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ORIGINAL PAPER

## A MODEL OF TRAINING QUALIFIED PERSONNEL FOR THE REGIONAL ECONOMY IN THE CONTEXT OF DIGITAL TRANSFORMATION

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**Abstract.** In modern economic conditions, an important role is assigned to the system of training of highly qualified specialists with skills and competencies necessary for work in the conditions of digitalization, introduction of new technologies and innovations. The construction industry is developing quite rapidly, new construction materials and software are appearing, employers' requirements to personnel are toughening and, accordingly, there is a high outflow of qualified personnel from the industry. All this requires new approaches to personnel training both for the construction industry and for the economy of the country's regions as a whole. The relevance of the research is determined by the need to resolve the contradiction between the provision of the industry with workers and mid-level specialists and high rates of construction of objects based on new technologies and materials. The orientation of the system of vocational education to the formation of graduates' skills of real production, experience in the development and implementation of projects based on modern technologies of modeling the integral life cycle of construction is in demand. The purpose of the study is to develop the author's model of training qualified personnel for the construction industry of the regional economy in the conditions of digital transformation. The objectives of the study include: elaboration of the basis for the development of a new model of training in the construction industry in the conditions of digital transformation, analysis of the needs of partner enterprises in personnel training for compliance with the developing high-tech production and competencies of the digital economy, testing the model on the basis of the centers of OGBPOU "Novgorod Construction College" and on the basis of partner enterprises, monitoring the formation of professional competencies of students and dissemination of innovative experience. The subject of the study is the educational process of OGBPOU "Novgorod Construction College" in terms of training qualified personnel for the construction industry of the regional economy. The methodology is based on the study of regulatory and legal acts and practical experience in the development and implementation of the model of personnel training for the construction industry in the conditions of digital transformation. The main results of the implementation of this model are: the built system of support and adaptation of graduates in the workplace under the real conditions of the labor market, the development of startups in the form of subjects of the educational and production complex, increasing the competitiveness of the implemented educational programs, etc. The practical significance of the proposed model is determined by the practical significance of the proposed model. The practical significance of the proposed model is determined not only by the long-term nature of state and regional educational development programs, but also by the growing need of the region's economy in highly qualified workers. The results of the study can be fully scaled to other regions.

**Keywords:** construction industry, digitalization, regional economy, personnel training

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ОРИГИНАЛЬНАЯ СТАТЬЯ

## МОДЕЛЬ ПОДГОТОВКИ КВАЛИФИЦИРОВАННЫХ КАДРОВ ДЛЯ ЭКОНОМИКИ РЕГИОНА В УСЛОВИЯХ ЦИФРОВОЙ ТРАНСФОРМАЦИИ

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**Аннотация.** В современных экономических условиях важная роль отведена системе подготовки высококвалифицированных специалистов, имеющих навыки и компетенции, необходимые для работы в условиях цифровизации, внедрения новых технологий и инноваций. Строительная отрасль развивается довольно быстро, появляются новые строительные материалы, программное обеспечение, ужесточаются требования работодателей к персоналу и, соответственно, высок отток квалифицированных кадров из отрасли. Все это требует новых подходов к подготовке кадров как для строительной отрасли, так и для экономики регионов страны в целом. Актуальность исследования определяется необходимостью разрешения противоречия между обеспечением

отрасли рабочими кадрами и специалистами среднего звена и высокими темпами строительства объектов на основе новых технологий и материалов. Востребована ориентация системы профессионального образования на формирование у выпускников навыков реального производства, опыта разработки и реализации проектов на основе современных технологий моделирования целостного жизненного цикла строительства. Цель исследования заключается в разработке авторской модели подготовки квалифицированных кадров для строительной отрасли экономики региона в условиях цифровой трансформации. К задачам исследования отнесено: проработка основания для разработки новой модели подготовки кадров строительной отрасли в условиях цифровой трансформации, анализ потребности предприятий-партнеров в подготовке кадров на предмет соответствия развивающемуся высокотехнологичному производству и компетенциям цифровой экономики, апробация модели на базе центров ОГБПОУ «Новгородский строительный колледж» и на базе предприятий-партнеров, мониторинг сформированности профессиональных компетенций студентов и диссеминация инновационного опыта. Предметом исследования является образовательный процесс ОГБПОУ «Новгородский строительный колледж» в части подготовки квалифицированных кадров для строительной отрасли экономики региона. Методология основывается на исследовании нормативно-правовых актов и практического опыта по разработке и реализации модели подготовки кадров для строительной отрасли в условиях цифровой трансформации. Основными результатами реализации данной модели стали: выстроенная система сопровождения и адаптации выпускников на рабочем месте под реальные условия рынка труда, развитие стартапов в форме субъектов учебно-производственного комплекса, повышение конкурентоспособности реализуемых образовательных программ и др. Практическая значимость предлагаемой модели определяется не только долгосрочностью государственных и региональных программ развития образования, но и растущей потребностью экономики региона в высококвалифицированных рабочих кадрах. Результаты проведенного исследования в полной мере могут быть масштабированы на другие регионы.

**Ключевые слова:** строительная отрасль, цифровизация, экономика региона, подготовка кадров

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## Introduction

The construction industry is currently undergoing a digital transformation. Thus, in the federal project "Digital Public Administration" a pool of tasks is defined, among which an important role is given to the implementation of a life cycle management system for capital construction projects based on information modeling technologies (BIM technologies) [1]. In recent years, new technologies have been actively introduced in the construction industry, which today represent a real prospect of bringing the region's industry to a new level of development. Among them: additive technologies in construction (3D printing), the Internet of things and smart sensors (Smart Home, Smart City technologies), robotics, unmanned aerial vehicles (drones), virtual and augmented reality, digital doubles, blockchain technologies, artificial intelligence and machine learning, Big Data, 3D scanning, etc. [2].

The use of new technologies in the industry helps to avoid a number of risks and errors that seriously affect the economic indicators of both the organizations themselves and the economy of the region: it reduces the time it takes to complete processes, increases productivity, replaces manual labor with machines, increases the period before the onset of obsolescence or eliminates it altogether, reduces costs, modernizes capital construction facilities, anticipates risks and predicts the effectiveness of certain works. In addition, it is new technologies that motivate young people to stay working in the construction industry while remaining in

their native region [3].

BIM modeling represents the most obvious trend in the construction industry and is also an important component of the federal project "Digital Construction". Currently, with the development of information technologies, organizations predominantly observe collective creation and use of information, new organizational processes are being built, roles and areas of responsibility are distributed in the planning and implementation of industry projects. The transition to a new investment cycle and the "planning-construction-commissioning" model entails the introduction of information modeling processes [4].

\* In recent years, the peculiarities of economic development have led to the renewal of the secondary vocational education system. As experts rightly note, it is impossible to consider the degree and quality of development of the vocational education system in isolation from the regional economy, new vectors of its development and innovation [5].

Issues of strategic partnership of educational institutions and the introduction of practice-oriented forms of training specialists for the construction industry in the world and Russia are considered, mainly from the point of view of higher educational institutions. Here we can cite the works of I. Belinskaya [6], A. Chesnokov [7], I. Maltseva [8], K. Stashova [9]. The main idea of their research is that global trends towards increased internationalization of education, the development of digital

technologies, and increased demands from employers for graduates require cooperation with the external environment and, accordingly, new educational opportunities based on cooperation flow from this with external partners, organizations, and educational institutions.

The main starting point in the creation and implementation of a new model for training specialists for the regional economy was the passport of the priority regional project "Creation of a center for the implementation of innovative information modeling technologies in construction on the basis of the Novgorod Construction College", approved by the Governor of the Novgorod Region on 01/22/2021. This document was prepared in accordance with the strategy of socio-economic development of the Novgorod region until 2026 [10] and the Procedure for recognizing organizations engaged in educational activities as regional innovation platforms of the Novgorod region [11]. There is also a number of accompanying regulatory legal acts: project passport of the Prototyping Center dated November 1, 2022, order of the Ministry of Education of the Novgorod Region dated January 27, 2023 No. 94 "On the Regional Prototyping Center", Regulations on the structural unit "Center for the Implementation of Innovation technologies of information modeling in construction "BIM-center" of the regional state budgetary vocational educational institution "Novgorod Construction College" (Order dated 07/12/2021 No. 139-main activities), Regulations on the workshop, equipped with a modern material and technical base for one of the competencies (Order No. 146 of June 27, 2019 - main activities) and the Regulations of the Training Site of the regional state budgetary professional educational institution "Novgorod Construction College" (Order dated 05/12/2022 No. 81-main activities.)

In our opinion, the new model, and its implementation as an innovative project (program) are of high significance for the development of the education system in the Novgorod region. The project correlates with national goals and strategic objectives stipulated by Decree of the President of the Russian Federation of May 7, 2018, No. 204 regarding the modernization of vocational education, including through the introduction of adaptive, practice-oriented, and flexible educational programs.

In addition, the proposed project correlates with the national goals and strategic objectives provided for by the Decree of the President of the Russian Federation of July 21, 2020 No. 474 – within the framework of the national goal "Opportunities for self-realization and development of talents": "creating conditions for the education of a harmoniously developed and socially responsible personality based on the spiritual and moral values of the peoples of the Russian Federation, historical and national-cultural traditions", namely through close interaction with the employer within the framework of the work of student project teams. As part of the

national goal "Decent, effective work and successful entrepreneurship", the project we propose is aimed at increasing the number of people employed in the field of small and medium-sized businesses, including individual entrepreneurs and the self-employed, to 25 million people.

As part of the national goal "Digital Transformation", thanks to the implementation of our proposed project in the Novgorod region, it is possible to achieve the following tasks outlined in the Strategy for the socio-economic development of the Novgorod region until 2026 (as amended on November 28, 2022):

- advanced training of highly qualified specialists in the interests of socio-economic development of the region, through the inclusion of the college and partner organizations in a single system of "end-to-end" education;
- increasing the quality of student training, possessing the skills to use BIM technologies effectively;
- increasing the level of corporate culture of construction industry personnel;
- reducing the "staff shortage" of construction personnel in the region [10].

The research methodology is based on the study of regulations governing the field of education, digitalization of the construction industry and practical experience in the development and implementation of a training model for the construction industry in the context of digital transformation.

As part of the research, we have developed our own new model for training industry personnel for the regional economy in the context of the transition to digital construction. The main goal of the author's model was the development of a new effective model for training qualified personnel in the construction industry in the context of digital transformation through the creation and operation of a training ground, industry departments based on partner enterprises, and a Center for Information Modeling in Construction (BIM), Prototyping Center, training, and production complex.

We consider the following to be the main objectives of the implementation of this project:

- 1) Development and implementation of a new model for training personnel in the construction industry in the context of digital transformation as a process of developing a group project, its testing based on the centers of the Novgorod Construction College, as well as based on partner enterprises.
- 2) Analysis of the needs of partner enterprises in training for compliance with developing high-tech production and competencies of the digital economy.
- 3) Implementation of the projects "Center for the implementation of innovative technologies of information modeling in construction ("BIM center"), "Training area", "Capability base (industry departments at partner enterprises)", "Prototyping Center", training and production complex.

4) Monitoring the development of professional competencies of students, including with the participation of experts from among the partners - employers.

5) Analysis of the results of the experiment and dissemination of innovative experience within the framework of scientific and practical conferences, publication of effective experience in scientific and industry journals.

Thus, the main idea of the innovative project is to develop and implement a new model of personnel training for the construction industry in the context of digital transformation, which will lead to an increase in the quality of training of workers and mid-level specialists and a decrease in personnel requirements construction specialists in the Novgorod region.

As part of the scientific research, we analyzed the requests of enterprises – employers of the Novgorod region, highlighting the following contradiction: with the modern fast pace of construction, it is necessary to have the ability to be complementary specialists at all stages of work, to have the skills to work in different teams. Not a single federal state educational standard of secondary vocational education forms these competencies.

Therefore, the idea of our project is to change the learning process based on the following approaches. The integrity of the preparation process can correlate with the integrity of the production process - the creation and operation of a capital construction project. Students master information modeling technologies as technologies that ensure integrity at all stages of design and construction to achieve this.

The use of the project team method, starting from the 1st stage (1st course) of training, makes it possible to master the algorithm of activity. The idea of a differentiated grouping of teams (crews), in our opinion, will allow the student to master various “profiles” of their specialty. Each team is formed from students of different courses and specialties.

The relevance of the innovative project is also determined by the problems of practice of professional educational organizations, including:

- discrepancy between the volumes, structure and content of training of workers and mid-level specialists with high-tech production enterprises in the regional economy;
- discrepancy between the level of personnel potential of an educational organization, the developing material and technical base and the innovative tasks of developing high-tech production;
- imperfect application of partnership mechanisms, low variability of forms of professional educational organizations and the sector of the real economy of the region;
- insufficient practice orientation in training personnel for a specific enterprise in the region;

- lack of a system for organizing internships for teachers and industrial training specialists using innovative forms and production technologies [15].

A student who has experience in solving production problems as part of an established team on real equipment with real production tasks is a specialist of a different level and quality. Analysis of Russian legislation, in particular, the Federal Law “On Education in the Russian Federation” [12], the Procedure for organizing and implementing educational activities in basic vocational training programs [13], Order of the Ministry of Science and Higher Education of the RF “On practical training” [14], List of professions of workers, positions of employees for which vocational training is carried out [15], Procedure for the formation and functioning of innovative infrastructure in the education system [16]” and other research materials shows the possibility of improving the quality of training significantly through the implementation of project activity mechanisms, in particular through the release of certain types of products, provision of certain types of services (including using BIM information modeling technology).

### Results and Discussion

The research we conducted allows including the following as the main results of the implementation of the innovation project:

- a new model of personnel training for the construction industry of the Novgorod region economy was developed and tested in the conditions of digital transformation;
- new modules have been developed as part of the main professional educational programs, providing a new model for training construction personnel;
- students will gain experience in implementing projects, practical skills and work experience in their specialty;
- a built-in system of support and adaptation of graduates in the workplace to the real conditions of the labor market;
- impetus for start-ups in the form of subjects of the educational and industrial complex;
- increasing the competitiveness of implemented educational programs;
- development of infrastructure and expansion of resources in the college;
- expanding employment opportunities for graduates;
- increasing the responsibility of the college staff for the quality of training of specialists;
- in the implementation of the projects “Center for the Implementation of Innovative Technologies of Information Modeling in Construction” (“BIM-Center”), “Training area”, “Prototyping Center”, “Educational and Production Complex”.

The sustainability of the project after completion of its implementation, including resource provision

mechanisms, is justified as follows:

- long-term state and regional programs for the development of education and the construction industry in the region;
- the growing need of the regional economy for highly qualified workers with skills in using information modeling (BIM);
- development of the college’s material and technical base thanks to investments from employers, grants, and support from the Board of Trustees;
- strategic partnership with employers within the framework of concluded long-term contracts;
- the constant need to improve the quality of the educational process both by improving methodology and practice;
- scaling up work experience to other educational institutions in the region;
- increasing the number of educational services of the college.
- In the process of research, we formulated proposals for the dissemination and implementation of the results of the innovative project into mass practice, including regarding changes to the legislation on education. So, the main ones are as follows:

- in updating the content of student training programs containing the development and implementation of a group project using information modeling technologies (BIM) by project teams (crews), including students of different specialties and courses, a teacher, a representative of the work; employers on the basis of college centers, as well as on the basis of partner enterprises, with access to public advocacy;
- determining a set of conditions for the creation of educational and production complexes (EPC);
- making proposals to change federal state educational standards for specialties 02.08.01 Construction and operation of buildings and structures and 02.07.01 Architecture in terms of approaches and content of student training.

The implementation of the innovative project “a new model for training qualified personnel for the regional construction industry in the context of digital transformation” is designed for 5 years, until 2027. The amount of financing is 28.4 million rubles, including 27.5 million rubles from the regional budget and 0.9 million rubles from extra-budgetary sources (*Table 1*).

*Table 1 / Таблица 1*

**Financial Justification of the Innovative Project Realization, Thousand Rubles / Финансовое обоснование реализации инновационного проекта, тыс. руб.**

Sources of Financial Support / Источники финансового обеспечения	2023	2024	2025	2026	2027
regional budget	0.0	2998.9	8997.8	9236.0	6270.8
extra-budgetary sources	599.0	47.0	0.0	0.0	280.0

Source: compiled by the authors / Источник: составлено авторами

In the process of working on a new model for training qualified personnel, we identified 4 main stages:

- Stage 1 – research of innovative opportunities and creation of conditions;
- Stage 2 – implementation of an innovative project;
- Stage 3 – analysis and assessment of the

effectiveness of the innovation project;

Stage 4 – dissemination of innovative experience.

Let us consider in more detail each of the 4 main stages of the implementation of our proposed project to create a new model for training qualified personnel for the construction industry of the region in the conditions of digital transformation (Tables 2-5).

*Table 2 / Таблица 2*

**Main Components 1 Stage of the Project "Research of Innovative Opportunities and Creation of Conditions" / Основные составляющие 1 этап проекта «Исследование инновационных возможностей и создание условий»**

№ п/п	List of Activities / Перечень мероприятий	Content of the Event, Methods of Activity / Содержание мероприятия, методы деятельности	Conditions Necessary for the Implementation of Program Activities / Необходимые условия для реализации программных мероприятий
1.	Study of the regulatory framework regulating the innovative activities of organizations and the activities of regional innovation platforms	Development of regulations on innovation activities and the activities of the regional innovation platform.	Availability of developed and approved local regulations regulating the activities of the regional innovation platform and ensuring the implementation of project activities. Creation of a working group to implement project activities.
2.	Project staffing	Order on the creation of a project management working group	Availability of appropriate qualified teaching staff for project implementation

3.	Determining the potential capabilities of the Center for Information Modeling, BIM Prototyping Center, industry departments for the implementation of real projects by students specializing in 02.08.01 Construction and operation of buildings and structures and 02.07.01 Architecture	Conducting a round table jointly with the heads of college centers, heads of industry departments (OOO "SB" and OOO "Archikom")	Distribution of responsibilities and duties for the implementation of project activities
4.	Creation of an educational and production complex as a structural unit of the college	Development of Regulations on the training and production complex. Determination/development of a package of regulatory documents necessary to update the infrastructure (creation of the EPC). Opening of the training and production complex	Readiness of personnel of the training and production complex to provide high-quality services
5.	Formation of focus groups for the implementation of projects using information modeling technologies (BIM) as part of teams, including students of different specialties and courses, a teacher, a representative of employers based on college centers, as well as based on enterprises – partners	Acquaintance with innovative methods of activity, formation of design thinking. Generating ideas by focus groups	Projects using information modeling technologies (BIM) have been identified for implementation by students as part of teams, including students of different specialties and courses, a teacher, a representative of employers based on college centers, as well as on database of partner enterprises

Source: compiled by the authors / Источник: составлено авторами

Among the main predicted results of the implementation of the activities of the 1st stage of the project, we note: the creation of a regulatory framework that ensures the implementation of the project, the availability of personnel support that guarantees the successful implementation of the

project, the determination of directions for the development and implementation of real projects completed by teams of students, the determination of introduction of directions for the development and implementation of real projects carried out by teams of students.

Table 3 / Таблица 3

**Main Components of Stage 2 of the Project "Implementation of the Innovation Project" / Основные составляющие 2 этапа проекта «Реализация инновационного проекта»**

№ п/п	List of Activities / Перечень мероприятий	Content of the Event, Methods of Activity / Содержание мероприятия, методы деятельности	Conditions Necessary for the Implementation of Program Activities / Необходимые условия для реализации программных мероприятий
1.	Activities of the Center for the implementation of innovative information modeling technologies in construction	Meetings, strategic sessions on organizing the activities of the Center. Design workshop jointly with the head of the industrial department of indicators and forms for assessing student competencies in accordance with new professional modules	Formation of a software package for construction information modeling technologies (BIM) for personnel training, license renewal. Activities of the working group "BIM – center"
2.	Activities of the Prototyping Center	Meetings, strategic sessions on organizing activities. Activities within the framework of the EPC	Equipment of the Center. Purchasing the necessary consumables
3.	Activities of the educational and production complex	Design workshop (BIM – Center). Creation of products based on the Prototyping Center. Search for potential customers. Selection and/or attraction of personnel from among teachers and partners	Purchase of missing equipment. Conclusion of an agreement with personnel
4.	Implementation of the "Opportunity Base" project: work of industry departments at partner enterprises	Meetings, strategic sessions on organizing the activities of the branch department. Design workshop together with the head of the industrial department of indicators and forms for assessing student competencies in accordance with the new Professional modules	Regulatory support: concluded/extended contracts with partner enterprises. Personnel support: head of the industrial department. Forms of motivation and stimulation of the head of the branch department

5.	Implementation of the "Training area" project	Organizing training and competitive events "StroyMaster" together with the National Association of Builders ("NOSTROY")	Regulations for the activities of the training area, updating the functionality of the workshop manager
6.	Analysis of the activities of a focus group of students carrying out projects using information modeling technologies (BIM) in teams including students of different specialties and courses, a teacher, a representative of employers at the college centers, as well as at partner enterprises	Analysis of possibilities in the implementation of real projects using information modeling technologies (BIM). Assessment of the quality of completed projects by representatives of employers	Work of the expert group
7.	Amendments to local regulations	Adjustment of the variable part of basic professional educational programs and educational methods	Determining vectors for the development of the construction industry
8.	Organization of student training using a new model	Diagnostics of students' general competencies. Formation of groups of participants in an innovative project from among students of the specialty 02.08.01 Construction and operation of buildings and structures and 02.07.01 Architecture. Updating educational programs in specialties considering the implementation of the projects "Training area", "Opportunity Base", "BIM Center". Organization of project group activities	Activity of working groups of teachers, methodologists, deputy director for teaching and guiding
9.	Quality monitoring of practice-oriented training of workers and mid-level specialists	Development of a road map of monitoring schedule in the annual cycle, consolidating it with an order. Implementation of the road map of monitoring. Corporate orientation seminar	Regulatory framework (updated): Regulations on the State Final Examination, Regulations on the Assessment Funds, Regulations on intermediate and final certification, Regulations on practice, Regulations on the competition of educational projects. Methodology for implementing forms for assessing general and professional competencies. Evaluative and analytical competencies of teaching staff

Source: compiled by the authors / Источник: составлено авторами

Among the main predicted results of the implementation of the activities of the project stage, we note the most significant: the development of a new educational program "Information Modeling Technologies" taking into account the work of a team of students, new forms of interaction with partners in the field of "Construction", the

readiness of the prototyping center to fulfill orders from Almaz-Antey, a built-in system of support and adaptation of students in the workplace to the real conditions of the labor market, an impulse for start-ups in the form of small student enterprises, increasing the competitiveness of implemented educational programs.

Table 4 / Таблица 4

**The Main Components of Stage 3 of the Project "Analyzing and Evaluating the Effectiveness of an Innovation Project" / Основные составляющие 3 этапа проекта «Анализ и оценка эффективности инновационного проекта»**

№ п/п	List of Activities / Перечень мероприятий	Content of the Event, Methods of Activity / Содержание мероприятия, методы деятельности	Conditions Necessary for the Implementation of Program Activities / Необходимые условия для реализации программных мероприятий
1.	Analysis of the results of an innovation project by the project management working group. Analysis and prospects of an innovative project	Analysis and evaluation of the results of an innovation project by working groups, innovation management group	Activities of the project management group

Source: compiled by the authors / Источник: составлено авторами

The predicted results of the implementation of the event include: the formation of a new model for training qualified personnel in the construction industry in the context of digital transformation, train-

ing students using a new model for training qualified personnel in the construction industry in the conditions of digital transformation, the implementation of student projects in real sectors of the economy.

Table 5 / Таблица 5

**Main Components of Stage 4 of the Project "Dissemination of Innovative Experience" / Основные составляющие 4 этапа проекта «Диссеминация инновационного опыта»**

№ п/п	List of Activities / Перечень мероприятий	Content of the Event, Methods of Activity / Содержание мероприятия, методы деятельности	Conditions Necessary for the Implementation of Program Activities / Необходимые условия для реализации программных мероприятий
1.	Dissemination of innovative experience	Preparation and release of methodological recommendations. "A new model for training qualified personnel in the construction industry in the context of digital transformation". Interregional scientific and practical conference on the results of innovative activities. Preparation and publication of conference materials. Making proposals to change federal state educational standards for specialties 02.08.01 Construction and operation of buildings and structures and 02.07.01 Architecture in terms of approaches and content of student training	Participation in the final conference of Representatives of the Project Coordination Council

Source: compiled by the authors / Источник: составлено авторами

The predicted results of the implementation of this stage include: description of a new innovative model for training mid-level specialists within the framework of a scientific and practical conference of the college, conferences of partner organizations, the journal "Bulletin of NOPRIZ", publication of effective experience in collections of scientific and methodological materials.

The main means of monitoring and ensuring the reliability of the results of the entire project will be as follows: a report on the activities of the innovation site, quality monitoring, scientific publications, implemented projects using information modeling technologies (BIM) and their assessment by employers, methodological recommendations with reviews from partners, new modules of the main professional programs, information on the official website, video reviews of project partners on the official website of the college.

**Conclusion**

In summary, it should be noted that the sustainability of the project results after completion of its implementation will be ensured by organizing activities within the project based on federal, regional, and other regulatory and legal grounds. Secondly, through the introduction of a new innovative model for training personnel in the construction industry, providing better training. Thirdly, by reducing the need for construction industry specialists who are proficient in BIM information modeling technologies. Fourthly, due to the growth of competencies of teaching staff, college leaders and partners. Fifthly, the functioning of the college's quality management system. Sixth, through interaction with partner

organizations, based on which industry-specific departments have been created (OOO "SB" and OOO "Archikom").

**Authors' Contribution**

The authors have made an equal contribution to the research: collection and analysis of the material; definition of goals and objectives, research methods; formulation and scientific substantiation of conclusions, registration of key research results in the form of an article.

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