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# Integration of Monitoring Systems in the Public Administration of the Region Under the Conditions of Technological Transformation

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#### **ABSTRACT**

This paper presents the newly developed model for integrating monitoring systems in public administration at the regional level, including the possibilities for its technological transformation. The model is formed by authors on the example of the integration of monitoring systems for performance evaluation of the financial activities of local authorities at the territory of Tver region. Authors provide the assessment of the effectiveness of the inter-budget transfers provided to the municipal district from the regional budget, as well as the need for technological transformation of public administration. The article clarifies the concept of "integration of monitoring systems in the public administration of the region", distinguishes the terms of "monitoring" and "monitoring system". The technological transformation is highlighted as an element of digital transformation. The results of the paper are of interest to experts in the field of economics and management, the digital economy, the budget process and financial law.

Keywords: integration, monitoring, system, public administration, region, technological transformation

## 1. INTRODUCTION

The performance of public administration largely depends on the information that has become the basis for making management decisions and can be obtained as a result of various monitoring, reflecting the efficiency of the implementation of methods and tools previously used by state and (or) municipal structures.

The problem of modernizing public administration, increasing its effectiveness and quality, as well as the process of improving the system and structure of authorities, are not only legal problems, but also problems of a socio-political and socio-economic order. Moreover, these problems are closely interconnected and interdependent [1].

Today, various types of monitoring is implemented at the regional level, however, most often they are not automated, they are supervised by various authorities of the constituent entities of the Russian Federation. Many indicators in these monitoring are duplicated, and their value varies.

This problem can be solved within the framework of the technological transformation of public administration at the regional level.

The authors defines technological transformation as the first stage of digital transformation, which, at the same time, can be an independent element.

The key difference between technological and digital transformations lies in the level of automation of

monitoring processes and the degree of human participation in its implementation.

The purpose of the paper is to develop a model for the integration of monitoring systems in public administration at the regional level, taking into account the possibility of technological transformation of processes.

## 2. STUDY METHODOLOGY

The study is based on the set of theories, which includes the theory of administrative management by H. Fayol, the theory of unbalanced growth by A. Hirschman, and feedback management theory. The principles adaptive for public administration implemented by regional and municipal authorities are taken into account.

The main element of the research methodology was the structural level method, which allows us to consider monitoring processes as an element of the region's public administration system.

As part of a system analysis, the mechanism for monitoring of municipal financial management systems was updated from the position of public administration. It was implemented to identify the effectiveness of the inter-budget transfers provided to the municipal district from the regional budget, and justify the management decisions based on the given results.

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The modeling method was used by the authors for the visualization of the proposed integration of the interbudget transfers' effectiveness monitoring into the public administration system at the regional level.

As pilot territory for the experiment and analysis, the Tver region has been chosen. This region characterized over the past 3 years by an annual increase in the volume of inter-budget transfers provided to municipalities in the region.

The model is formed on the example of the integration of monitoring systems in the field of assessing the activities of local authorities by regional authorities.

The open data of executive authorities of the selected constituent entities of the Russian Federation was analyzed. Among them Primorsky Krai, Belgorod region, Ulyanovsk region, Khanty-Mansiysk Autonomous Okrug – Ugra. The rationale for the use of open data is the latest revision of the Federal Law 8-FZ "On Ensuring Access to the Information on the Activities of State Bodies and Local Government Bodies" from February 9, 2009.

#### 3. RESULTS AND DISCUSSION

# 3.1 Integration of monitoring systems in the public administration of the region: concept and technological transformation

Integration in translation from Latin is understood as restoration, replenishment. V.S. Evteev considers integration as a side of development associated with the unification into a whole of previously heterogeneous parts and elements [2].

The interdisciplinary term "monitoring" is interpreted in GOST R ISO 9000-2015 National Standard of the Russian Federation. "Quality Management Systems. Basic Provisions and Terms" determining the status of a system, process, product, service or activity, reflected at various stages or periods, in the context of public administration, has the specifics of determining the conceptual space [3].

Charles S. Wesson in his works notes that, as a result of monitoring for certain indicators, it is possible to establish (identify) trends, thanks to which it is possible to predict the values of indicators and pre-determine the state of the system, instead of trying to shift it to a more stable state, using a lagging characteristic [4].

More than 25 years ago, Joseph S. Wholey and Harry P. Hatry noted the importance of applying methodologies for assessing the effectiveness of various aspects of public administration in the framework of monitoring [5].

Irena Segalovičienė, examining public administration, notes that the formation of performance monitoring indicators is the most significant step in planning. Development of the performance monitoring indicators is an important political and methodological direction [6].

According to the authors, the concept of "monitoring system" is broader in relation to the concept of "monitoring", since in addition to the process and objects, it includes the subjects of implementation.

Public administration at the regional level is the activity of the authorities of a constituent entity of the Russian Federation, as well as structures within the authorities.

Thus, the integration of monitoring systems in the public administration of a region refers to the combination of processes for determining the status of management entities, the exclusion of duplication of functions of regional authorities (management entities), and the formation of unified final results.

In the conditions of technological transformation, this integration implies automatic aggregation of indicators, the use of an inter-level and interagency interaction information system.

A further effective transition from technological to digital transformation should be accompanied by an increase in the coefficient of reduction in labor costs for monitoring.

# 3.2. Monitoring of local government performance evaluation by regional authorities

Currently, in the Russian Federation most municipal government bodies use inter-budget transfers provided to the municipal district from the regional budget to resolve issues of local importance.

At the same time, the question of the effectiveness of the use of intergovernmental transfers by local governments remains open, which can be considered from the perspective of analyzing the influence of the transferred funds on increasing the own revenue base of the municipality.

High level of performance in this field can only be achieved within the framework of financial management implemented at the municipal level, and justification of appropriate management decisions by local authorities.

In part, the performance analysis can be carried out on the basis of monitoring data on the quality of financial management in municipalities, taking into consideration the regulatory framework of the constituent entities of the Russian Federation.

Monitoring of financial management quality allows on a regular basis to analyze and evaluate the actions of authorities implemented to ensure efficient use of budgetary resources [7].

An analysis of the 2018 data from the Tver region (data for 2019 are not publicly available) allows to conclude that in the period under review, compared to 2017, in 9 municipal districts of the Tver region, local governments significantly improved the quality of financial management, while not one of the municipalities, according to the rating, did not exceed the threshold of



90% of the maximum possible points, and in 16 municipalities there was a negative trend.

IIIn terms of ongoing research, the most interesting indicators of the group are:

- "ensuring the balance and medium-term sustainability of local budgets"
- "ensuring effective financial planning and spending of funds of the municipality",
- "ensuring the effective management of municipal institutions of the Tver region".

Based on the characteristics of the problems identified by the Ministry of Finance of the Tver region, the following reasons caused the failure to achieve the maximum possible assessment of the quality of municipal finance management in 2018:

- local governments are not actively involved in collecting local taxes;
- in 40 out of 43 municipalities the mechanism of selftaxation of citizens is not running (while objectively this possibility is excluded only in 2 municipalities that have the status of closed administrative-territorial entities);
- reducing the revenue potential of the territories was identified in 7 municipalities (in 2017, it was identified in 11 municipalities);
- inefficient use of municipal property was identified in 25 municipalities (in 2017, it was identified in 20 municipalities);
- poor quality of planning the income from the sale of assets was identified in 16 municipalities (number of such municipalities has decreased compared to 2017).

The task of increasing revenues from income-generating activities of the municipal institutions of the Tver region remains important.

Thus, the existing monitoring of financial management allows to identify the main problems of forming the revenue base of the municipal district, but does not reflect the efficiency of using inter-budget transfers provided from the regional budget.

However, as a rule, such monitoring does not imply the use of calculation formulas directly reflecting the studied local government performance. Monitoring process involves only some indicators that can be included in these formulas, or indirectly reflect the achievement of any effects. It confirms the problems of implementing adequate financial management.

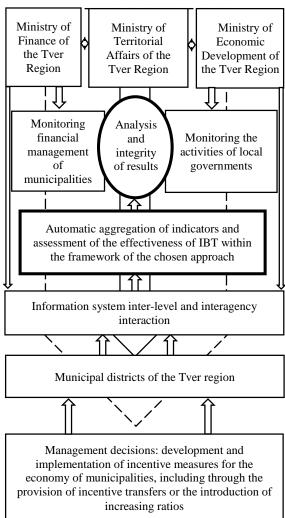
From the position of public administration at the regional level, the existing monitoring systems reflect only the effectiveness of financial resources usage, including the inter-budget transfers, and not the achievement of local government performance goals.

Evaluation of the effectiveness of inter-budget transfers provided to municipal districts from the regional budget can be an independent tool for making managerial decisions by public structures of a constituent entity of the Russian Federation or a municipality, or it can be an element of integrated regional monitoring of financial management and evaluation of the local government performance.

The introduction of assessment of the effectiveness of inter-budget transfers to municipal districts in regional monitoring of financial management and (or) an evaluation of the local government performance implies its inclusion as one of the indicators of assessment.

At the same time, it is advisable to introduce a single approach, which will eliminate duplication of processes. As criteria for the evaluation, autonomy indicators can be used, assessing the inter-budget transfers from the point of view of financial equalization and the adequacy of budgetary resources for resolving issues of local importance, and also taking into account the coefficient reflecting the financing of transferred state tasks.

The proposed integration of monitoring, including an assessment of the effectiveness of inter-budget transfers provided to municipalities, in the public administration system at the regional level, using the example of municipal districts of the Tver region, is presented at the Figure 1.



IBT – inter-budget transfer provided to the municipal district from the regional budget

**Figure 1** Integration of monitoring systems for assessing the effectiveness of municipal financial management in the Tver region



This integration can be considered as an adaptive model that can be implemented in any region.

In this case, the model is understood in a broad interpretation, as a substitute object for the original, designed to study some of its properties [8].

The integration under study in the Tver region requires the introduction in the region of an information system of inter-level and interagency cooperation, as well as software tools that provide aggregation of indicators of municipalities and assessment within the framework of calculation formulas.

It is worth noting a similar situation in other regions of the Russian Federation.

The best practices of technological transformation of processes in public administration at the regional level executed at Khanty-Mansi Autonomous Okrug – Ugra, Primorsky Krai, Ulyanovsk region, Belgorod region.

For the majority of these regions of the Russian Federation, information systems integrated at the regional and municipal levels are used for monitoring purposes, which ensures the required inter-level interaction [9].

So, for example, the inter-level interaction provided within the framework of the information system in the Khanty-Mansiysk Autonomous Okrug - Ugra (KMAO-Ugra) allows:

- to ensure bilateral information interaction between the public administration structures of the KMAO-Ugra, the administrations of municipalities of the region, the central project office of the KMAO-Ugra;
- to ensure bilateral information interaction between municipal project offices, structural divisions of municipal administrations, functional project offices of branch executive bodies of the KMAO-Ugra;
- to provide information from the project committee of the KMAO-Ugra to the municipal project offices;
- to provide information from the central project office of the KMAO-Ugra to the functional design offices of sectoral executive bodies of the KMAO-Ugra;
- to introduce the monitoring of the implementation of national projects in the region and municipalities, as well as other monitoring in the field of economic management in the regional space [10].

# 4. CONCLUSIONS

The executed analysis results allows to develop the following conclusions:

- integration of monitoring systems in the public administration of a region refers to the combination of processes for the determination of the status of administrative entities, the exclusion of duplication of functions of regional authorities (administrative entities), the development of unified final results;
- the concept of "monitoring system" is broader in relation to the concept of "monitoring", since in addition

to the process and objects, it includes the subjects of implementation;

- under the conditions of technological transformation, this integration implies automatic aggregation of indicators, the use of an information system of inter-level and interagency interactions;
- assessing the effectiveness of inter-budget transfers provided to municipal districts from the regional budget can be an independent tool for making managerial decisions by public structures of a constituent entity of the Russian Federation or a municipality, or it can be an element of integrated regional monitoring of financial management and evaluation of local governments' performance.

The proposed integration can be considered as an adaptive model, and should be recommended for implementation in all regions.

The results of the study can be embedded in the activities of public authorities at the state and municipal levels. The value of the study can be considered from the point of view of experts in the field of economics and management, the digital economy, the budget process and financial law.

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