

## THEORETICAL ASPECTS OF ENTERPRISE INNOVATION DEVELOPMENT USING BUSINESS PROCESSES REENGINEERING

**Problem statement.** Transformation processes in the state economy encourage national enterprises to search relevant methods of management, strategy and tactics of behavior at the market, new methods of interrelations with the partners and clients. Modern companies have complex structure with a wide activity spectrum, territorial distribution of subdivisions, variety of business contacts with partners. In this case dynamics of business processes increases, which is caused by changes in market needs, production orientation to consumer's individual tastes, constant technological improvement, high competition. As a result, enterprise management transfers from control of particular resources and functional subdivisions to business processes management, which unites the activities of all the structures of the enterprise. At present this subject is topical as improvement of the efficiency of managing industrial enterprises business processes on the basis of complex use of innovations in the sphere of management, marketing and information technologies is very important. It is this concept of transformation changes at enterprises that business processes reengineering (BPR) presents.

Under the conditions of economic crisis a great number of problems face economic subjects as to mobilization of inner economic potential to overcome financial problems as well as difficulties connected with optimization of owned capital, personnel redundancy, transfer to a reduced working day, lack of internal circulating assets, increase of accounts payable, impossibility to timely pay employee's wages. It should be mentioned that a lot of business processes in enterprises production system are inefficient, which makes top-managers review production functional components, search alternative ways out of the crisis.

**Analysis of the recent research and literature.** At present innovation way of development is an inseparable or even determinative component of economic growth of any country of the world. The experience of other countries [1] testifies that only on condition of wide introduction of innovation developments is it possible to fill both Ukrainian and world markets with competitive products made in our country. Instead, quite a different situation can be seen now: in place of high-technological products, domestic export is mostly represented by low-quality half-finished products and raw materials, which, in its turn, is a most striking proof of irrational use of natural resources. In this connection, innovation changes at many industrial enterprises of our country and even in whole branches of industry are extremely necessary as the future image of the national innovation system will in many aspects depend on the possibilities of the state to timely mobilize its inner innovation potential.

Many Ukrainian and Russian scientists: N.M. Abdykeiev, T.P. Danko [1], I.O. Blank, G.V. Sytnyk [2], G. Geier [3], M.V. Davydova [4], O.V. Marchenko [5], L.G. Smoliar [6], V.P. Riashchenko, M.I. Zhyvitere [7], et al devoted their papers to the problems of enterprises innovation development. They stress the necessity of state support of the innovation activity. However, data published by the State Agency of Investments and Innovations reveal a very low level of state financing of regional and branch innovation projects, which makes enterprises search alternative sources of financing. It is for this reason that the problem of determination and analysis of the conditions on which enterprises could actively introduce innovation developments into production is topical. Investigation of the principles of innovation management at an enterprise is to be analyzed in their evolutionary formation according to the changes of business activity conditions and environment transformation influence on the methods of taking managerial decisions. It should be mentioned that complexity of the methods of innovation activity increases with the development of technologies markets.

Reengineering is a process of reformation, reorganization, improvement of the existing organization or group. The aim of reengineering consists in refusal from inefficient old rules of

organization and carrying out business, with which purpose they must be revealed and substituted with the new ones meeting modern requirements. During reengineering at first the acting object is described in detail, then this description is analyzed and particular measures to improve the reengineering object are determined. It is difficult to forecast the result of reengineering. However, the more real the danger of a crisis or bankruptcy is, the more probable the reengineering success is, as in its process the initiative and innovation activity of all the employees are stimulated, which promotes creation of new, improved and more efficient business processes [3].

Both Ukrainian economy on the whole and separate domestic enterprises have already become aware of the consequences of the world financial and economic crisis shaking the whole world. Taking into account the fact that the science researched the cyclicity of economy development long ago, there arises a question if it was possible to anticipate and prevent the economic crisis taking place at the present moment.

The term “BPR” was first introduced by M. Hammer, the father of the first “traditional” approach to BPR, that admits the creation of new business processes (BP) from “empty paper”. The authors of this concept, Americans Michael Hammer and James Champi, write in their book “Corporation reengineering. Revolution manifest in business”: “Being asked to give a short definition of reengineering, we answer: its essence is in beginning from the beginning. Reengineering is a refusal from stable procedures, a fresh look at the work of creation of a product or a service and providing a client with a value. Reengineering is a fundamental re-understanding and radical re-designing business projects with the aim of achievement of significant improvement of the quality of organization functioning” [4].

Two general approaches to carrying out reengineering are used:

1. Revolutionary approach – introduction of a new way of carrying out business.
2. Evolutionary approach – gradual improvement of the quality of processes [3].

Components of reengineering include: concentration of the energy and attention of the manager and personnel on the necessity of changes, refinement of the changes strategy, development of a balanced indices system tracking the process of changes realization, creation of the organization economic model; ordering the production infrastructure, business processes reengineering; concentration of attention on the client’s needs; creation of new types of business; introduction of information technologies, development of stimulation system; organization of individual re-education.

**Formulation of the research task.** The aim of the research consists in analysis of the role and place of reengineering in the system of management at modern enterprises during the period of their innovation development.

**The main material.** Innovation type of development is characterized by transference of the accent to the use of principally new advanced technologies, transfer to the manufacture of high-technology products, progressive organizational and managerial solutions in innovation activity as to micro- and macroeconomic processes of development (creation of technoparks, technopolices, carrying out the policy of resources saving and intellectualization of all the manufacturing activity).

The main obstacles to activation of innovation process at Ukrainian enterprises may include lack of financial resources for providing scientific research and introduction of innovation developments, imperfection of norm-legal system of regulation and stimulation of innovation activity. To create an efficient mechanism of financing innovation development of enterprises it is necessary to use the diversified instruments of the state support that is to take into account the world experience and national peculiarities of the activity of domestic enterprises.

So, for enterprises which only start or renew their innovation activity, a system of specific measures of versatile support and, first of all, financial provision, should be introduced. Special attention should be paid to attraction of private investors’ funds for financing innovation

activity. Both direct state support and promotion of involvement of private (including foreign ones) resources can be optimally realized within the frames of correspondent state programs.

To increase the amount of financial provision of enterprises innovation activity it is necessary to solve a number of problems connected with the establishment of innovation sector in Ukraine: commercialization of innovation products (bringing innovation developments to practical application requires additional funds for a long period of time); extreme risks of innovation activity; no-purpose and inefficient use of financial resources directed to the support of innovation activity (first of all by state institutions); speculative use of state benefits (for example, venture structures), etc.

Development and wide application of computers help to solve the problem of efficient use of powerful conceptual mathematical and technical means, and reengineering of business processes at industrial enterprises is one of them. Business processes reengineering (BPR) means reconstruction or creation of new business processes with the aim of improvement of the enterprise activity efficiency. Characteristic feature of this approach, compared with other methods, consists in direction to a cardinal change of business processes and not to their gradual improvement.

The main purpose of reengineering among many others is obtaining additional competitive advantages and, correspondingly, improvement of company competitiveness and profitability.

Carrying out BPR is a complicated process requiring time and concentration of efforts of the whole organization. As any global process influencing the enterprise vital activity and radically changing its functioning methods, BPR conforms to certain principles.

Consequences of business process reengineering consist in the following:

- transfer from a functional structure of subdivisions to a horizontal ones takes place, which makes it possible to solve the problem of disagreement or contradiction between the aims of activity of different functional subdivisions;
- the work of an employee becomes multilateral, its versatility increases, which may be a significant factor of employee's motivation;
- instead of being controlled in their work, employees make decisions independently and choose possible variants of achieving goals, they do not have to wait for orders of the manager but act in accordance with their own initiative within the frame of their greatly increased authorities;
- requirements to training workers at all levels: from short-term course to professional education, change; in connection with multilateral and varied work in reformed processes the enterprise is to provide not only short-term courses aiming at training people to do certain work or control a certain situation, but also continuous and comprehensive education of its employees;
- the estimation of the work efficiency and payment change: from estimation of the activity to estimation of the result; after reengineering the team of the processes is responsible for its results, and in this case the enterprise can measure the efficiency of the team work and pay for it according to the obtained result;
- the criterion for promotion changes: from the efficiency of performed work to the ability to do the work; under the new conditions the employee's promotion is to be separated from the efficiency of his/her work; promotion is a function of the employee's capabilities and not of the efficiency of his/her work;
- satisfaction of the client's needs becomes the aim of the worker; reengineering requires change of position: work for the client and not for the manager; managers' functions change: from control to coaching; more complicated work of the employees results in the fact that the manager provides less control of the work process; the process team is completely responsible for its results, and controlling influence on the performers on the part of the managers is reduced to the minimum; manager's functions change, now they consist not of

guiding and controlling impacts but of assistance to the members of the team in solution of the problems emerging in the process;

- organizational structure of the new enterprise is more horizontal, flatter, which makes it possible to orientate the organization not to the functions but to the processes, many management levels are eliminated;

- administrative functions change; one of reengineering consequences consists in the change of top management role; reduction of management levels takes management closer to immediate performers and clients; under such conditions managers should become leaders who promote strengthening of performers' convictions and values.

**Conclusions.** Thus, enterprise innovation activity financing is the basis of scientific technical progress and technological modernization of productive capacities and strengthening their competitive positions at the domestic and world markets. However, financing of enterprise innovation activity is mainly made at the expense of internal funds. State financing and support are very small. So, to optimize the innovation activity it is necessary to take the following measures: the state is to take care of the enterprise ecologization, stimulate activity directed to environment protection; increase of expenditure to train high-level specialists, workshops, courses, employees' motivation to innovation activity, decrease of scientists' migration; legal changes in the sphere of innovation activity concerning benefits and stimuli; expanding the financing sources; the enterprise policy is to be directed to innovation; close cooperation with foreign enterprises, exchange of experience, activation of technoparks activity by means of the state support.

Realization of the proposed directions in activation of innovation activity in Ukraine will enable a considerable increase of the level of innovation activity at industrial enterprises, stabilization of rapid process of production renovation, effective use of the internal and attracted external investment and innovation activity. Based on the fact that innovation changes in industry at the modern stage of economy development are promising and provide high indices of general economic growth there arises the necessity of investigation of the modern state and directions of innovation activity activation at industrial enterprises.

The results of researching the problems of the interconnection of domestic enterprises innovation potential development and the level of their competitiveness testify the absolute efficiency of the complex analysis of these components of enterprise management. In this case great attention is to be paid to taking into account the main problems that restrict the innovation development of Ukrainian enterprises as well as its positive trends.

In its turn, domestic enterprises are to direct their efforts to innovation way of development, first of all, to improvement of own innovation potentials. It is innovation development that can provide achieving stable positions at the world market by both domestic enterprises and our state on the whole.

Thus, reengineering, referring to such profound aspects of enterprises vital activity, also implies changes of the system of estimation, motivation and encouraging of the personnel, as people who work in a new fashion need a new-fashion management. It is impossible to realize business process engineering by isolating it from all other aspects of the enterprise.

So, a company provides productivity growth by modifying processes and provides efficiency growth by reengineering. Productivity growth reflects results improvement by means of decrease of expenditures and is an internal index that is easy to measure and improve if necessary. Efficiency connected with satisfaction of the consumer's needs is an external index that is difficult to measure and a considerable period of time is required to improve it. Efficiency is very important for survival and successful activity of the company.

### Summary

The paper is devoted to the investigation of the role and place of engineering in the system of management of modern enterprises during the period of their innovation development. The analysis of the recent research and publications concerning the present investigation has

been made, the notion of business processes reengineering (BPR) has been revealed, the aims and advantages of the use of reengineering at enterprises have been characterized.

Attention has been drawn to the use of optimization measures promoting efficient economic activity of the enterprises with the aim of provision of their stability and competitive advantages in the future. It has been pointed out that provision of enterprises growth and efficiency under the conditions of innovation development is the main methodological basis of reengineering use.

**Key words:** innovation development of enterprises, innovation product, intellectualization, competitiveness, micro- and macroeconomic processes, enterprises-innovators, advanced technologies, business processes reengineering, resource saving, management.

#### **Анотація**

Стаття присвячена дослідженню ролі та місця реінжинірингу у системі управління сучасними підприємствами в період їх інноваційного розвитку. Здійснено аналіз останніх досліджень і публікацій, присвячених обраному дослідженню, розкрито поняття «реінжиніринг бізнес-процесів» (РБП), охарактеризовано цілі та переваги застосування РБП на підприємствах.

Акцентовано увагу на застосуванні оптимізаційних заходів, які б сприяли ефективному господарюванню підприємств, з метою забезпечення їх стабільності та конкурентних переваг у майбутньому. Відзначено, що головною методологічною основою застосування реінжинірингу є забезпечення росту та ефективності підприємств в умовах інноваційного розвитку.

**Ключові слова:** інноваційний розвиток підприємств, інноваційний продукт, інтелектуалізація, конкурентоспроможність, мікро- та макроекономічні процеси, підприємства-інноватори, прогресивні технології, реінжиніринг бізнес-процесів, ресурсозбереження, управління.

#### **Аннотация**

Статья посвящена исследованию роли и места реинжиниринга в системе управления современными предприятиями в период их инновационного развития. Сделано анализ последних исследований и публикаций посвященных избранному исследованию, раскрыто понятие «реинжиниринг бизнес-процессов» (РБП), охарактеризовано цели и преимущества использования РБП на предприятиях.

Акцентируется внимание на использовании оптимизационных мероприятий, которые б содействовали эффективному хозяйствованию предприятий, с целью обеспечению их стабильности и конкурентных преимуществ в будущем. Отмечено, что главной методологической основой использования реинжиниринга есть обеспечения роста и эффективности предприятий в условиях инновационного развития.

**Ключевые слова:** инновационное развитие предприятий, инновационный продукт, интеллектуализация, конкурентоспособность, микро- и макроэкономические процессы, предприятия-инноваторы, прогрессивные технологии, реинжиниринг бизнес-процессов, ресурсосбережение, управление.

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