

Setting of innovative activity as a base of contribution to the efficiency of building companies

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Abstract

The article is devoted to the actual problem of increasing the intensity and efficiency of innovative activity at the enterprises of the construction industry. The kinds of innovations and the characteristics of the innovation process in the construction industry are considered. It is discussed the characteristics of the innovation process in the construction industry and the problem of technologies transfer. The factors influencing the innovation potential of the building organizations are analyzed.

Keywords: innovation, innovative processes, selection criteria, extent of innovations (transfer), complex of investments and construction, synergetic effect.

Introduction

The increasingly globalized world economy which rate of development is quite high seriously challenges many companies for it requires a considerable restructuration of economic policy, special focus on such categories as quality, innovations, ability to stand up to the competence. The analysis of modern economy witnesses that the only way for companies to achieve high economic results is possible by means of innovative approach aimed to search for the opportunities opened by economic environment in the area of producing and launching new types of goods, new industrial and transport means, and also by exploring new markets and forms of management. All this requires an innovative style of management based on goal oriented activities [1-5].

As innovations they usually qualify different changes which occur during the production and as a result of having taken new decisions as well as polishing and applying them to technique, industrial organization, supply, commercialization, promotion, social and political area with the purpose of its commercial realization to satisfy certain demands of consumers and to provide economic growth and competitive character of the system with stability.

The selection criteria are the following ones:

- fulfilling the requirements of organization (acceptable risk level, life cycle, global aim, etc.);
- fulfilling market demands (offer and demand, expenditures and revenues, competitors, channels of distribution and promotion, etc.);
- fulfilling technical demands (patent transparency, conformity to the standards, perspectives of development, etc.);

- financial conformity (money flows, profitability, investments, etc.);
- production conformity (production power, potential, employment, qualification and security);
- fulfilling ecological requirements (pollution characteristics, waste, utilization).

Nowadays there is a general opinion that the enterprise innovations from the point of view of strategic management can be divided in two groups: technological and organizational ones. All other innovations have an additional character. Technological innovations affect the appliance and use of new technologies, goods and services. Organizational ones should increase company's influence on the environment as well as widen market and get to total synergetic effect. Both types of these innovations are interrelated and one doesn't exist without another one. For example, the appliance of new power-saving technologies of accelerated consolidation of concrete looks forward to seeking correspondent market partners-admixture producers, training personnel in new methods as well as in documents on an improving program of organizational and technical skills.

The extent of innovations (transfer) as well as its creation is a key part of innovative process which is a complex of consecutive works beginning with receiving technical skills ending with the use of a good created on the base of new knowledge acquired by consumer.

The modern theory of innovative management reasonably underlines the priority of innovative process and innovative activity on the innovation as product or result of such an activity. If an innovation as a product can appear within an organization, the innovative process never can take place inside of only one organization. Companies always carry out its innovative activity not in an isolated manner but within a sophisticated network of relations linking scientific, research, educational juridical, industrial and commercial processes penetrating the organizational borders of all of the innovative activity participants. The majority of innovations appear based on activity of a great number of subjects as a result of a different mutually complimenting and specialized skills, competence and knowledge joint. The synergetic effect taking place as a result of combining different skills, command and abilities as well as the necessity of overcoming the inertia of already configured process and relations are the engines of innovative activities [2].

The structure of an innovative process should be studied by revealing optimal conditions to create and put into practice an innovation at a concrete industrial system scale able to

provide the best effect and consecutively increase its own executive stability and steadiness. It will make sure the revealing of existing gaps between separate stages and will allow to establish the reasons causing a prolonged innovative process as well as decreasing the final efficiency of innovations, to control the whole life cycle of innovation and to prepare conditions in time to change an innovation into another one more progressive [6,8].
 Special features arranged in Table 1 are characteristic for innovative processes.

Table 1. Particular characteristics of innovative processes.

Features	Particularities
By reasons of appearing	Reactive (oriented to the surviving of a building company, requiring new transformations in conditions of a tough competence); Strategy (having a preventive character)
By subject and appliance area	Production (new solutions for global planning and design); Market (new market areas to apply goods to); Innovation (technology, organization, guidelines)
By types	Association of innovations to the strategically planning, creation of an economic tool and organizational forms according to the innovation types
By depth of working out	High technologies (backed by big financial capital, sponsors and state assistance); system modernization (under influence of monopolies); rationalization and reconstruction
By depth of integration	Deep integration (unification of the type "university" and the type "business"); Medium integration (research institutes in trusts); Low integration (private researches).

From the point of view of the result of an innovative process the stage of extension-so called transfer of technologies-is substantial. On this stage of innovative process the useful effects of an innovation determining its profitability as well as the efficiency of the whole innovative process are put into practice.

The first level of extension makes sure the processes of restructuring within a construction industry system. The innovative change initially happens in one of the elements of the technological chain "building details and production-transportation-assembling and building works" extending consecutively to other elements in conformity with technical dependence.

The second level of transfer of technologies is due to the necessity of technological use of innovation by several building companies and organizations producing similar things. It serves to adopt restructuring processes among homogenous systems of building industry: civil, industrial, rural engineering, etc.

The final goal of technological transfer is to take construction works to a new level of quality, to increase the volume of

building and assembling works, to reduce costs, etc. To achieve an established aim it's necessary to take into account the factors having influence on the commitment of innovative processes in the construction branch. (Fig.1).

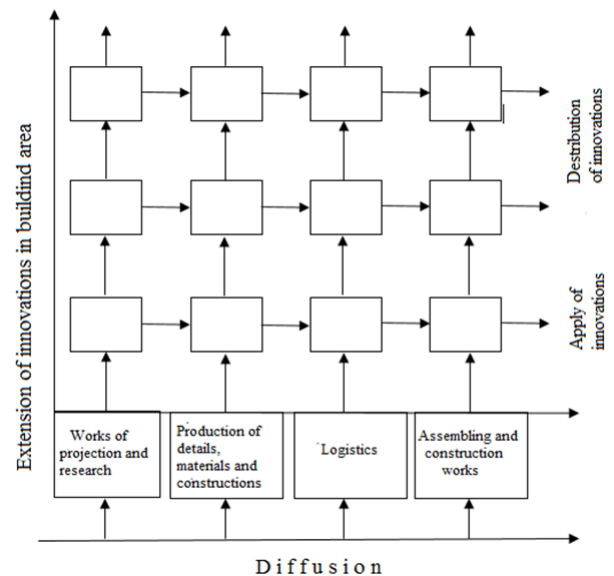


Fig.1. Distribution of innovations in building

Consecutive development of complex of investments and construction is based on increasing quality of construction, guaranteeing price competition, rise of labor productivity, reducing building terms. All this is impossible without a fundamental renovation of technological potential of building companies as well as the use of progressive technologies and planning decisions [7]. According to worldwide experience one of the ways to solve this problem is by resorting to the international transfer of technologies.

Innovative processes in the complex of investments and construction have some particularities determined by a systematic character of building production described by linked technological chain: design, production of building materials and construction, its transportation and implementation of building and assembling works on the building site (Fig.1).

A prolonged duration of scientific and production cycle which decreases the ability of a company to compete because during such a long time the investors' requirements change with regard to the production according to consumers' demands.

The reduction of the duration of the cycle of investment is basically determined by the innovative potential of a company.

The main activity of a building company consists of erecting or renewing buildings and constructions on terms established by agreements in conformity with required quality [3,4]. To accomplish this task social and industrial potential is formed. The potential may have several basic states what determines the variability of its value. On organizational and technological terms the potential depends on reasonable combination of features of elements of the system of production, on the level of organization of processes of

production, on the characteristics of the material and technical base of building as well as on the mobile building infrastructure. Intensive market changes lead to the reduction of decision-taking stage that's why the most important element of social and industrial potential is the innovative potential.

It's possible to arrange the innovative potential of a building company as follows:

- technical factors;
- organizational factors;
- social and psychological factors;
- economic factors;

Dealing with the level of innovative potential of a company it's necessary to take into consideration that the higher actual level of development of the company the bigger number of possibilities of further development it has. However the use of indexes of achieved level of technical and economic development of a company such as profitability, specific weight of new equipment, coefficient of devastation of active part of funds of production, payback fund, etc. has also certain weak points to estimate innovative potential of companies. Amongst these shortcomings we can enumerate the followings ones:

- a) static approach to assess innovative potential reflecting only actual situation of a company without taking into account perspectives of its further development;
- b) dependence of indexes of innovative potential of a company on the previous experience of development of company.

On these terms it's worth using the indexes which characterize the process of improving the production including the coefficient of loses of obsolete equipment, coefficient of renewing of active part of funds of production, the level of expenditure on the capital reparation, etc.

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