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Justification of necessity and directions for improving strategic planning of investment and construction enterprises innovative development

In modern conditions of the investment and construction sector development, characterized by the need to implement a policy of technological sovereignty, import substitution and the creation of their own competitive industries by enterprises, there is a need to improve the conceptual and methodological foundations for activating the innovative development of construction enterprises. The paper identifies the features of innovative activity of enterprises in the investment and construction sector, systematizes scientific approaches to the construction of a methodology for strategic planning of innovative development, and proposes a methodology for analyzing the dynamics of characteristics and identifying trends in innovative development in construction. Based on the analysis, the main problems and trends in the development of the innovation space in the industry are identified, methods for solving problems and appropriate tools and directions for their scientific justification are proposed. When determining strategic guidelines for the development of construction organizations, as well as when determining meso-level development strategies, respectively, a value-oriented approach in the projection of value innovation as a sustainable competitive advantage of enterprises, industries and regions, as well as a stakeholder approach in the projection of the formation of an innovation network, should be taken into account. A new approach to planning and implementing the strategy of innovative development of a construction enterprise is proposed, including a change in the innovation paradigm based on value innovation and foresight forecast of the construction industry. The application of the author's approach will increase the level of innovative activity in construction and ensure a steady growth of innovative competitive advantages of the enterprise in accordance with the targets of scientific, technical and sectoral development. The expediency of improving the methodology for forming the strategy of innovative development of enterprises in the investment and construction sector on the basis of a new paradigm of value innovation is shown, a logical scheme for improving the methodology is developed, which allows to provide advanced development of domestic construction enterprises on an innovative basis.

Keywords: *innovative development, investment and construction sector, strategy, enterprise, methodology*



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The modern investment and construction sector is a network of regional construction clusters. Construction is distinguished from other types of economic activity by the specifics of final and intermediate construction products, the peculiarities of the construction market and the institutional environment, the specifics of network interactions [1–6].

The specific features of the investment and construction sector form both the need for its innovative development and the corresponding strategic orientation of the development and implementation of innovations, as well as the difficulties in their implementation, that is, innovative inertia [3, 7–11]. Overcoming innovative inertia and activation of innovative development of an enterprise in the investment and construction sector determine the need and expediency of a deeper study of the specifics of innovative development of construction in order to develop a methodology for forming a strategy for innovative development of enterprises in the investment and construction sector.

The analysis of scientific approaches to the construction of a methodology for the formation of a strategy for the innovative development of construction enterprises allowed us to present the prospects for their application, taking into account the peculiarities of innovation in the investment and construction sector and the identified economic and managerial focuses in the form of Fig. 1.

The problematization of innovative development in the investment and construction sector is formed, first of all, by the general trends of innovative development in the country, including mechanisms of state regulation and support, the specifics of construction products and the corresponding specifics of the investment and construction sector, as well as global challenges that changes in the external environment generate for the innovation and construction sector.

To identify the problems and prospects of innovative development in construction, it is necessary to analyze the characteristics of the space of innovative activity of construction enterprises. The space of innovation activity, based on the analysis of scientific literature [3, 12–14] and the analysis of the specifics of innovative development of the investment and construction sector, we propose to structure as follows (Fig. 2).

As can be seen from the above diagram, the characteristics of the innovation activity space are structured on the basis of the environment of the construction enterprise into sectoral and intersectoral. In order to build a strategy for the activity of a construction enterprise and determine strategic goals and guidelines, it is necessary to analyze the dynamics of the characteristics of the space of innovative activity of construction enterprises and identify trends and limitations of development [15–19].

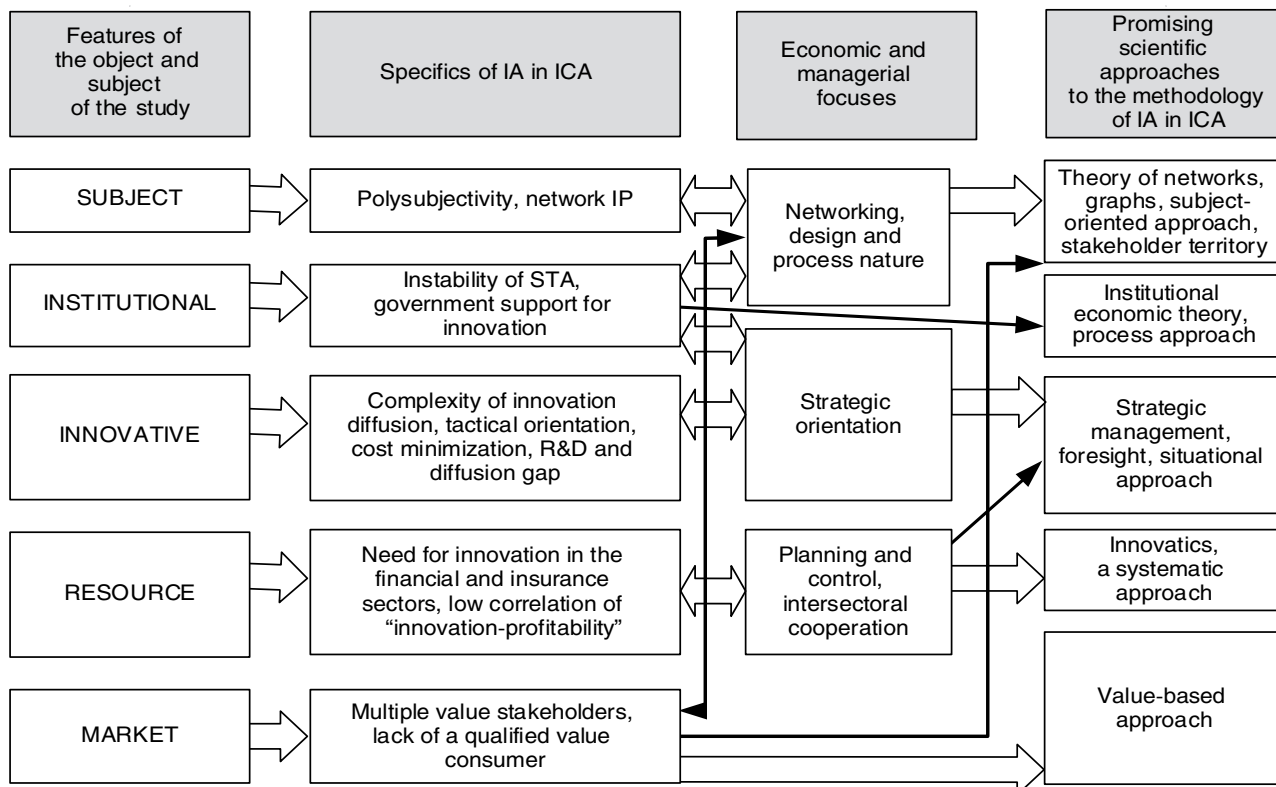


Fig. 1. The specifics of innovation activity in the investment and construction sector and promising scientific approaches to the construction of a methodology for the formation of an innovative development strategy

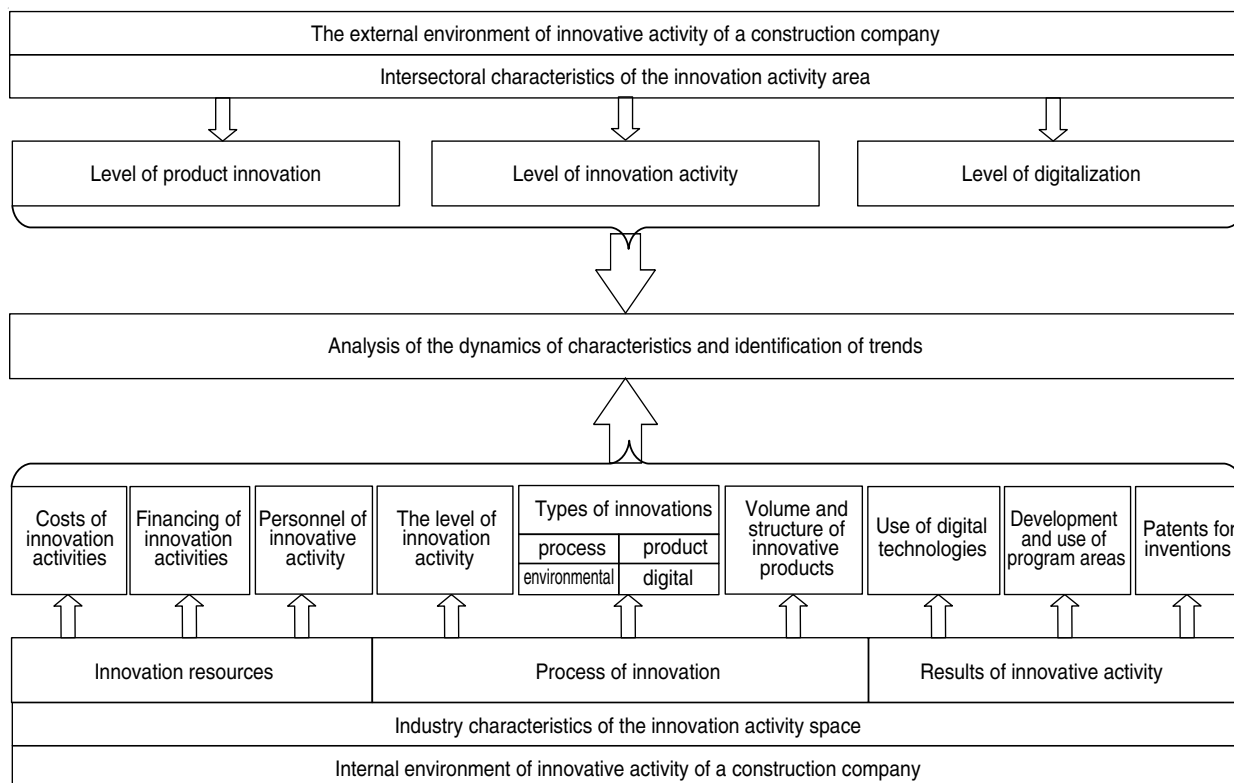


Fig. 2. Structure of the characteristics of the space of innovative activity of construction enterprises

Trends and problems of characteristics of the space of innovative activity of construction enterprises and proposed research directions

The problem / trend of the development of the innovation activity space	Methods of solving the problem	Research directions
Insufficient financing, financing from own funds / –	Improving the return on investment in innovation, state innovation policy	<ul style="list-style-type: none"> • foresight technologies for choosing innovations; • creation and development of “points of innovative growth”
High level of costs for innovation activities with low efficiency	Creating effective long-term unique Sustainable Competitive Advantage (SCA)	Value innovation
Low and uneven innovative activity of enterprises in the investment and construction sector / –	<ul style="list-style-type: none"> • activation of scientific and technical developments; • accelerating the diffusion of innovation; • organization of innovation promotion centers; • training and stimulation of personnel 	Creation of “points of innovative growth”
Uneven innovative potential of organizations, under-development of cooperative relations / –	<ul style="list-style-type: none"> • acceleration of the diffusion of innovations; • organization of innovation promotion centers; • increasing information openness 	<ul style="list-style-type: none"> • network methods of organizing innovative interactions; • foresight technologies
High level of competition in ICS / –	Creating long-term unique SCA	Value innovation
– / Sustainable development	<ul style="list-style-type: none"> • creating effective SCA; • state innovation policy 	<ul style="list-style-type: none"> • foresight technologies for choosing innovations; • creating “points of innovative growth”
– / Digitalization of products and processes	<ul style="list-style-type: none"> • creating digital SCA; • development and application of modern software 	Value innovation
– / Consumer requirements	Creating effective SCA	Creating “points of innovative growth”
Insufficient intersectoral and sectoral diffusion / –	<ul style="list-style-type: none"> • acceleration of the diffusion of innovations; • organization of innovation promotion centers; • state innovation policy 	<ul style="list-style-type: none"> • creation of “points of innovative growth”; • network methods of organizing innovative interactions

The results of structuring and analyzing the characteristics of the innovation space of construction enterprises are summarized in a table (Table), which also suggests the directions (tools), proposed to solve the identified problems and prolong the deterministic trends in the development of the innovation space in the investment and construction sector.

Based on the analysis of the characteristics of the innovation activity space, the expediency of applying four main focuses or directions in further research is revealed, namely: foresight technologies, value innovations, the creation of “points of innovative growth” and appropriate network methods for organizing innovative interactions in the process of implementing ICP.

The results of the analysis of the characteristics of the space of innovative activity of construction enterprises indicate the presence of a number of problems of innovative development of a strategic nature, which led to the preservation and further increase of the innovative inertia of construction. There is an objective need to improve the methodology for forming an innovative development strategy for the investment and construction sector, especially at

the level of the basic link (enterprises), with the elaboration of issues of activation and improvement of the effectiveness of innovation activities, as well as the diffusion of innovations, mainly with the need for state incentives based on innovation policy. Consequently, the necessity of developing a concept and methodology for the formation of an innovative development strategy for ICS enterprises is identified, taking into account the specifics we have substantiated, as well as the identified problems and trends in the dynamics of the characteristics of the innovation activity space in order to prolong positive trends in innovative development and minimize its uncertainty [20].

Based on the comprehensive analysis and the set goals and objectives of the dissertation, the author has developed a logical scheme of the dissertation research (Fig. 3).

Following the proposed logical scheme, we believe, will allow us to create a unified methodological support for the processes of formation and implementation of an innovative development strategy at all levels of management of the investment and construction sector.

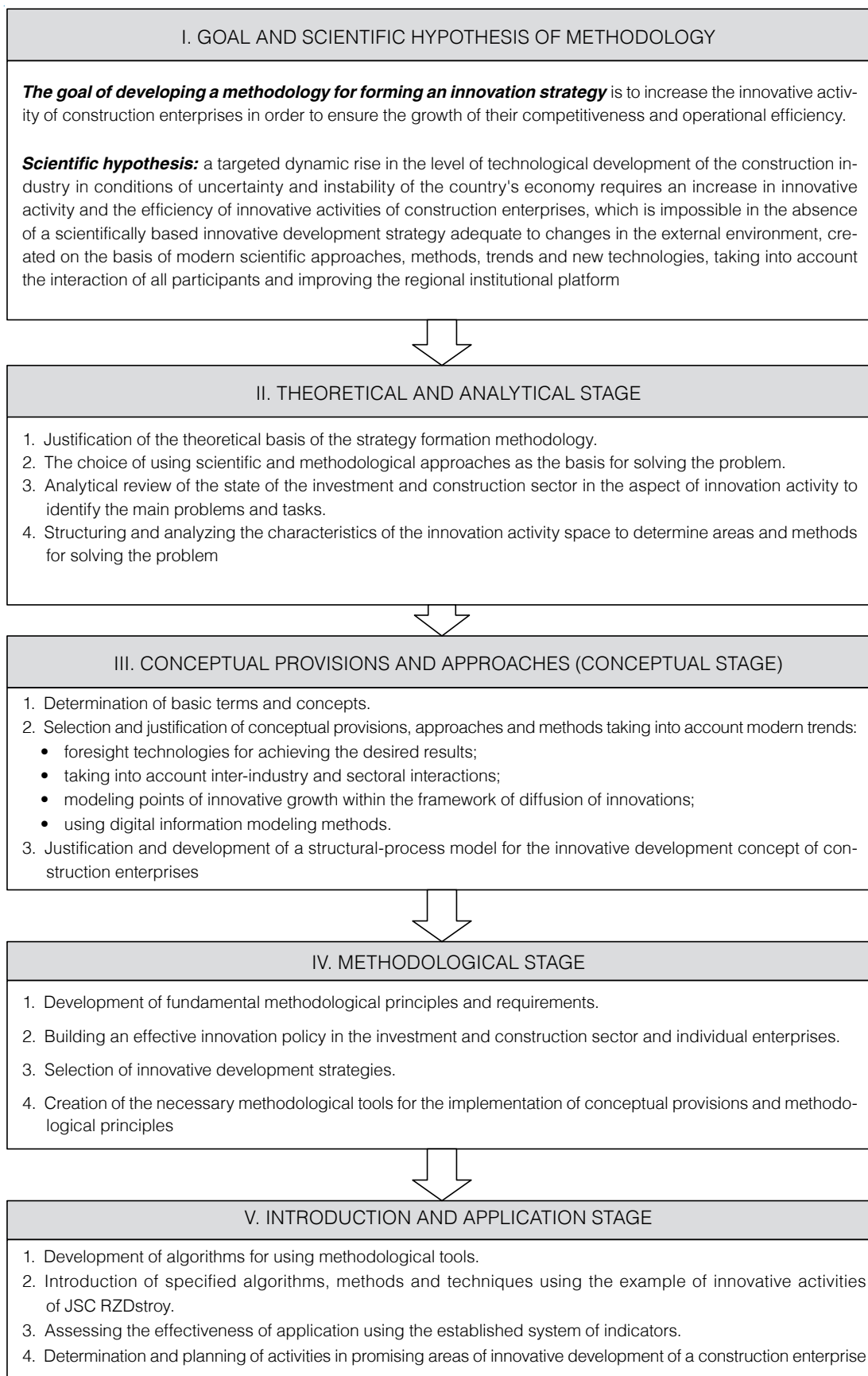


Fig. 3. A systematic framework for developing a methodology to shape an innovative development strategy for large construction companies

REFERENCES

- Grabovyy P.G., Manukhina L.A., Budanov I.V. Features of project financing of investment and construction projects of residential real estate: problems, risks, forecast. *Real estate: economics, management*. 2019; 4:6-12. (rus.).
- Grabovyy P.G., Grebenshchikov V.S., Belyakov S.I. Risks in the investment and construction sector : monograph. Moscow, 2017, 160. (rus.).
- Kankhva V.S., Uvarova S.S., Belyaeva S.V. Rapid assessment of the current price level of basic building materials and analysis of their dynamics. *Real Estate: Economics, Management*. 2023; 2: 27-32. DOI: 10.22337/2073-8412-2023-2-27-32
- Lukmanova I., Panenkov A., Kuzovleva I., Bredikhin V. Methodology of the theory of change management in the implementation of digital transformation of construction: problems and prospects. *E3S Web of Conferences*. 22. "22nd International Scientific Conference on Energy Management of Municipal Facilities and Sustainable Energy Technologies, EMMFT 2020". 2021; 05005. DOI: 10.1051/e3sconf/202124405005
- Uvarova S., Voronov D., Erypalov S. Assessment and management of developer company competitiveness in the conditions of business changes. *MATEC Web of Conferences*. 2017; 08036. DOI: 10.1051/mateconf/201710608036
- Tipili P.O., Ilyasu M.S. Evaluating the effects of communication in construction project delivery in Nigeria. *J. Environ. Sci. Technol.* 2014; 2:48-54.
- Vlasenko V., Bukreev A., Sizova E., Vasilyeva O. Specifics of the strategic management of innovative activity of big development and construction companies. *MATEC Web of Conferences*. 2017; 08034. DOI: 10.1051/mateconf/201710608034
- Uvarova S., Andryunina Ya., Smorodina E., Ovsyannikov A., Chugunov A. Increasing the attractiveness of green construction objects from the perspective of a value-based approach. *AIP Conference Proceedings*. VIII international scientific and technical conference "Solving environmental problems in the construction industry" ESCI 2022. AIP PUBLISHING. 2023; 040025. DOI: 10.1063/5.0129529
- Wang N., Gong Z., Xu Z., Liu Z., Han Y. A quantitative investigation of the technological innovation in large construction companies. *Technol. Soc.* 2021; 65:101533. DOI: 10.1016/j.techsoc.2021.101533
- Yaskova N., Kolosova T. The investment and construction activities transformation at the modern development stage of Russia. In the collection : *IOP Conference Series: Materials Science and Engineering*. 23, *Construction — The Formation of Living Environment*. "XXIII International Scientific Conference on Advance in Civil Engineering: «Construction — The Formation of Living Environment», FORM 2020 — Management in Construction" 2020; 062050. DOI: 10.1088/1757-899X/869/6/062050
- Zhang X., Le Y., Liu Y., Liu M. Fostering ambidextrous innovation in infrastructure projects: Differentiation and integration tactics of cross-functional teams. *J. Constr. Eng. Manag.* 2021; 147:04021046. DOI: 10.1061/(ASCE)CO.1943-7862.0002060
- Lekan A., Clinton A., Owolabi J. The Disruptive Adaptations of Construction 4.0 and Industry 4.0 as a Pathway to a Sustainable Innovation and Inclusive Industrial Technological Development, *Buildings*. 2021; 11:79. DOI: 10.3390/buildings11030079
- Gumba K., Belyantseva O., Kochetova L. Justification of the Sources of Forming Competitive Advantages of Underground Construction Companies under the Production Concentration Conditions, *Procedia Engineering*. 2016; 165:1323-1327. DOI: 10.1016/j.proeng.2016.11.858
- Chen W., Yu M., Hou J. Synergistic Relationship, Agent Interaction, and Knowledge Coupling: Driving Innovation in Intelligent Construction Technology, *Buildings*. 2024; 14: 542. DOI: 10.3390/buildings14020542
- Uvarova S.S., Belyaeva S.V., Kankhva V., Vlasenko V. Implementation of innovative strategy in underground construction as a basis for sustainable economic development of a construction enterprise. In the collection : *15th International scientific conference "Underground Urbanization as a Prerequisite for Sustainable Development" 12-15 September 2016, St. Petersburg, Russia. "Procedia Engineering"*. 2016; 1317-1322. DOI: 10.1016/j.proeng.2016.11.857
- Gumba K., Belyaeva S. Specific character of sustainable innovative development of transport construction in self-regulation conditions. *IOP Conference Series : Earth and Environmental Science*. 2017; 012163. DOI: 10.1088/1755-1315/90/1/012163
- Kuzyk B.N., Yakovets Yu.V. Global forecast "The future of civilizations" for the period up to 2050. Part 5. Moscow, Publishing house of the Moscow Institute of Socio-Cultural Programs , 2009. (rus.).
- Lukmanova I.G., Yaskova N.Y. New tasks of investment and construction activities in the context of trends in spatial development of Russia. *Bulletin of MGSU*. 2019; 14:6 (129):774-784. DOI: 10.22227/1997-0935.2019.6.774-784 (rus.).
- Yaskova N.Yu., Zaitseva L.I. Construction: overcoming growth limits, *Real Estate: Economics, Management*. 2022; 4:12-17.
- Vlasenko V.A. Formation of sustainable competitive advantages in the development of a construction company strategy based on value innovation. *Real Estate: Economics, Management*. 2023; 3:37-41.

Обоснование необходимости и направлений совершенствования стратегического планирования инновационного развития предприятий инвестиционно-строительной сферы

В современных условиях развития инвестиционно-строительной сферы, характеризующихся необходимостью реализации политики технологического суверенитета, импортозамещения и создания собственных конкурентоспособных производств предприятиями, возникает необходимость совершенствования концептуальных и методологических основ активизации инновационного развития строительных предприятий. В статье выявлены особенности инновационной деятельности предприятий инвестиционно-строительной сферы, систематизированы научные подходы к построению методологии стратегического планирования инновационного развития, предложена методика анализа динамики характеристик и выявления трендов инновационного развития в строительстве. На основе проведенного анализа определены основные проблемы и тренды развития пространства инновационной деятельности в отрасли, предложены методы решения проблем и соответствующий инструментарий и направления их научного обоснования.

При определении стратегических ориентиров развития строительных организаций, равно как и при определении стратегий развития мезоуровня, соответственно, должен учитываться прежде всего ценностно-ориентированный подход в проекции инновации ценности как устойчивого конкурентного преимущества предприятий, отраслей и регионов, а также стейкхолдерский подход в проекции формирования инновационной сети. Предложен новый подход к планированию и реализации стратегии инновационного развития строительного предприятия, включающий изменение инновационной парадигмы на основе инновации ценности и форсайт-прогноза строительной отрасли. Применение авторского подхода позволит повысить уровень инновационной активности в строительстве и обеспечить устойчивый рост инновационных конкурентных преимуществ предприятия в соответствии с целевыми ориентирами научно-технического и отраслевого развития. Показана целостность совершенствования методологии формирования стратегии инновационного развития предприятий инвестиционно-строительной сферы на основании новой парадигмы инновации ценности, разработана логическая схема совершенствования методологии, позволяющая обеспечить опережающее развитие отечественных строительных предприятий на инновационной основе.

Ключевые слова: инновационное развитие, инвестиционно-строительная сфера, стратегия, предприятие, методология

СПИСОК ИСТОЧНИКОВ

1. Грабовый П.Г., Манухина Л.А., Буданов И.В. Особенности проектного финансирования инвестиционно-строительных проектов жилищной недвижимости: проблемы, риски, прогноз // *Недвижимость: экономика, управление*. 2019. № 4. С. 6–12.
 2. Грабовый П.Г., Гребенщиков В.С., Беляков С.И. Риски в инвестиционно-строительной сфере : монография. М., 2017. 160 с.
 3. Kankhva V.S., Uvarova S.S., Belyaeva S.V. Rapid assessment of the current price level of basic building materials and analysis of their dynamics // *Real Estate: Economics, Management*. 2023. No. 2. Pp. 27–32. DOI: 10.22337/2073-8412-2023-2-27-32
 4. Lukmanova I., Panenkov A., Kuzovleva I., Bredikhin V. Methodology of the theory of change management in the implementation of digital transformation of construction: problems and prospects // *E3S Web of Conferences*. 22. Сер. "22nd International Scientific Conference on Energy Management of Municipal Facilities and Sustainable Energy Technologies, EMMFT 2020". 2021. P. 05005. DOI: 10.1051/e3sconf/202124405005
 5. Uvarova S., Voronov D., Erypalov S. Assessment and management of developer company competitiveness in the conditions of business changes // *MATEC Web of Conferences*. 2017. P. 08036. DOI: 10.1051/mateconf/201710608036
 6. Tipili P.O., Ilyasu M.S. Evaluating the effects of communication in construction project delivery in Nigeria // *J. Environ. Sci. Technol*. 2014. Vol. 2. Pp. 48–54.
 7. Vlasenko V., Bukreev A., Sizova E., Vasilyeva O. Specifics of the strategic management of innovative activity of big development and construction companies // *MATEC Web of Conferences*. 2017. P. 08034. DOI: 10.1051/mateconf/201710608034
 8. Uvarova S., Andryunina Ya., Smorodina E., Ovsyannikov A., Chugunov A. Increasing the attractiveness of green construction objects from the perspective of a value-based approach // *AIP Conference Proceedings*. VIII international scientific and technical conference "Solving environmental problems in the construction industry" ESCI 2022. AIP PUBLISHING. 2023. P. 040025. DOI: 10.1063/5.0129529
 9. Wang N., Gong Z., Xu Z., Liu Z., Han Y. A quantitative investigation of the technological innovation in large construction companies // *Technol. Soc*. 2021. Vol. 65. P. 101533. DOI: 10.1016/j.tech-soc.2021.101533
 10. Yaskova N., Kolosova T. The investment and construction activities transformation at the modern development stage of Russia // *B сб. : IOP Conference Series : Materials Science and Engineering*. 23, *Construction — The Formation of Living Environment*. Сер. XXIII International Scientific Conference on Advance in Civil Engineering: "Construction — The Formation of Living Environment", FORM 2020 — Management in Construction 2020. P. 062050. DOI: 10.1088/1757-899X/869/6/062050
 11. Zhang X., Le Y., Liu Y., Liu M. Fostering ambidextrous innovation in infrastructure projects: Differentiation and integration tactics of cross-functional teams // *J. Constr. Eng. Manag*. 2021. Vol. 147. P. 04021046. DOI: 10.1061/(ASCE)CO.1943-7862.0002060
 12. Lekan A., Clinton A., Owolabi J. The Disruptive Adaptations of Construction 4.0 and Industry 4.0 as a Pathway to a Sustainable Innovation and Inclusive Industrial Technological Development // *Buildings*. 2021. Vol. 11. P. 79. DOI: 10.3390/buildings11030079
 13. Gumba K., Belyantseva O., Kochetova L. Justification of the Sources of Forming Competitive Advantages of Underground Construction Companies under the Production Concentration Conditions // *Procedia Engineering*. 2016. Vol. 165. Pp. 1323–1327. DOI: 10.1016/j.proeng.2016.11.858
 14. Chen W., Yu M., Hou J. Synergistic Relationship, Agent Interaction, and Knowledge Coupling: Driving Innovation in Intelligent Construction Technology // *Buildings*. 2024. Vol. 14. P. 542. DOI: 10.3390/buildings14020542
 15. Uvarova S.S., Belyaeva S.V., Kankhva V., Vlasenko V. Implementation of innovative strategy in underground construction as a basis for sustainable economic development of a construction enterprise // *B сб. : 15th International scientific conference "Underground Urbanisation as a Prerequisite for Sustainable Development" 12-15 September 2016, St. Petersburg, Russia*. Сер. "Procedia Engineering". 2016. Pp. 1317–1322. DOI: 10.1016/j.proeng.2016.11.857
 16. Gumba K., Belyaeva S. Specific character of sustainable innovative development of transport construction in self-regulation conditions // *IOP Conference Series: Earth and Environmental Science*. 2017. P. 012163. DOI: 10.1088/1755-1315/90/1/012163
 17. Кузык Б.Н., Яковец Ю.В. Глобальный прогноз «Будущее цивилизаций» на период до 2050 года. Часть 5. М. : изд-во Московский институт социально-культурных программ, 2009.
 18. Лукманова И.Г., Яськова Н.Ю. О новых задачах инвестиционно-строительной деятельности в контексте трендов пространственного развития России // *Вестник МГСУ*. 2019. Т. 14. № 6 (129). С. 774–784. DOI: 10.22227/1997-0935.2019.6.774-784
 19. Yaskova N.Yu., Zaitseva L.I. Construction: overcoming growth limits // *Real Estate: Economics, Management*. 2022. No. 4. Pp. 12–17.
 20. Vlasenko V.A. Formation of sustainable competitive advantages in the development of a construction company strategy based on value innovation // *Real Estate: Economics, Management*. 2023. No. 3. Pp. 37–41.
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