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ORGANIZATIONAL ASPECTS OF THE REAL ESTATE DEVELOPMENT COMPANY PROJECT MANAGEMENT SYSTEM TRANSFORMATION IN THE DIGITALIZATION CONDITIONS

ОРГАНІЗАЦІЙНІ АСПЕКТИ ТРАНСФОРМАЦІЇ СИСТЕМИ УПРАВЛІННЯ ПРОЄКТАМИ ДЕВЕЛОПЕРСЬКИХ КОМПАНІЙ В УМОВАХ ЦИФРОВІЗАЦІЇ

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The article is devoted to highlighting the organizational aspects of implementing models and methods for transforming the project management system of real estate development companies. An analysis of literary sources on the development of organizational models and methods in project management is conducted. An unresolved part of the scientific problem is identified. It is emphasized that projects for transforming the management system of a real estate development company should take into account modern trends in the field of project management, digitalization of management systems and use appropriate AI tools and agents. Five organizational models for possible implementation in a project for transforming the project management system in a real estate development company are proposed. Among such models: creation of a working group; initiation of a specific type of project team meetings; involvement of external consultants; outsourcing of the task (part of the project); creation of a group of specialists with relevant competencies within the project team; composite model. The features of the application of such models are described. A comparison of the proposed set of models (in terms of flexibility in application, speed of work and degree of controllability by the project team) is carried out. A SWOT analysis of the proposed set of models was conducted. The strengths of this set were identified, including: the complexity of the approach, the diversity of the proposed models, the higher level of organizational maturity of the real estate development company in the field of project management. Prospects for further exploration in the selected direction were outlined. Among them: a study of the feasibility of implementing the proposed models in a complex or separately within the project of transforming the project management system of the real estate development company “KAN Development”, the implementation of the selected set of models, the development of recommendations for increasing the efficiency of using organizational models in the project of transforming the management system based on the results of the implementation. Conclusions on the conducted research were formulated.

Keywords: management, project management, project management system transformation project, organizational model.

Стаття присвячена висвітленню організаційних аспектів впровадження моделей і методів трансформації системи управління проєктами девелоперських компаній. Проведено аналіз літературних джерел. Запропоновано п’ять організаційних моделей для можливої реалізації у проєкті трансформації системи управління проєктами в девелоперській компанії. Серед таких моделей: створення робочої групи; започаткування специфічного типу нарад команди проєкту; залучення зовнішніх консультантів; передача задачі (частини проєкту) на аутсорсинг; створення групи фахівців, що володіють релевантними компетенціями,

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всередині команди проєкту; композитна модель. Описано особливості застосування таких моделей. Проведено SWOT-аналіз запропонованої множини моделей. Окреслено перспективи подальших розвідок у обраному напрямку. Сформульовано висновки за проведеним дослідженням.

Ключові слова: менеджмент, управління проєктами, проєкт трансформації системи управління проєктами, організаційна модель.

Statement of the problem. The activities of real estate development companies in Ukraine take place in extremely harsh conditions. The war caused by the aggression of the russian federation against Ukraine, the constant risks of new destruction of infrastructure and residential buildings as a result of shelling by the aggressor, the shortage of industry specialists, and other consequences of the war significantly complicate the tasks of real estate development companies. On the other hand, the quality requirements for new construction projects are increasing significantly – both in terms of additional protection from air attacks, and in terms of arranging a protected and fully functional shelter, and in terms of increasing the level of energy independence. At the same time, the use of digitalization, digitalized solutions and AI developments contributes to increasing the efficiency of construction management systems, which can help real estate development companies to ensure their functioning and development in today's difficult conditions. However, their combination requires new management approaches, rethinking the accumulated experience, developing innovative solutions in management, testing, adjusting and effective use. The management systems of real estate development companies urgently need a significant transformation, which should be based on relevant scientific developments. The organizational basis for such a transformation should also be prepared in order to increase the efficiency of using innovative management tools, which is what this article will be devoted to.

Analysis of recent research and publications. The basis for organizational development can be classical models of construction management, which are set out in particular in fundamental work of Ushatskyi, Sheiko, Tryger and others [1]. However, on their basis, organizational models are being improved, new roles and models of their interaction in real estate development companies are being proposed, in particular in the context of involving consulting, management and engineering companies in development projects in the article by Karpenko, Danylchenko [2]. Leading project management standards in their current editions also expand the variety of organizational models. Thus, in particular, the PMBOK outlines new organizational structures (along with the usual functional, matrix and project-oriented) - organic or simple, multi-divisional, virtual (network) and hybrid [3]. The International Organization for Standardization standard ISO 21502 contains a section on structure and organization. The section emphasizes that the specified standard provides a clear structure for project management, covering everything from the project's initiation to its closure [4]. The current edition of the Japan Project Management Association standard offers a superstructure over the organization's projects in the form of program management roles; the list of such roles is aimed at profiling the company's mission, managing the list of projects, their overall strategy, etc. [5]. In the works of classical project management, more and more attention is paid to innovative approaches to projects, in particular in the context of digitalization. The organizational aspects of ensuring such innovations are also outlined, in particular in the context of the project management organization maturity model PMMM – Project Management Maturity Model by Harold Kerzner [6], in another work of the same author real examples of organizational support for project management are given [7]. Modern research on organizational models and structures in project management concerns the development of new models and structures by Valčić, Dimitrić, Dalsaso [8], the development of performance metrics for different models of organizational structures by Hyväri [9], the role of organizational structure and knowledge-based dynamic capability by Gonzalez [10], the influence of organizational maturity factors of organizations in the field of project management on the success of projects by Anantatmula, Rad [11], organizational culture and organizational models when applying the Agile methodology in project management and its hybridization with classical methodologies by Zasa, Patrucco, Pellizzoni [12], the influence of organizational structures used by companies for project management on the effectiveness of relationship quality on knowledge transfer in project teams by Ren, Xu, Hao, Wang [13], the general role of the organizational structure

used for project implementation in the context of the organization's management system and its activities by Cut, Rehulina, Benhur, Cahyoginarti, Muhammad [14]. However, the aforementioned scientific works have not sufficiently investigated the issue of transforming project management systems in the context of digitalization using AI elements. The authors' work (Verenych, Kochuma) in this direction, although devoted to the aforementioned topic, does not touch on the organizational aspect of such transformation [15].

Highlighting previously unresolved parts of the overall problem. Modern research in the field of improving organizational models, implementing digitalization projects and transforming management systems does not sufficiently cover the organizational aspects of transforming the management system of a real estate development company in the context of digitalization, which confirms the relevance of this study.

Formation of the objectives of the article (task statement). The purpose of the article is to develop organizational models for use in projects to transform project management systems for real estate development companies and analyzing such models.

Summary of the main research material. Projects to transform the management system of a real estate development company should take into account modern trends in the field of project management, digitalization of management systems and use appropriate tools and AI agents. Such projects should be guided by new models of organizational structures that would be adequate to modern conditions and would take into account the possibility of organizational implementation of modern trends.

We will propose five organizational models for possible implementation in a project to transform the management system of projects in a real estate development company, and describe the features of the application of such models.

1. Creation of a working group.

The implementation of the project can be supported by a working group that will be created in the real estate development company. The working group should include the entire transformation project implementation team, as well as specialists from the company's line departments. Such departments include those involved in the implementation of the project (finance department, development department, engineering department, IT department, etc.). The frequency of meetings of such a working group should be established with the recommended frequency – weekly. Additionally, the role of the working group coordinator should be defined, whose responsibilities should include: organizing working group meetings, preparing information for meetings and distributing it to working group participants, informing the company's top management about the results of the working group's activities.

It is worth noting that the implementation of the project as a whole can be entrusted to such a working group within a weak matrix organizational structure, as indicated by the PMBOK. However, modern real estate development companies in Ukraine operate mainly within a strong matrix organizational structure, where the company has a Project Management Office (PMO). Therefore, the working group can be more of an auxiliary organizational model to provide additional expertise and accelerate the advancement of project decisions within the real estate development company.

2. Initiating a specific type of project team meeting.

In order to focus attention on individual aspects of the management system transformation project, the project team can initiate specific types of meetings. In particular, the model of conducting meetings to solve challenges (PIP – Potential Improvement Point) can be used in accordance with the organizational development methodology of Ichak Adizes. The model of brainstorming meetings can also be used to solve complex tasks within the project. The periodicity of such meetings should be established by the project manager in agreement with the team. A model of conducting such meetings on an aperiodic basis is possible – according to the precedent of the emergence of issues that should be considered at this type of meeting.

3. Involvement of external consultants (or AI).

To solve complex project tasks due to its multi-vector subject area (management systems, system transformation, digitalization, AI tools), external consultants may be involved in the project team. The form of involvement is based on consulting contracts, with hourly payment for work. Payment may be made according to the hours worked on the project, which may be in recorded acts of work performed, which are signed and approved by both parties – the external consultant and the development company. The manager of the management system transformation project

should be responsible for recording the working hours of the external consultant. The act can be signed on behalf of the real estate development company by the sponsor of the transformation project, who, as a rule, represents the top management of the real estate development company. External consultants can be involved both in regular work on the transformation project and in project meetings. The list and frequency of such meetings, in which the external consultant will be involved, is determined by the project manager. In modern conditions, AI agents can also act as external consultants – both general and specialized.

4. Outsourcing the task (part of the project).

Individual tasks within the transformation project, or its individual stages or phases (for example, the testing phase of an IT product, which will be one of the project results) can be outsourced to an external contractor under a contract (outsourcing).

5. Creating a group of specialists with relevant competencies within the project team.

In order to concentrate the competencies required for the project within the project team, such a team can be supplemented by specialists in the main subject areas. Among such areas (as already mentioned above), it is worth highlighting the field of project management, the field of real estate development company management systems, the field of management system transformation projects, the field of digitalization, the field of application of AI models and tools. These specialists can be combined into a separate group within the project team, which allows polarizing the efforts of such specialists precisely on the main content of the project, which is related to its subject area, and ensuring greater control over content creation by the project manager.

6. The composite model can also be used, which involves the situationally justified use of one of the above models. This occurs if precedents arise in the project that require flexible use of one of the models from the list, and if such a composite model is added to the list of models suitable for the project. Such a model can also be added to the Standard (Methodology) of project management used in the real estate development company, or be part of the documented Corporate Management Culture.

Let us characterize the proposed set of models according to the parameters of flexibility in application, speed of work and degree of manageability by the project team (Table 1).

We formalize the proposed organizational approach in the form of a formal six:

$$O = \langle K, C, M, S, T, H \rangle,$$

where O – the organizational aspect of the management system transformation project of the real estate development company;

K – the set of artifacts of the corporate methodology (standard) used to manage the transformation project;

C – the set of external and internal factors that can influence the choice of organizational models in the transformation project;

M – the set of organizational models that can be used in the transformation project (in particular, those proposed in this study);

S – the set of scenarios for choosing one of the organizational models or their combination;

T – the set of participants in the transformation project management team;

H – the set of stakeholders of the transformation project.

We will conduct a SWOT analysis of the set of proposed models, identify their strengths and weaknesses, the threats associated with their use, and the opportunities they provide.

Strengths: comprehensiveness of the approach, diversity of proposed models, higher level of organizational maturity of the real estate

Table 1

Characteristics of the management system transformation project organizational models

No.	Model type	Flexibility	Velocity	Controllability
1	Working group	+	+	++
2	Specific type of project team meeting	+++	++	+++
3	External consultants (or AI)	++	++	++
4	Outsourcing	++	+	++
5	Group of specialists within the project team	++	+++	+++
6	The composite model	+++	++	++

Source: compiled by the authors

development company in the field of project management.

Weaknesses: the presence of a human factor, moderate controllability of some models by the project manager, insufficient development of models controlled directly by AI without human participation.

Threats: the likelihood of errors during unprofessional implementation of models, project slowdown due to increased decision-making time when using individual models, lack of top management support for the use of additional organizational models.

Opportunities: scaling the experience gained to other projects, increasing the maturity of the real estate development company in the field of project management, strengthening the company's reputation in the market and increasing the number of orders as a result.

We will also formulate vectors for further research in the chosen direction: studying the feasibility of implementing the proposed models in a complex or separately within the project to transform the project management system of the development company "KAN Development", implementing a selected set of models, developing recommendations for increasing the efficiency of using organizational models in the project to transform the management system based on the results of implementation.

Conclusions. New challenges of modernity require the use of new models and methods of project management. Real estate development companies operate in conditions of war, more stringent requirements for projects and their products as a result, against the background of accelerated digitalization and the expansion of the influence of AI. Thus, project management systems of real estate development companies must be modernized, and projects for the transformation of management systems are identified as an appropriate way of such modernization. This article proposes a set of organizational models for implementation in projects for the transformation of management systems of real estate development companies, provides their analysis, and outlines the prospects for further research in the chosen direction.

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