Features of Innovation at Industry of Building Materials Enterprises

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Abstract: Innovative development of materials production is important for construction, investment and construction process and the economy as a whole. The article analyzes the process of activating innovative activity, reveals its industry specifics. Based on the study, a classification of innovations is given. Special methods for the development of the innovation process in the industry and its development, taking into account modern methods of innovation.

Keywords: production of building materials, investment and construction activities, activation of innovative development at the enterprises of the building materials industry, application of methods and forms of innovation.

The mission of the building materials industry is to fully meet the needs of the investment and construction complex in modern building materials, products and structures in full and with a wide range of products that meet the requirements of standards and norms with acceptable economic indicators. That is why enterprises for the production of building materials and their innovative development are of particular interest, since the use of innovative products in construction leads to a reduction in the cost of construction and operation of facilities and directly affects the efficiency of the investment and construction cycle.

The building materials industry under consideration includes production of a very different nature. The main differences in the production of building materials are the load capacity of the consumed raw materials and products, high consumption of energy resources. In the national economy of our country, this industry occupies a special place; it is not for nothing that many economists call this industry the “locomotive” of the economy [1]. This industry includes many enterprises that are located everywhere.

The Message of the President of the Republic of Uzbekistan Sh. Mirziyoyev to the Oliy Majlis notes: “In 12 leading industries, programs are being implemented to modernize and increase competitiveness. As a result, last year the economic growth rate was 5.6 percent. The volume of industrial production increased by 6.6 percent, exports - by 28 percent, which, of course, is a great achievement[2].”

To a certain extent, this also applies to the industry under consideration, where there is an intensive growth in the production of traditional products and the development of innovative products and technologies. The question is in the growth of the efficiency of innovation.
For the first time the concept of "Innovation" was introduced by VG Kolosov [3]. In [4], the following definition is given: "Innovation is the end result of innovative activity, which has been implemented in the form of a new or improved product sold on the market, a new or improved technological process used in practice."

Scholars give different definitions of innovation. So, S.A. Semenov argues that innovation is "a process of purposeful development, implementation, and use by subjects of economic and social relations of ideas that initiate potentially useful changes in the goals, organization, relationships, modes of action and production of the main components of the system under consideration [5]. And in the study [6 ] innovation is defined as "the final result of the creation and development (implementation) of a fundamentally new or modified means (innovation) that satisfies specific social needs and gives a number of effects." A number of researchers, both economists and specialists studying the development of technology, have come to understand that the basis of industrial growth is innovation.

Note that innovations can be classified according to a number of criteria.

For example:
1. By area of application: product, process, organizational and marketing innovations;
2. According to the level of novelty: basic innovations, improving innovations, micro-innovations;
3. By terms: long-term (more than 3 years), medium-term (2-3 years) and short-term (1 year);

In addition, innovations can differ by geography (transcontinental, transnational, regional, large, medium, small); according to the degree of intensity (explosive, uniform, weak, mass); by stages of scientific and technical progress (scientific, technical, technological, design, production, information).

Based on the basics of innovation, a generalized classification of innovative projects is given in Table 1. Note that the conformity of a project to a certain type reflects its content and requires adequate methods for the formation and management of the project.

Table 1

<table>
<thead>
<tr>
<th>№</th>
<th>Classification sign project</th>
<th>Project types</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Project duration</td>
<td>Short term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium-term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Long term</td>
</tr>
<tr>
<td>2</td>
<td>Novelty needs</td>
<td>New Needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Traditional Needs</td>
</tr>
<tr>
<td>3</td>
<td>Project scale levels</td>
<td>Mono-, multi- and mega-projects</td>
</tr>
<tr>
<td>4</td>
<td>Type of innovation</td>
<td>New Product</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New production method</td>
</tr>
<tr>
<td></td>
<td></td>
<td>new market</td>
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<tr>
<td></td>
<td></td>
<td>New source of raw materials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New management structure</td>
</tr>
<tr>
<td>7</td>
<td>Types of project goals</td>
<td>Final</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intermediate</td>
</tr>
</tbody>
</table>

Prepared by the author taking into account the above research.
The difference between an innovative project and an investment or other project is that the composition and level of risks in them are much more complicated and higher. In an innovative project, a system of activities is formed, which are determined by resources, deadlines, and performers.

It is obvious that the innovation process is not interrupted after implementation, because after distribution (diffusion), the innovation is improved, becomes more efficient, acquires previously unknown consumer properties.

It is known that the most logical model of the innovation process is the innovation chain, which includes a complete scientific and production cycle, consisting of technologically related stages and stages. It should be noted that at present most of the country's industrial enterprises are directly involved in the stages of development of production, production and sale of products.

The stage "science" in the innovation chain means: fundamental research - applied research - design work.

For an industrial enterprise at the stage of applied research, innovations take the form of original samples of equipment, technology or their individual elements. Appropriate documentation is formed in the process of development work. At this stage, samples of new products are formed for subsequent testing.

Next, at the stage of "production" is the implementation of the results of the previous stages of the cycle:

- mastering the production of products, which means complete informational, technical and organizational preparation for the production of products. Here, the rate of development of innovation and the start of production of new products, focused on one type or another, depend on the interaction of science and production [7];

- actual production. Two stages can be distinguished here: the development of a technological process and its implementation in the production of new products.

The "consumption" stage includes the following stages: the sale of new products and the operation of new products by the consumer.

In the industry under study, the innovation process is influenced by:

- industrial enterprises (employees engaged in internal research work);
- research centers, design institutes, consulting organizations, scientific laboratories;
- raw material suppliers;
- construction and installation organizations;
- competitors;

Considering the current state of the industry, in which more than 7 thousand enterprises operate, it should be noted that there is an increase in the production of building materials [8].

Many researchers note that in the investment and construction complex, the industry of building materials occupies a key place and the level of accessibility of construction, its quality and, in general, the efficiency of the investment process depend on it.

In modern conditions of innovative development between construction and the industry under consideration, innovative ties are strengthening, which have a bilateral focus. On the one hand, there is a complication of construction objects (an increase in the number of storeys, the development of design and planning solutions, tightening of requirements for the energy efficiency of buildings, etc.). On the other hand, the development of building scientific thought leads to the creation of new generations of building materials (for example, materials based on the use nanotechnologies), which allows the construction of...
fundamentally new buildings and structures. In general, in the building materials industry, as in other industries, fierce competition has developed, the most important factor of which is the innovativeness of technologies and materials. Today it is on the verge of innovative structural and technological changes.

Interesting data on the level of use of available capacities in the domestic industry (Table 2). They show that a high level of capacity utilization leads to a lack of reserves for increasing production, and a low level is associated with an increase in prices and restrictions in the autumn-winter period of energy resources, the use of modern types of materials.

Table 2

<table>
<thead>
<tr>
<th>№</th>
<th>Name of product</th>
<th>Usage level</th>
<th>Production capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Building glass</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Plasterboard sheets</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Ceramic tile</td>
<td>97%</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Cement</td>
<td>92.2%</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Slate</td>
<td>25.2%</td>
<td></td>
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BIBLIOGRAPHY


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