Formation of the cyber-physical platform "Digital Region"

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Abstract. The article considers the cyber-physical platform "Digital Region", which will allow managing technical, technological, industrial and infrastructure facilities of the region. The authors describe the concept of ensuring the digital and physical functioning of this platform; argue for the positive impact of the new digital platform on the sustainable development of the regions.

1. Introduction

The digital region is a platform of the near future, which is defined in the National Program "Digital Economy of the Russian Federation". The coronavirus pandemic and the role of digital technologies in the fight against it have once again shown how important digital solutions are for the development of the economy and ensuring the safety of life of Russians. The digital transformation of regions and municipalities will open up new opportunities for their activities [1].

The actualization of this topic includes a set of solutions in the context of the transition to the digital economy, taking into account the technologies of the new generation [2].

Currently, the transition to the digital economy is actively being carried out in public administration [3]. As a result, at the federal level, approved:

- National goals and strategic objectives of the development of the Russian Federation for the period up to 2024 dated May 7, 2018 No 204;
- Strategy for the Development of the Information Society in the Russian Federation for 2017-2030 of May 9, 2017 No 203;
- Strategy of Economic Security of the Russian Federation for the period up to 2030 dated May 13, 2017 No 208;
- National Program "Digital Economy of the Russian Federation" for the period up to 2025 dated July 28, 2017 No 1632-p.

These documents define the development directions and national priorities for the long-term period, the introduction of new areas of public administration in the context of digitalization and import substitution. When switching to a new type of Digital Economy format, changes will occur in the public administration sector, such as [4-7]:

- Wide distribution of global networks;
- Creation of large data centers;
- Implementation of centralized solutions based on web technologies.
All this is the basis for the transition to qualitatively new solutions in public administration.

In modern conditions, it is the digital platform that was developed by the NPO "KRISTA" that includes a number of activities aimed at quickly solving problems during the transition to a new format of the economy [8-9].

2. Materials and methods

The digital Region cyber-physical platform will ensure the achievement of the most significant performance indicators of the region through the implementation of state and municipal functions, through optimization of activities, increasing the openness of accounting processes using continuous online monitoring and situational management. The main directions of the Digital Region platform are shown in figure 1 [9-16].

![Diagram of the main directions of the Digital Region platform]

**Figure 1.** Structure of the Digital Region platform.

The stages of development of the new digital platform are shown in figure 2.

![Diagram of stages of development of a new digital platform]

**Figure 2.** Stages of development of a new digital platform.
The transition to a new platform will improve the investment climate of the region. The investment climate of a region is a combination of investment activity (the development and intensity of investment activity in the region, characterized by the volume and pace of attracting investment to the region or current investment activity) and investment attractiveness (the relationship of investment potential and investment risks or future investment activity) of the region, consider figure 3.

Figure 3. Indicators that characterize the investment policy of the region.

The cyber-physical platform should combine a complex of industry programs, departmental projects and other initiatives. It should also be provided that they are supplemented by the necessary measures aimed at the sustainable socio-economic development of the regions.

3. Results

The Digital Region cyber-physical platform is the achievement of key performance indicators for both the region and municipalities by increasing the efficiency of state and municipal activities, through centralization, unification and optimization, as well as increasing the openness of monitoring and management processes.

The introduction of the digital platform will allow:

- Increase public confidence in the authorities;
- The efficiency of spending budget funds, strictly for its intended purpose;
- Development of the investment climate in the region, through the implementation of effective projects, programs;
- Improving the efficiency of state property management;
- Import substitution;
- Improving the effective performance of municipalities;
- Information availability of regions.

The digital region will be aimed at the introduction of digital technologies and platform solutions in the economy, social sphere, in the spheres of state and municipal administration of the regions of Russia, that is, to describe the current state of the region as a result of the introduction of digital and platform solutions into the economy.
4. Discussion
In most regions, the main tasks for the introduction of transactional systems that automate various aspects of public administration have already been solved. Digitalization should ensure the creation of an effective system of public administration based on data analysis. The main principles that were laid down in the creation of the new platform are presented in figure 4.

![The new digital platform, the "Digital Region", is based on the following principles](image)

- Unified ecosystem of digital data storage and processing in the region: collection, storage, processing and ordering of all necessary data, differentiated access to data and their protection, centralization of regulatory and reference information
- Full electronic document management: transfer of all processes and documents from paper to digital form
- Seamless interaction of information systems: data collection, storage and use based on uniform standards and rules, elimination of data duplication
- Increasing the level of trust in the public administration system: decisions are transparent due to the reliability of data, open to citizens
- Automated decision-making technologies based on data analysis results

Figure 4. The principles of the new digital platform "Digital Region".

The platform will allow processing large amounts of data about the financial system of the region, including in a structured and unstructured form, using various business and analytical applications. The Digital Region will ensure that data is entered once and used by various information systems, providing users with access to the necessary data from interconnected systems at any time. It is also worth noting that the platform provides an opportunity to connect new systems through an open API.

5. Conclusion
As a result of the transition to a digital platform, the economic indicators of the region will have only positive dynamics:

- Budget savings from 300 million rubles per year;
- Increase in the percentage of efficiency of implemented programs and projects;
- Growth of non-tax budget revenues;
- The growth of the indicator of trust in the authorities;
- The growth of the indicator of information openness of the region;
- Increasing the distribution of Russian software.

When switching to a new digital platform, it is necessary to take into account such indicators as the effectiveness of the political situation in the region, support measures, the level of readiness, the level of the status of the region and their potential. Given these conditions, it is possible to group the regions by indicators for a gradual transition.
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