

Operational analysis and monitoring of information about the municipal territory using information from the unified federal real estate register

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Abstract. The article assesses some of the problems arising when creating relevant, reliable and complete information resources, information from which is used in the implementation of management functions. The authors pay special attention to an operational analysis and monitoring of information on land plots and other real estate objects by local governments in order to increase incomes of local budgets. The need to create a chain of interactions between the local government, the regional operator of spatial data and the federal operator of information resources is emphasized. The authors draw attention to the examples of such interactions at the federal and regional levels. To implement data integration tasks, it is necessary to maintain databases that have an infrastructural significance - spatial data certifying the location of objects, and data about the subjects of rights, allowing them to be identified and interact with them. The authors suggest that local authorities analyze the data of existing regional and federal information systems, operators of regional information systems integrate this information into the spatial data infrastructure, and the operator of the federal information system updates the system based on the information provided.

1. Introduction

Operational monitoring of information on the territories of municipalities is the integration of tabular and spatial data on land plots and other real estate objects from legally significant sources, their analysis, identification of typical differences between them and their graphic-analytical processing on the cartographic basis.

When carrying out such works, the tasks of developing the territory of municipalities, reducing risks in the turnover of land plots and other real estate objects, increasing the investment attractiveness of the economic sector of the territory are solved [2].

Local governments want to have up-to-date information about property located on their territories, since the land and property taxes form their budget. They have a direct impact on the ability to develop the territory by increasing the investment prestige of the region and achieving social effects.

A detailed analysis of information about real estate objects for their discrepancy with the actual parameters can be carried out by local self-governments, since neither the Federal Tax Service, nor the Federal Service for State Registration, Cadastre and Cartography have such powers [1]. In this regard, conducting operational monitoring of the municipal territory using data from the unified state real estate register and other informational systems can improve the quality of management of such territories and their capacity, including the financial resources of local governments.



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Regular analysis and monitoring of information on the territories of municipalities with the subsequent integration of updated information into regional and federal information resources will allow to form a comprehensive vision of the results and needs in areas of scientific research, development of technologies and innovations, their popularization and implementation not only in the sphere of interests of public authorities and local governments, but also in a wide range of sectors of the economy.

2. Results

Taking into account the interests of the population, local governments set goals and objectives, plan and execute budgets, manage municipal property, and plan territories. In this regard, there is a need to increase the financial independence of municipalities, improve interbudgetary relations by increasing incomes of local budgets in order to perform their functions, develop information services, increase the attractiveness and efficiency of socio-economic activities within the municipal territory.

However, local governments do not have powers to participate in the interaction process to ensure the administration of local taxes, where data on taxation objects are provided by the territorial bodies of the Federal Service for Registration, Cadastre and Cartography to the administrator, the Federal Tax Service [3].

At the same time, tax inspectorates face the lack of sufficient coverage of all objects of taxation, the inconsistency of the information provided, the facts of data irrelevance. Undoubtedly, the local governments suffer since there are problems with budget incomes.

The absence of any consolidated up-to-date database on actual indicators for land plots and other real estate objects located in the municipal territory and being a source of budget revenues makes it difficult to mobilize most of the revenues from local taxes, does not make it possible to assess the reserves of budget revenues.

In those municipalities where the local authorities have organized the integration of data on real estate objects, in particular, on land plots and their rightholders, providing more complete, reliable, relevant and consistent data for all participants in the information interaction process, the revenues of local budgets began to increase steadily. There are land areas that have not been included in the list of taxation objects.

The functions of integrating information on land plots, capital construction objects, assessing their completeness, relevance and reliability, organizing feedback when monitoring the actual state of such objects and achieving goals of improving the quality and completeness of information should be performed by local governments. These functions should be separated from the functions of data providers and administrators of tax actions.

The main information resource for monitoring the territories of municipalities is the unified state real estate register. Due to the fact that this state information resource functions within the electronic services, there is an increasing need to create and use technologies of geographic information portals that integrate information from local authorities [4].

With the cartographic integration of information resources, it is possible to visualize the risks of inaccurate information on land plots, which can be identified in a timely manner, and take the actions to eliminate it. For example, the type of permitted use of land plots indicated in the unified state real estate register for the period of existence of the accounting system in Russia has the form of phrases with grammatical, spelling and other errors, which do not allow them to refer land plots to a certain group, lead to a discrepancy between the land tax rate and the type of permitted use.

Electronic federal and municipal services are provided using information and telecommunication technologies, including the portal of federal and municipal services, multifunctional centers and other tools, including the electronic interaction between federal bodies, local governments, organizations and applicants in accordance with the Federal Law of July 27, 2010 210-FZ "On the provision of federal and municipal services" [5]. Thus, methods are being developed to improve the completeness and quality of information from the unified state register of real estate on the basis of information

interaction of local governments with the Russian real estate registering bodies on the basis of a feedback loop from local governments using portal technologies.

An example of the large-scale work of the Federal Tax Service and Rosreestr with the involvement of local governments aimed at involving the latter in the processes of increasing the completeness and quality of information on land plots in order to mobilize local property taxes is the Federal Information address system. The operator of the Federal Information Address System is the Federal Tax Service, the territorial divisions of Rosreestr are responsible for monitoring the compliance of address objects, and local authorities are responsible for entering local addresses that have not yet been submitted to the address system.

The development and filling of this information resource are carried out in a planned manner. Given the shortcomings and inconsistency of the information, the lack of preparedness of local authorities to promptly fill and correct the address register, the address register has not been filled yet. This work is carried out by integrating data from the Federal Information Address System, the unified state register of real estate, territorial planning documents (master plans, land use and development plans, etc.).

An example of creating a regional platform for the integration of information resources, including spatial data, is the information system "Regional geographic information system aimed to support the activities of central executive bodies of Moscow region, state bodies of Moscow region, local government bodies of municipalities of Moscow region" [6]. Its goal is to create a single information space on the territory based on the integration of state and non-state information resources containing spatial data. Federal government bodies, regional government bodies and local government bodies interact when forming, entering and using information following the Agreement on information interaction during the operation of such a regional information system.

As the basic spatial data, the Regional Geographic Information System to support the activities of the central executive bodies of state power of the Moscow region, state bodies of the Moscow region, local governments of municipalities of the Moscow region uses the electronic cartographic basis of the Moscow region, the information of which is included in the regional spatial data fund.

National Research University "Higher School of Economics" with the participation of the Research Institute of Aerospace Monitoring "AEROCOSMOS" as a result of the research work "Research and forecasting the needs of the economy in spatial data, Earth remote sensing data and geoinformation technologies, as well as services and products created on their basis", commissioned by the Federal Service for State Registration, Cadastre and Cartography, the report "Spatial data: the needs of the economy in the context of digitalization" was prepared and published [7].

As a result of this scientific study, it was revealed that geoservices are applied and used the most actively at the level of government bodies of the constituent entities of the Russian Federation, rather than by the federal government bodies. Regional authorities most often use information systems of spatial data when planning and making managerial decisions and rendering public services. The most in demand are cadastral records, geodetic measurements and topographic products on electronic media.

The development and implementation of technologies for collecting, processing and analysis of spatial data require system solutions, consistent identification and overcoming of barriers to innovative development. This requires a new level of coordination and communication of the participants in this process, as well as the active involvement of local governments in these processes.

The methodology for the development of spatial data services in public authorities and local governments is currently generally mastered. However, there is a natural need for a transition to a new level of development of such systems, where the platform for collecting, storing and disseminating information should be replaced by the decision "analytics, expert systems".

These examples indicate the interaction between local governments when developing federal information systems and creating various information systems at the regional level.

The results of active actions of local authorities in the operational analysis and monitoring of the territories can be reflected in federal information resources or in the regional information system of

spatial data. In the first case, the integration process will be faster, but the number of discrepancies in the information will be more significant. Following the second path, it is quite possible to synchronize various geospatial data about land plots and real estate objects, reducing discrepancies in their characteristics, but the time stage of entering them into federal information resources, including the unified state real estate register, which is a source of information about taxation objects and their copyright holders, can increase.

3. Conclusion

A method of updating federal information systems, which can improve the quality of information, should be prioritized. The regional operator as a link between local governments and federal government bodies that form and maintain the federal information systems, should be empowered to process and compare information received from local government bodies with information contained in federal information resources. It is necessary to build a chain of interactions between the local government, the regional operator and the federal operator. In order to conduct operational monitoring, local self-government bodies analyze the data of the federal and regional information systems for their compliance with actual indicators; the operator of the regional information system performs the functions of an integrator, and the operator of the federal information system incorporates such information into the database used for implementing functions of public administration, including the fiscal one.

The regions can become owners of the most complete databases, which are promptly updated and integrated with the federal databases.

To achieve this goal, a mechanism of responsibility is required.

It is not difficult to create a system of such interactions. In the Russian Federation, there is a system of mutual exchange of information between various authorities and local self-government bodies.

It should be noted that a systematic analysis of the available information, systematic observation of the completeness, reliability, and relevance of actual characteristics of land plots and other real estate objects, gives a number of derivative effects for all subjects of information interactions, contributing to the stable development of territories. Such consequences include an increase in social and economic justice in property relations, tools for assessing risks arising with the turnover of real estate objects if the information is incomplete, irrelevant, inaccurate or contradictory, improved efficiency of other functions of local self-governments, in particular, municipal land control, development of territorial planning documents and other components of the emerging municipal information systems [8].

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