УДК 005.8 DOI: 10.31732/2663-2209-2019-55-128-133

ЦІННІСНІ-ОРІЄНТОВАНИЙ ПІДХІД УПРАВЛІННЯ ПРОЕКТАМИ ЯК ДЖЕРЕЛО ВИНИКНЕННЯ РИЗИКІВ

Сеек А.М.А.¹, Тесленко П.О.², Белова О.І.³

¹ аспірант, ВНЗ «Університет економіки та права «КРОК», м. Київ, вул. Табірна, 30-32, 03113, Україна, тел.: (044)-455-69-79, e-mail.: seek_a@ukr.net, ORCID: 0000-0003-5123-5614 ² к.техн.н., доцент кафедри інформаційних систем, Одеський національний політехнічний університет,

м. Одеса, проспект Шевченка, 1, 65044, Україна, тел.: (048) 705-84-42, e-mail.: ори@ори.иа,

ORCID: 0000-0003-4178-6532

³ к.е.н., доцент кафедри бізнес-адміністрування та управління проектами, BH3 «Університет економіки та права «КРОК», м. Київ, вул. Табірна, 30-32, 03113, Україна, тел.: (044)-455-69-79, e-mail.: belovaelenag@gmail.com, ORCID: 0000-0001-9359-6947

VALUE-ORIENTED PROJECT MANAGEMENT APPROACH AS A SOURCE OF RISK

Seek A.M.A.¹, Teslenko P.², Bielova O.³

¹ postgraduate student, «KROK» University, Kyiv, st. Tabirna, 30-32, 03113, Ukraine, tel.: (044) 455-69-79, e-mail.: seek_a@ukr.net, ORCID: 0000-0003-5123-5614

² *PhD* (technical), associate professor of information systems department, Odesa national polytechnic university, Odesa, pr.Shevchenka, 1, 65044, Ukraine, tel.: (048)-705-84-42, e-mail.: opu@opu.ua,

ORCID: 0000-0003-4178-6532

³ PhD (economics), associate professor of business administration and project management department, «KROK» University, Kyiv, st. Tabirna, 30-32, 03113, Ukraine, tel.: (044)-455-69-79, e-mail.: belovaelenag@gmail.com, ORCID: 0000-0001-9359-6947

Анотація. Підвищення ефективності методів управління проектами вимагає розширення бази аналізованих ознак. Сюди, крім традиційних інвестиційно-вартісних показників все частіше включають організаційноиіннісні. Ціннісно-орієнтований підхід на сьогоднішній день вважається найбільш передовою методикою в забезпеченні успішного завершення проектів. Розглянуто застосування ціннісно-орієнтованого підходу до управління проектами. Показно сутність цінності за різними науковими джереалами, та її імплементація, щодо субсктів проекту. Зазначено, що поняття цінності зазвичай застосовують до стекхолдерів проекту. Вони мають власні очикування, а підчас реалізації проекту ці очікування імплементуються у вигляді набутої цінності. Таким чином, додані категорії ціннісно-орієнтованого підходу, такі як: цінність, стейкхолдери, очікування, додана цінність та інші, можуть бути охарактеризовані, як додаткові ступені свободи для забеспечення успішного завершення проекту. Однак, включення додаткових ступенів свободи, зазвичай веде за собою появу нових ризиків, в даному випадку, в управлінні проектами. Тому авторами була поставлена задача проаналізувати взаємозв'язок між забезпеченням цінності для основних стейкхолдерів проекту і ризиками, які виникають у зв'язку з цим. У статті представлени результати аналітичного пошуку сучасного стану теоретико-практичного інструментарію ціннісно-орієнтованого управління проектами, портфелями, программма в проектно-орієнтованих організаціях, його взаємозв'язок з проектнмі ризиками. Проаналізовано базові визначення. Цінність проекту визначають як задоволення інтересів його основних стейкхолдерів, при тому як ціннісно-орієнтований підхід, застосовується для управління організацією. Показано, що ціннісноорієнтоване управління, супроводжується ризиками структурної диспропорції цінності щодо стейкхолдерів в рамках одного проекту, що викликає його нестійкість. Для розробки методики управління даної групи ризиків, сформульовані базові принципи. В якості основи управління, запропоновано використовувати інструментарій теорії спіральної динаміки.

Ключові слова: управління проектами; ціннісно орієнтоване управління; ризики структурної диспропорції цінності; управління ризиками; теорія спіральної динаміки.

Формул: 0, рис.: 0, табл.: 0, бібл.: 19

ISSN (Print) 2307-6968, ISSN (Online) 2663-2209 Вчені записки Університету «КРОК» №3 (55), 2019

Annotation. Improving the effectiveness of project management methods requires expanding the base of the analyzed features. Here, in addition to traditional investment value indicators, they increasingly include organizational and value. Value-oriented approach today is considered the most advanced method in ensuring the successful completion of projects. Application of value-oriented approach to project management is considered. Indicative essence of value by various scientific sources, and its implementation, in relation to the subjects of the project. It is noted that the notion of value is usually applied to project stewards. They have their own proofs, and during the project implementation, these expectations are implemented in the form of acquired value. Thus, added value-based approach categories such as value, stakeholders, expectations, added value, and others can be characterized as additional degrees of freedom to ensure a successful completion of a project. However, the inclusion of additional degrees of freedom, as a rule, leads to the emergence of new risks, in this case, in project management. Therefore, the authors have been tasked to analyze the relationship between providing value for the main project stakeholders and the risks that arise in this regard. The article presents the results of the analytical search for the modern state of the theoretical and practical toolkit of value-oriented management of projects, portfolios, programs in project-oriented organizations, its relationship with project risks. Analyzed basic definitions. The value of the project as meeting the interests of its main stakeholders, and the value-oriented approach, as a rule, is used to manage the organization. It is shown that value-oriented management is accompanied by risks of structural value imbalance with respect to stakeholders in a single project, which causes its instability. For the development of management techniques for this group of risks, the basic principles are formulated. As the basis of control, it is proposed to use the tools of the theory of spiral dynamics.

Key words: project management; value oriented management; risks of structural value imbalances; Management of risks; spiral dynamics theory.

Formulas: 0, fig.: 0, tabl.: 0, bibl.: 19

Stating the problem. In the modern world, companies compete not with their products, but with their management models. Successful completion of the project is not a trivial task. Such an objective function will be multimodal, noisy, multi-criterial. Moreover, according to the modern project management paradigm, projects that are implemented in project-oriented organizations are at the bottom of the management pyramid, above which there are: portfolio management, project-oriented management of organization, strategic management, sustainable development.

modern theory of organization The management, when choosing optimal models of methods and management tools, takes into account such element as corporate culture and the corresponding levels of organizational maturity. Certain management styles will suit a certain level of corporate culture and maturity of an organization. In this case there is a mutual influence: corporate culture influences the choice of management methods and styles, and management methods change the corporate culture. How to choose a model and style of project or organization management?

The level of construction project's uncertainty does not allow to standardize this process. Therefore, an additional top-level criterion is introduced - a value, quantitative

indicators of which determine the success of the project.

Unsolved part of the problem. The purpose of this article is to review the current state of theoretical and practical toolkit of value-oriented management in projects, portfolios, programs and project-oriented organizations. Identifying the basic methodological foundations of this area and identifying a possible connection with the occurrence of project risks. Formation of proposals and directions for further research.

Main research material. In [1], the relationship between value formation and organization's strategic goals achievement is presented. Portfolio management is used as a tool. The mechanism of project value formation is shown. The authors proposed indices that describe "Development of the value of a project-driven organization".

The project value is defined as meeting the needs of key stakeholders related to the resources used, while "value management" is defined by the authors as "a structured approach to determination value elements for project organization".

However, in most cases, the value category applies to the organization's activities.

Values of organization, according to [2], are a set of values that declare and cultivate management, and also supports the majority of employees. To manage the value authors suggest the use of following concepts: Profile of Values, Chain of Values.

The value of a project or program is classified according to the following criteria: system; kind of values; content of values; the source or basis of values origin; essence of values: dynamic manifestation of values: place of values manifestation; stability level of of values manifestation; stable and unstable factors; scale of values distribution. The authors consider the feature of value management in organizations as: «Cultivating shared values shared by project participants and translating them into effective regulators of organizational activities leads to the integration and consolidation of efforts of all stakeholders, employees commitment for organization» [2]. However, this approach contains a contradiction: «consolidation of of efforts all stakeholders». Different organizations take part in one project and the consolidation of stakeholders takes place inside "their own" organizations which interests in the project may not be harmonized and sometimes contradictory.

The Japanese P2M project and program management standard [3] requires a continuous value evaluation that ensures satisfaction of stakeholders involved in the management process. Here, stakeholders are considered not as a passive element, according to PMBOK [4], but as an active participant in management.

In [5], the author defines the "essence of value management" as establishment of interrelationships between goals of strategic management, creation of values, reengineering, financial management and human resources, business processes and strategy elements.

The author notes that for commercial projects that have a high social component, such as housing construction, the value of projects should be defined as the ability to meet project interested parties 'or project stakeholders' interests [5]. However, due to the heterogeneity of views on the value by all participants, conflicts of interest and their difficulty in project implementation may arise. The author proposes to consider a methodology for processing these risks in the

implementation of goal-setting, and gives examples of the conflict of interests of stakeholders because of the number of floors in the building, which is set by law or geodesy, or because of the presence or absence of parking spaces near the building [5] that is not a conflict between stakeholders: future homeowners and business owners.

The assessment and management of risks from stakeholders' conflict of interest is proposed to conduct with the indicator ΔZ , which is treated as a deviation from the actual value of the project. Most often, the ΔZ index is converted into a cost plane that imposes appropriate restrictions on the use of a valueoriented approach and the development of tools to manage stakeholders.

Similarly, the cost expression of value is used by authors [1] to formulate the principles of a balanced project portfolio of a projectmanaged organization. The paper proposes to optimize the values of portfolio management, one of the criteria of which is "the balance between risks and possible benefits, driving forces and resistances. How many risky projects can the company withstand or want to implement?" In our opinion, the criterion of estimation is the value that the authors [1] attribute to main stakeholders' expectations and benefits: «significant breakthroughs in the development of new products or the conquest of new markets», at the same time, there is a deliberate increase in the risk load in projects and portfolios.

The value. risk link between and satisfaction of stakeholders is also present in scientific projects. The authors [6] offer an conscious and controlled project risk in creating value. Conflicts can occur throughout the life cycle of a scientific project, therefore, project conflict management processes must be carried out continuously from the very beginning of the project planning to its successful completion and meeting the objectives of stakeholders in the project. At the same time, the authors pay considerable attention to constructive conflicts, which will improve the implementation of the project.

In [7], it is proposed to reduce the risk situations in projects that are related to the human factor, through the application of an

integrated approach to managing the project stakeholders. This, according to the authors, will increase the effectiveness of project management and provide added value obtained by stakeholders as a result of interaction with the project team.

An approach to project management, popular in the last century, is gradually moving away from material and financial criteria and is increasingly oriented to criteria of organizational and value management [8].

New concepts of "harmonized value", "harmonization with the strategic goals of the organization" and "harmonization of the values of the interested parties" [9]; "dominant organizational value" [3] are introduced.

In [8], the authors propose a "Value Approach" in the management of projectoriented organizations' development and mention the possibility of using the theory of spiral dynamics of the American professor of psychology, Clare Graves [10]. The valueadded approach is realized through the formation of programs and portfolios of projects related to organizations and for organization' development.

One more important parameter of valueoriented approach is the level of maturity of an organization. One of the founders of this area is Harold Kerzner, who outlined the main principles of strategic project management through a mature project management model (PMMM) in [11]. The main idea of the author is that for different levels of maturity, it is necessary to use the appropriate project management tools, at the same time, the interacting counteragents must be at approximately the same levels. Otherwise, as well as in the spiral dynamics of Graves, there are risks of misunderstanding and ineffective stakeholders. interaction between which reduces the likelihood of a successful completion of the project [12].

The author [13] points out the need to take into account the linkage between the value of project management, the maturity model of the company, and the existing project management practices in the company. In [14], the author, in essence, unites the concepts of organization' portfolio and valueoriented management, however, already justifies the organization' value development by analogy of the spiral movement upwards.

In [15], the authors note that "the creation of values for stakeholders is impossible without creating value for the final consumer of the project product", and offer a method for evaluating value as a collection of subjectively perceived consumer properties.

In many papers [13-17], the authors consider a value-oriented approach in various areas and spheres of project management. Their use of a value-oriented approach is essentially aimed at ensuring the successful completion of projects, and it is clear that, directly or indirectly, failure will depend on the risks that will prevent the accumulation of value. However, in almost all the works, this relationship: value-oriented management and risks is absent.

Conclusions. An exceptional feature of the risk composition and value-based approach is the emergence or allocation of a new group of risks, which is associated with structural disproportion in the distribution of values between the main stakeholders of the project.

Thus, it can be argued that the risks of structural disproportion of value are random events, which are initiated by internal environment of stakeholders in the framework of one project, the consequences of which cause the instability of project as a system [18].

Based on the results of the analytical review of this problem, the following hypothesis was formed.

The risks of structural disproportion in the project's values distribution in the are based on the following principles:

1. Several organizations are involved in the project.

2. Each of them pursues its own strategic development goals, and they can usually not coincide with the general purpose of the project (of course, apart from organizations of initiator and executor of the project).

3. Each organization is at different level of corporate maturity, which are matched by different sets of achievable value, as well as methods and means of achieving these values. 4. Project stakeholders, as personal participants, are carriers of corporate culture and strategic goals for the of their organizations' development. Moreover, each person is on own level of psycho-emotional development with own level of knowledge, experience and outlook on life. It is not necessary to say that all these levels can be different and the values generated will be different.

5. Focused selection of employees (stakeholders) corresponding to the same levels of development is possible only within the project team. For the stakeholder' organizations, for project participants, such a selection (by the project initiators) is excluded a priori.

Therefore, risks of structural disproportion in the distribution of values among main stakeholders of the project are always present.

As a platform for assessing the level of development, the authors of the article suggest using spiral dynamics tools [10]. This is a fairly new direction in the development and management of the individual and organization, which is already positioned as a theory. Spiral dynamics is based on human evolution principles, however, unlike Darwin's evolutionary theory, it does not rely on the physiology of living organisms' development, but pays more attention to the psychological and organizational development of individual. A similar approach is applied to the organization as a set of individuals in a team.

At the same time, as well as in evolutionary theory, the person and the organization may move to a new level of development, and they may not. That is, the development process remains random.

However, markers of value, allow us to assess the current state of the system, and with the help of organizational and psychological methods and means, to manage the system, in order to reduce the risks of stakeholder interaction.

Література:

1. Бушуев С. Д., Бушуева Н. С. Механизмы формирования ценности в деятельности проектноуправляемых организаций. Восточно-европейский журнал передовых технологий. 2010. № 1/3 (43). С. 4-9.

2. Бушуев С. Д., Харитонов Д. А. Ценностный подход в управлении развитием сложных систем. Управління розвитком складних систем. 2010. Вип. 1. С. 10-15.

3. Ярошенко Ф. А., Бушуев С. Д., Танака Х. Управление инновационными проектами и программами на основе системы знаний : монографія. Київ : 2011. 263с.

4. A guide to the project management body of knowledge (PMBOK guide) / Newtown Square, PA : Project Management Institute, 2017.

5. Азарова І. Б. Ціннісно-орієнтований підхід в управлінні інвестиційнобудівельними проектами житлового будівництва : дис. ... кан. тех. наук : 05.13.22 / ХНУМГ ім. Бекетова, Харків, 2016. 145 с.

6. Данченко О. Б., Бедрій Д. І., Семко І. Б. Управління конфліктами наукового проекту. Вісник національного технічного університету «ХПІ». Серія: Стратегічне управління, управління портфелями, програмами та проектами. 2019. № 2 (1327). С. 28-35.

7. Шерстюк О. І., Тесленко П. О. Аналіз компетенцій команди проекту при її взаємодії із зацікавленими сторонами. *Управління проектами у розвитку суспільства* : матеріали XVI міжнародної конференції. Київ : КНУБА, 2019. С. 248 – 249.

8. Бушуев С. Д. Ценностный подход в управлении развитием проектно-ориентированных организаций. *Технические науки - от теории к практике :* матер. XII междунар. науч.-практ. конф. №3(28). URL :

https://sibac.info/conf/tech/xxxii/37522.

9. Рач В. А. Методи оцінки альтернативних проектів стратегій регіонального розвитку. Управління проектами: стан та перспективи. Управління проектами: стан та перспективи : матеріали конференції. Миколаїв, 2009. С. 4-6.

10. Spiral Dynamics: Mastering Values, Leadership, and Change, Don Beck and Christopher Cowan, 1996.

11. Керцнер П. Стратегическое планирование для управления проектами с использованием модели зрелости: научное пособие. Москва : Компания АйТи;М.; ДМК Пресс, 2003. 320 с.

12. Teslenko P., Antoshchuk S., Krylov V. Increasing probability of successful projects complete. *Proceedings of the International Research Conference at the Dortmund University of Applied Sciences and Arts took place*. June 30th - July 1st 2017 for the seventh time. 2017. Dortmund : the Dortmund University, P. 28-30.

13. Дегтярев М. А. Проектная зрелость и
ценностно-ориентированное управление
проектами. URL : http://www.i-
mash.ru/materials/economy/64524-proektnaja-zrelost-
i-cennostno-orientirovannoe.html.

14. Метод формирования портфеля проектов на основе доминирующих ценностей организации. *Universum: Технические науки.* 2014. № 2 (3). URL : http://7universum.com/ru/tech/archive/item/1033.

15. Данченко Е. Б., Дзюба Т. В. Использование маркетинговых инструментов идентификации ценностей в проектах. Управление проектами и развитие. 2012. № 3 (43). С. 21-28.

16. Драч І. Є., Рулікова Н. С. Розробка механізму системно-ціннісного формування портфелю наукових проектів вищого навчального закладу. *Управління проектами та розвиток виробництва.* 2013. №2(46). С. 100-107. URL : http://www.pmdp.org.ua/

17. Григорян Т. Г., Кошкин В. К. Совершенствование моделей ценностноориентированного управления портфелями проектов реконструкции систем водоснабжения. Восточно-Европейский журнал передовых технологий. 2015. № 2/3 (74). С. 43 – 49.

18. Питерская В. М. Ценностный подход в управлении развитием проектно-ориентированной организации. Вісник Одеського національного морського університету. 2014. № 3 (42). С. 172–180.

19. Чимшир В. И., Тесленко П. А. Проект как система : монография. Одесса : Институт креативных технологий, 2011. 159 с.

References:

1. Bushuev, S. D. and Bushueva, N.S. (2010), "Mechanisms of value formation in the activities of project-driven organizations", *Vostochno-evropeiskyi zhurnal peredovikh tekhnolohyi*, vol. 1/3 (43), pp. 4-9.

2. Bushuev, S. D. and Kharytonov, D.A. (2010), "The value approach in managing the development of complex systems", *Upravlinnia rozvytkom skladnykh system*, vol. 1, pp. 10-15.

3. Yaroshenko, F. A. Bushuev, S.D. and Tanaka, Kh. (2011), *Upravlenye ynnovatsyonnimy proektamy y prohrammamy na osnove systemi znanyi* [Knowledge Project Management of Innovative Projects and Programs], Kyiv, Ukraine, 263 p.

4. A guide to the project management body of knowledge (PMBOK guide) (2017) / Newtown Square, PA : Project Management Institute.

5. Azarova, I.B. (2016), "Value-Oriented Approach to Managing Housing Investment Projects", abstract of PhD dissertation, project and program management, Kharkiv National University of Urban Economics named Beketov O.M., Kharkiv, Ukraine, 145 p.

6. Danchenko, O.B. Bedrii, D.I. and Semko, I.B. (2019), "Conflict management of a scientific project", *Visnyk natsionalnoho tekhnichnoho universytetu «KhPI». Seriia: Stratehichne upravlinnia, upravlinnia portfeliamy, prohramamy ta proektamy, vol. 2 (1327), pp. 28-35.*

7. Sherstiuk, O.I. and Teslenko, P.O. (2019), "Analyzing the competencies of the project team in its interaction with stakeholders", *Upravlinnia proektamy u rozvytku suspilstva* [Project management in the development of society], materialy XVI mizhnarodnoi konferentsii [materials of the sixteenth international conference], Kyiv, Ukraine, pp. 248-249. 8. Bushuev, S.D. (2018), "Valuable approach in the management of the development of project-oriented organizations", *Tekhnycheskye nauky - ot teoryy k praktyke* [Engineering - from theory to practice], mater. XII mezhdunar. nauch.-prakt. konf [mater. XII international. scientific-practical conf], Kyiv, Ukraine, available at: https://sibac.info/conf/tech/xxxii/37522.

9. Rach, V.A. (2009), "Methods of evaluation of alternative projects of regional development strategies. Project management: status and perspectives", *Upravlinnia proektamy: stan ta perspektyvy* [Project management: status and perspectives], materialy konferentsii [conference materials], Mykolaiv, Ukraine, pp. 4-6.

10. Spiral Dynamics: Mastering Values, Leadership, and Change, Don Beck and Christopher Cowan, 1996.

11. Kertsner, P. (2003), *Stratehycheskoe planyrovanye dlia upravlenyia proektamy s yspolzovanyem modely zrelosty* [Strategic planning for project management using a maturity model], Kompanyia AiTy;M.; DMK Press, Moscow, Russia, 320 p.

12. Teslenko, P. Antoshchuk, S. Krylov, V. (2017), "Increasing probability of successful projects complete. *Proceedings of the International Research" Conference at the Dortmund University of Applied Sciences and Arts took place*. P. 28-30.

13. Dehtiarev, M.A. (2015), "Project maturity and value-oriented project management", available at: http://www.i-mash.ru/materials/economy/64524-proektnaja-zrelost-i-cennostno-orientirovannoe.html.

14. The method of forming a portfolio of projects based on the dominant values of the organization (2014), *Universum: Tekhnycheskye nauky*, vol.2(3), available at :

http://7universum.com/ru/tech/archive/item/1033/

15. Danchenko, E.B. and Dziuba, T.V. (2012), "Using marketing tools for identifying values in projects", vol. 3(43), pp. 21-28.

16. Drach, I.Ye. and Rulikova, N.S. (2013), "Development of a mechanism of system-value formation of a portfolio of scientific projects of a higher educational institution", *Upravlinnia proektamy ta rozvytok vyrobnytstva*, No2(46), pp. 100-107, available at : http://www.pmdp.org.ua/

17. Hryhorian, T.H. and Koshkyn, V.K. (2015), "Improving the models of value-oriented portfolio management of projects for the reconstruction of water supply systems", *Vostochno-Evropeiskyi zhurnal peredovikh tekhnolohyi*, N_{2} 2/3 (74), pp. 43-49.

18. Pyterskaia, V.M. (2014), "A value-based approach to managing the development of a projectoriented organization", *Visnyk Odeskoho natsionalnoho morskoho universytetu*, vol. 3 (42), pp. 172–180.

19. Chymshyr ,V.Y. and Teslenko, P.A. (2011), *Proekt kak systema* [Project as a system], Ynstytut kreatyvnikh tekhnolohyi, Odessa, Ukraine, 159 p.

Стаття надійшла до редакції 12.10.2019 р.