

## Directions For the Development of An Innovative Management System in The Context of Digital Transformation

Irina G. ERSHOVA

Southwest State University, Kursk, Russia, e-mail: [ershovairgen@yandex.ru](mailto:ershovairgen@yandex.ru)

Olga S. PRIKHODCHENKO,

Southwest State University, Kursk, Russia, [olgaprikhodchenko@yandex.ru](mailto:olgaprikhodchenko@yandex.ru)

Irina N. RODIONOVA,

Southwest State University, Kursk, Russia, [irodionovadoc@mail.ru](mailto:irodionovadoc@mail.ru)

Elena S. SIMONENKO,

Southwest State University, Kursk, Russia, [simonenkoL@mail.ru](mailto:simonenkoL@mail.ru)

Correspondence should be addressed to: Irina G. ERSHOVA; [ershovairgen@yandex.ru](mailto:ershovairgen@yandex.ru)

\* Presented at the 38th IBIMA International Conference, 23-24 November 2021, Seville, Spain

Copyright © 2021. Irina G. ERSHOVA, Olga S. PRIKHODCHENKO, Irina N. RODIONOVA and

### Abstract

Information and digital technologies are effective tools for the development of all spheres of society. In modern conditions, digital transformation is the key to the successful socio-economic development of the region. Digital technologies allow regional government bodies to effectively solve strategic management tasks and achieve the set goals of socio-economic development. The purpose of the study is to develop theoretical and methodological provisions for the formation of a digital system for managing the region's economy, built on the basis of a platform approach that ensures effective interaction between participants and allows solving strategic management tasks. The study is based on the use of methods of systemic and structural-functional approaches to the consideration of information resources, as well as general scientific methods of analysis and synthesis. This article discusses the goals and principles of project management in executive authorities. The role of a single information resource for planning and monitoring the execution of state programs and national projects of the Russian Federation in the digital transformation of the regional economic management system is revealed. On the basis of the study, the author proposes a platform approach as an effective mechanism for managing economic processes at the regional level. Active processes of digital transformation are changing the architecture of the regional economic management system. The functioning of the system of strategic management of the region's economy presupposes the creation of an information and analytical model based on the use of a set of information and digital technologies.

**Keywords:** Regional Economy Management, Project Management, Digital Transformation, Digital Technologies, Platform Approach.

Elena S. SIMONENKO

### Introduction

The ambitiousness of the national project "Digital Economy" approved by the Government of the Russian Federation and the announcement at the highest level of the start of public administration reform dictate the requirements for finding a

---

**Cite this Article as:** Irina G. ERSHOVA, Olga S. PRIKHODCHENKO, Irina N. RODIONOVA and Elena S. SIMONENKO, Vol. 2021 (37) "Directions for the Development of An Innovative Management System in The Context of Digital Transformation", Communications of International Proceedings, Vol. 2021 (37), ISBN: 978-0-9998551-7-1, ISSN: 2767-9640. Article ID 38151021

new model of regional governance and sustainable development based on the integrated implementation of digital technologies in all spheres of functioning of the economy and society.

In Russia, the strategic planning system, including its territorial level, is currently at the stage of formation and is undergoing changes and needs significant improvement in view of the rapid development of digital technologies.

Today, in the scientific and journalistic space, one can increasingly find studies (Babkina A., 2021; Kelesh Yu., Bessonova E., 2021; Afanasyeva L., Tkacheva T., Piyaltsev A., 2020; Lygina N., Izmalkova S., Pyanova N., 2019; Mashkina N., Belyaeva E., Obukhova A., Belyaeva O., 2021; Merzlyakova E., Ershova I., Bridskiy E., 2021) devoted to the impact of digital transformation on the development and management processes of the economic, financial, social and other spheres.

The digital approach to managing the economy and social sphere of the country's regions has gained the greatest popularity since the declaration of the concept of the Center for Strategic Research "State as a Platform" in 2018.

The theoretical basis of the article is formed by fundamental developments on the topic under study, which were presented in the works of modern authors such as Brunet M. (Brunet, 2019), Malinen P., Simula H. (Malinen, Simula, 2005), Boris I.V., Nemykina T.V. (Boris, Nemykina 2017), Molchanova N.P. (Molchanova, 2017), Izmalkova S.A. (Izmalkova, 2019), Baklaeva N.M. (Baklaeva, 2017), Ostrovskaya N.V., Barykin S.E., Burova A.Yu. (Ostrovskaya, Barykin, Burova 2020).

## **Materials and Methods**

The study is based on the use of methods of systemic and structural-functional approaches to the consideration of information resources, as well as general scientific methods of analysis and synthesis.

The study was based on the current legislative framework (the national program "Digital Economy of the Russian Federation", order of the Ministry of Economic Development of the Russian Federation dated April 14, 2014 No. 26R-AU "On Approval of Methodological Recommendations for the Implementation of Project Management in Executive Bodies" and etc.).

The materials for the study were the scientific works of the authors, presented in monographs and publications of periodicals, devoted to the formation of the digital economic system of the region, the development of the regional system of socio-economic development in the context of digitalization.

## **Results**

The main idea of the program for the development of the digital economy of Russia should be a set of measures to stimulate the creation of digital platforms in all industries and spheres of life, followed by expansion to the economic contour of the EAEU (<http://dpfund.ru/>).

The use of the digital platform "Electronic Budget" has a positive effect on increasing the efficiency of the program-targeted project-targeted management of budget resources in accordance with the program and social requirements for modern state financial and economic systems.

The most significant advantages and features of the SI IS "Electronic Budget" are: strengthening budgetary discipline, increasing the responsibility of the authorities for decisions made, increasing the efficiency of budgetary resource management at all levels of the budget system, increasing the openness of the budget for citizens of the country.

At the regional level, work began on the comprehensive automation of the budget process using a single digital platform "Electronic Budget", which made it possible to combine different levels of budgets and contributed to the formation of an integrated information environment in the budgetary sphere.

To date, we can note the visible indisputable advantages of the digital platform "Electronic Budget":

- 1) the digital platform "Electronic Budget", in a single digital space of which financial and budget information is consolidated and moved, allows users (participants in the budget process, state and regional subjects of control) to get access to up-to-date information in real time;
- 2) the digital platform "Electronic Budget" facilitates the transition from a vertical model of budget expenditures management to a process-oriented horizontally oriented management model.

Digital transformation in modern conditions affects various areas of the financial and economic activities of the state, and the budgetary sphere is no exception.

The report of the Center for Strategic Research (2018) notes that digital transformation will lead to increased transparency in the use of budgetary resources, namely, there will be more and more transparent chain of suppliers and final beneficiaries, available not only to Rosfinmonitoring, and it will become clear how narrow the boundaries are. formal conflict of interest.

Traditional information systems do not allow solving modern problems in digital content management, aimed, first of all, at the exchange of information represented by large amounts of data in digital form, and then its analysis and use of the analysis results to achieve the goals of strategic development of digitalization subjects (Izmalkova, 2019).

We consider it expedient at the regional level in the field of economic management to use a platform approach, which has already proven its effectiveness in the commercial sector. Platform solutions are currently the dominant player in the process.

We note the following advantages and capabilities of platforms that make the platform approach to regional governance attractive:

- ensuring the interaction of a large number of users;
- creation for participants of an open infrastructure of interaction with clearly defined rules;
- a high level of quality and efficiency of interaction with the use of platform services;
- lower costs of platform users for interaction than with traditional forms of interaction;
- the constant accumulation of large amounts of data on the behavior of participants, which are subsequently used to optimize the work of the platforms.

The introduction of information technologies into the structure of regional strategizing helps to speed up information exchange, and the tools used for information technology support of work processes make it possible to increase the efficiency of public administration and local self-government, build up the potential for continuous monitoring of socio-economic processes and making operational decisions on their regulation (Dorgushaova, 2015).

An innovative digital blockchain technology can help achieve these goals.

Blockchain is a promising technology that can be used in the field of strategic management of the development of the region (Prihodchenko, Pankov, Afanasyeva, 2021).

The participation of the state in the development and implementation of blockchain technology will ultimately help to reduce the complexity and cost of public administration (Prihodchenko, 2020).

Important advantages of the potential use of blockchain in the public sphere are security (encryption to confirm transactions), immutability (the current state of the blockchain depends on previous transactions), transparency (due to public and distributed storage).

The issues of using the potential of blockchain technology are in the focus of attention of various modern researchers and practitioners.

According to Daryl Plummer, director of research at Gartner, there is a digital revolution currently taking place, which will gain momentum in the near future. Despite the imperfection of distributed ledger technologies, a Gartner analyst believes that blockchain will penetrate various industries within the next 2-3 years.

Gartner predicts that blockchain can be used in any industry where transactions need to be verified.

In the past few years, more and more attention of Russian and foreign researchers and analysts has been attracted by the possibilities of using blockchain technology in various fields, including in the field of public administration.

So, in early 2017, at a meeting with Deputy Prime Ministers, Prime Minister Dmitry Medvedev, an order was made to the Ministry of Economic Development and the Ministry of Telecom and Mass Communications to analyze the possibility of using blockchain technology in the field of public administration and economic management in Russia.

In 2016, a report was prepared on a study by the UK Government Science Office (Ledger Technology: beyondblockchain) ([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/492972/gs-16-1-distributed-ledger-technology.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/492972/gs-16-1-distributed-ledger-technology.pdf)). This report states that one of the priority tasks of the state is to identify the possibilities of using distributed ledger technology in public administration and in the provision of public services.

In May 2018, a member of the US Federal Reserve Board Lael Brainard prepared materials (Cryptocurrencies, Digital Currencies, and Distributed Ledger Technologies: What Are We Learning?) (<https://www.federalreserve.gov/newsevents/speech/brainard20180515a.htm>), in which it is noted that distributed ledger technology (blockchain) is a mechanism for maintaining and transfer of records, which in the past few years has already gone beyond the cryptocurrency.

## **Discussion**

It is possible to form a unified strategic planning system in the Russian Federation, constituent entities of the Russian Federation and municipalities based on the integration of retrospective theoretical developments and practical experience of strategic planning with the realities of digital transformation.

In modern conditions, the need for the development of a system of state strategic management (planning) of socio-economic development in the country is growing.

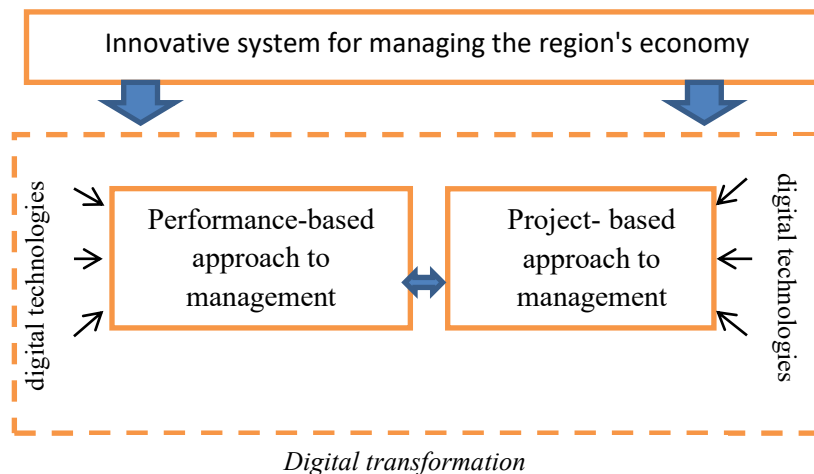
The modern system of strategic planning in the field of economic management of the state and regions is based on the program-project approach.

In a broad sense, the project-target approach is a professional activity using modern scientific and practical knowledge, skills, methods and technologies, which is focused on obtaining results through the successful implementation of projects that include clear requirements for time, scope of work, cost and quality (Boris, Nemykina, 2017).

A project-based approach to managing economic processes implies effective interaction of all stakeholders, guarantees resource savings and predictability of results.

The project-target approach being implemented at present reinforces the need for innovative development of the regional economy management system. In modern conditions, the modernization of the regional innovative economic management system is largely determined by the orientation of the regional management system towards digitalization processes.

The development of digital transformation processes for managing the regional economy is facilitated by the introduction of various digital technologies. The digital platform is becoming more and more widespread in the digital space, which can be considered as a new form of organization of the system of institutions and mechanisms for managing the region's economy.



Source: compiled by the authors

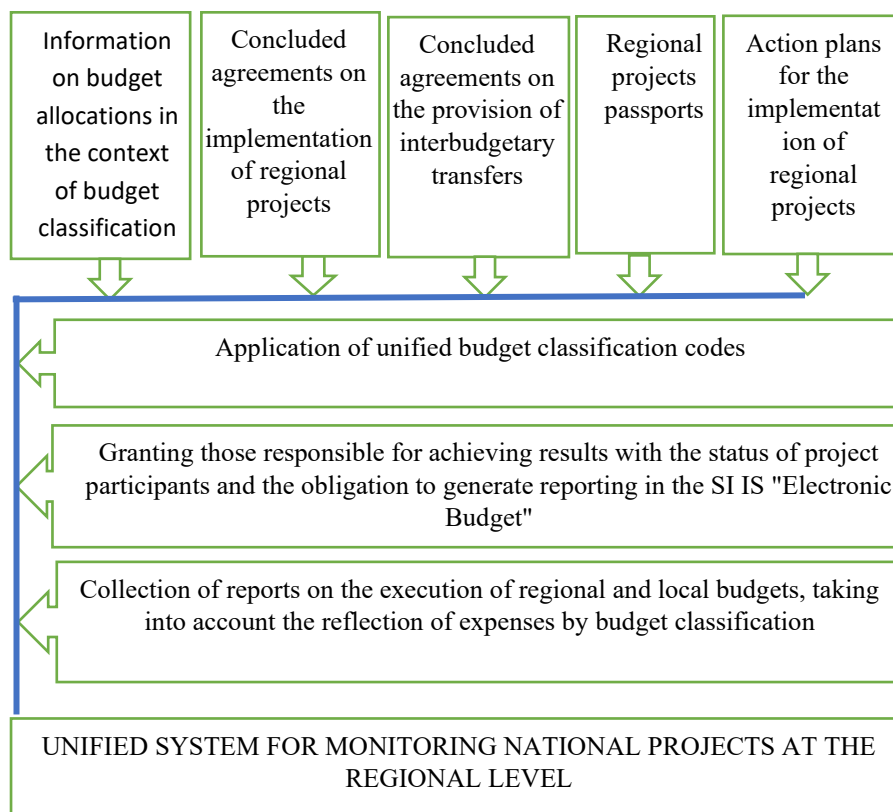
**Fig. 1. Innovative system for managing the regional economy in the context of digital transformation**

The system of socio-economic development depends on and is interconnected with the budgetary system, since budgetary resources are the financial basis for the functioning of this system.

As part of the action and development of the electronic government system at the level of the Russian Federation, the issues of ensuring the possibility of accounting and interconnecting the parameters of strategic planning documents, as well as the transparency and openness of the relevant information, are extremely relevant. And, first of all, this applies to the planning and execution of government programs and national projects.

According to the Ministry of Finance of Russia, these opportunities will be provided through the formation of a single information resource.

The SI IS "Electronic Budget" provides for a subsystem "Management of national projects", the purpose of which is to monitor the achievement of indicators of national projects, take into account risks, which will allow managers of all levels to take timely measures to prevent deviations from planned indicators. This subsystem allows you to form a passport of a regional project, which reflects the goals and indicators, results, financial support, the project plan of activities and the state programs of the region related to this project. Also, this subsystem allows for continuous monitoring of the implementation of a regional project (Fig. 2).



**Fig. 2. Unified monitoring system of national projects at the regional level based on the digital platform "Electronic Budget"**

Source: compiled by the authors according to the official website of the Ministry of Finance of the Russian Federation

A significant result of the implementation of the GI IS "Electronic Budget" is that the subjects of financial and budgetary control are provided with access to the full volume of necessary information, which will avoid distortion and discrepancies in data generated at different levels of management. Also, this system helps to increase the validity of decisions and the effectiveness of regional management.

## Conclusion

The functioning of the system of strategic management of the region's economy presupposes the creation of an information and analytical model, which contains goals, a set of measures that contribute to the achievement of these goals, and allows to accumulate reporting data in a timely manner.

Within the framework of this model, for information support of strategic decisions, the importance of using a set of modern information and digital technologies combined into a digital platform and ensuring the coordination of analytical, information, expert and forecasting activities of various services of regional government bodies is obvious.

## References

- Strategic management of the development of the digital economy based on smart technologies: monograph / ed. Dr. econ. Sciences, prof. A. V. Babkina. - Spb. : POLYTECH-PRESS, 2021. - 793 p.
- Kelesh Yu.V., Bessonova E.A. (2021) *Implementation of strategic priorities of digital transformation of the regional economy* // Bulletin of the NGIEI. No. 5 (120). S. 111-125.
- Afanasyeva L.V., Tkacheva T.Yu., Piyaltsev A.I. (2020) *Identification and statistical assessment of factors constraining the economic potential of regions in the context of digitalization* // News of the South-West State University. Series: Economics. Sociology. Management. Vol. 10.No. 6.P. 32-41.
- Lygina N.I., Izmalkova S.A., Pyanova N.V. (2019) *Formation of a digital economic system for the purposes of strategic management of the region* // News of the South-West State University. Series: Economics. Sociology. Management. Vol. 9.No. 1 (30). S. 47-56.

- Mashkina N.A., Belyaeva E.S., Obukhova A.S., Belyaeva O.V. (2020) *Digitalization of the transport industry in the context of globalization of the world economy* / SHS Web of Conferences 92. The 20th International Scientific Conference Globalization and its Socio-Economic Consequences C. 05020.
- Merzlyakova E., Ershova I., Briday E. (2020). *Developmental delays of healthcare in the digital economy* / SHS Web of Conferences 92. The 20th International Scientific Conference Globalization and its Socio-Economic Consequences. C. 01034
- Brunet M. (2019). *Governance-as-practice for major public infrastructure projects: A case of multilevel projectgoverning* / M. Brunet // International journal of project management. Vol. 37, iss. 2. P. 283-297.
- Malinen, P., Simula, H. (2005). *A Conceptual Platform for Developing Local and Regional Innovation Environment*. In The 6th CINet Conference. Brighton, UK. Retrieved from: [https://www.researchgate.net/publication/228360602\\_AConceptual\\_PLATFORM\\_FOR\\_DEVELOPING\\_LOCAL\\_AND\\_REGIONAL\\_INNOVATION\\_ENVIRONMENT](https://www.researchgate.net/publication/228360602_AConceptual_PLATFORM_FOR_DEVELOPING_LOCAL_AND_REGIONAL_INNOVATION_ENVIRONMENT).
- Boris I.V. Nemykina T.V. (2017). *Development of a development program using project management mechanisms* // BellRO Bulletin. No. 2 (4) p. 47-51.
- Molchanova N.P. (2017). *The development of public finance in the context of the formation of the digital economy* // Scientific research of the Faculty of Economics. Electronic journal. Volume 9. Issue 3. - P. 7-16.
- Izmalkova S.A. (2019) *Features of the development of the regional socio-economic system in the context of digital transformation. Development of the digital economy in the context of de-globalization and recession* A. Aletdinova, D. A. Alekhina, O. Andrukhova, A. Babkin, N. Bairova ., Bogdanova R.M., Borisov A.A., Bochkova S.V., Bykovskaya E.V., Vertakova Yu.V., Volkova A.A., Voronov D.V., Garifova L.F., Glushchenko M.E., Goldenova V.S., Grigorieva E.A., Ermolenko O.D., Zakharova Yu.V., Ivanov A.A., Izmalkova S.A. et al. St. Petersburg,.S. 253-277.
- Baklaeva N.M. (2017). *Blockchain technologies in the practice of intergovernmental fiscal relations* // Economy and business: theory and practice. №8. S. 13-18.
- Ostrovskaya N.V., Barykin S.E., Burova A.Yu. (2020). *Digitalization of project management in state and municipal administration of Russia* // Strategic decisions and risk management. Vol. 11.No. 2.P. 206-215.
- Dorgushaova A.K. (2015). *Information and technological context of regional strategizing* // Regional Economy. South of Russia. No. 4 (10). S. 72-80.
- Prikhodchenko O., Panskov V., Afanasyeva L. (2020) *Modern Trends in the Development of the Regional Economic Management System in the Context of Digital Globalization* / SHS Web of Conferences 92, 0 (2021). The 20th International Scientific Conference Globalization and its Socio-Economic Consequences.
- Prikhodchenko O.S. (2020) *Digital technologies in the strategic management of the region* // News of the South-West State University. Series: Economics. Sociology. Management..Vol. 10, No. 1. P. 85–94.