processes, innovative capacity, innovative resources and information flows. It can be recommended to business manager that they ought to focus for detailed analysis of the current situation in business and to understand the role of technology in implementing the innovation strategy. It is also necessary to map innovative potential and correctly specify the innovative requirements to properly set evaluation system and a set of rules. Another risk area is the definition of strategic objectives that the company wants to achieve in terms of innovation in the area of innovation strategy. Frequently the company don't know clearly and understandable, what wants to achieve, respectively what are capabilities using its innovative potential. In this situation it is necessary that businesses correctly understood the concept of innovation potential, realized the potential benefits and was able to translate these requirements into the objectives. For the most common cause of failure may be *lack of understanding of its business innovation potential and possibilities for its use*. That can be advised to manager to properly understand the concept of innovation potential (good knowledge by studying literature, advice or relevant professional training), to clarify the situation, where the company wants to implementing innovative strategies to get the expected benefits and understand manner conducive to their realization and developed a common vision.

One frequent problem is *the exclusion of human factors from the process of innovation strategy*. Staff who are not involved in the creation of an innovation strategy, they do not get sufficient information about the objectives innovation strategy, are not thoroughly familiar with the intentions of firm's innovation activities, may be in some activities passively. It can be recommended to manager be ensured regular communication with employees with aim to create an innovative climate. Top management should allow employees to

participate in creating innovative strategies and welcome their ideas and explain the importance of innovation strategy. Of course it is necessary to ensure staff awareness during of the different steps of the implementation of innovation strategy. In some cases it may also happen to *automate the previous wrong innovation processes*. It can be recommended to manager to identify and continuous updating of innovative process, the main emphasis must be placed primarily on the processes that are in direct connection with the work of innovation. Managers must identify the missing processes. Sufficient attention must be paid to analyzing the current state of innovation processes. As a useful tool in this analysis can help managers create their own business model of innovation relationship management (more Bartók & Ješka, 2006).

Conclusion

Currently, the companies try to ensure their competitiveness through innovation. To be in the company conducted effective work with innovation is necessary to adopt and implement an innovation strategy. The proposed model of innovation strategy brings new insights primarily on analysis of internal environment and area of the formulation of the strategy. The main effort of business should be to create an innovative corporate culture. It should be noted that the corporate culture significantly affects the development of innovative strategies, as well as its implementation. Creating an innovation strategy will require a change in the organizational structure of the company. On the other hand, it should be noted that the innovation strategy, if successful, is not only plan to be implemented. It has symbolic value. It is something that provides information to staff about where the company is going with innovations, what motivates employees, what is the meaning of their work. In this sense the innovation strategy is a particular culture.

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