INFORMATION MODELING. BIM360 DOCS

The essence of the actual problems of promising technologies in construction is considered. Building information modeling (BIM) occupies the most important place today. Reducing the cost and timing of projects, improving the quality of design and construction, new opportunities in facility management and other benefits of BIM implementation. The cloud-based BIM 360 Docs service enables you to efficiently transfer, review and approve models, drawings and construction plans anywhere, anytime. A platform that unites all participants in the design and construction activities and provides them with constant access to data both in the office and on the site. It is a set of digital products that help improve the efficiency of project management in construction. Nothing comes as expensive in construction as lost time. The programs will help you to reduce the time for making management decisions.

The main expected results of the implementation of innovations in construction production are of value nature and are associated with the formation of the life cycle of a construction organization based on sustainable business models. The development of a set of guidelines based on sustainable building indicators is one of the promising innovative business models. As a result, this process will be a kind of "road map" for enterprises, especially small businesses, at the European level of industry development. The creation of an online networking platform that globalizes control and operational management of the business model opens up new avenues for innovation in the construction sector and the development of the necessary methodologies and tools to serve the entire industry.

In this article, we consider innovation as a field structure with a methodologically determined center, core, and periphery, where innovations intersect with innovations in another area or structures of a different order (for example, modernization).

That is, the network innovation project initially had a number of opportunities for innovation in the construction sector. The field structure of this innovation assumes that the center is a solution, a production management model that determines structural links, communication, technological and other levels of interaction of elements cooperating to achieve a goal, the effectiveness of which exceeds traditional solutions (models). The core is surrounded by BIMS sectors, i.e. elements that diversify the functional connections of other structural elements, their tasks in the process of implementing an innovation [1]. The center, made up of BIMS sectors, determines the functionality, sustainability and vitality of the field. Its communicative (semantic) connections allow the elements of innovation to interact and realize their purpose. Any work with innovation is work with the BIMS sectors, which in this regard act as the elements of innovation management. The basis of the composition of the innovation, as the basis of any model, are typified elements of the organizational and management system.

Thus, considering innovation as a field structure, in the center of which there is a certain promising solution (model), we get the opportunity to study the components of innovation, analyze its segments and the connections between them.

"Innovation champions" among companies gain up to 60% of the profit index, with the right innovative technology. Selection of the optimal technological and organizational model, i.e. the core of innovation is a key task of any enterprise. A prime example of such innovation is the Green Building Innovation or EcoAP. EcoAP assumes a unilateral progression of the industry based on sustainable development, which also pursues the goal of reducing the pressure on the environment by introducing innovations within the framework of the Europe 2020 strategy[2].

BIM360 It is a set of cloud services on a single platform that helps manage the design and construction process and make informed decisions throughout the entire project and construction life cycle. Advantage of BIM 360: Collaboration, as a complete understanding between the participants in the design and construction activities. Less time for working with documentation, more precisely, less time spent on manipulating files, more time for productive work. Information from one source, like models, drawings and building plans in one place, available in the office and on the construction site, always up to date[3]. Support for 2D and 3D Publishing: View and reconcile 2D drawings, 3D models, and PDF documentation. Electronic markings in 2D drawings and 3D models are available to all project participants. Documentation access control: distribution of access levels to the project or project files. Access from mobile devices: remote access to the project through the application on iOS and Android devices, including offline. When connected to the Internet, the data is synchronized and made available to all participants. Publication of drawings: the formation of sets of drawings for the production of work with the automation of distribution to individual sheets and 3D models. Version control: track changes, compare drawings and 3D models between versions. Rollback to an earlier version.

Thus, the process of modeling innovations in construction is mathematically feasible, predictable and manageable, capable of being studied from the point of view of field theory. The defined toolkit allows for a more flexible application of innovations in construction, ensuring the scientific innovation priority of the industry and the state.

This program is currently being implemented in Kazakhstan, in the city of Nur-Sultan. The BI Group company undertook to study and use it in construction, not only in the construction of houses, but also roads. As mentioned in the beginning, this program makes it possible to do everything in one place. Each participant in the construction can view all the data in his gadget: this is an estimate, and drawings, and the name, as well as the dimensions of all structures. It makes it possible to save time, which is very important in construction.

References

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[2]. 10.Zelenskoj O.A. Novye tehnologii. 2010. № 4. pp. 83-87.

[3]. https://www.iesoft.ru/head/autodesk-bim-360/