

STRATEGIC MANAGEMENT OF ENTREPRENEURSHIP BASED ON SMART TECHNOLOGIES

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ABSTRACT

The theoretical basis and methodological provisions developed on its basis and recommendations based on the activation and compensatory smart approach are substantiated to improve the process of strategic management of innovative development, increase its effectiveness, activate innovative search and ensure the efficiency of management decisions, compensating for the growth of their labor intensity through reasonable management tools. An activation-compensatory smart approach was developed to improve the organizational and economic tools of the innovative enterprise development strategy, according to which the system development of the management tools of the strategy activates innovative thinking and innovative search for the company's personnel after all stages of the strategy life cycle, simultaneously compensating for the growth of the functional and labor-intensiveness of these processes. A conceptual model was proposed to outline the hierarchy of tools for the four levels of innovation development management: national, regional, enterprise levels and its subsystems (scientific and technical study, production, management).

Keywords: Innovative Development, Smart Management, Strategy, Life Cycle, Mental Map.

JEL Classifications: M5, Q2

INTRODUCTION

Strategic management of innovative development of industrial enterprises in the context of growing information and a range of management tasks that impede management processes and functional content is carried out against the background of the rapid development of information and communication and information technologies. This requires the development of new organizational and economic tools capable of ensuring the effectiveness of innovative development and its strategy, while at the same time compensating for their complications through the use of intelligent (smart) technologies. This is objectively due to the rapid development of the latest smart technologies and approaches that activate innovative search in general and at the same time compensate for the complications and increase in the complexity of individual managerial functions, in particular strategic management.

At the enterprise level, the smart management of its innovative development within the framework of the strategy is carried out by a more developed management tool, which is changed under the influence of technological, informational and knowledge (human) factors. This level determines: the type of content of the strategy as a whole and the strategy of innovation development, the directions and mechanisms of the enterprise innovation development, the tools for developing and implementing the strategy, the control of its current indicators and final results.

REVIEW OF PREVIOUS STUDIES

Innovative development of an enterprise is ensured by the development and implementation of a specific type of strategy according to its corresponding principles and sequences of introducing changes; it forms specific objects of strategic management (Yang et al., 2017; Vlasov et al., 2019).

Achieving the desired result of development should ensure its appropriate resource provision, which consists of material, human, financial, informational and other resources (Rowledge et al., 2017).

The result of innovative development is to achieve different types of effect:

- Scientific and technical, which consists in changing the technical and operational and consumer characteristics of products (Dodgson, 2018; Makedon et al., 2019).
- Resource, which is the change in the volume of consumption of scarce or value resources (Drobyazko et al., 2019).
- Economic, consisting in obtaining certain profits or revenues from the implementation of innovations (Galloway et al., 2017).
- Social, which is to obtain an increase in indicators of social value (overcoming world hunger) (Provasnek et al., 2017).
- Environmental, taking into account the impact of innovation on the environment (Hilorme et al., 2019a).

Strategic management of innovative development should cover two different, but related objects: innovation activity and innovation potential, taking into account qualitative changes in the direction of personnel innovation growth (Hilorme et al., 2019b). Such an approach does not contradict the existing definition of the components of innovation development, since it relies on the logic of the innovation process as a whole and allows you to write out more clearly the organizational and economic tools of its strategy for the two objects mentioned.

METHODOLOGY

The study used the following methods: scientific abstraction, retrospective analysis and empirical research-when studying the scientific basis of innovative development of enterprises, justifying its qualitative changes as an object of strategic management; structural logic modeling-when developing a conceptual model of a multilevel support strategy for the innovative development of an industrial enterprise with intelligent organizational and economic tools, “*Innovation Scorecard*”-in the systematization of indicators for their evaluation, smart control of innovative development; systematic approach-for targeted selection of the functional content of

activation and compensatory management tools of the innovation development strategy; logical-to build a study structure.

RESULTS AND DISCUSSION

Since the strategy of innovative development of an enterprise is an integral set of interrelated elements, according to the objectives of innovative development, it should determine the mechanism of innovative changes, taking into account the existing limitations and opportunities, and, applying certain methods and tools, influence innovation development. This means that the strategy for managing the innovative development of an industrial enterprise should be based on: objectives of innovative development; possibilities and limitations of innovative products, processes, technologies, organizational and economic levers, the enterprise itself; management tools of the activation-compensatory smart approach (hereinafter-the ACS-approach).

The management tools of the ACS-approach are formed by a combination of the methodology of the ACS-approach, applicable management tools and methodological support of the process of their application at various levels of management. Since the work considers the level of enterprise management, management tools are considered further for it.

It is advisable to introduce management tools of the two groups.

Group 1: Organizational tools aimed at enhancing innovative search and development of innovative thinking of personnel. These include:

- Road or strategic maps that allow: to visualize the strategy and the relationship of strategic objectives, tactical decisions and business functions in time; to present graphically the existing technologies, products and markets at present and their formation and development in the future; to plan and integrate the development strategy with the objectives of innovation development.
- Mental (intellectual) maps, which present the strategy of innovation development holistically, allow to activate the innovative thinking of personnel in the process of its development, in particular at the target (developed), information and analytical and security (control) stages.
- IT technologies and cloud services that allow you to use the latest technologies to accelerate management functions and work, including smart control of strategy implementation.
- Professional training for the formation of personnel competencies in innovation and strategic management in terms of developing an innovative development strategy and smart control of its implementation.

Group 2: Economic tools that increase the effectiveness of the development and implementation of innovative development strategies at different levels of management:

- External national and regional (in particular, direct financing of research and development on innovations in the form of grants for their development and promotion, grants on a competitive basis; concessional lending of innovation activity; tax breaks and holidays; preferential depreciation regimes; support for venture funds; formation of innovation infrastructure; activation of long-term lending of investment activities by commercial banks; microloans and interest rate compensation for loans to enterprises in priority areas).
- At the level of the enterprise and its subsystems (a system of indicators for smart control of strategy implementation, a system for encouraging innovative personnel search).

There are two fundamentally divergent directions: innovative search and innovation introduction, which significantly differ in the main objectives of using IK mind-maps. Also, using the IK mind-maps tool, one can highlight the directions for improving the management tools of the innovation development strategy (Figure 1). Recommendations for its construction are as follows: by levels of detail, taking into account the logical link, to identify the main components of the strategy, consisting of the development. It is advisable to outline the following:

- a) The left part: The traditional substantive part (goals, objectives, strategic directions, conditions and limitations of innovative development (strategic factors), resources, risks, horizon and budget strategies, strategic plan, the latest blocks (innovative search, innovative culture and thinking).
- b) The right part: The management tools of the strategy by their types: road maps; smart cards (IK mind-maps) smart control and indicators of innovative development; professional training for the formation of competencies; key personnel competencies; areas of application of management tools (training, planning of strategic activities and projects, time, budget, decision-making; brainstorming; presentation of the strategy and its components).

In order to implement the model (Figure 1), two groups of management tools are proposed:

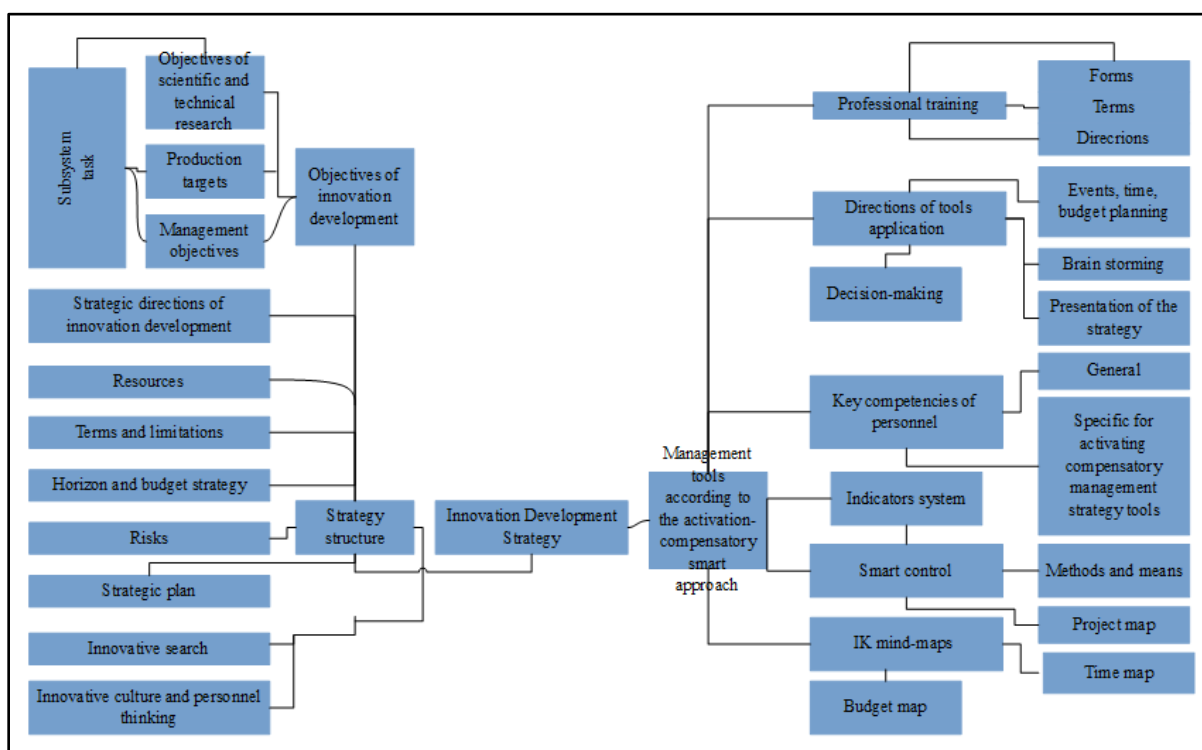


FIGURE 1
STRUCTURE OF THE STRATEGY OF INNOVATIVE DEVELOPMENT OF INDUSTRIAL ENTERPRISES AND THE DIRECTION OF IMPROVEMENT OF ITS MANAGEMENT TOOLS (AUTHORING)

Organizational, aimed at enhancing innovative search and development of innovative thinking of personnel: road or strategic maps that allow: to visualize the strategy and the relationship of strategic objectives, tactical decisions and business functions in time; to plan and integrate the development strategy with the objectives of innovation development; mental (intellectual) maps, which present the strategy of innovation development holistically, allow to activate the innovative thinking of personnel in the process of its development, in particular at the target (developed), information and analytical and security (control) stages; IT technologies and cloud services that allow you to use the latest technologies to accelerate management functions and work, including smart control of strategy implementation; professional training for the formation of personnel competencies in innovation and strategic management in terms of developing an innovative development strategy and smart control of its implementation.

Economic which allow increasing the effectiveness of the development and implementation of innovative development strategies at different levels of management: a) external national and regional (in particular, direct financing of research and development on innovations in the form of grants for their development and promotion, grants on a competitive basis; concessional lending of innovation activity; tax breaks and holidays; b) at the level of the enterprise and its subsystems (a system of indicators for smart control of strategy implementation, a system for encouraging innovative personnel search).

Accepting the basis for determining the strategy of innovative development of an industrial enterprise as a set of specific rules, methods and means of searching and choosing the best perspective directions for the development of its three subsystems: scientific and technical research, production and management, the study essentially recognized the multi-level improvement of management tools of the strategy of innovative development as a necessary condition for ensuring its consistency and integrity, since this approach allows to cover all levels of management of innovative development of the enterprise and its strategy. At the same time, it is necessary to expand multi-levelness and to go beyond the enterprise, since in the external environment the conditions and restrictions of innovative development are formed, which will affect its passing and effectiveness.

RECOMMENDATIONS

The content characteristic of the smart control of the innovative development of an industrial enterprise and the systematization of indicators for evaluating the effectiveness of management tools in the strategy of innovative development make it possible to evaluate them collectively and in full. The main tasks of smart control are: a) Planning: development of common principles and methodology for planning and control; determination of indicative indicators for monitoring the implementation of innovative development strategies; b) Organizational: building an automated smart control system, determining the interrelations of its components; regulation of control operations and delimitation of spheres of control; applying motivational programs for mastering smart control methods; c) Control and analytical: interactive smart control of processed, variance analysis; d) Regulating: development of proposals to eliminate deviations.

CONCLUSION

The developed methodical approach assumes a multi-level provision of the strategy of innovative development of an industrial enterprise with smart activation and compensatory management tools, and also contains recommendations for their functional meaningfulness and targeted use.

Potentially capable of activating innovative search and development of innovative thinking of personnel at the level of an industrial enterprise, without increasing its labor intensity or compensating for it through the use of appropriate technologies and technical management tools, such management tools as: road (strategic) maps and mental (intellectual) maps, IT-technologies and cloud services, stimulation of innovative search, professional training for the formation of personnel competences in the strategy of innovative development, smart control of its implementation.

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