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### Modern Tools for Sustainable Development of Territories. Special Topic: Project Management in the Regions of Russia

#### PROJECT MANAGEMENT FOR SUSTAINABLE DEVELOPMENT OF REGIONS

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#### *Abstract*

The introduction of methodological recommendations developed by the Ministry of Economic Development of Russia on the formation of project management in government bodies is aimed at reducing the existing asymmetry of development indicators in the regions. Of particular importance are project management methods in the face of growing requirements for the efficient spending of limited budget funds when achieving the goals of business entities. The expanding processes of digitalization of the economy require the development of design methods on an innovative basis. For regional business entities, regardless of differences in their potential, they are a condition for achieving the goal of ensuring sustainable socio-economic development. Project management methods, improving the principles of strategic management in implementing the tasks of sustainable development of territorial systems, are able to radically change the relations of subjects of the regional economy, leading to the formation of a new type of economic processes that stimulate the optimization and rationalization of management. The need to improve management efficiency is associated with the study of the project management method itself, as a new development technology. The created prerequisites for the introduction of new management tools are not able to fully guarantee a significant increase in the quality and living standards of the population, as conditions for increasing the stability of the functioning of regional systems. The justification and development of a system for their assessment, critical analysis and involvement in the activities of business entities allow us to identify promising areas of strategic management.

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**Keywords:** Indicators, management system efficiency, methods, project management, strategic management, sustainable development of regional systems.



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## 1. Introduction

Throughout the world, project management methods have earned a well-deserved place in meeting development goals and efficient management. Recent changes in the Russian economy have predetermined a vector of focus on the implementation of the principles of sustainable regional development in terms of their innovation (Basiago, 1999; Gushchina, Vitalieva, & Volkov, 2018). One of the conditions for achieving their consistent interaction is the development of such processing schemes for the strategic management of the territory that would simultaneously solve both long-term tasks and quickly respond to pressing problems of our time. The importance of creating such mechanisms in the public sector is emphasized many times, in various forms, mainly through the introduction of project offices, which allow for a link between the volume of budget financing and the performance indicators of state authorities at various levels, thereby reducing territorial asymmetry. Despite the fact that project management as a whole is a component of the strategic management of the territory, in modern conditions of Russia it is evolving and can significantly increase the efficiency of government at the regional level. The improvement of the project management methodology in this aspect seems to be the most promising, since the stability of the socio-economic development of the country as a whole depends on this. In the framework of the updated methodology, the task of forming a systemic interaction of regional policy measures for sustainable and balanced development of the territories of the regions at all levels of the implementation of project initiatives within the framework of regional strategies is more relevant than ever. It is this conceptual approach that predetermines the process by which the authors conduct research, which allows the transition from the development and implementation by executive bodies of isolated operations to the unity of strategy for goals, tasks and means.

## 2. Problem Statement

For the favorable development and formation of a stable institutional environment of the state, effective management of all its subjects is necessary. Since the introduction of project management methods at the federal and regional levels of administration, a need arose to assess the effectiveness of government structures. The effectiveness of government administration at various levels must be determined not only by the amount of budget funds spent, but first of all by the degree of sustainability of the development of territories. The latter, in its turn, is determined by the positive dynamics of the gross regional product, by improving the quality of life of the population of the regions and by the growth of their real income, by the development of infrastructure and increase in investment attractiveness of territories, and by the low level of information asymmetry between levels of management. A large number of new goals, tasks, functions, methods and management tools often do not allow understanding the entire flow of information, the implementation of various tasks and tasks. There is an informational asymmetry regarding the establishment of boundaries between the types of activities, in determining what purpose a particular assignment relates to. Information asymmetry is also present in the process of searching for human resources for the implementation of project activities, which increases the risks of successful project implementation and reduces the effectiveness of government bodies (Prokofiev, Murar, Rashkeeva, & Elesina, 2014; Gushchina, Vitalieva, & Volkov, 2018). The objective need to improve

management efficiency is associated with the study of the project management method itself, as a new development technology. For identification and clear instructional work, it is necessary to concretize a new control method with isolating all its functions, elements and parameters. The study of a new method for project management for regional authorities requires the structuring and detailing of its elements in order to reduce risks from implementation and implementation.

### **3. Research Questions**

- 3.1. To determine the place and role of project management in the implementation of the strategy for sustainable development of the territory at the regional level.
- 3.2. To explore the system of functions of managing the region through the prism of project activity.
- 3.3. To develop a project methodology for studying the system of functions for managing the sustainable development of the territory at the regional level based on the identification of criteria for the effectiveness of the functioning of state authorities in the framework of the implementation of strategic priorities.

### **4. Purpose of the Study**

The study aims to justify the feasibility of improving the system of strategic management of the territory based on the project approach from the standpoint of its more detailed structuring, decomposition and determination of the logical structure of management functions. The results obtained make it possible to increase the stability of the territorial system of the regional level through the active implementation of the project management methodology, the efficiency of the functioning of the public sector while maintaining the established order of interaction of its subsystems.

### **5. Research Methods**

- 5.1. The methodological basis of the study is the general scientific methods of analysis and synthesis. Systemic principles are identified that make it possible to consider strategy at the implementation stage as a set of interrelated projects determined by the exact parameters and configuration of changes in the territory within the regional system.
- 5.2. To determine the basic positions of the project method, which in the future can form the conceptual foundations of the strategic management of regional systems, due to the widespread use of project activities in Russia, it is necessary to use the methods of the subject-object approach and existing methodological developments, the latest scientific views and achievements.
- 5.3. To carry out a comparative analysis of the effectiveness of project activities in the activities of public authorities at different levels, methods of graphical visualization of the received and analyzed information, graphical interpretation of empirical and factual data, study and analysis of expert and public opinion are used.

## 6. Findings

### 6.1. Place and role of the project method in the process of managing sustainable development of the region

In modern studies on the sustainable development of the territories of the constituent entities of the Russian Federation, the determinant of achieving their goals of faster growth and improving the quality of life of the population is traced. This necessitates the formulation of the tasks of the optimal functioning of public administration and the search for its modern standards that adequately reflect socio-economic changes in the system of public relations. Project management becomes just such a standard, summarizing the tendencies of territorial management, contributing to the preservation of their succession and predetermining their prospects. It serves as an incentive for the process of updating the institutional environment, reflecting the most insignificant changes in the national policy in relation to specific territories (Leksin & Shvetsov, 2003). The project management method ensures the modernization and intensification of the interaction of economic objects and entities functioning with varying degrees of stability, initiates the process of improving the mechanisms built into it (Yushkova, Gushchina, Gaponenko, Dontsov, & Gushchin, 2019). This management technology is becoming increasingly common in the theory and practice of managing the territories of the constituent entities of the Russian Federation in recent years. However, unambiguous interpretations of this phenomenon have not yet been developed.

The scientific understanding of project management tends to differentiate methodological approaches (Efremov, 1998; Vanhoucke & Demeulemeester, 2003). Summarizing them, project management can be considered as a set of means, methods, techniques aimed at achieving the goals and results of the project while balancing between workloads, resources, quality and risks. For a regional business entity, the key advantage in using this method is to increase the ability to achieve goals, in particular, sustainable development of territories. This is ensured by the features of the project management method at the level of a given business entity (Vasilyev & Prokofyev, 2016):

- establishing strict regulatory requirements for the implementation of the project;
- accountability to state authorities;
- allocation of budgetary funds for the project;
- publicity, open reporting and public control of the project;
- focus on the priority social effect.

So, the traditional and widespread point of view on the problem of project management is the dominance of its instrumental component. In contrast, the authors propose to strengthen the functional significance of the project method in the integrated process of regional development. It is understood as a technology that contributes to the achievement of optimal results in a limited amount of resources and time. Digitalization as an environmental characteristic of the functioning of the public sector increases the importance of design methods as developing the principles of strategic management in the implementation of the tasks of sustainable development of territories. Therefore, they are able to radically change the relations of subjects of the regional economy, thereby leading to the formation of a new type

of processes of economic activity and stimulating the development of management optimization and rationalization.

## **6.2. Project Management Effects**

In order to increase the sustainability of regional systems, it is essential that consistent goals and means are achieved within the framework of strategic priorities. The project component is manifested, first of all, in the balance of interests of the subjects of the regional economy and their relations, realized in the processes of transformation of the socio-economic space of the region of varying degrees of intensity. Project management stimulates the consolidation of declarative and proactive plans, determined by existing institutional requirements and restrictions formalizing the basic principles of regional policy. Presumably, in the process of adapting to the conditions of specific territories, they form a certain integrity of the forms of transformation of the existing relations of the subjects of the regional economy. In general, it is expressed in the development of special methods of strategy that differ in the options for the interaction of socio-economic and spatial components, which are determined at all stages of project management.

The method of project management based on strategy contributes to the completeness and accuracy of solving problems in accordance with the established goal of the development of the territory. One of the main advantages of this method is the prediction of a decrease in the role of risk factors and minimization of their negative impact in the implementation of specified design decisions. This can lead to synchronization of the declared strategic development priorities and potential capabilities of the territories. As a general result, as applied to the current structural and hierarchical system of developing, coordinating and approving documents corresponding to various stages of management (goal setting, planning, forecasting, programming), a scenario is developed to overcome the methodological “delimitation” of the performed procedures (Yushkova, Gushchina, Gaponenko, Dontsov, & Gushchin, 2019). This should optimize the strategic planning process by forming effective links between different public administration institutions, the role of which is reinforced and emphasized by newly adopted legislative acts. The existing contradiction with regard to the previously unified (and, in principle, indivisible) state administration object – the region – can be resolved based on the development and adoption of coordinated, agreed and successive decisions.

The introduction of the principles of project management increases the visibility of the results of activities of public authorities. The unity of standards set at the state level is interpreted in the practice of regional management with a high degree of variability, while the comparability of possible options is not based on uniform methods for their development. Despite the universality of the initial formats of requirements for the state of regional systems and the indicators characterizing it, the initial conditions existing in the constituent entities of the Russian Federation act as both stimulating and limiting factors in the development of the regional economy. The proposed approach, it seems, will reduce the share of permissible deviations of changes in the development indicators of regional systems at the planning stage from those indicators that were formed at the goal-setting stage (Tretyakova & Osipova, 2018).

### **6.3. The system of project management functions and assessment of their effectiveness**

The desire to achieve the goals of sustainable regional development, built on design methods, contributes to the formation of a project-oriented management system. It may be characterized by a different level of organization and system. High organization of the implementation of the project method requires detailing the functions, the composition of the variables, the criteria for the effectiveness of the project and attribute variables. It is this approach to the presentation of project management that will allow us to form a higher and more complex form of its organization, interpreted as a project management system (Fageberg, 2000; Smith, 2003). Thanks to the detailed structured, detailed and logically defined representation of the project method in the management of the region, the probability of achieving goals with the lowest costs and with the lowest implementation risks increases.

According to the basic idea and principles of sustainable development – the reproduction and formation of human resources capable of generating and embodying the ideas of continuous development of society, it is possible to form three main groups of rules for sustainable development:

- A – the worldwide activity of mankind, which would ensure the natural-historical chronological process of development of the Living on Earth;
- B – reproduction, formation and development of human resources capable of generating and embodying the ideas of continuous development of society;
- C – application of ideas to increase the efficiency of machines, mechanisms, technological processes, etc. to meet public needs, taking into account the possibilities of Nature (Vernadsky, 1991).

The patterns of recursive development of the territorial system also make it possible to establish the presence of three groups of rules that are followed by them:

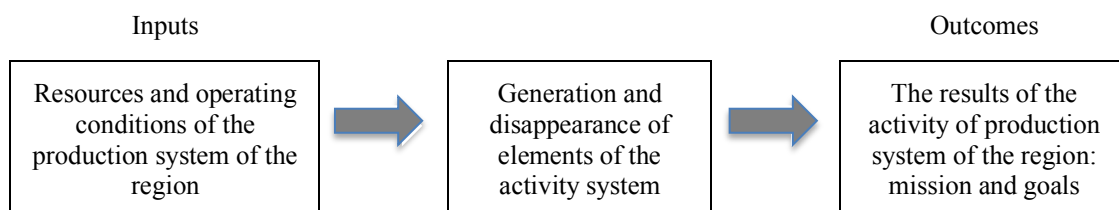
- rules for the conscientious production of any product, expressed as the goods produced (group A);
- rules for the competent management of human potential, expressed in the management of labor productivity, in the minimum time spent on the production of goods (group B);
- rules for skillful disposal of resources involved in production, which can be expressed in the minimum cost of resources for the production of goods (group C).

Further, it is necessary to study the system of control functions of the SD “Region”, which means identifying the elements of the system, expressing their variables, determining the inputs and outputs of the system, finding the values of the variables and highlighting the parameters (Doloi & Jaafari, 2002). Elements are called system inputs (if using them the environment affects the object) and the outputs of the system (if through them the object affects the environment). To establish relations between management functions, it is necessary to determine the composition of variables that change the nature of the relationships between the structural elements of the “system of management functions” by the sustainable

development of the socio-economic system of the region. Denote this desired logical structure – Lf SM SD Region, which includes:

- patterns according to which management functions and relations between them arise and disappear;
- the composition of variables that change the nature of the relationships between elements of a system of control functions;
- criteria of efficiency (effectiveness);
- parameters (significant variables) of the region’s management system related to the preservation of its basic quality, the loss of which leads to its destruction and destruction in the face of changes in the environment.

The production of products in the region, created through the interaction between the resources of the region and the human potential of the region, acts as an element of SM SD “Region”. Consider the process of generating elements of the system of activity of the region and the relationship between them. The main function of SM SD “Region” is the most complete satisfaction of consumer needs through the quality of products manufactured in the region. The external environment in this case is complex, variable and uncertain and therefore the main function of the region becomes a dependent variable on a number of arguments - environmental factors: economic, political, technological, environmental, social, etc. The result of this is the adaptation of the main function through the complication of its constituent elements. This also happens because the subject of management of the SD “Region” is being improved, it covers new areas of production activity, creates new tools for managing the economy, and sets more complex goals and objectives. The process of generation and disappearance of project management elements in the region’s activity system can be represented as follows (Figure 01).



**Figure 01.** Elements of the process of project management of the regional production system

Incoming elements of this process are the region’s resources for production activities (personnel, material, technical, financial, temporary, information resources), and the outgoing ones are the mission and development goals of the region.

For the project method, the concept of “a system of managing the region’s production activity” is expressed through the object of the production system, the subject of the production system and the process (relations between the object and the subject) (Figure 02).

F – the whole set of features of the elements of the production management system in the region		
↓	↓	↓
$F_1$ – features reflecting the object of the production system of the region	$F_2$ – features reflecting the subject of the production system of the region	$F_3$ – features reflecting the process of the production system of the region
↓	↓	↓
The operational structure of the object of industrial activity	The organizational structure of the subject of industrial activity	The technological structure of the production process

**Figure 02.** The set of features of the elements of project management of the production system of the region

Many elements of the system of the SM SD “Region” reflecting the structure of the object of production activity ( $F_1$ ) can be sequentially decomposed:

- to the areas of activity in which production is carried out in the region, which we denote ( $j_i$ ), where  $i = 1, 2, \dots, n$  – spheres, areas of activity;
- to the tasks of the production system, which we denote ( $f_i$ ), where  $i = 1, 2, \dots, n$  is the set of tasks for the implementation of the indicated areas of activity of the region ( $j_i$ ).

The structure of the set of elements of the activity system of the production system of the region, reflecting the type of subject of the production system ( $F_2$ ) can be represented as consisting of elements of activity of different levels, links and individual workers ( $\sigma_i$ ), where  $i = 1, 2, \dots, n$  is the set of elements of activity different levels, links and individual workers. The structure of many elements of the region’s production management system that reflects the structure of the region’s production management process ( $F_3$ ) and designated as ( $\chi_i$ ) can be decomposed into stages (planning, organization, control, accounting, analysis, regulation), decision stages and processing stages information, where  $i = 1, 2, \dots, n$  is the set of elements of the activity system of the production system of the region, in accordance with the indicated steps. At the operational level, the element of the region’s production management system is a single inextricable whole – the unity of the object, subject and process, consisting of logical, computational, technical operations of the operational level ( $\xi_i$ ), where  $i = 1, 2, \dots, n$  is the set of operations constituting the solution of the problem ( $f_i$ ), specific subjects ( $\sigma_i$ ), in certain areas ( $j_i$ ).

The proposed scheme of the logical structure of the project, which considers the system of elements for managing the region’s production activity, establishes its composition (Figure 03). These considerations allow us to better understand the essence of the logical structure of the system of controls in the production system of the region in the conditions of sustainable development.



$L^s_{SM SD}$		
↓ $j_i$	$j_1$	Features corresponding to the key activities of sustainable development of the region: A – product quality; In – the productivity of managerial labor; C – product efficiency in the SD.
	$j_{...}$	
	$j_n$	
↓ $\sigma_i$	$\sigma_1$	Features corresponding to the type (type) of performers: – management levels; – management links; – employees.
	$\sigma_{...}$	
	$\sigma_n$	
↓ $\chi_i$	$\chi_1$	Features corresponding to the stages of the management process: – stages of the management process; – stages of decision making; – stages of information processing.
	$\chi_{...}$	
	$\chi_n$	
↓ $f_i$	$f_1$	Features relevant to management objectives
	$f_{...}$	
	$f_n$	
$\xi_i$	$\xi_1$	Features corresponding to operational management level - actions
	$\xi_{...}$	
	$\xi_n$	

**Figure 03.** The logical structure of the "system of management functions" of the production system of the region, as a subject of management of the sustainable development of socio-economic systems

Presentation of the project approach in a detailed structure of managerial functions helps to improve the quality and effectiveness of the method itself; accurate and quick adjustment of goals and objectives; optimizing project lead times; increase the interaction of project participants.

## 7. Conclusion

Thus, the study of the urgent problems of improving the project management methods for sustainable development of the region allows us not only to develop a new systematization of potential management functions, but also to determine the direction of their optimal grouping, as applied to the identified development problems of specific territories. From the point of view of the authors, the reorganization of strategic management using the project method can lead to a clearer definition of goals and criteria for their achievement, optimization of resources, identification and identification of risks, more detailed control of the project implementation process. As a result of this, it is necessary to predict an increase in the effectiveness of business processes, the identification in the territories of competitive advantages that ensure the progressive dynamics of strategic changes. Using the project method will outline the prospects for the latest Russian experience in strategic management. In the context of the standards for managing the sustainable development processes of regional systems of the regional level used in world practice, the prospects for further research on improving the strategic methodology have been identified, and a mechanism for reducing information asymmetry has been identified. In particular, we are talking about the development of tools and instruments that increase the adaptability of territorial systems and allow to eliminate some of the imperfections inherent in a market economy.

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