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# ТЕОРЕТИЧЕСКИЕ ОСНОВЫ ХИМИЧЕСКОЙ ТЕХНОЛОГИИ

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AN INNOVATIVE PROJECT MANAGEMENT MODEL FOR TECHNOLOGICAL  
DEVELOPMENT OF AN ENTERPRISE

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The modern period of development of the economy calls for innovative activity of enterprises and to develop a new approach to innovation. Currently, the industry has all the prerequisites for the development and introduction of new technologies, modernization, implementation of scientific and technological research and development for the purpose of technological upgrading of industry. In the present conditions, as a key condition for the survival and the success of a growing competitive environment the ability to develop and implement an effective innovation policy based on scientific, technical and resource potential, private financial and material resources are required from the industrial enterprises. For the current stage of economic development is characterized by processes that require the adoption of a large number of innovative solutions [1].

During the last decades of the last century, a new branch of economics – management of innovative projects, represented as a part of the theory of economic systems management, which is learning methods, forms, machinery and tools which are most effective and efficient management of development processes of innovation [2].

The word innovation in general refers to a cost-effective (profitable) use of innovations in the form of new resource- and energy-saving technologies, new and effective products, organizational, technical, socio-economic solutions of industrial, financial, commercial, and managerial issues.

A more detailed information about development of innovative processes is presented in paper [3]. In their view, the emergence of innovations associated with the life cycle of innovation, which includes the following steps: 1) conducting the exploratory research, in which there is a realization of the scientific groundwork and their experimental verification; 2) implementation of applied research designed to test the investment activities of the innovation, as well as assessment of possible risks; 3) the project works with execution of design and technological documentation; 4) implementation of the commercialization of innovations from startup to use and output to market.

Innovative project means a complex system of interdependent and interrelated to all kinds of resources, time and event executants, which are directed to achieve specific innovative goals in the priority areas of science, engineering and technology. In other words, an innovative project represents a traced systematic implementation, united by a common purpose and dedicated to a particular time range of activities and events for the creation, production and marketing of new high-tech products with indicating the performers, the resources used and their sources [4].

Thus, the concept of “Innovation Project” can be seen in the next aspects: 1) as a set of innovative measures to achieve objectives; 2) the process of innovation; 3) as a package of documents justifying and describing these events.

These three aspects of the project confirm the importance of innovation as a form of the organization and targeted innovation management.

The purpose is to study and develop the principles of management and controlling in the innovative project of an industrial enterprise.

In this paper, we proposed a detailed scheme of design and implementation of innovative project, in which it seems appropriate mandatory introduction in the innovation cycle mechanisms controlling, ensuring, in this case the function of support and control at all stages of the innovative project. Under this scheme, provided the operational control and adjustments of direct and feedback to improve the intermediate results at certain stages of development and implementation of an innovative project (Fig. 1).

The division into stages allows to control and adjust the progress of the innovative project. Virtually all phases of the innovative project may make management decisions:

- whether to continue the planned project or adjust the job;
- the need to change the last stage of the project;
- to stop further implementation of the project.

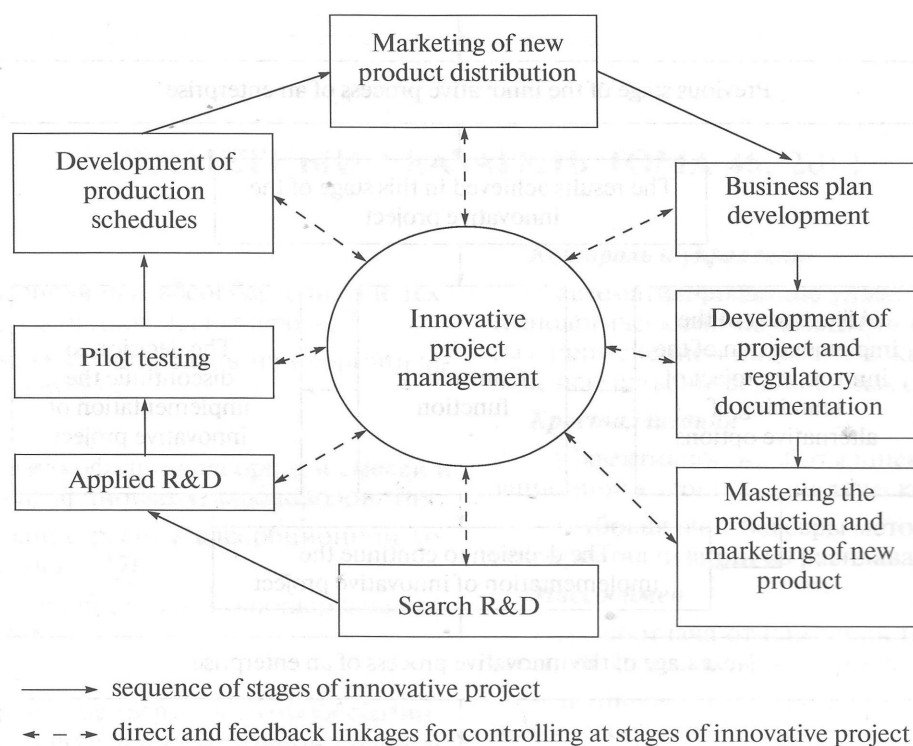


Fig. 1. The scheme of management and controlling of the innovative project.

Controlling – a kind of audit at each stage of the innovation project with feedback in the form of corrective and administrative decisions on the project. The main task of controlling is to ensure timely management of the company to issue a set of specific recommendations for their management of solutions to help achieve the objectives of the innovation project of the company.

There is no doubt that, controlling puts a major contribution in the development and decision-making on the problems of the innovative project. The controlling function is also associated with the implementation of operational management and adjustment of the progress of innovative project of an enterprise (Fig. 2).

Thus, the role of controlling in the innovative project is not so much in performance of informative and consulting functions, as in the active analysis and regulation of the implementation of an innovative project by managerial decisions.

In summary, the representation of the main function of controlling of the innovative process is methodical and information support for the preparation of adoption of the managerial decisions for different levels of management on the basis of analysis and forecasting of technical and economic indicators in the field of innovation. This involves conducting ongoing

monitoring, analysis and adjustment of management, implementing the innovation process.

The success of the innovative project company may have a significant influence of objective and subjective reasons, such as the condition of the main technological equipment, the availability of material (raw material) and financial resources, geographical location of the enterprise, skill level of engineers and technicians on the profile of the innovative project, etc. All these factors have a decisive influence on the outcome and effectiveness of the innovative project, so they need to be considered at the design stage of the innovative project. And as each individual company has its own factors that influence the technical and economic efficiency of innovative projects, there is no universal system of project evaluation, but several factors may be relevant to the majority of enterprises engaged in innovation activities. Based on these factors can be identified certain criteria for the evaluation of innovative projects, which include: goals, strategy and policy of the enterprise development, the ability to implement an innovative project in an enterprise environment, the cost of reconstruction and/or retrofitting of the production line, marketing of similar products market and definition of new product competitiveness: price and sales forecast of the new product.

The planned large scale restructuring and modernization of industrial enterprises and industries in the

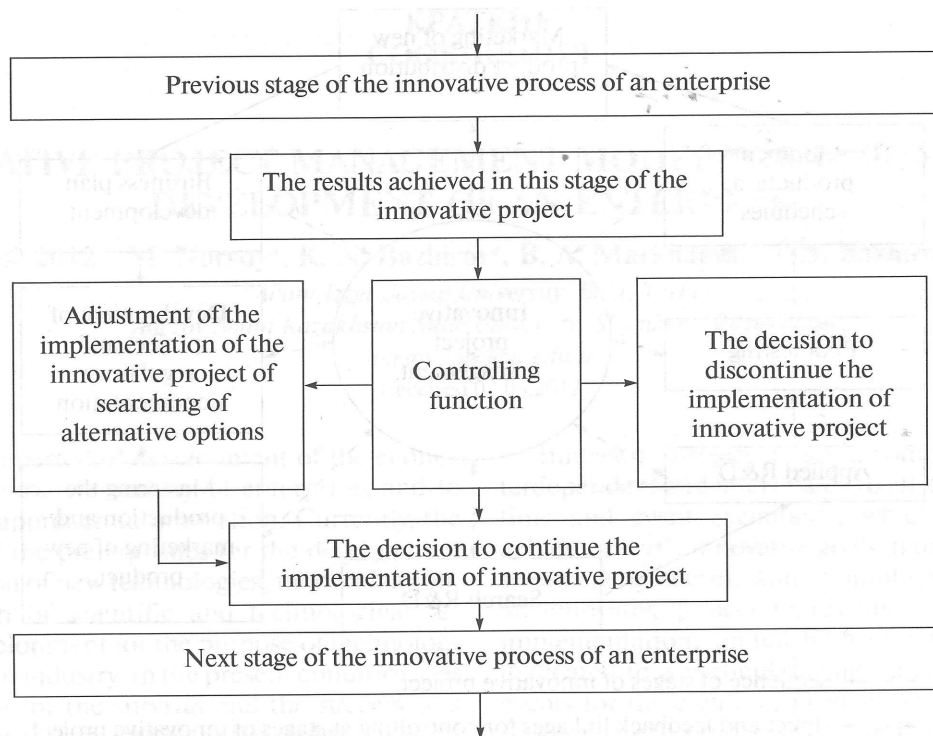


Fig. 2. The function of controlling in managerial decision making at various stages of an innovative project.

future will require the development of new approaches to the elaboration of innovative projects, building and implementing innovative processes, ensuring the growth of innovative activity, the effective use to achieve this scientific and technological capacity, material, financial and commodity-gas resources, domestic and foreign investment.

Thus, an innovative project management is the science of effective leadership on the use of institutional, scientific, technical, financial, material, labor and other resources throughout the project life cycle based on the application of modern scientific methods and management techniques to achieve the planned project results.

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