

Olga Poltinina

# GENERALIZATION OF APPROACHES TO VALUE-ORIENTED PROJECT MANAGEMENT AT OIL AND GAS PRODUCTION ENTERPRISES

The political and economic situation in Ukraine leads to the fact that companies today are stuck with the deterioration of their financial condition and need effective mechanisms for further development even in the conditions of martial law. The ability to plan the project management process, formulate value guidelines for project management and implement the necessary management tools can help to form an optimal approach for the company to value-oriented project management at oil and gas production enterprises. To optimize the project management process, it is necessary to detail and improve the process of planning the implementation of these projects. Implementation of such detailing is possible under the condition of applying modeling of business processes at the enterprise. Therefore, the object of this research is approaches to value-oriented project management at oil and gas production enterprises.

The paper uses general scientific methods of analysis, synthesis, systematization, generalization, and also used the method of modeling business processes to determine a clear sequence of actions in the process of implementing projects at oil and gas production enterprises.

According to the results of the research, it was established that for optimal value-oriented project management at oil and gas production enterprises, a certain business process should be followed, which provides for a clear sequence of actions and the possibility of controlling the result at each stage of the project. In general, according to the author's business process, value-oriented project management at oil and gas production enterprises involves the following stages:

- formation of a clear sequence of actions aimed at the implementation of the project (establishment of value indicators of the project);
- identification of responsible persons and allocation of resources for the implementation of each stage of the project;
- general implementation of the project (this stage involves detailing individual tasks);
- control of efficiency and achievement of value indicators of the project.

Adherence to such a sequence of actions will improve the efficiency of project management and ensure the coordination of project performance indicators with the general value orientations of the enterprise.

**Keywords:** value-oriented management, business process, data visualization, project management, oil and gas production enterprises.

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## 1. Introduction

In the modern management system, more and more attention is paid to the management of projects and programs within a certain enterprise, which makes it possible to achieve specific results and carry out point management taking into account both the goals of a separate project and the mission of the enterprise itself. For the successful conduct of the oil and gas production business, it is extremely important that the company's key principles and values, which are the basis of interaction with customers and partners, are reflected in each of the company's projects and supported by its employees. As a result of the analysis of scientific literature [1, 2], it becomes possible to state that the project

represents a time-limited purposeful change of a separate system with clearly defined goals, the achievement of which determines the completion of the project, with established requirements for terms, results, risk, spending frameworks and resources and to the organizational structure.

The value of the project or product that can be obtained as a result of project implementation is understood as the criteria for meeting the needs of key stakeholders, assigned to the used resources. Project value management should be focused on optimizing strategic aspects of the company's development and increasing the value of the final result of the project or program based on the optimal organization of internal business processes. Accordingly, the effectiveness of the entire company depends on the consistent and clearly

planned implementation of the project management business process. Oil and gas production enterprises are mostly focused on the implementation of high-value projects with a long implementation period and high costs. Accordingly, value-oriented project management with the formation of a clear plan for the implementation of business processes becomes particularly relevant for such companies. It is also important to pay attention to the detailed description of the responsible persons in order to obtain the maximum effect from the results of its completion.

Given the proven relevance of the research topic, *the aim of this research* is to generalize approaches to value-oriented project management at oil and gas production enterprises using the business process modeling method.

## 2. Materials and Methods

To achieve the aim of the research, an analysis of the scientific literature devoted to issues of value-oriented project management and business process modeling based on data visualization approaches was carried out. The main challenges and prospects for the development of value-oriented project management at oil and gas production enterprises have been determined. The method of modeling business processes was also used to determine a clear sequence of actions in the process of implementing projects at oil and gas production enterprises.

The basis of the study is scientific materials related to the issues of project management, value-oriented management, data visualization, and features of the functioning of oil and gas production enterprises. Special attention was paid to the scientific literature on the topic, in particular monographs, articles from peer-reviewed scientific journals, in particular those indexed in the scientometric databases Scopus and Web of Science.

Current scientific sources for the last five years were chosen for the study in order to obtain the most up-to-date information and take into account the realities of today.

## 3. Results and Discussion

The modern practice of professional project management developed together with classical management. The traditional instructional system management approach, which dominated until the middle of the last century, has been replaced by management by objectives, which is still popular today. Since the end of the last century, such parameters as quality and value began to appear more and more frequently in project management. Value-oriented project management represents not only a new way of organizational management, but also a new way of understanding and applying knowledge practically. The main goal of this management is to implement a clear understanding of the project's focus on achieving the goal with the maximization of the value of its results with minimal expenditure of resources. Project management is the main tool of value-oriented management at enterprises, since it helps to translate declarative slogans into actions that are understandable for ordinary performers when properly applied.

The application of value-oriented project management is particularly important for oil and gas production enterprises, as it makes it possible to systematize the procedure for large-scale and expensive projects and to focus more clearly on obtaining a specific result.

Accordingly, it can be argued that value-oriented management is one of the most effective tools of organizational development in the conditions of modern, dynamically developing

business, but this is true only under the condition of maximally balanced and consistent planning of each business process with the definition of responsible persons and a specific result.

At the same time, it should be emphasized that in the process of implementing projects based on a value approach, any enterprise faces certain difficulties and problems. At each stage of business development, they can be conditionally divided into two categories:

1) growth problems, that is, problems caused by the immaturity of the company's organizational structure or management system;

2) systemic problems that may be the result of improper internal management or an unfavorable environment.

Value-oriented project management based on the construction of business processes will make it possible to overcome these problems and create prerequisites for effective further development and obtaining the desired return from implemented projects.

The process of forming a business process of value-oriented project management at an oil and gas production enterprise is quite complex and multi-stage, it requires consideration of a large number of factors and integration into the overall development strategy of the entire company. Any business entity develops a unique technology based on its own experience, the market development model, the results of previous periods, the opportunities presented to the enterprise, etc.

Fig. 1 presents a context diagram of the business process of value-oriented project management at an oil and gas production enterprise, the source information of which should be the maximum effect from the implementation of the project with the minimum expenditure of resources.

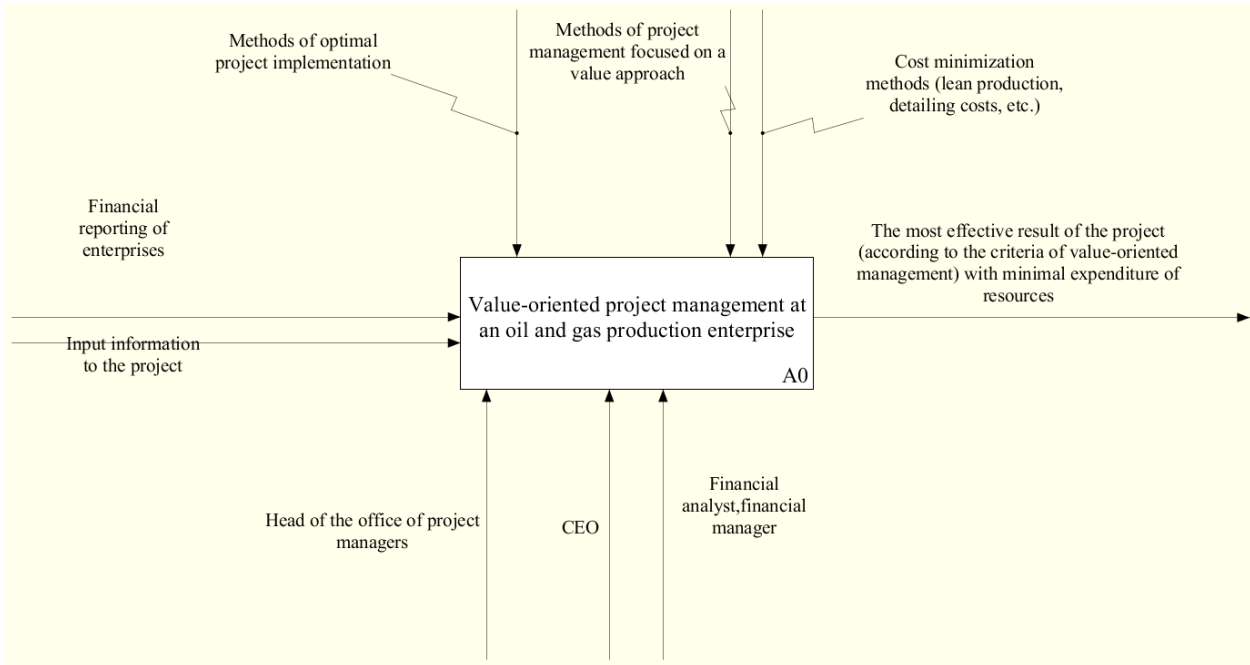
When considering Fig. 1, it is worth noting that the business process modeling method was used to build the context diagram, which is best suited for planning the sequence of actions within complex processes, in particular, from value-oriented project management.

For Ukrainian oil and gas production enterprises operating under the current conditions of martial law in Ukraine, it is necessary to emphasize anti-crisis measures for the further development of projects [3, 4]. Accordingly, modern tools of value-oriented management for Ukrainian oil and gas production enterprises should be anti-crisis in the first place.

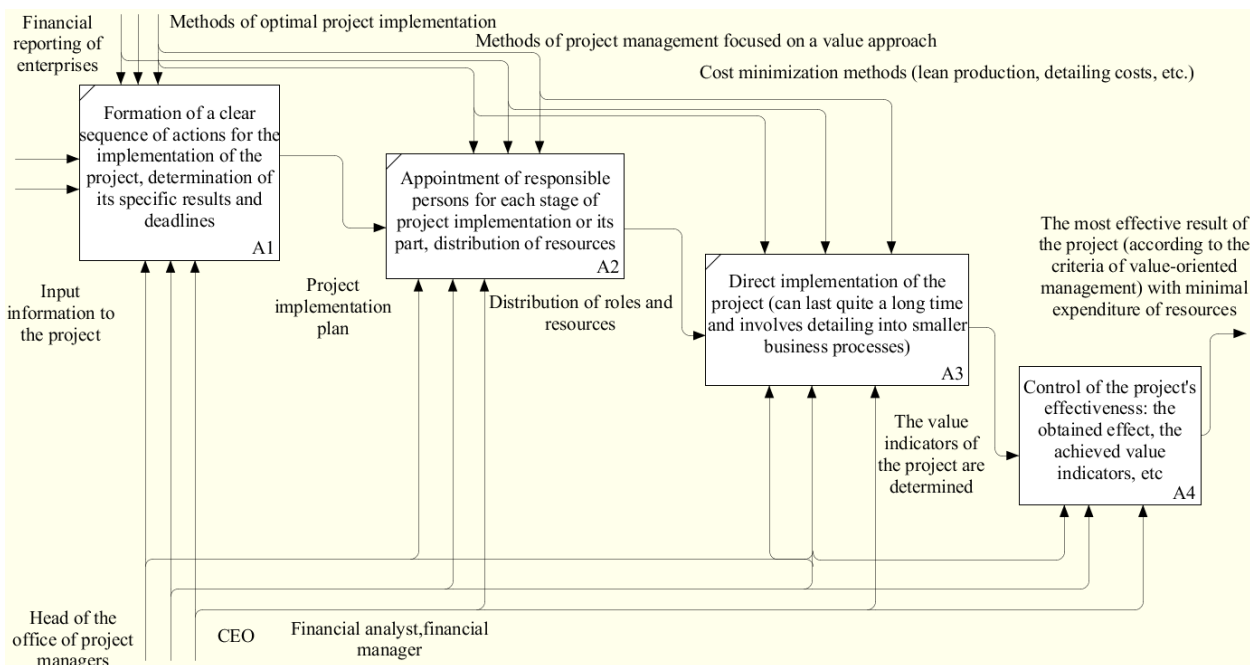
Information support in the process of forming an enterprise management system is financial reporting, which is used to assess enterprise assets, property status as a whole, and capital structure [5, 6].

The organization of the strategy formation process at the enterprise is handled by a financial specialist together with the top management of the business. The detailed sequence of actions related to the implementation of the value-oriented project management business process at the oil and gas production enterprise is presented in Fig. 2.

If focus attention in more detail, the business process presented in Fig. 2, it can be pointed out that the first stage is the formation of the project implementation plan with the determination of specific results and terms of its implementation. It is extremely important to obtain reliable data that will show the real potential and allow to create plans that can be achieved within a realistic time frame [7, 8]. Otherwise, it is possible to create a negative reputation for the company due to unreliable planned indicators or the impossibility of achieving them within the specified time, which can negatively affect the investment attractiveness and overall reputation of the oil and gas production company.



**Fig. 1.** Context diagram of the value-oriented project management business process at an oil and gas production enterprise



**Fig. 2.** Stages of implementation of the value-oriented project management business process at the oil and gas production enterprise

The next stage is the distribution of roles and the determination of resources necessary for the implementation of the project. This stage is necessary for the prediction of future processes and the timely use of adaptation measures, the search for potential development opportunities, and the analysis of the strengths and weaknesses of the project. The activities of enterprises and the implementation of projects always depend on external conditions, which cannot be neglected when planning a value-oriented management system. These factors cannot be influenced or controlled from the outside, so business entities develop a number of measures to minimize the negative impact, especially in war conditions. It is impossible to take into account all the data, so it is a priority to consider indicators that most fully characterize

the current state of those processes that are directly or indirectly related to the implementation of the project [9, 10].

Next, the direct implementation of the project is carried out, which involves the execution of all sub-processes and obtaining a specific result for each of the elements of the project.

This stage is crucial because it involves the most expenditure and the use of the most resources. It is at this stage that the value of the project is created and the effectiveness of value-oriented project management is determined on its basis.

According to modern standards of project management, the process of value-oriented project management begins with a description of the mission and its strategic goal. In general, the mission of the project expresses the essence of that organizational value, which is dominant and is the

basis of the development of the corresponding strategy at the enterprise in general. Next, the strategy is transformed into the main goal of the program or portfolio of projects, which is subject to decomposition into sub-goals and tasks that express priority aspects of the organization's development. At the same time, it is worth emphasizing that the value goals must first of all be measurable in the financial space, so that at the next stage of the business process under investigation, they can be evaluated and the achievement of the project goals can be monitored.

In the process of value-oriented project management, three functions are mainly performed: identification (detection), creation and imposition of values [11, 12]. The identification of values most often occurs through the establishment of financial benchmarks for project performance. And the creation and provision of values is usually done by the project manager through the adoption of special mandatory internal documents and the administration of project processes.

At the last stage, the effectiveness of the project implementation is monitored with possible further work on the analysis of the process of achieving or not achieving the set goals of the project. It is at this stage that the real financial and value indicators of the effectiveness of project implementation are determined and an analysis can be carried out, which will become the basis for further improvement of value-oriented project management at oil and gas production enterprises.

Thus, project management at oil and gas production enterprises is logically and fully justified to build on the principles of value-oriented management. The essence of this approach is orientation and obtaining the maximum effect from project implementation, taking into account the value system created at each specific enterprise.

*Practical issue.* For oil and gas production enterprises of any country in the world, it can be considered critically important to ensure the high-quality implementation of business processes, in particular in the field of value-oriented management. Accordingly, the practical significance of the issue of optimal planning and modeling of business processes is difficult to overestimate. The proposed approaches can be used to build business development scenarios, implement energy saving projects or measures to restore oil and gas production facilities.

*Limitations of the study.* The main limitation in the use of the research results may be critical risks associated with the aggravation of the military situation on the territory of Ukraine and the presence of direct security and power risks for enterprises in the analyzed sphere. In general, no other limitations in the implementation of the research results were diagnosed.

*The influence of martial law conditions.* Under the conditions of martial law, there are certain restrictions on the publication of the results of statistical studies, accordingly, it was not possible to analyze the most current data on the value indicators of oil and gas production enterprises. Due to the need to observe force, energy and military security in the state, there are restrictions on access to public information regarding projects implemented by oil and gas production enterprises. However, general information about the possibilities of development of companies in this area was sufficient for conducting research on the selected topic.

*Suggestions for further research.* The oil and gas production sphere are one of the most significant and promising spheres for the Ukrainian economy, therefore the issues of management

of enterprises in this sphere have not lost their relevance for quite a long time. At the same time, the issue of value-oriented goal setting at the enterprises of the industry, as well as the coordination of financial aspects of business development and value-oriented ones, require the attention of scientists.

#### **4. Conclusions**

The effectiveness of the company's development depends on the success of the projects it implements. In the process of conducting the research, it was established that in the modern conditions of the development of Ukrainian oil and gas production enterprises, project management using a value-oriented approach becomes the optimal project management tool. Because it allows to take into account the specifics of project planning and implementation, and also allows to focus on the values that have been formed at the enterprise and to fit the project into the system of achieving the strategic goal and mission of the enterprise.

In the process of developing the study, it was proven that for optimal value-oriented project management at oil and gas production enterprises, a certain business process should be followed, which involves a clear sequence of actions and the possibility of controlling the result at each stage of the project. In general, according to the author's business process, value-oriented project management at oil and gas production enterprises involves the following stages:

1. Formation of a clear sequence of actions aimed at the implementation of the project (establishment of value indicators of the project).
2. Identification of responsible persons and allocation of resources for the implementation of each stage of the project.
3. General implementation of the project (this stage involves detailing individual tasks).
4. Control of efficiency and achievement of value indicators of the project.

In general, the implementation of value-oriented project management at oil and gas production enterprises according to the proposed sequence of actions involves obtaining a clear result and harmonizing project performance indicators with the general value orientations of the enterprise.

The results obtained in the process of developing research and recommendations can be taken into account and used for oil and gas production enterprises of different countries. The results of the research can be especially relevant for companies operating in an unstable external environment, since the research was based on the analysis of scientific works of authors from different countries of the world.

#### **Conflict of interest**

The author declares that she has no conflict of interest in relation to this study, including financial, personal, authorship or other, which could affect the study and its results presented in this article.

#### **Financing**

The study was conducted without financial support.

#### **Data availability**

The manuscript has no associated data.

## Use of artificial intelligence

The author confirms that she did not use artificial intelligence technologies when creating the presented work.

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*Olga Poltinina*, PhD, Department of Finance and Credit, Simon Kuznets Kharkiv National University of Economics, Kharkiv, Ukraine, e-mail: [olgapp86@gmail.com](mailto:olgapp86@gmail.com), ORCID: <https://orcid.org/0000-0002-4035-022X>