

# Process and Project Model of the Russian Oil Industry Management: Impact on Sustainable Development

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Abstract: Traditional methods and instruments of state regulation of the oil industry are losing their effectiveness. In the context of a significant influence of external factors (OPEC + agreements, COVID-19), digital transformation of business and public administration, as well as an increase in the speed of changes in the economic system, specialized bodies are faced with the need to improve the tools of sectoral management. Justification of the need to transform the system of state regulation of the oil industry in Russia, as well as the development of the concept and definition of tools and elements of the process-design model of sectoral management in this area. The validity and reliability of the conclusions obtained in the course of this study are provided by the use of analysis methods such as statistical and retrospective analysis, as well as mathematical modeling tools. The article proposes a concept of a process-design model of sectoral management of the oil industry in Russia, substantiates its advantages, and describes its subjects, elements and mechanisms.


## 1 INTRODUCTION


Over the past 15-20 years, project management has gone through several stages of development - from a new management style, or rather a set of skills and techniques used in the activities of creative, audit and construction companies to a whole paradigm and philosophy of management (Brunet, 2018), (Eklund and Simpson, 2019), (Leybourne, 2012), (Salovaara et al., 2020). At the same time that the concept of project management was gaining ground in business schools and large corporations, research was emerging looking at the benefits of using routine, process and structure, and combining the two concepts of management to improve productivity (Wuliang et al., 2010), (Artto et al., 2008), (Atkinson, 1999).


This is an important issue, not least because there is currently a significant imbalance between the declared principles, technologies and management skills spelled out in various international standards, such as PMI, IPMA, and the actual actions of project managers.


The active implementation of the project management methodology and tools, including in the public sphere, was based on the assumption that the use of a standard project management structure and system would increase project efficiency and increase the number of successful projects. However, some authors have noted that there are costs, risks and threats to implementing a design approach because the methodology usually requires tracking, signing and using guidelines and checklists. In some cases, the volume of documentation can be very time-consuming and is often viewed as the main

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disadvantage of using project management techniques and tools (Dicks, 2000), (Kerzner, 2001). According to a number of authors, for any use of project management tools, there must be an element of continuous assessment and improvement, which takes time and effort, increases management costs and, in essence, is already an element of process management. Thus, it seems wrong to oppose the process and project management approaches.

A number of researchers also indicated that further work is needed to explore this assumption that project management methodologies increase success, arguing that the concept of project success is too narrowly focused (considering only some aspects of project management practice), and sample sizes in a number of studies were too small to provide statistically reliable evidence (Thomas and Mullaly, 2007).

Over the past decade, significant attention has been paid to changing management paradigms, as evidenced by trends such as the destruction of hierarchies, the elimination of "command and control", and the formation of new concepts, such as new public management or Management 2.0.

Most of these new developments and concepts are aimed at uncovering and solving problems associated with the complexity and ambiguity in planning and executing projects. Another challenge is the increase in improvised work, often driven by the need to help with time and cost overruns or volume changes. There are also problems associated with the changing demographics of project workers, which leads to the need to adopt new ways of managing project negotiations and activities, as well as to amend and change the adopted project procedures and procedures. These problems dictate the changes that scientists and practitioners are trying to implement in the system of strategic and operational management of companies, regions and states.

## 2 MATERIALS AND METHODS

One of the disadvantages of the widespread use of project management, in addition to its obvious limitations associated with the type of activity and the specifics of the organization, is the lack of creativity and a creative or improvisational component in the process of project implementation. At the same time, it was precisely the creative, non-standard approach to solving the assigned tasks that often led to more successful and effective methods of achieving goals.

In this context, the concept of Australian scientists presented by them on the pages of the International

journal of project management (Too and Weaver, 2013) seems to be remarkable. In their work, they propose to distinguish between two English words - governance and management. Closest to the word governance in the Russian language is the concept of "leadership" or "government". In the context of an organization, governance provides a framework for ethical decision-making and management action that is grounded in transparency, accountability and roles. Thus, the core values of a well-governed organization are within the purview of the leadership of an organization, which includes its vision, values and ethics, a commitment to corporate social responsibility, and how the "board" manages itself. These values are not absolute and should be the sole responsibility of the "governing board" or its equivalent.

Responsibility for the overall management system is assigned to the "board" or "management", and responsibility for the implementation of certain aspects of the management system is transferred to the appropriate levels of management together with the necessary authority to carry out management work in the established functional areas. So, summarizing the concept described above, leadership or "board" includes a set of relationships between the company's management, its board, shareholders and other interested parties. Management also provides a framework by which the objectives of the company are set and the means of achieving those objectives and monitoring performance are determined. A good "governing board" should stimulate management and the board of directors to achieve goals that are in the best interests of the company and its shareholders. Management defines the structures used by the organization, assigns rights and responsibilities within those structures, and requires assurance that management operates effectively and appropriately within defined structures. The role of management is to govern the organization within the framework defined by a system of governance or "governing".

All the aspects noted above apply to process and project management both at the corporate, and at the sectoral and state levels.

By analogy with the concept described above, "management" or "board" is responsible for all aspects of project and process management, but does not replace them, but creates conditions for effective interaction between managers in their areas of responsibility. In fig. 1 schematically shows the separation of these three management hierarchies within the framework of the described concept.

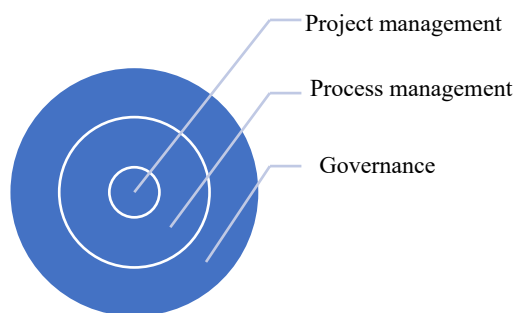


Figure 1: Distribution of management levels.

All further generalizations and conclusions in this work are based on the use of this concept.

### 3 RESULTS

It is important to note that the system of process or project management cannot function without effective support of the management system of the economic system as a whole. Thus, a project-based approach to management in such a multi-project environment as an industry or the state as a whole has two key functions. The first function is deciding which projects should be approved, supported, financed and worked out in detail. At the same time, the levels of acceptance, management and execution of projects are different. In the oil industry, for example, at the industry level, projects can be adopted by the President, the Government, or supervising deputy prime ministers, and executed and coordinated by the relevant ministry of energy. The second function of a project management system in this context is to oversee and ensure implementation. These functions include aligning project provisions with current strategic industry development documents, long-term planning concepts, and answering the question of how projects approved under this strategy contribute to the achievement of strategic goals.

A similar situation is observed in the implementation of the process approach to management. In most sectors of the economy, a number of processes are continuous and constant. These processes need to be managed, coordinated and interacted between different levels of processes and management decision making. It is obvious that the success of the implementation of any project largely depends on the quality of the organization of process management in the field. For this reason, it seems that the only correct solution to improve the quality of

sectoral management is the introduction of a process-project management model, as well as the implementation of a new project management toolkit and elements of the process approach into the sectoral management system.

In fig. 2 presents the main elements of the sectoral management system. Moreover, it is important to note that these tools, as well as the managers responsible for their use and implementation in the management system, are not only in constant interaction with each other, but also in a periodic situation of conflict over resources, powers and areas of responsibility, which, in their turn, leads to a decrease in the effectiveness of industry management and regulation.

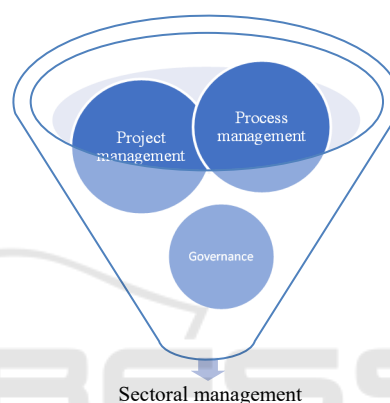


Figure 2: The main elements of the sectoral management system

At the same time, it is important to note that conflicts mainly arise during the contact of individual elements of process and project management systems. A system of leadership, coordination, or “governance,” as described above, acts as an arbiter in dispute resolution. However, the wider the scope of the tasks set, the more often and more acute conflicts can arise between managers and specialists. It is to minimize such conflicts, as well as to achieve a synergistic effect, that it is proposed to transform the design tools and elements of the process approach into a single process-project model of sectoral management. At the same time, it should be noted that the governance system is also included in this model for effective coordination of project and process elements of management. A schematic representation of the process design model is shown in Fig. 3.

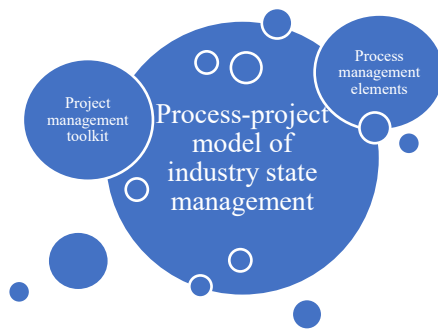


Figure 3: Image of process-project (process-design) model

Process management in corporations has become widespread. There are a huge number of different tools and mechanisms of process management, among which the ISO 9000 quality management system standards, the balanced performance scorecard (BSC) toolkit, the Deming PDCA cycle and many others stand out. The basis of the process management concept lies in the development of uniform standards of processes, goals, objectives and algorithms for their achievement, so that the management system functions accurately and in a timely manner, regardless of personal factors and the impact of the external environment. In turn, with significant changes in the macroenvironment, the management can change the settings of processes, improving and thereby developing process management.

Due to the specifics of the public administration system, not all process management tools can be used in this area, but in recent years there has been an active borrowing of technologies, mechanisms and tools with their subsequent adaptation for the needs of the public sector. Thus, one of the most common mechanisms for the implementation of the process approach to management is a system of balanced performance indicators adapted to the realities of public administration. Process management in federal executive bodies, which are actually regulators of the country's sectoral development, acts as a basic tool for the implementation of both current and strategic management, a platform for the implementation of national and federal projects and programs. Indeed, without a clearly and effectively built operational management system, the implementation of any projects seems impossible.

Thus, for effective work and high-quality sectoral management of the oil industry in the Russian Federation, it seems necessary to have a competent combination of both project and process management tools in order to achieve long-term goals and objectives specified in the basic regulations.

At present, when analyzing the main directions and tools of sectoral management of the country's oil industry, it can be concluded that there is a significant asymmetry in favor of project management. The importance of a project management approach has received more and more attention and attention in recent years. In each region and in each federal executive body, so-called project offices have been created. At the same time, the desire to present in the form of a project any process and any phenomenon, which has recently been observed in almost all ministries, agencies and services, seems counterproductive. The rejection of the classical process management, the methodology for setting, monitoring and adjusting goals and plans leads to excessive bureaucratization of relations, expansion of the project portfolio and its filling with quasi-projects and pseudo-projects (Gaspar Ravagnani et al., 2012), (Marques et al., 2014), (Thurber, 2011), (Paz Antolín and Ramírez Cendrero, 2013), (Bolívar et al., 2015), (Clegg et al., 2018).

## 4 DISCUSSIONS

The problem that this work is aimed at is that the traditional methods of sectoral management of the oil industry, both design and others (federal target programs, budgetary and tax instruments, administrative regulations, etc.) in the modern dynamically changing world have a number of limitations.

Firstly, it is the existing contradictions between the short-term and long-term goals of the state and oil industry enterprises, which creates an imbalance in the process of implementing regulatory functions. Secondly, the inconsistency of a number of government and corporate decisions made with the provisions of the Energy Strategy of the Russian Federation, as well as the lack of mechanisms for coordinating the provisions of various federal target programs and projects with each other. Third, at present, sectoral management in the oil sector is carried out practically without using the methodology and tools of process management, on the basis of a project approach and "manual" management. Therefore, the scientific problem is to determine the tools of project and process management, which will be implemented in the system of state sectoral management of the oil industry. In this regard, it is proposed to create a multi-factor process-project model of sectoral management of the oil industry in the Russian Federation and its constituent entities, which will allow, firstly, to optimize the instruments

of state regulation of both the industry as a whole, and organizations and enterprises of this sphere in particular, second, to create a tool for coordinating and assessing the regulatory impact of various federal target programs, projects, and enterprise development concepts from the point of view of the state's long-term strategic interests in the oil industry. This model will increase the speed, quality and efficiency of government decision-making in the oil industry.

In order to improve the quality and efficiency of the sectoral management of the oil industry in Russia, a combination of project and process management tools in this area is proposed. At the same time, it is proposed to significantly expand the tools and mechanisms of both project and process management of the industry.

So, at present, the Russian oil industry is characterized by the same set of project and process management tools that are used by the relevant government authorities to regulate and manage any other industry. The tools of project management include the Energy Strategy of Russia until 2030, the forecast of scientific and technological development of the fuel and energy sector and a number of other key regulations with a project structure - specific goals and objectives, the stated implementation period and budget to achieve the set goals. Also, elements of the project management system are national projects, national programs, federal projects described above. Various departmental and sectoral projects can also be attributed to project management tools, for example, the project of digitalization of the activities of the Ministry of Energy, digitalization of production, etc.

The process tools of sectoral management of the oil industry in Russia include all federal laws, government decrees, orders of the Ministry, regulations and other regulatory legal acts that regulate current issues related to taxation, excise taxes, fines, duties, licenses, auctions, etc. ... A separate place in this list is occupied by the Doctrine of Energy Security of the Russian Federation, which spells out the main challenges and threats to the development of energy industries, as well as possible reactions of state authorities and corporations to minimize these threats. In fact, most of the regulation and management of the Russian oil industry is carried out using process management tools.

It seems expedient to combine the two approaches, while adding tools and mechanisms of both project and process approaches in order to form a process-project model of sectoral management of the Russian oil industry. Thus, in the previous chapters, it was shown that some of the tools that have

a significant impact on the oil market and the oil industry are used separately, by different actors and without appropriate coordination with other areas of activity. Formally, such instruments are separate elements, processes or actions of various economic entities and are not included in the list of sectoral management instruments, however, in fact, they can have no less, and often a much greater impact on the economic indicators of the sector's development. We are talking about such instruments as integration processes, intersectoral interaction, the formation and development of energy clusters, the actions of companies with state participation and their integration interactions. All of these areas of activity should be considered as tools (mechanisms) for the implementation of the process-design model of sectoral management of the oil industry in Russia. In fig. 54 schematically presents the elements of the process-design model of the sectoral management of the oil industry.

The model shown in the figure is a combination of project management tools and process management elements. At the same time, in the white rectangles there are already existing, implemented and operating in the system of sectoral management of the oil industry tools and elements. The blue rectangles highlight project management tools and process management elements that exist independently, but are not included in the industry management architecture.

The formation and further development of the process-project model involves active interaction and combination of various tools (mechanisms) of both process and project management in order to improve the quality and efficiency of public administration in this area.



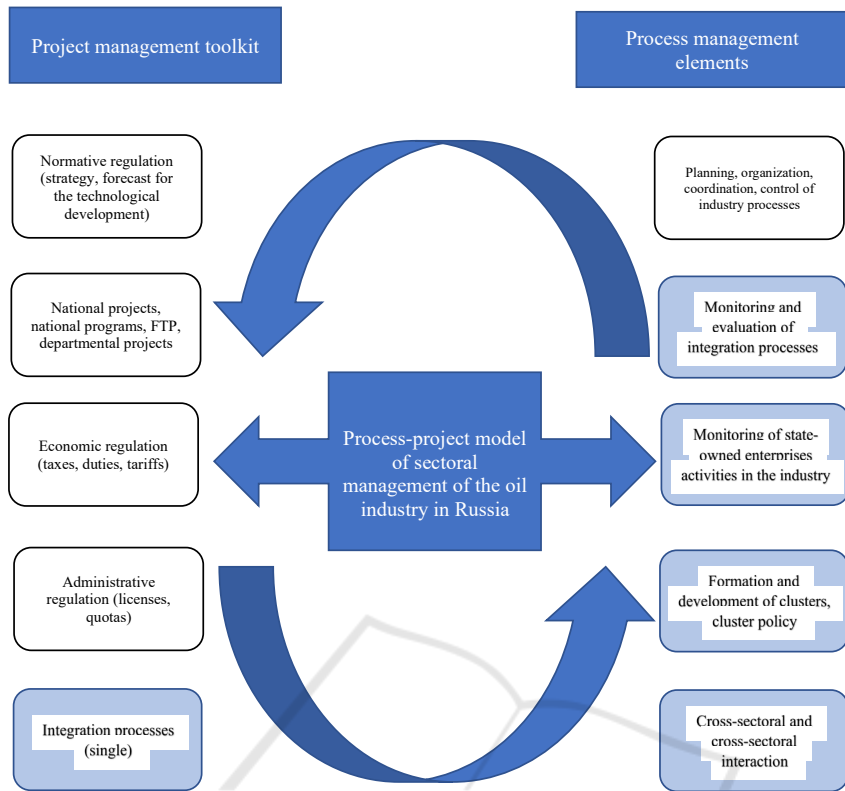


Figure 4: Elements of the process-design model of sectoral management of the oil industry

Another important component of the process-design model is the list of decision-makers and actually engaged in sectoral management in the oil industry. It seems reasonable that representatives of all sectors of the economy have the opportunity to influence the development of programs, tools and mechanisms for sectoral management of the relevant area (Fig. 5).



Figure 5: Subjects of the process-project model of the sectoral management of the oil industry of the Russian Federation

## 5 CONCLUSIONS

Due to the fact that within the framework of the formation of the process-project model of the sectoral management of the oil industry of the Russian Federation, some project management tools and elements of process management are additionally included, it seems reasonable to conduct a more detailed assessment of the consequences of the integrated use of such tools and mechanisms. So, at present, in accordance with the current legislation, the assessment of the regulatory impact of a regulatory legal act of a constituent entity of the federation must be made without fail. At the same time, at the federal level only federal laws go through a detailed analysis of the consequences of the adoption of normative legal acts. Decrees of ministries, Decrees of the Government may not be included in the list of acts in respect of which it is necessary to conduct a regulatory impact analysis.

A feature of the process-design model, according to the author, is the use of the tools described above in such a way that, within the framework of this model, a single mechanism for analyzing the opportunities, threats and consequences of making

management decisions was built. Thus, within the framework of the process-design model, a mechanism should be formed for the long-term assessment of the consequences from the use of such inherently different tools as monitoring integration processes, the activities of companies with state participation and the implementation of federal target programs. All this will make it possible to achieve management synergy and improve not only the quality of decisions made, but also improve the socio-economic indicators of the state's development.

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