

# Process Modeling of Realization of Regional Socio-economic Policy

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**Abstract**—The features and scientific-methodological basis of the process approach to management and its introduction to improve the effectiveness of regional policy are described in the article. Process model "As Is" of implementation of socio-economic policy of a region in Russia is constructed. This model reflects the current organization of that process. Developed process model "To Be" in accordance with the PDSA cycle reflects the necessary changes in this process: need to conduct on a regular basis evaluation of efficiency of realization socio-economic policy of a region; the available activity to develop recommendations for elimination errors of the management subject; differentiation of the need to correct the purpose and objectives and/or methods and tools of policy. The priority directions of increasing the efficiency of realization regional socio-economic policy are appropriate.

**Keywords**—*socio-economic policy; region; process approach; management efficiency; PDSA cycle.*

## I. INTRODUCTION

The achievement of socially significant results of the modern society and economy development of any state is possible only in case of active using of advanced methods and technologies of management, which include the introduction of the process approach for boost efficiency of implementation of socio-economic policy of a region.

Regional socio-economic policy is a purposeful process of influence of public authorities (Federal and regional) in different spheres of society by a set of regulatory measures, but also a system of principles, priorities and assessments, determining the interactions and influence of subjects on objects in time and space.

The socio-economic policy basis at the Federal level is creation the most equal conditions for economic growth throughout the country with a concurrent reduction of the interregional differences in the living standards of the population. Regional socio-economic policy acts as both an important condition and one of the main tools to overcome socio-economic problems arising in society [1]. In this regard, G. Cameron identified three alternative approaches depending on the degree of state intervention in the economic development of the regions [2]: the absence of state intervention (nonintervention model); minor adjustments territorial development (the adaptation model); the intensive state influence (the model of radical transformation).

The type of government influenced on the designing and implementation of regional socio-economic policy [3]. In Federal States, including the Federal Republic of Germany (FRG) and the Russian Federation (RF), powers of regional authorities is much wider, in contrast to the unitary, and pursued their socio-economic policy have a more significant impact on the territories development. The right of regions to lead an independent regional policy, subject to a unified state strategy of socio-economic development is enshrined in the Russian Constitution [4] and the German Constitution [5] [6]. Under the region in the article context refers to a land and a subject of Germany and Russia respectively.

Therefore, the problems of socio-economic development and joint practical activities of authorities at different levels should be considered interrelated and systemically. Which might be the result of the active introduction of the process approach to management.

## II. PROCESS APPROACH TO MANAGEMENT

The process approach to management is most fully articulated in the international standards ISO 9000, ISO 9001: "A process is set of interrelated or interacting activities that use inputs to deliver an intended result" [7].

Quite often, the standards ISO 9000, ISO 9001 and the concept of "process approach" is used when talking about organizations that manufacture and/or sale of goods, provision of works or services. Currently, however, standards ISO 9000, ISO 9001, defining requirements for the quality management system, went far beyond the problems of product quality. They can be considered as a guide for building an effective management system of any organization, as well as the process approach can be applied to any organization and any management system regardless of type, size or complexity [8].

The process approach is fourth of the seven quality management principles, which description is "consistent and predictable results are achieved more effectively and efficiently when activities are understood and managed as interrelated processes that function as a coherent system" [9]. So, understanding how results are produced by the quality management system enables an organization to optimize the system and its performance. The process approach includes establishing the organization's processes to operate as an integrated and complete system [8].

The process approach with Plan-Do-Check-Act (PDCA) cycle and Risk-based thinking are three concepts, which together form an integral part of the ISO 9001:2015 standard.

PDCA - cyclically repeating the decision-making process. Sometimes the PDCA cycle is called the Deming cycle, but if we turn to the history of the emergence and development of this concept [10], we can note that E. Deming preferred another name – "Shewhart Cycle [11, p. 45] for Learning and Improvement" or the Plan-Do-Study-Act (PDSA) cycle [12, p. 35]. The PDSA cycle is a systematic process for gaining valuable learning and knowledge for the continual improvement of a product, process, or service and it can be repeated over and over [13].

Risk-based thinking is used throughout the process approach to [8]: decide how risk is addressed in establishing the processes to improve process outputs and prevent undesirable results; define the extent of process planning and controls needed (based on risk); improve the effectiveness of the quality management system; maintain and manage a system that inherently addresses risk and meets objectives.

### III. FEATURES OF THE PROCESS APPROACH INTRODUCTION TO IMPROVE THE EFFICIENCY OF SOCIO-ECONOMIC POLICY OF A REGION

Key points at introduction the process approach to improve the efficiency of regional socio-economic policy: definition and description of existing business processes and their interaction in the overall mechanism of realization of socio-economic policy of a region; clear definition of the responsibility of the management subject for each stage of the mechanism of realization of socio-economic policy of a region; the definition of performance indicators socio-economic policy of a region and methods of their measurement; development and approval of normative-legal documents governing each stage of the mechanism of implementation of regional socio-economic policy; making recommendations when detecting deviations, inconsistencies in the implementation process of socio-economic policy of a region.

The benefits of adopting the process approach to improve the efficiency of regional socio-economic policy:

1. The process approach allows to optimize the process of managerial decision-making, to make it transparent for public authorities and for the population. This provides citizens confidence that the existing socio-economic policy aimed at constant improvement of the level and quality of their live.

2. The process approach allows to obtain and use a multi-factor indicators system of efficiency assessment of regional socio-economic policy.

3. The process approach contributes to the development and implementation of information-analytical system of monitoring and evaluation indicators characterizing the transformational and transactional factors of regional socio-economic policy. This information-analytical system can be used not only for reporting but also to receive objective information for management, as a support system for decision-making.

4. The process approach introduction ensures a clearly defined procedure and responsibility for the development and execution of normative-legal acts socio-economic development of regions.

With the introduction of the process approach to improve the efficiency of regional socio-economic policy, in author's opinion, it is expediently to use business processes modeling in accordance with the PDSA cycle.

Business process modeling is reflection real-existing (or planned) processes in an organization by means of graphic, tabular or text ways of representation. At present there are a quite large number of different tools for business processes modeling that implement the different methods [14]. However, in author's opinion, ARIS method most satisfies to requirements of process approach. ARIS (Architecture of Integrated Information Systems) is method for complex modeling of business processes in an organization. The author of this method is August-Wilhelm Scheer. ARIS method [15] and tool ARIS Express [16] from German company, Software AG.

On the basis of the studied experience of formation and implementation of socio-economic policy of a region in RF the model "As Is" is constructed (see Fig. 1). This model reflects the current organization of that process. The description of the main elements used in the models is shown in the table.

TABLE I. THE MAIN ELEMENTS OF THE ARIS NOTATION

№	Description of ARIS elements
1	 Event. This symbol represents an event that triggers activities.
2	 Activities describe what happens during a process, i.e., what exactly is done. They are the core elements of a process.
3	 Organizational unit. Unit in an organizational hierarchy.
4	 IT systems. Activities can be performed manually or automatically. Automated activities are performed by IT systems.
5	 Input and output data. A process generates data or requires data for continue.
6	 Document. The process can generate or use different documents
7	 Process control via rules. Rules describe process workflow alternatives and thus illustrate possible execution variants. The following rule symbols are available: Exclusive OR: only one of the subsequent (or preceding) options may occur; AND rule: all subsequent/preceding paths are applicable; OR rule: any number of paths can be used.

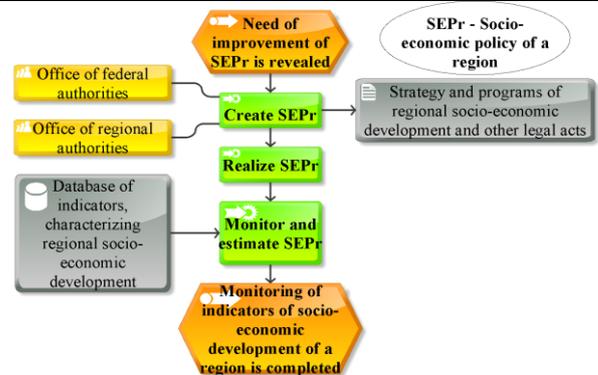


Fig. 1. Process model "As Is" of implementation of socio-economic policy of a region in Russia.

The model "To Be" business process of implementation of socio-economic policy of a region in Russia (see Fig. 2) reflects the proposed by the author of the study the necessary changes in this process.

The difference between the constructed models is need to conduct on a regular basis (with information-analytical system) evaluation of efficiency of realization socio-economic policy of a region with the generation of a report reflecting the deviation of actual indicators from planned; the available activity to develop recommendations for elimination errors of the management subject when identifying inefficient implementation of policy; differentiation of the need to correct the purpose and objectives and/or methods and tools of policy (this is of fundamental importance, as it may indicate the complete professional insolvency of the management subject).

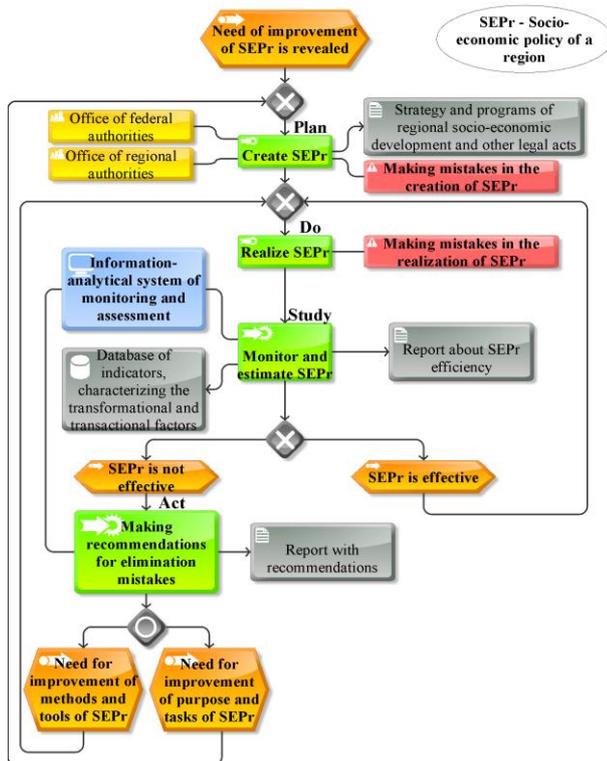


Fig. 2. Process model "To Be" of implementation of socio-economic policy of a region in RF.

So, according to the PDSA cycle, Create SEPr is Plan, Realize SEPr - Do, Monitor and estimate SEPr - Study, Making recommendations for elimination mistakes - Act.

#### IV. CONCLUSION

The following priority directions of increasing the efficiency of realization regional socio-economic policy are appropriate: resumption of the Ministry of regional development work or powers expansion of the existing Department of regional development within the Ministry of economic development to solve a wide range of social and economic problems of the regions and coordinate the activities of other ministries in this area; formation of an effective apparatus of regional authorities in terms of number and qualifications; creation of conditions

for the development of entrepreneurship and providing the population with educational, health and socio-cultural institutions; increasing the role of strategic planning and forecasting through the creation and implementation of targeted programs for the national projects execution and overall regional development; improvement of the legal framework for socio-economic development of the territories, as well as legislative consideration of regional interests in the budget formation of the Central Government; comprehensive development of a regional infrastructure; formation and support of information-analytical systems for integrated monitoring and evaluation of socio-economic policy indicators, centralized assessment on a regular basis; expanding the list and optimizing the provision of public services based on IT-technologies and the Internet.

These recommendations, aimed at the comprehensive development of the regional socio-economic policy subsystem, will create the necessary conditions for equal development and decent human existence regardless of a region of residence.

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