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PROCESS OF FUNCTIONING AND CREATING MODELS FOR DEVELOPMENT

ПРОЦЕС ФУНКЦІОНУВАННЯ ТА СТВОРЕННЯ МОДЕЛЕЙ ДЛЯ РОЗВИТКУ ДЕВЕЛОПМЕНТУ

Summary. This article provides a comprehensive analysis and justification of the importance and necessity of creating operating models for development business structures. The article substantiates and presents the characteristics of various investment and construction entities that determine the importance of territorial aspects in the formation and development of business models and investment and production components of development business structures. The presented factors substantiate the need to analyze and evaluate target sets of resource and organizational elements that underpin the effective operation and development of integrated investment and production structures of development business structures as complex, hierarchically structured territorial and production systems of development business structures. The effectiveness of integrated investment and production structures of development business structures is determined by the justified choice of a rational organizational and economic mechanism for the functioning and development of the territorial system of existence of development business structures. At the same time, the development and creation of new approaches to analysis and organizational-economic modeling in the formation and justification of strategic actions aimed at achieving agreed business goals and the socio-economic development of business structures, in our opinion, should be considered as an important promising direction in the development of tools and mechanisms for the formation and development of a territorial system for the development of development business structures. The article examines and presents conclusions that since investment and construction activities are a complex set of interconnected processes that differ both in their nature and in their functional role within a single investment and construction process, and those that have a complex hierarchy, the creation of models based on the decomposition of the functioning processes of integrated investment and production structures of the development business in order to develop a mechanism for the formation and development of a territorial system for the development of the development business and approaches to its implementation as a structural basis requires a hierarchical representation of the key object zones of the territorial system for the development of the development business, which makes it possible to identify key processes within the framework of the functioning of the territorial system for the development of the development business in relation to each object zone.

Keywords: construction, development, modeling, efficiency, growth.

Introduction. Modern tasks in the conditions of development and changes in the environment of the functioning of construction enterprises involve the implementation of various programs for their renewal (in various areas, in particular economic, managerial, technical and technological progress), such restructuring and reconstruction should be carried out after coordination with the conditions

and state of the market and taking into account the peculiarities of the functioning of the investment and construction sector. We consider investment and construction activities as a complex-structured complex of interconnected processes of a diverse nature, which differ both in their nature (production, organizational, communication, etc.) and in their functions (technological, providing,

controlling, etc.), but they are considered as a systemic process within the framework of a single investment and construction process, and have an internal hierarchy [7].

The development of scientific, methodological and methodological approaches to the functioning, development and changes of the territorial and reproductive system of the development business simultaneously requires solving the problem of creating models and determining the basic processes that are implemented within the framework of the functioning of the investment and construction complex of Ukraine, and is the basis for further identification and structuring of organizational and functional elements of the territorial and reproductive system of the development business.

Analysis of modern research. When monitoring scientific publications on the topic of the article, a lot of literature was reviewed on the functioning, development and prospects of the investment and construction complex and the possibilities of its application as a tool for transformations and increasing the efficiency and effectiveness of construction enterprises, in particular the works of such specialists as J. Champi, M. Hammer J. Davenport, F. Wallach, M. Robson, E. Frese, F. Hill, O.V. Arefieva, O.Yu. Belenkova, A.E. Derkach, P.M. Kulikov, V.M. Lych, O.M. Malykhina, V.P. Nikolaev, I.V. Novykova, I.V. Popovichenko, G.M. Ryzhakova, L.V. Sorokina, S.P. Stetsenko, R.V. Trach, V.G. Fedorenko, V.I. Shapiro, G.V. Shpakova and others. However, despite numerous developments in the development and functioning of integration structures in the construction industry, most publications do not fully take into account the peculiarities of various stages of construction and do not consider scientific support for the processes of creating integration complexes for construction enterprises of various types.

The purpose of the article. The purpose of the article is theoretical and methodological developments and justification of the creation and functioning of individual components of the development business modeling process in modern conditions.

Results/Discussion. The basis of the process approach to the creation and functioning of models of economic systems and enterprises of various industries was laid by the fundamental works of M. Weber, P. Drucker, G. Ford and other scientists [3]. According to the research of these scientists, process modeling in the general sense primarily involves the identification and description of processes and basic relationships with a sufficient degree of detail and allows you to assess the

functional characteristics of the modeling process of integrated investment and production structures of the development business and is the basis for identifying problem areas. This is what allows you to assess the activities of the structure on the basis of defined processes for the purpose of their further analysis and development of improvement measures [2].

The process approach in the context of the purpose of this article is understood by us as the application of a holistic view of interconnected processes, it is this definition that is implemented within the framework of the functioning of integrated investment and production structures when assessing the functioning and development of the territorial-reproductive system of the development business [1].

The main unified characteristics of the process can be defined [7]:

- goal formation and justification: each process should form a specific goal or a specific result, this allows a clear understanding of what needs to be achieved as a result of implementation;
- development and definition of the execution algorithm: the process should consist of a sequence of steps or definition of stages that must be implemented in a certain period of time to achieve the set goal;
- definition and justification of resource provision: the implementation of individual processes requires the availability of various resources: temporary, financial, labor, material, information, etc.;
- assessment and analysis of the internal structure: within the framework of the process, there is a need to assess the relationship between different elements or individual stages of implementation, as well as other processes and their components;
- development and proposal of controlled parameters: the organization and creation of an algorithm for the functioning and development of processes is associated with the need to conduct intermediate and final control of their parameters in order to assess and ensure their compliance with the specified goals and increase efficiency.

Implementation of the components of the modeling process within the framework of the creation, formation and development of the territorial-reproductive system of the development business, which functions in accordance with various aspects of the process approach and in the general case is justified by the following basic approaches:

- process modeling is a new methodological approach that allows you to abstract and structure

processes in formal models, which will provide the prerequisites for the functioning of an effective system. Modeling and monitoring of investment and construction processes makes it possible to identify the most problematic and bottlenecks and redundant operations, which in the long term contributes to their increased efficiency and optimization of overall production productivity and optimization of the work of integrated investment and production structures of the development business in general. Determining the basic parameters and intermediate stages when creating a processing system contributes to increasing the efficiency of the distribution and use of basic resources of the territorial-reproductive system of the development business;

- assessment, definition and identification of various types of risks and determination of the level of potential losses in the processes of investment and construction activities allows in the future to optimize organizational and economic mechanisms of risk management, primarily by implementing additional control tools and mechanisms, developing forecast and reserve plans or improving existing processes with the main goal of increasing the level of stability and reliability;

- standardization and unification of processes allows to optimize organizational and production operations, reduce the level of problems and errors, increase the level of optimization and adaptability of the territorial and reproductive system of the development business;

- a very important and necessary aspect of the implementation and application of process modeling is the development of an algorithm for improving the efficiency of communications between individual elements of integrated investment and production structures of the development business, individual components of the implementation of the investment and construction project. Various models of investment and construction activity processes most often act as a visual tool that allows for a clearer understanding of the individual roles, place and responsibilities of each participant, contributes to increasing efficiency and improving coordination of joint actions of all individual components.

In addition, process modeling itself serves as the basis for improving the tools and mechanisms for the development of the territorial-reproductive system of the development business and increasing the efficiency of the functioning of various development business enterprises. Within the framework of the conducted research, it can be concluded that the relevance and significance of substantiation and development of scientific and practical tools for process modeling is justified by the fact that the

process approach is the most effective and necessary methodological basis for various modern approaches and standards of the management system, allowing to establish basic methods for determining business process systems that are used and implemented in construction enterprises [6, 7]. As the basis of such modern approaches to modeling organizational systems, the following popular systems should be identified:

- Process Integrated Quality System (PIQS);
- Total Quality Management (TQM);
- Business Process Management System (BPMS);
- Project Management Body of Knowledge (PMBOK);
- ISO 9000 standards;
- Enterprise Resource Planning (ERP).

When determining the content and features of the sphere of investment and construction activity, we consider it reasonable to determine the feasibility of applying individual elements of process modeling, which is the basis for international and Ukrainian scientific-methodological and methodological approaches, standards for design activities of construction enterprises and integrated structures in the field of construction. Development and definition of process modeling based on the decomposition of the processes of functioning of individual elements of integrated investment and production structures in order to form a toolkit and develop a mechanism for the functioning of the territorial-reproductive system of the development business and the definition of basic approaches to implementation and implementation based on a structural approach requires a justified and hierarchical combination of basic object areas of the territorial-reproductive system of the development business in accordance with generally accepted approaches to the hierarchical structuring of production systems [4].

Based on the justification provided, it can be determined that the scientific goal of process modeling of integrated investment and production structures of the development business based on the established hierarchy of object areas of the territorial and reproductive system of the development business, in our opinion, should be based on the synthesis of individual process models that are formed on the basis of existing conceptual approaches to the process support of the functioning and development of integrated business structures, taking into account the specific features of the development business, determining the life cycle of investments and other basic factors. The assessment and generalization of scientific and theoretical approaches in the implementation of this

provision makes it possible, within the framework of this article, to substantiate the process model of the functioning of integrated investment and production structures of the development business and to determine the main processes in accordance with each individual object branch of the territorial-reproductive system of the development business [3]:

I. Strategic (highest) level

The basic, most important processes that are implemented in relation to the territorial-reproductive system of the development business on the basis of the formation, creation and implementation of a development and growth strategy include [2; 6]:

Strategic planning:

- monitoring the external and internal environment of the territorial-reproductive system of the development business, assessment of the basic parameters of efficiency, effectiveness and growth;
- assessment of the main strategic alternatives for the development and growth of the territorial-reproductive system of the development business;
- substantiation of the most important strategic priorities and development of perspective strategic plans for the development of the territorial and reproductive system of the development business;
- management of various types of risks and changes;
- integration interaction, including the main processes of unification and determination of levels of consolidation;
- substantiation, creation, formation and development of tools and mechanisms for interaction of entities within the framework of the creation of integrated investment and production structures of the development business;
- creation of an effective system of interaction with external stakeholders in order to increase the efficiency of the functioning of entities of integrated investment and production structures of the development business;
- development and establishment of effective mechanisms for the distribution of powers and a monitoring and control system in integrated investment and production structures of the development business.

Determination of resource support:

- determination of the level of efficiency and formation of a single economic potential of the territorial-reproductive system of the development business within the framework of production, investment and financial, personnel, innovation and other types of resources of construction enterprises;

– strategic, tactical, operational financial and budgetary planning of the activities of integrated investment and production structures of the development business.

– development of a structural support system:

– formation, development and creation of a system for the effective functioning of the organizational and functional structure of the territorial-reproductive system of the development business and organizational models of investment and construction activities;

– organizational and contractual and financial support of investment and construction activities;

– formation and development of an information system, determination of parameters for assessing the effectiveness and information and communication environment of the territorial-reproductive system of the development business.

– risk management system:

– identification, probability assessment, qualitative and quantitative assessment of risks in the system of operation of the territorial and reproductive system of the development business;

– development of a strategy, plans and risk management mechanisms in order to reduce the level of their impact on the effectiveness of the territorial and reproductive system of the development business.

Control and monitoring:

– creation of a system and mechanisms for controlling the process of implementing the strategy and implementing plans for the development of the territorial and reproductive system of the development business;

– monitoring of the main indicators of efficiency and effectiveness of the territorial and reproductive system of the development business;

– analysis and assessment of the production and financial and economic activities of integrated investment and production structures of the development business;

– sustainable and sustainable development:

– planning, development and implementation of long-term programs for sustainable and sustainable development of the territorial and reproductive system of the development business taking into account ESG principles;

– development and implementation of mechanisms for ESG transformation of the development business model;

– determination and analysis of the compliance of the activities of integrated investment and production structures of the development business with the basic principles of sustainable development.

II. Tactical (investment) level

The combination of basic processes implemented at the tactical (investment) level of the territorial-reproductive system of the development business includes [5, 6]:

- increase and combination of processes implemented in accordance with the object industry of the investment portfolio of assets of integrated investment and production structures of the development business;
- processes of forming a portfolio of investment and construction projects and investment assets;
- processes of monitoring the effectiveness of the investment portfolio;
- combination of processes implemented in relation to the object areas of individual assets in accordance with individual stages of the life cycle of the investment asset;
- conceptual planning and justification of investments;
- creation / acquisition of an asset;
- operation of an asset;
- modernization and reconstruction of an asset;
- alienation / liquidation of an asset.

III. Operational (project) level

Formation and unification of the main processes within the framework of the development and implementation of an investment and construction project in accordance with individual stages of the life cycle includes [7]:

- formation of a conceptual goal and conceptual planning of an investment and construction project;
- creation of a business plan of an investment and construction project;
- organization of financing at each stage of an investment and construction project;
- engineering and design;
- execution of documents, creation of standards and development of an algorithm for coordinating documents in the process of implementing an investment and construction project;
- organization and formation of an effective system of logistics and supplies of material and technical equipment;
- creation of an effective system of construction production;
- formation of an effective system of operation of real estate objects;
- organization of the process of selling products of the territorial and reproductive system of the development business.

Conclusions Based on the analysis, it was determined that the process decomposition of the creation and functioning of integrated investment and production structures of the development business

forms the basis for the formation and development of an integrated organizational and economic mechanism for the functioning of the territorial and reproductive system of the development business, the main procedures of which within the framework of the defined process approach should include the following components:

- identification, assessment, definition and formalization of processes;
- delegation of individual components to various organizational elements of the organizational and functional structure of the territorial and reproductive system of the development business;
- integration and implementation of part of the processes within the framework of process and functional modeling and structuring of the territorial and reproductive system of the development business;
- determination of basic criteria and basic methods of process monitoring and diagnostics of the territorial and reproductive system of the development business;
- resource, including financial, personnel, information support of individual processes and the complete system;
- monitoring, assessment and analysis of certain processes and models of the territorial-reproductive system of the development business;
- development, implementation and determination of the effectiveness of methods for optimizing processes.

It has been determined that the main features of the development business are a different composition of investment and construction activity processes, which are interconnected in a system of closed investment and production cycles of the formation and development of construction products, which are implemented at separate stages of the life cycle of the investment and construction project and real estate objects and are distinguished by the nature of production processes, duration, capital intensity, risk level and other characteristics.

References:

1. Belenkova O.Y. (2022). Tsyfrova transformatsiya budivnytstva i developmentu terytoriy yak imperativ formuvannya stratehiy uchasnykiv budivel'noho protsesu. *Mistobuduvannya ta terytorial'ne planuvannya*. № 81. S. 13–22.
2. Derkach A.Y., Valyayev O.V., Rovens'kyi A.Y., Makarenko R.M., Derkach A.Y., Hulyayev D.A. (2021). Osoblyvosti pidryadnoho budivnytstva yak funktsional'na skladova peredumov diahnostuvannya stanu ekonomichnoyi stabil'nosti pidpryemstv-uchasnykiv vprovadzhennya investytsiynoho budivel'noho protsesu. *Formuvannya rynkovykh vidnosyn v Ukraini*. № 3. S. 46–57.

3. Ponomarenko V.S., Minukhin S.V., Znakhur S.V. (2013). *Teoriya ta praktyka modelyuvannya biznes-protseviv: monohrafiya*. Kharkiv: Vyd. KHNEU, 244 s.
4. Khomenko O.M., Petrenko H.S., Ryzhakova H.M., Petrukha N.M., Chupryna Y.A., Malykhina O.M., Kushnir O.K. (2022). Suchasni instrumenty ta prohramni produkty administruvannya budivel'nykh orhanizatsiyamy v umovakh transformatsiyi operatsiynykh system menedzhmentu. *Upravlinnya rozvytkom skladnykh system*. № 52. S. 113–125.
5. Chupryna K.M. (2021). Naukovo-prikladni komponenty formuvannya stratehiyi instytutsiyno-oriyentovanoi dyversyfikatsiyi diyal'nosti budivel'nykh pidpryyemstv. *Upravlinnya rozvytkom skladnykh system*. № 47. S. 109–118.
6. Bublyk M., Koval V., Redkva O. (2017). Analysis impact of the structural competition preconditions for ensuring economic security of the machine building complex. *Marketing and Innovation Management*. № 4. P. 229–240. DOI: <https://doi.org/10.21272/mmi.2017.4-20>
7. Ryzhakova G., Pokolenko V., Malykhina O., Predun K. (2020). Structural Regulation of Methodoloical Management Approaches and Applied Reengineering Tools for Enterprises-Developers in Construction. *International Journal of Emerging Trends*, 8 (10), p. 7560–7567.

Анотація. У статті проведено комплексний аналіз та обґрунтування важливості та необхідності створення операційних моделей для девелоперських бізнес-структур. Обґрунтовано та визначено характеристики різних інвестиційно-будівельних суб'єктів, які визначають значення територіальних аспектів у формуванні та розвитку бізнес-моделей та інвестиційно-виробничих складових девелоперських бізнес-структур. Наведені фактори обґрунтовують необхідність аналізу та оцінки цільових комплексів ресурсних та організаційних елементів, які лежать в основі ефективного функціонування та розвитку інтегрованих інвестиційно-виробничих структур девелоперських бізнес-структур як складних, ієрархічно структурованих територіально-виробничих систем девелоперських бізнес-структур. Ефективність інтегрованих інвестиційно-виробничих структур девелоперських бізнес-структур визначається обґрунтованим вибором раціонального організаційно-економічного механізму функціонування та розвитку територіальної системи існування девелоперських бізнес-структур. Водночас, розробку та створення нових підходів до аналізу та організаційно-економічного моделювання у формуванні та обґрунтуванні стратегічних дій, спрямованих на досягнення узгоджених бізнес-цілей та соціально-економічного розвитку бізнес-структур, на нашу думку, слід розглядати як важливий перспективний напрямок у розробці інструментів та механізмів формування та розвитку територіальної системи розвитку девелоперських бізнес-структур. У статті розглянуто та представлено висновки про те, що оскільки інвестиційно-будівельна діяльність є складним комплексом взаємопов'язаних процесів, що відрізняються як за своєю природою, так і за своєю функціональною роллю в рамках єдиного інвестиційно-будівельного процесу, та таких, що мають складну ієрархію, створення моделей на основі декомпозиції процесів функціонування інтегрованих інвестиційно-виробничих структур девелоперського бізнесу з метою розробки механізму формування та розвитку територіальної системи розвитку девелоперського бізнесу та підходів до її реалізації як структурної основи вимагає ієрархічного представлення ключових об'єктних зон територіальної системи розвитку девелоперського бізнесу, що дозволяє виділити ключові процеси в рамках функціонування територіальної системи розвитку девелоперського бізнесу стосовно кожної об'єктної зони.

Ключові слова: будівництво, девелопмент, моделювання, ефективність, розвиток.

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